Technology Student Association (TSA)

HIGH SCHOOL COMPETITIVE EVENTS GUIDE

for the 2025 and 2026 National TSA Conferences

with correlations to
Science, Technology, Engineering, and
Mathematics (STEM) Standards

ACKNOWLEDGMENTS

TSA is grateful to many people for their advice and expertise in developing the competitive events program over the years. The organization especially appreciates the efforts of the Subject Matter Experts (SME) team of the Competition Regulations Committee (CRC), noted below.

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TSA MISSION

The Technology Student Association (TSA) enhances personal development, leadership, 21st century skills, and career opportunities in STEM, whereby members apply and integrate these concepts through intra-curricular activities, competitions, and related programs.

WHO ARE TSA MEMBERS?

TSA is devoted exclusively to the needs of students engaged in science, technology, engineering, and mathematics (STEM). Open to those who are enrolled in or who have completed technology and engineering courses, TSA has 300,000 middle and high school student members across the country. TSA is supported by educators, parents, and business leaders who believe in the need for a technologically literate society. TSA members learn through exciting competitive events, leadership opportunities, and membership activities. It is the intent of TSA to involve as many different TSA members as possible in competitive events and provide recognition in a setting of fair play practices using TSA event guidelines.

Explore what TSA has to offer by using this guide and by visiting TSAweb.org for information. With competitive events that range from video game design to structural engineering and much more, there is something to capture the imagination of—and bring out the best in—all students. We hope that with teacher guidance, students will enjoy the challenge of TSA's competitive events at local, state, regional, and national TSA conferences.

The competitions in this guide support a broad spectrum of goals by enhancing STEM curriculum, emphasizing and promoting the development of leadership and 21st century skills, and increasing exposure to future career choices.

THE ROLE OF COMPETITIVE EVENTS

To follow its mission, TSA offers stimulating competitive events. TSA believes that by participating in thoughtfully designed competitions, students learn 21st century skills such as collaboration, perseverance, critical thinking, and problem solving, thereby becoming "winners"

irrespective of placement in a competition. Many teachers find that TSA's competitive events provide an excellent motivational tool in the academic environment.

Every two years, TSA's competitive events are reviewed and revised by subject matter experts (SMEs) in the Competition Regulations Committee (CRC), a standing group of technology and engineering educators with hands-on classroom experience. The *Technology Student Association (TSA) High School Competitive Events Guide for the 2025 & 2026 National TSA Conferences* is the result of the collaboration of CRC managers, competitive event coordinators, teachers, proposals of numerous TSA state and chapter advisors, and students who make TSA competitive events current and dynamic. The guide presents rules and regulations for all National TSA Conference competitive events; a view of each event's connection to STEM standards; and suggested careers. Relevant for all levels of competition (state delegations may choose to adopt the national guidelines for state-level competitions), the guide provides an excellent motivational tool for curricular study and activities in the classroom.

ABOUT THIS GUIDE

With the publication of the *2025 & 2026 TSA High School Competitive Events Guide*, come the following changes:

1. The format of this guide has been streamlined to familiarize competitors and advisors with the TSA Conference General Rules and Regulations, and the procedures, regulations, and assessment for each event.

2. General rules that apply to all participants across every competitive event are no longer identified in each competition's regulations. Therefore it is critical, and a personal responsibility of each competitive event participant and advisor, to read and fully adhere to the TSA Conference General Rules and Regulations. As an example, should a competitive event require a test to be taken, there is no longer a specific reminder in the event guidelines for participants to bring their own pencil to the event.

3. Some event's guidelines have been revised in some form, whether in content or in format.

COMPETITIVE EVENTS PROGRAM

LEVELS OF COMPETITION

A. The breakdown of grades noted below is used to designate levels for competition entries. Each level has its own unique competitive events guide.

- Middle School/Junior High School level— Grades 5, 6, 7, 8, 9

- High School level—Grades 9, 10, 11, 12

- Ninth graders must compete at the level in which the chapter affiliates.

  - If the configuration of the school includes grades 9-12, ninth grade students must compete in high school events.
  - If the configuration of the school includes grades 6-9 or 7-9, ninth grade students must compete in middle school events.

B. If the school has a K-12 configuration, or a configuration other than the examples above, national TSA should be contacted for clarification and approval regarding the appropriate school level designation.

GENERAL RULES AND REGULATIONS

NOTE: General rules and regulations apply to *all* competitive events and are *in addition* to each event's specific guidelines.

A. Affiliation and Membership

1. TSA members, advisors, and chapters must be currently affiliated with TSA to enter any competitive event.
2. TSA membership rights extend through the year of graduation.
3. Students who graduate mid year may compete at the national conference that immediately follows their end-of-year graduation.

B. Conference Registration, Attendance, and Participation in Events

1. Individuals who wish to attend the conference must complete conference registration.

2. Students must be registered and be in attendance with an adult chaperone at the National TSA Conference in order to enter and become a semifinalist or finalist in any event.

3. All adult advisors, chaperones, and student participants must be in attendance for the entire conference.

4. National TSA Conference registrants must wear conference identification badges at all times.

5. The TSA competitive event limit is six (6) events per conference participant—individual and team events combined.

6. Team events:

   a. All team members must be affiliated with the same chapter.

   b. Registration for any team competitive event requires the identification of all team members. A (one) team captain must be designated by the chapter advisor for any of the events with online submission requirements. The captain is responsible for uploading the competition entry/documentation on behalf of the entire team. Team captain responsibility does not apply for team events that involve a preliminary exam; all team members must take an exam to determine an average team score.

   c. Unless otherwise designated in a competition's eligibility guideline, the maximum size of a team is six (6) members.

C. Student Responsibilities for Competitions

1. It is the individual responsibility of each participant to obtain all rules and guidelines for competitive events.

2. Lack of knowledge or understanding about a particular event is neither reason nor excuse for an individual to request an accommodating adjustment or change.

3. Students and advisors must routinely check the TSA website, TSAweb.org, for updated information about TSA general rules and competitive event guidelines.

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4. Students who participate in any TSA competitive event are responsible for knowing all updates, changes, and clarifications related to that event.

5. Student competitors are responsible for ensuring that all competition-related websites and internet-based content are accessible from their device (personal or school-issued). TSA assumes no responsibility for a student competitor's inability to access national TSA conference competition platforms and/or web-based content.

D. Competition Entries

1. Entries must be started and completed during the current school year.

2. Entries may be submitted for one (1) year, and one (1) competition only. An infraction of this rule results in disqualification.

3. Each participant/team shall submit only one (1) entry per event.

4. All entries that require the onsite submission of a documentation portfolio must be secured in a clear front report cover unless otherwise indicated in an event's regulations (View a sample report cover).

5. All entries must be in English.

6. Participants must check in and pick up their event entries at the times and places stated in the conference program, or as announced during the National TSA Conference.

7. Testing, for events that include a test according to the current Middle School and High School Competitive Events Guides, may be administered online only at the national TSA conference. Written (paper) tests may not be available.

8. Individual participants, or each team member, must bring:

   a. One (1) laptop or tablet capable of networking via Wi-Fi, and running solely on battery power for up to two (2) consecutive hours. Google Chrome is the preferred browser.

   b. Optional: One (1) mouse

   c. External keyboards and monitors are not permitted

9. For any competition that involves the use of a pencil (e.g., for producing required sketches), participants must provide—and bring to the competition site two (2) pencils, either:

   • sharpened standard #2/HB grade with an eraser, or

   • #2 mechanical with an eraser

10. Entry content:

    a. National TSA provides guidelines for individual and team entry content but does not bear responsibility for content choices made by participants.

    b. Entries are evaluated on the basis of an event's official rating form.

11. Projects and/or products:

    a. Unless otherwise specified, no identifying information—other than a student or team ID#—is to be included on an entry.

    b. Exceptions to this rule are:

       i. Middle school competitive events:

          1. Career Prep

          2. Children's Stories

          3. Community Service Video

          4. Construction Challenge

          5. Structural Engineering

       ii. High school competitive events:

          1. Architectural Design

          2. Audio Podcasting (student first name[s] only may be used)

          3. Children's Stories

          4. Digital Video Production

          5. Structural Design and Engineering

       iii. Events that require submission of a Work Log shall include indication of student initials only.

    c. Unless otherwise noted, for all events that require a display, the size of the display may not exceed 15" deep x 2.5' wide x 4' high.

12. TSA may choose to keep National TSA Conference student entries.

    a. Such entries may be used by national TSA for promotional purposes. Should that occur, credit for any such entry would be noted by TSA.

    b. If applicable, the USB flash drive entries will become the property of TSA and will not be returned.

E. **Citations, References, and Copyrighted Material**

1. For all applicable competitive events, citations/references must follow a professional citation style of the competitors choosing unless the competitive event specifies a specific formatting style. Failure to use a professional citation style will result in a rules violation of twenty percent (20%). Some examples of professional citation styles include MLA, APA, Chicago, and IEEE.

2. All entries must be the original work of the student participant or student team.

3. All ideas, text, images (including those labeled "for reuse"), and sound from other sources must be cited.

4. If copyrighted material is used, written permission must be included.

    a. An internet search about copyrighted material and copyright fair use is recommended if ideas, text, images, or sound from other sources are incorporated into an event entry.

    b. For information about the use of the TSA logo, refer to the TSA Branding Guide in the Student Member Site.

5. TSA Honor Statement for Competitive Events:

    a. All work must be created and completed by individual competitors or teams. Plagiarism, the use of Generative Artificial Intelligence (GenAI) software, copyright violation, cheating, and falsification of information are prohibited.

    b. Participants may NOT use any generative artificial intelligence (GenAI) tools (e.g. ChatGPT, Google Gemini, GitHub Copilot, etc.). Any attempt to gain an unfair advantage will not be tolerated.

    c. Competitors at any level of TSA competition understand and agree to abide by the TSA Honor Statement.

    d. If it is determined that a student violated the TSA Honor Statement, a rules violation of twenty percent (20%) will be incurred.

F. **Prohibited Materials, References, and Images**

1. Hazardous materials, chemicals, lighted or open flames, combustibles, wet cell batteries, and other similar substances are not allowed at the national TSA conference.

2. Competition entries or presentations by participants must not include racial or ethnic slurs/symbols, reference to gang affiliation, or vulgar, violent, subversive, or sexually suggestive language or images.

3. Entries or presentations may not promote products that students may not legally buy, such as tobacco, alcohol, or illegal drugs.

4. Images of guns, knives, or other weapons are prohibited.

5. The Entertainment Software Rating Board (ESRB) provides industry guidance on the content of video games and/or applications. Please refer to the ESRB overview for the categories, descriptions, and elements of video content that may be included in competition entries.

6. Interpretation of the content of competition entries is at the discretion of the judges. Failure to follow any of the above procedures may result in disqualification.

G. **TSA Liability**

1. TSA is not responsible or liable for any personal property, equipment, or materials brought to the National TSA Conference for use by a participant or attendee.

H. Event Scheduling Conflicts

1. When an event scheduling conflict could prevent an individual from participating in an event, the individual has the right to not compete in an event.

I. Emergencies

1. Team member substitution may be allowed should a documented emergency arise in team events that involve written and semifinalist segments. All substitutions must be approved by the event manager and coordinator.

J. Event Judging

1. All events are judged in accordance with the stated event criteria noted in this competitive events guide.

2. Tier scoring has been implemented in the preliminary round of some events and is intended to streamline the evaluation process used to determine semifinalists.

3. The decisions of judges related to competitive events are final.

K. Procedure for filing a grievance with the Rules Interpretation Panel

The Rules Interpretation Panel (RIP), a group made up of at least three (3) CRC members, monitors and oversees the competitive events during the National TSA Conference. The panel provides a means by which state advisors may express grievances and concerns about conference situations that pertain to events, and it ensures continuity from year to year for competitive event rules and regulations.

1. All concerns must be in writing using the correct form in the guide. The Rules Interpretation Panel Grievance form (see Forms Appendix) must be completed in its entirety.

2. Only state advisors may submit a request to the Rules Interpretation Panel (RIP) at the national conference. Should an individual/team/chapter advisor have a concern about an event, the state advisor shall be the point of contact. National TSA will not accept forms from anyone other than the state advisor.

3. During the conference, the RIP panel will meet to discuss and analyze the advisor's concern.

4. It is the intent of the panel to resolve any grievances at the conference with a written response to the state advisor.

5. Only the state advisor may pick up the written response from the RIP panel.

6. All decisions made by the panel are final.

L. Rules Violations and Disqualifications

1. A rules violation that gives a competitor an unfair advantage will result in a twenty percent (20%) deduction of the total possible points in either a preliminary or semifinal round, as applicable.

2. The coordinator or manager of an event has the right to disqualify a competitor when this type of incident occurs.

3. The event coordinator and manager must sign off on both a twenty percent (20%) deduction and a disqualification.

M. Semifinalists

1. Should the competition have a semifinal round, the event will have a minimum of twelve (12) semifinalists.

2. Semifinalists (individuals or teams, as applicable) will compete against one another to determine the top ten (10) finalists in an event.

3. All members of a semifinalist team will participate in the semifinalist portion of an event, unless otherwise noted in the event's regulations.

N. Electronic Devices

1. Recording devices are not allowed in certain competitive events.

2. CRC manager and event coordinator approval is required before any event may be recorded.

3. All electronic devices—including but not limited to, cell phones, iPads/tablets, electronic readers, smart watches, etc.—*must* be turned off, unless otherwise noted in specific event regulations.

4. No electronic communication devices of any kind are permitted during competition.

COMPETITION REGULATIONS COMMITTEE

The Competition Regulations Committee (CRC) is composed of dedicated STEM teachers and education professionals from across the country who have made major commitments to create and maintain the high quality of national TSA's competitive events. Some CRC members are charged with reviewing TSA's competitive events, updating them as necessary, and presiding over the competitive events at the annual national TSA conference.

Ideas and feedback regarding events are always welcome. Guidelines and forms can be found in the Forms Appendix of this guide for proposing a new event and for suggesting revisions to existing event.

EVENT COORDINATOR REMINDERS

TSA appreciates the support of its event coordinators, many of whom are teachers attending the conference with students from their chapters. The busy schedules of these individuals prompt the reminders that follow.

A. Competitive event coordinators must be present for a mandatory coordinator's meeting on the first day of the conference.

B. Competitive event coordinators must be present for conference event check-in and check-out if they are coordinating an event in which these activities take place.

1. Generally speaking, "check-in" is on the evening of registration day, and "check-out" is held on the day before the awards ceremony.

2. Tentative schedule information will be available before the conference on the TSA website.

C. The Competition Regulations Committee, which consists of all the event managers, is available throughout the conference to support coordinators as they supervise competitive events.

AWARDS

At the conference awards ceremony, ten (10) finalists in each event are identified in random order and called to the stage for recognition and to receive a finalist lapel pin. The top three (3) winners in each event receive trophies.

EVENT PROPOSAL INFORMATION

As technology evolves and technology education attempts to keep pace and reflect these changes, new TSA events are added, some are revised, and others are dropped. TSA chapter advisors, state advisors, and others are encouraged to submit proposals for new events.

The following topics reflect potential direction for development:

- 21st century technology
- 3D printing
- Adaptive/Assistive Technology
- Cloud computing
- CoDrone
- Cyber Robotics Coding
- Data management
- Economic development
- Electronic publishing
- Engineering
- Environmental technology
- Fluid power technology
- Future technologies
- Green technology
- Innovative power sources
- Lasers/satellites/radar
- Manufacturing technology
- Mobile apps
- Social media marketing
- Transportation technology

When submitting a proposal for consideration, include these elements:

- Overview (description of the event and participant expectations)
- Eligibility for entry
- Limitations (such as time or entry submission requirements)
- Resource considerations (i.e. Are the resources a limiting factor, or are they affordable/readily available to all populations? Can this be executed at the national level?)
- Specific regulations
- Required personnel
- Alignment with STEM standards

Formative ideas are welcome, but the more complete the proposal the less likely it will be misinterpreted. The Competition Regulations Committee (CRC) acknowledges all submissions, and each is given consideration for possible inclusion in a competitive events guide. Once submitted, ideas and events become the property of national TSA. Proposals must be submitted by July 1 of first conference year of the current guide in order to be considered for the next guide.

Find the form in the Forms Appendix of this guide. Proposals must include the submitter's name and complete contact information. Proposals may be mailed to CRC, c/o National TSA, 1904 Association Drive, Reston, VA 20191-1540, or emailed in a Word file attachment to general@tsaweb.org.

DRESS CODE

NATIONAL TSA CONFERENCE DRESS CODE AND OFFICIAL CONFERENCE ATTIRE GUIDELINES

A. Chapter and state advisors, parents, and chaperones are responsible for seeing that all TSA student members wear TSA competition, general session, or casual attire as occasions may require.

B. Everyone who is registered for the conference, including parents, guests, and children, must comply with the TSA dress code policy.

C. TSA attire may be purchased online via the SHOP tab on the TSA website.

D. Because adults (advisors, parents, and guests) serve as role models at TSA conferences and activities, they are expected to dress appropriately for all TSA occasions they attend.

E. Students must adhere to the TSA dress code requirements as listed in this section and on the TSA website.

F. When students compete in any competitive event they must wear competition attire.

G. Students not in appropriate competition attire when they compete may be allowed to participate in an event, but they will lose twenty percent (20%) of the total possible points per round.

COMPETITION ATTIRE

1. **Shirt:** official royal blue TSA shirt
2. **Pants, or at least knee-length Skirt:** gray
   - *Unacceptable:* jeans; jeggings; leggings; baggy pants; exterior pocket pants; shorts
3. **Shoes:** black dress shoes worn with black or dark blue socks, hosiery (optional):
   - open-toed shoes or sandals are acceptable
   - *Unacceptable:* athletic shoes; flip-flops; military boots; or work boots

REQUIRED ADDITIONAL ATTIRE FOR MIDDLE AND HIGH SCHOOL CHAPTER TEAM EVENT

1. **Blazer:** navy blue with official TSA patch
2. **Tie:** official TSA tie (males)
   - Females are not penalized for wearing the official TSA tie to Chapter Team or any other competitive event

Above attire may be worn for other competitions if preferred by event participants.

GENERAL SESSION ATTIRE

1. **Shirt:** the official TSA shirt (royal blue) is preferred; button-down shirt or a polo/golf shirt
   - *Unacceptable:* t-shirts; halter tops; tank tops
2. **Pants, or at least knee-length Dress or Skirt**
   - *Unacceptable:* jeans; jeggings; leggings; baggy pants; exterior pocket pants; shorts
3. **Optional Blazer:** navy blue with official TSA patch
4. **Optional Tie:** official TSA tie
5. **Shoes:** dress shoes worn with dark socks, hosiery (optional):
   - open-toed shoes or sandals are acceptable
   - *Unacceptable*: athletic shoes; flip-flops; military boots; or work boots

CASUAL ATTIRE

1. Appropriate t-shirts, shorts, or jeans
2. Casual attire **may not** be worn at competitions or general sessions

Registered parents, guests, and children who are not compliant with General Session Attire and who wish to attend the Awards Ceremony, may be asked to sit in a designated section, if permitted entry.

Approved by the TSA, Inc. Board of Directors.
The above supersedes any other dress code prior to September 24, 2022.

PARTNERSHIP FOR 21ST CENTURY SKILLS (P21)

In 2002, the Partnership for 21st Century Skills (now the Partnership for 21st Century Learning, or P21) was founded as a non-profit organization by a coalition that included members of the national business community, education leaders, and policymakers.

21st century skills comprise skills, abilities, and learning dispositions that have been identified as being required for success in 21st century society and workplaces by educators, business leaders, academics, and governmental agencies. This is part of a growing international movement focusing on the skills required for students to master in preparation for success in a rapidly changing, digital society. Many of these skills are also associated with deeper learning, which is based on mastering skills such as analytic reasoning, complex problem solving, and teamwork. TSA's competitive events provide a natural platform to highlight the leadership and 21st century capabilities of students.

TSA's leadership program engages participants to be the best member they can be, as they seek knowledge about themselves, the organization, and their community, while developing and demonstrating leadership and 21st century skills. Leadership and 21st century skills components are all specifically tailored for each individual competitive event, and are evaluated based on the official rules and rubrics.

- For example, in one competitive event team members might note the communication, collaboration, and teamwork skills they used to finalize their idea/design in their Work Log. While in another event, a brief discussion of leadership skills and/or 21st century skills that they developed or demonstrated while working on a project might be highlighted as part of an existing presentation/interview. Criteria will be included in the rubric to evaluate the leadership and 21st century skills documented or demonstrated within these components.

TSA's leadership program features the development of leadership and 21st century skills.

TSA will provide related resources to affiliated chapters through the updated TSA member database. Participation in the TSA competitive events develops leadership and 21st century skills in student members – skills essential for success in the job market.

- There will be other competitive events in which a student/team may naturally demonstrate leadership skills as part of the event. In these events, criteria will be included in the rubric to evaluate the overall leadership and 21st century skills demonstrated.

During the course of preparing for, and participating in a TSA competitive event, participants will study leadership and 21st century skills, and put them into practice. Participants will use the widely accepted leadership and 21st century skills resources, in addition to other resources provided on the TSA website, as they complete the competitive event leadership requirements for all TSA competitions.

TSA believes that acquiring leadership and 21st century skills is critical to the success of young people. The resources found on the TSA website provide TSA advisors with a source for teaching, and students with an opportunity to practice these crucial skills.

TSA's leadership program focuses on the below definitions of leadership and 21st century skills as developed through participation in middle and high school competitions:

Communication: a process by which information is exchanged between individuals through a common system of symbols, signs, or behavior

Collaboration/Social Skills: to work jointly with others, especially in an intellectual endeavor

Initiative: energy or aptitude displayed in initiation of action

Problem Solving/Risk Taking: the process or act of finding a solution to a problem/the act or fact of doing something that involves danger or risk in order to achieve a goal

Critical Thinking (lateral thinking): a method for solving problems by making unusual or unexpected connections between ideas

Perseverance/Grit: continued effort to do or achieve something despite difficulties, failure, or opposition/ firmness of mind or spirit--unyielding courage in the face of hardship or danger

Creativity: the quality of being creative

Relationship Building/Teamwork: work done by several associates with each doing a part but all subordinating personal prominence to the efficiency of the whole

Dependability/Integrity: capable of being trusted or depended on/firm adherence to a code of especially moral or artistic values

Flexibility/Adaptability: characterized by a ready capability to adapt to new, different, or changing requirements

SOURCES

en.wikipedia.org/wiki/21st_century_skills

www.merriam-webster.com/dictionary/dictionary

www.edglossary.org/21st-century-skills

www.nea.org/home/34888.htm

www.lead4change.org/wp-content/uploads/2019/09/L4C_21stCenturySkillsAlignment_12-Track_2020.pdf

SCIENCE, TECHNOLOGY, ENGINEERING, AND MATHEMATICS (STEM) INTEGRATION

In recent years, not only educators, but also political, civic, and industry leaders have pushed for a greater emphasis on STEM education in schools. It is globally recognized that in order for any nation to be competitive, future generations must develop competency in the 21st century skills afforded through STEM fields. TSA promotes a vision of students literate in these fields and believes competitions within this guide help make that vision a reality.

STEM education is not just an isolated and discreet acquisition of STEM knowledge and skills. Rather, STEM education demands the interdisciplinary application of these academic fields to improve outcomes in comprehension, communication, and problem solving. It is commonly accepted that the correlation between these STEM disciplines is interdependent. In order to develop a deep comprehension of one STEM area, one must simultaneously have an encompassing knowledge of another. For example, to design and engineer with any degree of complexity, one also must be familiar with technology, mathematics, and science. To practice science, one must have a firm knowledge of mathematics and technology.

Beyond necessity, there is another reason for STEM education in our schools and why the TSA program of activities inherently aligns with STEM goals. This reason revolves around teaching, learning, and what motivates our 21st century learners.

When students participate in TSA competitions, they find they must not only embrace the value of design when they compete, but they also must conceptualize, assess, and materialize that vision. Students may choose to work collaboratively, depending upon the requirements of an event, or they may choose to work independently.

Irrespective of this choice, students develop the essential leadership and critical thinking skills to execute their strategy and align their intention with the STEM objectives set forth in this guide. STEM education is intrinsically exciting, rewarding, and meaningful for instructors and students alike. Through TSA competitive events, instructors challenge students to solve real-world problems through project-based learning and reflective experiences. This rigorous process supplements and complements classroom objectives by asking students to critically evaluate all aspects of their thought processes—from design, to communication, to execution.

Deserving of mention are three other essential areas embedded in most of TSA's competitive events—creativity, innovation, and ethics. Teaching students to think outside the box while considering the ethical consequences provides a global perspective essential to the success of our society. Through TSA competitions, students are asked to design creatively, while assessing the effects and impacts of what they develop.

The competitions found in this guide provide a hands-on venue for learning about STEM. By participating in TSA's competitive events, students gain a broader understanding of these content areas as they experience the satisfaction that comes from applying them to real life, problem-solving situations.

This section of the guide includes commonly accepted national standards for the areas of science, technology, and mathematics.

NEXT GENERATION SCIENCE STANDARDS* (GRADES 9-12)

A. Structure and Properties of Matter

1. **PS1-1:** Use the periodic table as a model to predict the relative properties of elements based on the patterns of electrons in the outermost energy level of atoms.

2. **PS1-3:** Plan and conduct an investigation to gather evidence to compare the structure of substances at the bulk scale to infer the strength of electrical forces between particles.

3. **PS1-8:** Develop models to illustrate the changes in the composition of the nucleus of the atom and the energy released during the processes of fission, fusion, and radioactive decay.

4. **PS2-6:** Communicate scientific and technical information about why the molecular-level structure is important in the functioning of designed materials.

B. Chemical Reactions

1. **PS1-2:** Construct and revise an explanation for the outcome of a simple chemical reaction based on the outermost electron states of atoms, trends in the periodic table, and knowledge of the patterns of chemical properties.

2. **PS1-4:** Develop a model to illustrate that the release or absorption of energy from a chemical reaction system depends upon the changes in total bond energy.

3. **PS1-5:** Apply scientific principles and evidence to provide an explanation about the effects of changing the temperature or concentration of the reacting particles on the rate at which a reaction occurs.

4. **PS1-6:** Refine the design of a chemical system by specifying a change in conditions that would produce increased amounts of products at equilibrium.

5. **PS1-7:** Use mathematical representations to support the claim that atoms, and therefore mass, are conserved during a chemical reaction.

C. Forces and Interactions

1. **PS2-1:** Analyze data to support the claim that Newton's second law of motion describes the mathematical relationship among the net force on a macroscopic object, its mass, and its acceleration

2. **PS2-2:** Use mathematical representations to support the claim that the total momentum of a system of objects is conserved when there is no net force on the system.

3. **PS2-3:** Apply scientific and engineering ideas to design, evaluate, and refine a device that minimizes the force on a macroscopic object during a collision.*

4. **PS2-4:** Use mathematical representations of Newton's Law of Gravitation and Coulomb's Law to describe and predict the gravitational and electrostatic forces between objects.

5. **PS2-5:** Plan and conduct an investigation to provide evidence that an electric current can produce a magnetic field and that a changing magnetic field can produce an electric current.

D. Energy

1. **PS3-1:** Create a computational model to calculate the change in the energy of one component in a system when the change in energy of the other component(s) and energy flows in and out of the system are known.

2. **PS3-2:** Develop and use models to illustrate that energy at the macroscopic scale can be accounted for as a combination of energy associated with the motions of particles (objects) and energy associated with the relative position of particles (objects).

3. **PS3-3:** Design, build, and refine a device that works within given constraints to convert one form of energy into another form of energy.*

4. **PS3-4:** Plan and conduct an investigation to provide evidence that the transfer of thermal energy when two components of different temperature are combined within a closed system results in a more uniform energy distribution among the components in the system (second law of thermodynamics)

5. **PS3-5:** Develop and use a model of two objects interacting through electric or magnetic fields to illustrate the forces between objects and the changes in energy of the objects due to the interaction.

E. Waves and Electromagnetic Radiation

1. **PS4-1:** Use mathematical representations to support a claim regarding relationships among the frequency, wavelength, and speed of waves traveling in various media.

2. **PS4-2:** Evaluate questions about the advantages of using a digital transmission and storage of information.

3. **PS4-3:** Evaluate the claims, evidence, and reasoning behind the idea that electromagnetic radiation can be described either by a wave model or a particle model, and that for some situations one model is more useful than the other.

4. **PS4-4:** Evaluate the validity and reliability of claims in published materials of the effects that different frequencies of electromagnetic radiation have when absorbed by matter.

5. **PS4-5:** Communicate technical information about how some technological devices use the principles of wave behavior and wave interactions with matter to transmit and capture information and energy.*

F. Structure, Function, and Information Processing

1. **LS1-1:** Construct an explanation based on evidence for how the structure of DNA determines the structure of proteins which carry out the essential functions of life through systems of specialized cells.

2. **LS1-2:** Develop and use a model to illustrate the hierarchical organization of interacting systems that provide specific functions within multicellular organisms.

3. **LS1-3:** Plan and conduct an investigation to provide evidence that feedback mechanisms maintain homeostasis.

G. Matter and Energy in Organisms and Ecosystems

1. **LS1-5:** Use a model to illustrate how photosynthesis transforms light energy into stored chemical energy.

2. **LS1-6:** Construct and revise an explanation based on evidence for how carbon, hydrogen, and oxygen from sugar molecules may combine with other elements to form amino acids and/or other large carbon-based molecules.

3. **LS1-7:** Use a model to illustrate that cellular respiration is a chemical process whereby the bonds of food molecules and oxygen molecules are broken and the bonds in new compounds are formed resulting in a net transfer of energy.

4. **LS2-3:** Construct and revise an explanation based on evidence for the cycling of matter and flow of energy in aerobic and anaerobic conditions.

5. **LS2-4:** Use mathematical representations to support claims for the cycling of matter and flow of energy among organisms in an ecosystem.

6. **LS2-5:** Develop a model to illustrate the role of photosynthesis and cellular respiration in the cycling of carbon among the biosphere, atmosphere, hydrosphere, and geosphere.

H. Interdependent Relationships in Ecosystems

1. **LS2-1:** Use mathematical and/or computational representations to support explanations of factors that affect carrying capacity of ecosystems at different scales.

2. **LS2-2:** Use mathematical representations to support and revise explanations based on evidence about factors affecting biodiversity and populations in ecosystems of different scales.

3. **LS2-6:** Evaluate the claims, evidence, and reasoning that the complex interactions in ecosystems maintain relatively consistent numbers and types of organisms in stable conditions, but changing conditions may result in a new ecosystem.

4. **LS2-7:** Design, evaluate, and refine a solution for reducing the impacts of human activities on the environment and biodiversity.*

5. **LS2-8:** Evaluate the evidence for the role of group behavior on individual and species' chances to survive and reproduce.

6. **LS4-6:** Create or revise a simulation to test a solution to mitigate adverse impacts of human activity on biodiversity.*

I. Inheritance and Variation of Traits

1. **LS1-4:** Use a model to illustrate the role of cellular division (mitosis) and differentiation in producing and maintaining complex organisms.

2. **LS3-1:** Ask questions to clarify relationships about the role of DNA and chromosomes in coding the instructions for characteristic traits passed from parents to offspring.

3. **LS3-2:** Make and defend a claim based on evidence that inheritable genetic variations may result from: (1) new genetic combinations through meiosis, (2) viable errors occurring during replication, and/or (3) mutations caused by environmental factors.

4. **LS3-3:** Apply concepts of statistics and probability to explain the variation and distribution of expressed traits in a population.

J. Natural Selection and Evolution

1. **LS4-1:** Communicate scientific information that common ancestry and biological evolution are supported by multiple lines of empirical evidence.

2. **LS4-2:** Construct an explanation based on evidence that the process of evolution primarily results from four factors: (1) the potential for a species to increase in number, (2) the heritable genetic variation of individuals in a species due to mutation and sexual reproduction, (3) competition for limited resources, and (4) the proliferation of those organisms that are better able to survive and reproduce in the environment.

3. **LS4-3:** Apply concepts of statistics and probability to support explanations that organisms with an advantageous heritable trait tend to increase in proportion to organisms lacking this trait.

4. **LS4-4:** Construct an explanation based on evidence for how natural selection leads to adaptation of populations.

5. **LS4-5:** Evaluate the evidence supporting claims that changes in environmental conditions may result in: (1) increases in the number of individuals of some species, (2) the emergence of new species over time, and (3) the extinction of other species.

K. Space Systems

1. **ESS1-1:** Develop a model based on evidence to illustrate the life span of the sun and the role of nuclear fusion in the sun's core to release energy that eventually reaches Earth in the form of radiation.

2. **ESS1-2:** Construct an explanation of the Big Bang theory based on astronomical evidence of light spectra, motion of distant galaxies, and composition of matter in the universe.

3. **ESS1-3:** Communicate scientific ideas about the way stars, over their life cycle, produce elements.

4. **ESS1-4:** Use mathematical or computational representations to predict the motion of orbiting objects in the solar system.

L. History of Earth

1. **ESS1-5:** Evaluate evidence of the past and current movements of continental and oceanic crust and the theory of plate tectonics to explain the ages of crustal rocks.

2. **ESS1-6:** Apply scientific reasoning and evidence from ancient Earth materials, meteorites, and other planetary surfaces to construct an account of Earth's formation and early history.

3. **ESS2-1:** Develop a model to illustrate how Earth's internal and surface processes operate at different spatial and temporal scales to form continental and ocean-floor features.

M. Earth's Systems

1. **ESS2-2:** Analyze geoscience data to make the claim that one change to Earth's surface can create feedbacks that cause changes to other Earth systems.

2. **ESS2-3:** Develop a model based on evidence of Earth's interior to describe the cycling of matter by thermal convection.

3. **ESS2-5:** Plan and conduct an investigation of the properties of water and its effects on Earth materials and surface processes.

4. **ESS2-6:** Develop a quantitative model to describe the cycling of carbon among the hydrosphere, atmosphere, geosphere, and biosphere.

5. **ESS2-7:** Construct an argument based on evidence about the simultaneous coevolution of Earth's systems and life on Earth.

N. Weather and Climate

1. **ESS2-4:** Use a model to describe how variations in the flow of energy into and out of Earth's systems result in changes in climate.

2. **ESS3-5:** Analyze geoscience data and the results from global climate models to make an evidence-based forecast of the current rate of global or regional climate change and associated future impacts to Earth systems.

O. Human Sustainability

1. **ESS3-1:** Construct an explanation based on evidence for how the availability of natural resources, occurrence of natural hazards, and changes in climate have influenced human activitity.

2. **ESS3-2:** Evaluate competing design solutions for developing, managing, and utilizing energy and mineral resources based on cost-benefit ratios.*

3. **ESS3-3:** Create a computational simulation to illustrate the relationships among management of natural resources, the sustainability of human populations, and biodiversity.

4. **ESS3-4:** Evaluate or refine a technological solution that reduces impacts of human activities on natural systems.*

5. **ESS3-6:** Use a computational representation to illustrate the relationships among Earth systems and how those relationships are being modified due to human activity.

P. Engineering Design

1. **ETS1-1:** Analyze a major global challenge to specify qualitative and quantitative criteria and constraints for solutions that account for societal needs and wants.

2. **ETS1-2:** Design a solution to a complex real-world problem by breaking it down into smaller, more manageable problems that can be solved through engineering.

3. **ETS1-3**: Evaluate a solution to a complex real-world problem based on prioritized criteria and trade-offs that account for a range of constraints, including cost, safety, reliability, and aesthetics, as well as possible social, cultural, and environmental impacts.

4. **ETS1-4**: Use a computer simulation to model the impact of proposed solutions to a complex real-world problem with numerous criteria and constraints on interactions within and between systems relevant to the problem.

Although not formally aligned, this standards alignment of TSA competitve events has been developed in accordance with the Next Generation Science Standards (NGSS) model.

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NEXT GENERATION SCIENCE STANDARDS (GRADES 9-12)

Event	Standard Number	A-PS1-1	A-PS1-3	A-PS1-8	A-PS2-6	B-PS1-2	B-PS1-4	B-PS1-5	B-PS1-6	B-PS1-7	C-PS2-1	C-PS2-2	C-PS2-3	C-PS2-4	C-PS2-5	D-PS3-1	D-PS3-2	D-PS3-3	D-PS3-4	D-PS3-5	E-PS4-1	E-PS4-2	E-PS4-3	E-PS4-4	E-PS4-5
Animatronics																									
Architectural Design																									
Audio Podcasting																									
Biotechnology Design					X																				
Board Game Design																									
Chapter Team																									
Children's Stories																									
Coding																									
Computer-Aided Design (CAD), Architecture																									
Computer-Aided Design (CAD), Engineering																									
Data Science and Analytics																									
Debating Technological Issues																									
Digital Video Production																									
Dragster Design																									
Drone Challenge (UAV)																		X							
Engineering Design																									
Extemporaneous Speech																									
Fashion Design and Technology																									
Flight Endurance																									
Forensic Science																									
Future Technology and Engineering Teacher																									
Geospatial Technology																									
Manufacturing Prototype																									
Music Production																									
On Demand Video																									
Photographic Technology																									
Prepared Presentation																									
Promotional Design																									
Robotics																									
Senior Solar Sprint												X					X	X							
Software Development																									
STEM Mass Media																									
Structural Design and Engineering																									
System Control Technology																									
Technology Bowl																									
Technology Problem Solving																									
Transportation Modeling																									
Video Game Design																									
Virtual Reality Simulation (VR)																									
Webmaster																									

Technology Student Association (TSA) High School Competitive Events Guide for the 2025 and 2026 National TSA Conferences

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SCIENCE, TECHNOLOGY, ENGINEERING, AND MATHEMATICS (STEM) INTEGRATION

NEXT GENERATION SCIENCE STANDARDS (GRADES 9-12) – continued

Event	Standard Number F-LS1-1	F-LS1-2	F-LS1-3	G-LS1-5	G-LS1-6	G-LS1-7	G-LS2-3	G-LS2-4	G-LS2-5	H-LS2-1	H-LS2-2	H-LS2-6	H-LS2-7	H-LS2-8	H-LS4-6	I-LS1-4	I-LS3-1	I-LS3-2	I-LS3-3	J-LS4-1	J-LS4-2	J-LS4-3	J-LS4-4	J-LS4-5
Animatronics																								
Architectural Design																								
Audio Podcasting																								
Biotechnology Design		X											X		X									
Board Game Design																								
Chapter Team																								
Children's Stories																								
Coding																								
Computer-Aided Design (CAD), Architecture																								
Computer-Aided Design (CAD), Engineering																								
Data Science and Analytics										X	X	X		X							X			X
Debating Technological Issues																								
Digital Video Production																								
Dragster Design																								
Drone Challenge (UAV)																								
Engineering Design																								
Extemporaneous Speech																								
Fashion Design and Technology																								
Flight Endurance																								
Forensic Science																								
Future Technology and Engineering Teacher																								
Geospatial Technology																								
Manufacturing Prototype																								
Music Production																								
On Demand Video																								
Photographic Technology																								
Prepared Presentation																								
Promotional Design																								
Robotics																								
Senior Solar Sprint																								
Software Development																								
STEM Mass Media																								
Structural Design and Engineering																								
System Control Technology																								
Technology Bowl																								
Technology Problem Solving																								
Transportation Modeling																								
Video Game Design																								
Virtual Reality Simulation (VR)																								
Webmaster																								

NEXT GENERATION SCIENCE STANDARDS (GRADES 9-12) – continued

Standard Number

Event	K-ESS1-1	K-ESS1-2	K-ESS1-3	K-ESS1-4	L-ESS1-5	L-ESS1-6	L-ESS2-1	M-ESS2-2	M-ESS2-3	M-ESS2-5	M-ESS2-6	M-ESS2-7	N-ESS2-4	N-ESS3-5	O-ESS3-1	O-ESS3-2	O-ESS3-3	O-ESS3-4	O-ESS3-6	P-ETS1-1	P-ETS1-2	P-ETS1-3	P-ETS1-4
Animatronics																							
Architectural Design																		X	X		X		
Audio Podcasting																							
Biotechnology Design																		X		X	X	X	
Board Game Design																							
Chapter Team																							
Children's Stories																							
Coding																							
Computer-Aided Design (CAD), Architecture																		X					
Computer-Aided Design (CAD), Engineering																		X					
Data Science and Analytics																	X		X	X		X	
Debating Technological Issues																							
Digital Video Production																							
Dragster Design																							
Drone Challenge (UAV)																					X		
Engineering Design																		X	X	X	X	X	X
Extemporaneous Speech																							
Fashion Design and Technology																							
Flight Endurance																							
Forensic Science																							
Future Technology and Engineering Teacher																							
Geospatial Technology								X											X				
Manufacturing Prototype																						X	
Music Production																							
On Demand Video																							
Photographic Technology																							
Prepared Presentation																							
Promotional Design																							
Robotics																							
Senior Solar Sprint																						X	
Software Development																							
STEM Mass Media																							
Structural Design and Engineering																					X	X	
System Control Technology																							
Technology Bowl																							
Technology Problem Solving																							
Transportation Modeling																		X		X	X	X	
Video Game Design																							
Virtual Reality Simulation (VR)																							X
Webmaster																							

STANDARDS FOR TECHNOLOGICAL AND ENGINEERING LITERACY (STEL)

STEL 1. Nature and Characteristics of Technology and Engineering

1N. Explain how the world around them guides technological development and engineering design.

1O. Assess how similarities and differences among scientific, mathematics, engineering, and technological knowledge and skills contributed to the design of a product or system.

1P. Analyze the rate of technological development and predict future diffusion and adoption of new technologies.

1Q. Conduct research to inform intentional inventions and innovations that address specific needs and wants.

1R. Develop a plan that incorporates knowledge from science, mathematics, and other disciplines to design or improve a technological product or system.

STEL 2. Core Concepts of Technology and Engineering

2T. Demonstrate the use of conceptual, graphical, virtual, mathematical, and physical modeling to identify conflicting considerations before the entire system is developed and to aid in design decision making.

2U. Diagnose a flawed system embedded within a larger technological, social, or environmental system.

2V. Analyze the stability of a technological system and how it is influenced by all of the components in the system, especially those in the feedback loop.

2W. Select resources that involve tradeoffs between competing values, such as availability, cost, desirability, and waste while solving problems.

2X. Cite examples of the criteria and constraints of a product or system and how they affect final design.

2Y. Implement quality control as a planned process to ensure that a product, service, or system meets established criteria.

2Z. Use management processes in planning, organizing, and controlling work.

STEL 3. Integration of Knowledge, Technologies, and Practices

3H. Analyze how technology transfer occurs when a user applies an existing innovation developed for one function for a different purpose.

3I. Evaluate how technology enhances opportunities for new products and services through globalization.

3J. Connect technological progress to the advancement of other areas of knowledge and vice versa.

STEL 4. Impacts of Technology

4P. Evaluate ways that technology can impact individuals, society, and the environment.

4Q. Critique whether existing or proposed technologies use resources sustainably.

4R. Assess a technology that minimizes resource use and resulting waste to achieve a goal.

4S. Develop a solution to a technological problem that has the least negative environmental and social impact.

4T. Evaluate how technologies alter human health and capabilities.

STEL 5. Influence of Society on Technological Development

5H. Evaluate a technological innovation that arose from a specific society's unique need or want.

5I. Evaluate a technological innovation that was met with societal resistance impacting its development.

5J. Design an appropriate technology for use in a different culture.

STEL 6. History of Technology

6F. Relate how technological development has been evolutionary, often the result of a series of refinements to basic inventions or technological knowledge.

6G. Verify that the evolution of civilization has been directly affected by, and has in turn affected, the development and use of tools, materials, and processes.

6H. Evaluate how technology has been a powerful force in reshaping the social, cultural, political, and economic landscapes throughout history.

6I. Analyze how the Industrial Revolution resulted in the development of mass production, sophisticated transportation and communication systems, advanced construction practices, and improved education and leisure time.

6J. Investigate the widespread changes that have resulted from the Information Age, which has placed emphasis on the processing and exchange of information.

STEL 7. Design in Technology and Engineering Education

7W. Determine the best approach by evaluating the purpose of the design.

7X. Document trade-offs in the technology and engineering design process to produce the optimal design.

7Y. Optimize a design by addressing desired qualities within criteria and constraints.

7Z. Apply principles of human-centered design.

7AA. Illustrate principles, elements, and factors of design.

7BB. Implement the best possible solution to a design.

7CC. Apply a broad range of design skills to their design process.

7DD. Apply a broad range of making skills to their design process.

STEL 8. Applying, Maintaining, and Assessing Technological Products and Systems

8N. Use various approaches to communicate processes and procedures for using, maintaining, and assessing technological products and systems.

8O. Develop a device or system for the marketplace.

8P. Apply appropriate methods to diagnose, adjust and repair systems to ensure precise, safe and proper functionality.

8Q. Synthesize data and analyze trends to make decisions about technological products, systems, or processes.

8R. Interpret the results of technology assessment to guide policy development.

STANDARDS FOR TECHNOLOGICAL AND ENGINEERING LITERACY (STEL)

Event	1N	1O	1P	1Q	1R	2T	2U	2V	2W	2X	2Y	2Z	3H	3J	4P	4Q	4R	4S	4T	4T
Animatronics				X	X	X		X		X	X	X								
Architectural Design	X					X				X	X	X				X		X		
Audio Podcasting						X		X		X	X	X							X	
Biotechnology Design	X	X	X	X	X	X		X		X		X			X		X	X	X	
Board Game Design				X		X		X		X	X	X								
Chapter Team																				
Children's Stories					X	X				X	X	X								
Coding					X	X														
Computer-Aided Design (CAD), Architecture																				
Computer-Aided Design (CAD), Engineering																				
Data Science and Analytics		X	X	X	X	X		X	X	X	X	X								
Debating Technological Issues				X																
Digital Video Production				X		X		X		X	X	X								
Dragster Design						X		X	X	X	X	X								
Drone Challenge (UAV)					X	X		X	X	X	X	X							X	
Engineering Design	X	X	X	X	X	X		X	X	X	X	X	X	X	X	X	X	X	X	X
Extemporaneous Speech	X		X	X					X	X	X	X	X	X	X	X	X	X	X	
Fashion Design and Technology						X			X	X	X	X								
Flight Endurance					X	X		X	X		X	X								
Forensic Science					X		X													
Future Technology and Engineering Teacher				X	X							X							X	
Geospatial Technology			X	X	X	X	X	X	X	X	X	X			X	X	X	X	X	
Manufacturing Prototype				X	X	X			X	X	X	X	X	X	X	X		X	X	
Music Production						X														
On Demand Video						X														
Photographic Technology						X														
Prepared Presentation						X														
Promotional Design						X														
Robotics				X	X	X		X		X	X	X								
Senior Solar Sprint					X	X														
Software Development		X	X	X	X	X	X												X	
STEM Mass Media														X	X	X				
Structural Design and Engineering		X		X	X	X		X	X	X	X	X								
System Control Technology		X		X	X	X		X		X	X	X								
Technology Bowl																				
Technology Problem Solving				X	X	X		X	X	X	X	X								
Transportation Modeling				X	X	X				X	X	X								
Video Game Design				X	X	X				X	X	X								
Virtual Reality Simulation (VR)		X		X	X	X						X								
Webmaster		X		X	X	X		X		X	X	X								

STANDARDS FOR TECHNOLOGICAL AND ENGINEERING LITERACY (STEL)

Event	STEL Benchmark	5H	5I	5J	6F	6G	6H	6I	6J	7W	7X	7Y	7Z	7AA	7BB	7CC	7DD	8N	8O	8P	8Q	8R
Animatronics										X	X	X	X	X	X	X	X	X	X	X		
Architectural Design										X	X	X	X	X	X	X	X					
Audio Podcasting				X						X	X	X		X	X	X	X	X				
Biotechnology Design		X	X	X	X					X	X	X	X	X	X	X	X	X	X		X	
Board Game Design										X	X	X	X	X	X	X	X		X			
Chapter Team																						
Children's Stories										X		X	X	X	X	X	X					
Coding										X	X	X		X	X	X	X			X	X	
Computer-Aided Design (CAD), Architecture										X	X	X	X	X	X	X						
Computer-Aided Design (CAD), Engineering										X	X	X		X	X	X					X	
Data Science and Analytics										X	X	X	X	X	X	X	X	X			X	
Debating Technological Issues																						
Digital Video Production										X	X	X	X	X	X	X	X					
Dragster Design										X	X	X	X	X	X	X	X			X	X	
Drone Challenge (UAV)										X	X	X	X	X	X	X	X	X		X	X	
Engineering Design		X	X	X	X	X				X	X	X	X	X	X	X	X	X		X	X	
Extemporaneous Speech							X							X	X	X		X			X	
Fashion Design and Technology										X	X	X	X	X	X	X	X		X			
Flight Endurance										X	X	X	X	X	X	X	X			X	X	
Forensic Science													X							X	X	
Future Technology and Engineering Teacher					X					X	X	X	X	X	X	X	X	X	X	X	X	
Geospatial Technology		X	X		X	X	X											X				X
Manufacturing Prototype										X	X	X	X	X	X	X	X	X	X	X		
Music Production										X	X	X	X	X	X	X	X					
On Demand Video										X	X	X	X	X	X	X	X					
Photographic Technology										X	X	X	X	X	X	X	X					
Prepared Presentation										X	X	X	X	X	X	X	X					
Promotional Design										X	X	X	X	X	X	X	X					
Robotics										X	X	X	X	X	X	X	X	X	X	X	X	
Senior Solar Sprint										X	X	X	X	X	X	X	X	X		X	X	
Software Development		X	X							X	X	X	X	X	X	X	X	X		X	X	
STEM Mass Media																					X	
Structural Design and Engineering										X	X	X	X	X	X	X	X			X	X	
System Control Technology										X	X	X	X	X	X	X	X	X			X	
Technology Bowl																						
Technology Problem Solving										X	X	X	X	X	X	X	X			X		
Transportation Modeling										X	X	X	X	X	X	X	X			X		
Video Game Design										X	X	X	X	X	X	X	X			X	X	
Virtual Reality Simulation (VR)										X	X	X	X	X	X	X	X	X			X	
Webmaster										X	X	X	X	X	X	X	X			X	X	

COMPUTER SCIENCE TEACHERS ASSOCIATION (CSTA) K-12 COMPUTER SCIENCE STANDARDS

Level 3A: Grades 9-10

CS: Computing Systems

01. Explain how abstractions hide the underlying implementation details of computing systems embedded in everyday objects.

02. Compare levels of abstraction and interactions between application software, system software, and hardware layers.

03. Develop guidelines that convey systematic troubleshooting strategies that others can use to identify and fix errors.

NI: Networks and the Internet

04. Evaluate the scalability and reliability of networks, by describing the relationship between routers, switches, servers, topology, and addressing.

05. Give examples to illustrate how sensitive data can be affected by malware and other attacks.

06. Recommend security measures to address various scenarios based on factors such as efficiency, feasibility, and ethical impacts.

07. Compare various security measures, considering tradeoffs between the usability and security of a computing system.

08. Explain tradeoffs when selecting and implementing cybersecurity recommendations.

DA: Data and Analysis

09. Translate between different bit representations of real-world phenomena, such as characters, numbers, and images.

10. Evaluate the tradeoffs in how data elements are organized and where data is stored.

11. Create interactive data visualizations using software tools to help others better understand real-world phenomena.

12. Create computational models that represent the relationships among different elements of data collected from a phenomenon or process.

AP: Algorithms and Programming

13. Create prototypes that use algorithms to solve computational problems by leveraging prior student knowledge and personal interests.

14. Use lists to simplify solutions, generalizing computational problems instead of repeatedly using simple variables.

15. Justify the selection of specific control structures when tradeoffs involve implementation, readability, and program performance, and explain the benefits and drawbacks of choices made.

16. Design and iteratively develop computational artifacts for practical intent, personal expression, or to address a societal issue by using events to initiate instructions.

17. Decompose problems into smaller components through systematic analysis, using constructs such as procedures, modules, and/or objects.

18. Create artifacts by using procedures within a program, combinations of data and procedures, or independent but interrelated programs.

19. Systematically design and develop programs for broad audiences by incorporating feedback from users.

20. Evaluate licenses that limit or restrict use of computational artifacts when using resources such as libraries.

21. Evaluate and refine computational artifacts to make them more usable and accessible.

22. Design and develop computational artifacts working in team roles using collaborative tools.

23. Document design decisions using text, graphics, presentations, and/or demonstrations in the development of complex programs.

IC: Impacts of Computing

24. Evaluate the ways computing impacts personal, ethical, social, economic, and cultural practices.

25. Test and refine computational artifacts to reduce bias and equity deficits.

26. Demonstrate ways a given algorithm applies to problems across disciplines.

27. Use tools and methods for collaboration on a project to increase connectivity of people in different cultures and career fields.

28. Explain the beneficial and harmful effects that intellectual property laws can have on innovation.

29. Explain the privacy concerns related to the collection and generation of data through automated processes that may not be evident to users.

30. Evaluate the social and economic implications of privacy in the context of safety, law, or ethics.

Level 3B: Grades 11-12

CS: Computing Systems

01. Categorize the roles of operating system software.

02. Illustrate ways computing systems implement logic, input, and output through hardware components.

NI: Networks and the Internet

03. Describe the issues that impact network functionality (e.g., bandwidth, load, delay, topology).

04. Compare ways software developers protect devices and information from unauthorized access.

DA: Data and Analysis

05. Use data analysis tools and techniques to identify patterns in data representing complex systems.

06. Select data collection tools and techniques to generate data sets that support a claim or communicate information.

07. Evaluate the ability of models and simulations to test and support the refinement of hypotheses.

AP: Algorithms and Programming

08. Describe how artificial intelligence drives many software and physical systems.

09. Implement an artificial intelligence algorithm to play a game against a human opponent or solve a problem.

10. Use and adapt classic algorithms to solve computational problems.

11. Evaluate algorithms in terms of their efficiency, correctness, and clarity.

12. Compare and contrast fundamental data structures and their uses.

13. Illustrate the flow of execution of a recursive algorithm.

14. Construct solutions to problems using student-created components, such as procedures, modules and/or objects.

15. Analyze a large-scale computational problem and identify generalizable patterns that can be applied to a solution.

16. Demonstrate code reuse by creating programming solutions using libraries and APIs.

17. Plan and develop programs for broad audiences using a software life cycle process.

18. Explain security issues that might lead to compromised computer programs

19. Develop programs for multiple computing platforms.

20. Use version control systems, integrated development environments (IDEs), and collaborative tools and practices (code documentation) in a group software project.

21. Develop and use a series of test cases to verify that a program performs according to its design specifications.

22. Modify an existing program to add additional functionality and discuss intended and unintended implications (e.g., breaking other functionality).

23. Evaluate key qualities of a program through a process such as a code review.

24. Compare multiple programming languages and discuss how their features make them suitable for solving different types of problems.

IC: Impacts of Computing

25. Evaluate computational artifacts to maximize their beneficial effects and minimize harmful effects on society.

26. Evaluate the impact of equity, access, and influence on the distribution of computing resources in a global society.

27. Predict how computational innovations that have revolutionized aspects of our culture might evolve.

28. Debate laws and regulations that impact the development and use of software.

Although not formally aligned, this standards crosswalk of TSA competitive events has been developed in accordance with the Computer Science Teachers Association (CSTA) K-12 Computer Science Standards. The CSTA Standards delineate a core set of learning objectives designed to provide the foundation for a complete computer science curriculum and its implementation at the K–12 level.

Computer Science Teachers Association (CSTA) K–12 Computer Science Standards, Revised 2017. csteachers.org/k12standards.

CSTA K-12 COMPUTER SCIENCE STANDARDS

Event	Standard Number 3A-CS-01	3A-CS-02	3A-DA-11	3A-DA-12	3A-AP-13	3A-AP-14	3A-AP-16	3A-AP-17	3A-AP-18	3A-AP-19	3B-DA-05	3B-DA-06	3B-AP-09	3B-AP-10	3B-AP-14	3B-AP-17	3B-AP-20
Animatronics	X	X			X	X	X	X	X	X				X	X		X
Architectural Design		X															
Audio Podcasting																	
Biotechnology Design																	
Board Game Design																	
Chapter Team																	
Children's Stories														X			
Coding					X	X		X	X						X		
Computer-Aided Design (CAD), Architecture																	
Computer-Aided Design (CAD), Engineering				X													
Data Science and Analytics			X								X	X					
Debating Technological Issues																	
Digital Video Production																	
Dragster Design																	
Drone Challenge (UAV)	X	X															
Engineering Design																	
Extemporaneous Speech																	
Fashion Design and Technology																	
Flight Endurance																	
Forensic Science																	
Future Technology and Engineering Teacher																	
Geospatial Technology			X	X							X	X					
Manufacturing Prototype																	
Music Production																	
On Demand Video																	
Photographic Technology																	
Prepared Presentation																	
Promotional Design																	
Robotics	X	X			X	X	X	X	X					X	X		X
Senior Solar Sprint	X	X															
Software Development	X	X			X	X	X	X	X	X			X	X	X	X	X
STEM Mass Media																	
Structural Design and Engineering																	
System Control Technology	X				X	X		X	X					X	X		X
Technology Bowl																	
Technology Problem Solving																	
Transportation Modeling																	
Video Game Design					X	X	X	X	X	X			X	X	X	X	X
Virtual Reality Simulation (VR)					X	X	X	X	X	X			X	X	X	X	X
Webmaster					X	X	X	X	X	X				X	X	X	X

ISTE STANDARDS FOR STUDENTS –
2016 INTERNATIONAL SOCIETY FOR TECHNOLOGY IN EDUCATION

1. **Empowered Learner**
   Students leverage technology to take an active role in choosing, achieving and demonstrating competency in their learning goals, informed by the learning sciences.

   a. articulate and set personal learning goals, develop strategies leveraging technology to achieve them and reflect on the learning process itself to improve learning outcomes

   b. build networks and customize their learning environments in ways that support the learning process

   c. use technology to seek feedback that informs and improves their practice and to demonstrate their learning in a variety of ways

   d. understand the fundamental concepts of technology operations, demonstrate the ability to choose, use and troubleshoot current technologies and are able to transfer their knowledge to explore emerging technologies

2. **Digital Citizen**
   Students recognize the rights, responsibilities and opportunities of living, learning and working in an interconnected digital world, and they act and model in ways that are safe, legal and ethical.

   a. cultivate and manage their digital identity and reputation and are aware of the permanence of their actions in the digital world

   b. engage in positive, safe, legal and ethical behavior when using technology, including social interactions online or when using networked devices

   c. demonstrate an understanding of and respect for the rights and obligations of using and sharing intellectual property

   d. manage their personal data to maintain digital privacy and security and are aware of data-collection technology used to track their navigation online

3. **Knowledge Constructor**
   Students critically curate a variety of resources using digital tools to construct knowledge, produce creative artifacts and make meaningful learning experiences for themselves and others.

   a. plan and employ effective research strategies to locate information and other resources for their intellectual or creative pursuits

   b. evaluate the accuracy, perspective, credibility and relevance of information, media, data or other resources

   c. curate information from digital resources using a variety of tools and methods to create collections of artifacts that demonstrate meaningful connections or conclusions

   d. build knowledge by actively exploring real-world issues and problems, developing ideas and theories and pursuing answers and solutions

4. **Innovative Designer**
   Students use a variety of technologies within a design process to identify and solve problems by creating new, useful or imaginative solutions.

   a. know and use a deliberate design process for generating ideas, testing theories, creating innovative artifacts or solving authentic problems

   b. select and use digital tools to plan and manage a design process that considers design constraints and calculated risks

   c. develop, test and refine prototypes as part of a cyclical design process

   d. exhibit a tolerance for ambiguity, perseverance and the capacity to work with open-ended problems

5. **Computational Thinker**
   Students develop and employ strategies for understanding and solving problems in ways that leverage the power of technological methods to develop and test solutions.

a. formulate problem definitions suited for technology-assisted methods such as data analysis, abstract models and algorithmic thinking in exploring and finding solutions

b. collect data or identify relevant data sets, use digital tools to analyze them, and represent data in various ways to facilitate problem-solving and decision-making

c. break problems into component parts, extract key information, and develop descriptive models to understand complex systems or facilitate problem-solving

d. understand how automation works and use algorithmic thinking to develop a sequence of steps to create and test automated solutions

6. **Creative Communicator**
Students communicate clearly and express themselves creatively for a variety of purposes using the platforms, tools, styles, formats and digital media appropriate to their goals.

a. choose the appropriate platforms and tools for meeting the desired objectives of their creation or communication

b. create original works or responsibly repurpose or remix digital resources into new creations

c. communicate complex ideas clearly and effectively by creating or using a variety of digital objects such as visualizations, models or simulations

d. publish or present content that customizes the message and medium for their intended audiences

7. **Global Collaborator**
Students use digital tools to broaden their perspectives and enrich their learning by collaborating with others and working effectively in teams locally and globally.

a. use digital tools to connect with learners from a variety of backgrounds and cultures, engaging with them in ways that broaden mutual understanding and learning

b. use collaborative technologies to work with others, including peers, experts or community members, to examine issues and problems from multiple viewpoints

c. contribute constructively to project teams, assuming various roles and responsibilities to work effectively toward a common goal

d. explore local and global issues and use collaborative technologies to work with others to investigate solutions

Although not formally aligned, this standards alignment of TSA competitive events has been developed in accordance with the ISTE Standards for Students framework. The ISTE Standards for Students are a framework for teaching and learning in the digital age and are adopted by schools, districts, states locally, nationally and internationally. The ISTE Standards for Students are a registered trademark of International Society for Technology in Education (ISTE). ISTE was not involved in the production of this product and does not endorse, support, or sponsor it.

ISTE STANDARDS FOR STUDENTS

Event / Standard Number	1a	1b	1c	1d	2a	2b	2c	2d	3a	3b	3c	3d	4a	4b	4c	4d	5a	5b	5c	5d	6a	6b	6c	6d	7a	7b	7c	7d
Animatronics	X			X									X	X	X	X				X	X	X	X	X			X	
Architectural Design	X	X	X						X	X	X	X	X	X	X	X					X	X	X	X			X	X
Audio Podcasting	X			X	X	X	X	X	X	X	X	X	X	X	X	X					X	X	X	X	X	X	X	
Biotechnology Design	X								X	X	X	X	X			X	X	X			X	X	X	X			X	X
Board Game Design																												
Chapter Team																												
Children's Stories																												
Coding				X															X								X	
Computer-Aided Design (CAD), Architecture													X	X	X	X					X	X	X	X			X	X
Computer-Aided Design (CAD), Engineering													X	X	X	X					X	X	X	X			X	X
Data Science and Analytics	X								X	X	X	X					X	X	X		X	X	X	X			X	X
Debating Technological Issues																												
Digital Video Production	X	X		X					X		X		X			X					X	X	X	X	X	X	X	X
Dragster Design																												
Drone Challenge (UAV)		X	X																									
Engineering Design	X	X							X		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Extemporaneous Speech																												
Fashion Design and Technology																												
Flight Endurance																												
Forensic Science																												
Future Technology and Engineering Teacher																												
Geospatial Technology	X								X	X	X	X	X	X		X		X	X		X	X	X	X			X	X
Manufacturing Prototype																												
Music Production	X			X					X	X	X	X	X	X		X					X	X	X	X			X	
On Demand Video	X			X					X		X		X			X					X	X	X	X			X	X
Photographic Technology	X			X					X		X		X			X					X	X	X	X			X	X
Prepared Presentation	X								X	X	X		X			X					X	X	X	X			X	X
Promotional Design	X			X					X		X		X	X	X	X					X	X	X	X			X	X
Robotics	X			X									X	X	X	X				X	X	X	X	X			X	X
Senior Solar Sprint																												
Software Development	X			X					X	X	X	X	X	X	X	X	X				X	X	X	X			X	X
STEM Mass Media																												
Structural Design and Engineering																												
System Control Technology	X			X					X	X	X	X	X	X	X	X	X		X	X	X	X	X	X			X	X
Technology Bowl																												
Technology Problem Solving																												
Transportation Modeling																												
Video Game Design	X			X					X		X		X			X					X	X	X	X			X	
Virtual Reality Simulation (VR)	X			X					X		X		X			X					X	X	X	X			X	X
Webmaster	X			X					X		X		X			X					X	X	X	X			X	

NATIONAL COUNCIL OF TEACHERS OF MATHEMATICS (NCTM) PRINCIPLES AND STANDARDS FOR SCHOOL MATHEMATICS

A. **Numbers and operations**

1. Understand numbers, ways of representing numbers, relationships among numbers and number systems
2. Understand meanings of operations and how they relate to one another
3. Compute fluently and make reasonable estimates

B. **Algebra**

1. Understand patterns, relations, and functions
2. Represent and analyze mathematical situations and structures using algebraic symbols
3. Use mathematical models to represent and understand quantitative relationships
4. Analyze change in various contexts

C. **Geometry**

1. Analyze characteristics and properties of two- and three-dimensional geometric shapes and develop mathematical arguments about geometric relationships
2. Specify locations and describe spatial relationships using coordinate geometry and other representational systems
3. Apply transformations and use symmetry to analyze mathematical situations
4. Use visualization, spatial reasoning and geometric modeling to solve problems

D. **Measurement**

1. Understand measurable attributes of objects and the units, systems and processes of measurement
2. Apply appropriate techniques, tools and formulas to determine measurements

E. **Data analysis and probability**

1. Formulate questions that can be addressed with data and collect, organize and display relevant data to answer them
2. Select and use appropriate statistical methods to analyze data
3. Develop and evaluate inferences and predictions that are based on data
4. Understand and apply basic concepts of probability

F. **Problem solving**

1. Build new mathematical knowledge through problem solving
2. Solve problems that arise in mathematics and in other contexts
3. Apply and adapt a variety of appropriate strategies to solve problems
4. Monitor and reflect on the process of mathematical problem solving

G. **Reasoning and proof**

1. Recognize reasoning and proof as fundamental aspects of mathematics
2. Make and investigate mathematical conjectures
3. Develop and evaluate mathematical arguments and proofs
4. Select and use various types of reasoning and methods of proof

H. **Communication**

1. Organize and consolidate mathematical thinking through communication
2. Communicate mathematical thinking coherently and clearly to peers, teachers and others
3. Analyze and evaluate the mathematical thinking and strategies of others
4. Use the language of mathematics to express mathematical ideas precisely

I. **Connections**

1. Recognize and use connections among mathematical ideas

2. Understand how mathematical ideas interconnect and build on one another to produce a coherent whole

3. Recognize and apply mathematics in contexts outside of mathematics

J. **Representation**

1. Create and use representations to organize, record, and communicate mathematical ideas

2. Select, apply, and translate among mathematical representations to solve problems

3. Use representations to model and interpret physical, social and mathematical phenomena

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PRINCIPLES AND STANDARDS FOR SCHOOL MATHEMATICS

Event	Standard Number	A1	A2	A3	B1	B2	B3	B4	C1	C2	C3	C4	D1	D2	E1	E2	E3	E4	F1	F2	F3	F4	G1	G2	G3	G4	H1	H2	H3	H4	I1	I2	I3	J1	J2	J3
Animatronics						×	×	×	×	×	×	×	×	×	×	×	×	×		×	×												×			
Architectural Design		×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×					×	×	×	×			×		×	×
Audio Podcasting																					×															
Biotechnology Design		×	×	×	×	×	×	×	×				×	×	×	×	×	×	×	×	×	×					×	×	×							
Board Game Design		×	×	×	×	×	×	×																			×	×	×							
Chapter Team																																				
Children's Stories		×	×																																	
Coding		×	×																×		×					×							×			
Computer-Aided Design (CAD), Architecture									×	×	×	×	×	×																	×			×		
Computer-Aided Design (CAD), Engineering									×	×	×	×	×	×							×										×			×		
Data Science and Analytics															×	×	×	×	×	×	×	×	×				×	×	×	×	×	×	×	×	×	×
Debating Technological Issues															×																					
Digital Video Production				×	×								×	×																	×		×			
Dragster Design				×				×	×	×	×	×	×	×						×	×											×	×		×	×
Drone Challenge (UAV)												×									×															
Engineering Design		×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×
Extemporaneous Speech																																				
Fashion Design and Technology													×	×																						
Flight Endurance			×	×					×	×		×	×	×	×	×	×	×	×	×	×	×			×		×	×	×				×			
Forensic Science																	×				×															
Future Technology and Engineering Teacher				×																×	×					×							×		×	
Geospatial Technology																																				
Manufacturing Prototype																		×				×														
Music Production																		×																		
On Demand Video										×	×																									
Photographic Technology																					×					×		×								
Prepared Presentation																														×						
Promotional Design												×									×															
Robotics											×	×	×	×	×	×	×	×	×	×	×	×		×	×	×						×	×			
Senior Solar Sprint		×	×	×					×	×	×	×	×	×					×	×	×	×	×	×	×	×	×	×	×	×	×	×	×			
Software Development																														×						
STEM Mass Media				×																																
Structural Design and Engineering		×	×	×	×		×		×	×	×	×	×	×	×	×	×	×	×	×	×	×	×			×	×	×	×	×	×	×	×		×	
System Control Technology		×	×	×	×	×	×			×	×	×			×	×	×		×	×	×	×	×	×	×	×	×	×				×	×			
Technology Bowl									×	×			×	×																		×	×			
Technology Problem Solving																				×	×															
Transportation Modeling				×			×	×		×																					×		×			
Video Game Design			×								×	×																								
Virtual Reality Simulation (VR)		×	×	×	×			×	×	×	×	×	×	×	×	×	×	×	×	×	×	×			×		×	×	×	×		×	×		×	×
Webmaster																				×	×															

TSA AND CAREERS

Choosing a career is one of the more important decisions made in life. This section of the guide may help students focus on career areas that appeal to them in the world of work, as well as show them how their involvement in TSA's program of activities has the ability to guide them toward those areas.

Career Clusters® are categories of similar occupations and industries. The Career Clusters® chart was developed by the U.S. Department of Education to organize career planning and help schools better prepare learners for their future. The Career Clusters® chart offers general information about career categories and work opportunities prominent in those areas. The *TSA Competitions and the Career Clusters®* grid illustrates the interconnectedness between individual TSA competitions and the 16 Career Clusters®. Use these together as a starting point to help your students become informed about careers and develop a plan to reach their life goals.

In December 2022, Advance CTE announced the relaunch of an initiative to modernize the National Career Clusters Framework. The expected unveiling of the final Framework is planned for Fall 2024.

PATHWAYS TO COLLEGE & CAREER READINESS
CareerClusters®

The Career Clusters® brand logo and its extensions are the property of the National Career Technical Education Foundation, as managed by NASDCTEc.

16 CAREER CLUSTERS®

A. AGRICULTURE, FOOD & NATURAL RESOURCES
- Agribusiness Systems
- Animal Systems
- Environmental Service Systems
- Food Products & Processing Systems
- Natural Resources Systems
- Plant Systems
- Power, Structural & Technical Systems Architecture & Construction

B. ARCHITECTURE & CONSTRUCTION
- Construction
- Design/Pre-Construction
- Maintenance/Operations

C. ARTS, A/V TECHNOLOGY & COMMUNICATIONS
- A/V Technology & Film
- Journalism & Broadcasting
- Performing Arts
- Printing Technology
- Telecommunications
- Visual Arts

D. BUSINESS MANAGEMENT & ADMINISTRATION
- Administrative Support
- Business Information Management
- General Management
- Human Resources Management
- Operations Management

E. EDUCATION & TRAINING
- Administration & Administrative Support
- Professional Support Services
- Teaching/Training

F. FINANCE
- Accounting
- Banking Services
- Business Finance
- Insurance
- Securities & Investments

G. GOVERNMENT & PUBLIC ADMINISTRATION

- Foreign Service
- Governance
- National Security
- Planning
- Public Management & Administration
- Regulation
- Revenue & Taxation

H. HEALTH SCIENCES

- Biotechnology Research & Development
- Diagnostic Services
- Health Informatics
- Support Services
- Therapeutic Services

I. HOSPITALITY & TOURISM

- Lodging
- Recreation, Amusements & Attractions
- Restaurants & Food/Beverage Services
- Travel & Tourism

J. HUMAN SERVICES

- Consumer Services
- Counseling & Mental Health Services
- Early Childhood Development & Services
- Family & Community Services
- Personal Care Services

K. INFORMATION TECHNOLOGY

- Information Support & Services
- Network Systems
- Programming & Software Development
- Web & Digital Communications

L. LAW, PUBLIC SAFETY, CORRECTIONS & SECURITY

- Correction Services
- Emergency & Fire Management Services
- Law Enforcement Services
- Legal Services
- Security & Protective Services

M. MANUFACTURING

- Health, Safety & Environmental Assurance
- Logistics & Inventory Control
- Maintenance, Installation & Repair
- Manufacturing Production Process Development
- Production
- Quality Assurance

N. MARKETING

- Marketing Communications
- Marketing Management
- Marketing Research
- Merchandising
- Professional Sales

O. SCIENCE, TECHNOLOGY, ENGINEERING & MATHEMATICS

- Engineering & Technology
- Science & Mathematics

P. TRANSPORTATION, DISTRIBUTION & LOGISTICS

- Facility & Mobile Equipment Maintenance
- Health, Safety & Environmental Management
- Logistics Planning & Management Services
- Sales & Service
- Transportation Operations
- Transportation Systems/Infrastructure
- Planning, Management & Regulation
- Warehousing & Distribution Center Operations

TSA COMPETITIONS AND THE 16 CAREER CLUSTERS®

Event	Cluster letter	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P
Animatronics				X						X				X			
Architectural Design		X	X		X		X	X	X	X	X	X		X		X	
Audio Podcasting				X								X					
Biotechnology Design		X	X						X					X		X	X
Board Game Design			X	X		X					X			X	X	X	X
Chapter Team					X			X					X				
Children's Stories				X		X					X					X	
Coding												X				X	
Computer-Aided Design (CAD), Architecture			X	X								X	X				
Computer-Aided Design (CAD), Engineering			X	X								X	X				
Data Science and Analytics		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Debating Technological Issues									X						X	X	
Digital Video Production				X						X		X				X	
Dragster Design											X						
Drone Challenge (UAV)												X				X	
Engineering Design		X	X	X	X	X	X	X	X	X			X	X	X	X	X
Essays on Technology				X	X												
Extemporaneous Speech				X	X	X		X							X		
Fashion Design and Technology				X										X			
Flight Endurance																X	
Forensic Science													X			X	
Future Technology and Engineering Teacher					X							X					
Geospatial Technology		X	X					X		X			L			X	X
Manufacturing Prototype					X			X				X		X		X	X
Music Production				X								X			X		
On Demand Video				X								X			X		
Photographic Technology		X		X		X		X	X			X		X	X	X	
Prepared Presentation				X	X			X									
Promotional Design				X							X						
Robotics			X									X				X	X
Senior Solar Sprint													X		X	X	
Software Development				X								X	X	X		X	X
STEM Mass Media				X	X							X			X		
Structural Design and Engineering			X					X		X			X	X		X	X
System Control Technology														X		X	
Technology Bowl		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Technology Problem Solving		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Transportation Modeling											X						
Video Game Design				X								X					
Virtual Reality Simulation (VR)				X								X				X	
Webmaster				X								X					

HIGH SCHOOL COMPETITIVE EVENTS

Technology Student Association (TSA) High School Competitive Events Guide for the 2025 and 2026 National TSA Conferences

39

NEW EVENTS

• Robotics

• STEM Mass Media

OF NOTE

• Some event's guidelines have been revised in some form, whether in content or in format.

• In addition to specific event guidelines, all advisors and participants must read the General Rules and Regulations in this guide.

• Every two years the specifics of many events are changed, keeping the competitions dynamic.

Animatronics

Architectural Design

Audio Podcasting

Biotechnology Design

Board Game Design

Chapter Team

Children's Stories

Coding

Computer-Aided Design (CAD), Architecture

Computer-Aided Design (CAD), Engineering

Data Science and Analytics

Debating Technological Issues

Digital Video Production

Dragster Design

Drone Challenge (UAV)

Engineering Design

Extemporaneous Speech

Fashion Design and Technology

Flight Endurance

Forensic Science

Future Technology and Engineering Teacher

Geospatial Technology

Manufacturing Prototype

Music Production

On Demand Video

Photographic Technology

Prepared Presentation

Promotional Design

Robotics

Senior Solar Sprint

Software Development

STEM Mass Media

Structural Design and Engineering

System Control Technology

Technology Bowl

Technology Problem Solving

Transportation Modeling

Video Game Design

Virtual Reality Simulation (VR)

Webmaster

COMPETITIVE EVENTS ELIGIBILITY

2025 & 2026 HIGH SCHOOL COMPETITIONS	ELIGIBILITY
Animatronics	three (3) teams of two to three (2-3) team members per state
Architectural Design	one (1) team per chapter; individual entries are permitted
Audio Podcasting	three (3) teams per state; individual entries are permitted
Biotechnology Design	one (1) team per chapter
Board Game Design	one (1) team per chapter
Chapter Team	one (1) team of six (6) members per chapter
Children's Stories	three (3) teams or three (3) individuals per state
Coding	three (3) teams of two (2) individuals per state
Computer-Aided Design (CAD), Architecture	two (2) individuals per state
Computer-Aided Design (CAD), Engineering	two (2) individuals per state
Data Science and Analytics	three (3) teams of two (2) individuals per state; individual entries are permitted
Debating Technological Issues	three (3) teams of two (2) individuals per state
Digital Video Production	three (3) teams or three (3) individuals per state
Dragster Design	two (2) individuals per chapter
Drone Challenge (UAV)	teams of two (2) to six (6) members; three (3) teams per state.
Engineering Design	three (3) teams of three (3) or more individuals per state
Extemporaneous Speech	three (3) individuals per state
Fashion Design and Technology	five (5) teams of two to four (2-4) individuals per state
Flight Endurance	two (2) individuals per chapter
Forensic Science	one (1) team of two (2) individuals per chapter
Future Technology and Engineering Teacher	three (3) individuals per chapter
Geospatial Technology	one (1) team of two to three (2-3) individuals per chapter
Manufacturing Prototype	one (1) team per chapter
Music Production	three (3) teams per state; individual entries are permitted
On Demand Video	one (1) team per chapter
Photographic Technology	one (1) individual per chapter
Prepared Presentation	three (3) individuals per state
Promotional Design	three (3) individuals per state
Robotics	three (3) teams of two to six (2-6) team members per state
Senior Solar Sprint	one (1) team of two to four (2-4) individuals per chapter; one (1) entry per team
Software Development	one (1) team per chapter; presentation/interview is limited to three (3) members
STEM Mass Media	one (1) team of two to three (2-3) members per chapter
Structural Design and Engineering	one (1) team of two (2) individuals per chapter
System Control Technology	two (2) teams of three (3) individuals per state
Technology Bowl	one (1) team of three (3) individuals per chapter
Technology Problem Solving	one (1) team of two (2) individuals per chapter
Transportation Modeling	one (1) individual per chapter
Video Game Design	five (5) teams per state
Virtual Reality Simulation (VR)	one (1) team per chapter; individual entries are permitted
Webmaster	one (1) team per chapter

TSA COMPETITIVE EVENTS RATING FORM/RUBRIC

The Technology Student Association (TSA) High School Competitive Events Guide for the 2025 & 2026 National TSA Conferences contains a rating form (rubric) for each competition. Rubrics are embraced by STEM educators because they provide a way to evaluate performance. The use of descriptors for each criterion being measured in a rubric increases consistency and a greater understanding of the evaluation process. The TSA rating form/rubric provides a way for TSA members to better prepare for competitions; for advisors to carefully assist them in the process; and for judges to effectively evaluate participants and their entries.

GO/NO GO SPECIFICATIONS

- Each competitive event has a Go/No Go Specifications checklist placed at the beginning of the official event rating form/rubric.
- Specifications in the checklist are required and must be met, or the individual or team will not be allowed to compete in the event.
- Refer to each competitive event's official rating form/rubric for details.

ANIMATRONICS

OVERVIEW

Animatronics refers to a robotic device that emulates a human or an animal, or brings an inanimate object "to life." Applying leadership and 21st century skills, teams produce an animatronics device complete with an appropriate display. The animatronics device must use control technology in its performance and fulfill the requirements of the theme to communicate, entertain, inform, demonstrate and/or illustrate a topic, idea, subject, or concept. Sound, lights, and surrounding environment are to accompany the device. The annual design problem is posted on the TSA website under *Themes & Problems*.

ELIGIBILITY

Three (3) teams of two to three (2-3) team members per state may participate.

TIME LIMITS

A. Up to five (5) minutes to set up.

B. Up to five (5) minutes for the presentation.

1. The presentation time begins when students present background information about the project and must conclude on or before the five (5)-minute time limit.

2. Timekeeper will stop presentation at five (5) minutes.

C. Up to two (2) minutes to respond to questions from the judges.

ATTIRE

TSA competition attire is required for this event.

PROCEDURE

PRE-CONFERENCE

A. Participants review the TSA Honor Statement for Competitive Events found in the General Rules and listed in the individual competitive event rules.

B. Participants review the design problem on the TSA website under *Themes & Problems*.

C. Participants concentrate their efforts on designing an animatronics device that uses control technology.

PRELIMINARY ROUND

A. Participants report to the time and place stated in the conference program to:

1. Check in

2. Sign up for a presentation/interview time

No animatronics devices are submitted during this time.

B. Participants report for the presentation/interview at the selected demonstration time with the animatronics device. Two (2) or three (3) team members are allowed to set up equipment, present the project, and participate in the event-specific interview.

C. Judges independently assess the entries.

D. A list of twelve (12) semifinalists (in random order) is posted.

SEMIFINAL ROUND

A. Semifinalists report to the event area at the time and place stated in the conference program to receive an assigned presentation/interview time.

B. Semifinalist presentation/interviews follow the same procedure as in the preliminary round.

C. Ten (10) finalists will be announced during the conference awards ceremony.

REGULATIONS AND REQUIREMENTS

Students will work to develop their leadership and 21st century skills in the process of preparing for and participating in this TSA competitive event. The development and application of those skills must be evident in their submission, demonstration, and/or communication pertaining to the entry.

PRELIMINARY ROUND

A. The starting position (resting) dimensions of the entry may not exceed 15" deep x 3' wide x 4' high. The device may extend beyond the dimensions of the display during the demonstration.

B. The exterior shell or skin is required. It must be removable in order to show the judges the internal components of the project.

C. The animatronic device must have at least three (3) separate movements that must include:

1. Fluid power to aid in the movement of the animatronics device. If no fluid power is used, a ten (10)-point deduction will be incurred.

2. Sound, lights, and sensors in the project model.

3. Gearing systems, linkages, and/or cabling systems, etc., to aid in the movement of the device.

D. Control technology must be used during the performance.

E. A wet cell battery may not be used in the animatronics device.

F. The animatronics device may use AC power, but the team will only have access to an AC outlet during the presentation/interview.

G. Should the device suggest anything that is inappropriate by language, sound, or movement, immediate disqualification will result.

H. A team that fails to appear for its presentation forfeits evaluation.

SEMIFINAL ROUND

A. Semifinalists report at the time and place stated in the conference program to sign up for a presentation/interview time.

B. Semifinalists report at the assigned time and place for the presentation/interview.

C. All regulations from the preliminary round apply to the semifinal round.

D. Judges evaluate the entries.

E. The top ten (10) finalists are announced at the awards ceremony.

EVALUATION

A. The device

B. The presentation/interview

Refer to the official rating form for more information.

TSA HONOR STATEMENT

All work must be created and completed by individual competitors or teams. Plagiarism, the use of Generative Artificial Intelligence (GenAI) software, copyright violation, cheating, and falsification of information are prohibited. Participants may NOT use any generative artificial intelligence (GenAI) tools (e.g. ChatGPT, Google Gemini, GitHub Copilot, etc.). Any attempt to gain an unfair advantage will not be tolerated. Competitors at any level of TSA competition understand and agree to abide by the TSA Honor Statement.

If it is determined that a student violated the TSA Honor Statement, a rules violation of twenty percent (20%) will be incurred.

NOTES

Learn more about animatronics by visiting the following:

www.roborobotics.com/Animatronics/Animatronics.html
www.animalmakers.com
www.garnerholt.com
www.dreamation.com/Animatronics.htm

STEM INTEGRATION

This event aligns with the STEM (Science, Technology, Engineering, and Mathematics) educational standards.

LEADERSHIP AND 21ST CENTURY SKILLS

This event provides opportunity for students to build and develop leadership and 21st century skills including but not limited to – Communication, Collaboration/Social Skills, Initiative, Problem Solving/Risk Taking, Critical Thinking, Perseverance/Grit, Creativity, Relationship Building/Teamwork, Dependability/Integrity, and Flexibility/Adaptability

CAREERS RELATED TO THIS EVENT

This competition has connections to one (1) or more of the careers below:

- Amusement park robotics maintenance engineer
- Electronics technician
- Film industry special effects engineer
- Industrial designer
- Toy developer

ANIMATRONICS
2025 & 2026 OFFICIAL RATING FORM
HIGH SCHOOL

Judges: Using minimal (1-4 points), adequate (5-8 points), or exemplary (9-10 points) performance levels as a guideline in the rating form, record the scores earned for the event criteria in the column spaces to the right. The X1 or X2 notation in the criteria column is a multiplier factor for determining the points earned. (Example: an "adequate" score of 7 for an X1 criterion = 7 points; an "adequate" score of 7 for an X2 criterion = 14 points.) A score of zero (0) is acceptable if the minimal performance for any criterion is not met.

Go/No Go Specifications

- Before judging the entry, ensure that the items below are present; indicate presence with a check mark in the box.
- If an item is missing, leave the box next to the item blank and place a check mark in the box labeled ENTRY NOT EVALUATED.
- If a check mark is placed in the ENTRY NOT EVALUATED box, the entry is not to be judged.

☐ Skins/shells are removable
☐ Interior skeleton and mechanism are accessible for inspection
☐ Battery meets regulations
☐ Entry meets initial "resting" position dimensions
☐ ENTRY NOT EVALUATED

MODEL APPEARANCE (30 points)

Record scores in the column spaces below.

CRITERIA	Minimal performance	Adequate performance	Exemplary performance	
	1-4 points	5-8 points	9-10 points	
Creativity, Aesthetics and Artisanship, Originality (X3)	Model lacks creativity; very few or no design principles are integrated in the model; work is unorganized and/or sloppy; model seems to be an afterthought and/or thrown together; model lacks imagination, originality, and artistic detail.	Some elements of creativity are evident, and most essential design principles are included and used somewhat effectively; some layout and design principles are integrated into the model, and aesthetics are adequate; model is somewhat innovative.	Model exudes creativity; essential design principles and elements are integrated; there is exemplary use of layout and design principles; artistic and aesthetic values are incorporated; model is inspiring, inventive, and resourceful.	
MODEL APPEARANCE SUBTOTAL (30 points)				

MODEL FUNCTION (70 points)

Record scores in the column spaces below.

Skin and skeletal function: There is no point value for the skin and skeletal function of the animatronics model. The model's skin must be removable in order to reveal skeletal function and mechanics located beneath the skin. If the skin is not removable then the entry will not be evaluated.

CRITERIA	Minimal performance	Adequate performance	Exemplary performance	
	1-4 points	5-8 points	9-10 points	
Sound Inclusion (X1)	There is little or no sound included, or the design suggests that the inclusion of sound was an afterthought to the model.	Sound is included, and it somewhat contributes to the overall function of the model.	The inclusion of sound is creative and effectively contributes to the design and performance of the model.	
Light Inclusion (X1)	Light is minimal, or the design suggests that the inclusion of lights was an afterthought to the model.	Light is included, and it somewhat contributes to the overall function of the model.	The inclusion of a light creatively and effectively contributes to the model's design and performance.	

MODEL FUNCTION (70 points) – continued

Sensor Inclusion (X2)	Sensors are included minimally, or the design suggests that the inclusion of sensors was an afterthought to the model.	Sensors are included, and they somewhat contribute to the overall function of the model.	The inclusion of sensors (and the interactivity that sensors allow) in the model is creative and effectively contributes to its design and performance.	
Control Technology (X1)	Little control technology is used during the performance.	Some basic control technology is used during the performance.	Advanced control technology is used during the performance; the model is fully autonomous.	
Fluid Power System Inclusion (X1)	A fluid power system is included, but it functions inadequately or not at all.	A fluid power system is included, and it contributes somewhat to the overall function of the model.	The inclusion of a fluid power system(s) and the fluidity of movement that this system(s) provides in an animatronics model creatively and effectively contribute to the model's design and performance.	
Use of Gears, Linkages, Cabling, etc. (X1)	The use of gears, linkages, cabling, etc. is minimally apparent or improperly incorporated into the model; the team shows little understanding of how to properly use these systems in the model.	Most gears, linkages, cabling systems, etc. are incorporated and used properly in the model; there is evidence of an adequate understanding of the systems.	Efficient and varied use of gears, linkages, cabling systems, etc. is apparent and properly incorporated in the model; there is evidence of a complete understanding of these systems.	
MODEL FUNCTION SUBTOTAL (70 points)			

PRESENTATION/INTERVIEW (30 points)

CRITERIA	Minimal performance	Adequate performance	Exemplary performance	
	1-4 points	5-8 points	9-10 points	
Organization and Knowledge (X1)	Team seems unprepared and unorganized for the presentation/interview, with an illogical explanation of the project; team members seem to have little understanding of the concepts in their project; vague interview answers are provided.	Team is prepared for the interview and is somewhat organized in its presentation to judges; team's presentation is somewhat logical and/or clear; team members have a general understanding of the concepts discussed and answer questions adequately.	Team's presentation/interview with judges is well organized; the interview is concise and logical, with a clear explanation of the development of the project; evidence is clear that team members have a thorough understanding of the concepts discussed; they answer questions thoroughly.	
Articulation (X1)	Communication of the design process is unclear, unorganized, and or illogical; leadership and/or 21st century skills are not evident.	Communication of the design process is somewhat logical and clear; leadership and/or 21st century skills are somewhat evident.	Communication of the design process is clear, concise, and logical; leadership and/or 21st century skills are clearly evident.	
Team Participation (X1)	Only one person in the group communicates with judges; there is little or no participation from other team members.	Team members all participate to some extent and seem to understand the concepts.	Team members seem to fully understand the concepts and share an equal role in the interview.	
PRESENTATION/INTERVIEW SUBTOTAL (30 points)			

Rules violations (a deduction of 20% of the total possible points in the above sections) must be initialed by the judge, coordinator, and manager of the event. Record the deduction in the space to the right.

Indicate the rule violated: _____

ANIMATRONICS

To arrive at the TOTAL score, add any subtotals and subtract rules violation points, as necessary.	**TOTAL (130 points)**	

Comments:

_____

I certify these results to be true and accurate to the best of my knowledge.

JUDGE

Printed name: _____   Signature: _____

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ANIMATRONICS
EVENT COORDINATOR INSTRUCTIONS

PERSONNEL

A. Event coordinator

B. Assistant for check-in, one (1)

C. Timekeeper, one (1)

D. Judges, two (2) or more

MATERIALS

A. Coordinator's packet, containing:

  1. Event guidelines, one (1) copy for the coordinator and for each judge

  2. TSA Event Coordinator Report

  3. Stick-on labels for entries, as needed

B. Measuring tape

C. Tables for presentation

D. Table and chairs for judges

E. Access to AC power for presentation/interview only

RESPONSIBILITIES

AT THE CONFERENCE

A. Attend the mandatory coordinator's meeting at the designated time and location.

B. Report to the CRC room and check the contents of the coordinator's packet.

C. Review the event guidelines and check to see that enough judges/assistants have been scheduled.

D. Inspect the area or room in which the event is to be held for appropriate set-up, including room size, chairs, tables, outlets, etc. Notify the event manager of any potential problems.

E. At least one (1) hour before the event is scheduled to begin, meet with judges and review the time limits, procedures, regulations, evaluation, and all other details related to the event. If questions arise that cannot be answered, speak to the CRC event manager before the event begins.

F. Logistics/Time management procedure: Four (4) tables for entry presentations. Have four (4) teams set up simultaneously. One (1) stays and three (3) leaves, waiting on their turn. After each team presents to the judges, each team takes their entries out, while the next teams enter and set up their entries. After all four (4) teams have presented, the next four (4) is invited in to set up their entries in the timed five (5) minutes. Repeat until done.

G. The time keeper starts the clock when the presentation begins and stops the presentation at five (5) minutes. No extension is allowed. Judges are allowed up to two (2) questions or two (2) minutes after the five (5)-minute presentation. Encourage the judges to score during and no more than two (2) minutes after any questions. The roll of the timekeeper is very critical in this event.

H. Ensure the judges have access to the online judging system.

PRELIMINARY ROUND

A. Check in participants at the time and place stated in the conference program. During check-in, participants only sign up for a presentation time and do not submit their entry.

B. If check-in is on the first day of the conference, requirements for attire do NOT apply during check-in.

C. As participants sign up for a presentation/interview time, notify them that they are to report fifteen (15) minutes prior to their scheduled time.

D. Late participants and/or entries are considered on a case-by-case basis and only when lateness is caused by events beyond the participant's control.

E. In order to compete, participants must be on the entry list or must have approval from the CRC.

F. Oversee the presentation/interviews.

G. Decisions about rules violations must be discussed and verified with the judges, event coordinator, and CRC manager to determine either:

1. To deduct twenty percent (20%) of the total possible points in this round or

2. To disqualify the entry

The event coordinator, judges, and CRC manager must initial either of these actions on the rating form

H. Following the preliminary heats, the judging system will tabulate the scores; twelve (12) semifinalists will be posted.

I. If necessary, manage security and the removal of materials from the area.

SEMIFINAL ROUND

A. Report at the time and place posted in the conference program to assign semifinalists a presentation/interview time.

B. Using the same official rating form for the semifinalist, judges asses the semifinalist presentation and determine the ten (10) finalists.

C. Discuss rule violations (e.g. 20% deduction, disqualification) and have all relevant parties initial the rating form.

D. If necessary, manage security and the removal of materials from the area.

ARCHITECTURAL DESIGN

OVERVIEW

Using leadership and 21st century skills, participants develop a set of architectural plans and related materials in response to an annual architectural design challenge and construct a physical, as well as a computer-generated model, to accurately depict their design. Participants must demonstrate an understanding of and aptitude for architectural design, the development of plans, modeling techniques and practice, and the awareness of the role that the built environment can play in human behavior and interactions. The design problem for the current school year will be posted on the TSA website under *Themes & Problems*.

ELIGIBILITY

One (1) team per chapter may participate; individual entries are permitted.

TIME LIMITS

PRELIMINARY ROUND

A. All components of the chapter's documentation portfolio entry must be finished, submitted, and accessible via the Internet by 11:59pm ET on a designated date in mid-May.

SEMIFINAL ROUND

A. Up to ten (10) minutes for the presentation/interview broken down as follows:
   1. One (1) minute for setup
   2. Seven (7) minutes for the presentation
   3. Two (2) minutes to respond to questions from the judges

ATTIRE

TSA competition attire is required for this event.

PROCEDURE

PRE-CONFERENCE

A. Participants review the TSA Honor Statement for Competitive Events found in the General Rules and listed in the individual competitive event rules.

B. Participants access the annual design challenge found on the TSA website under *Themes & Problems*.

C. Participants prepare the documentation portfolio according to the regulations.

D. Participants prepare their arcitechtural design model.

E. The documentation portfolio must be submitted by 11:59pm ET on a designated date in mid-May.

F. Submission information will be provided on the TSA website under *Competition Updates*.

PRELIMINARY ROUND

A. A list of twenty-four (24) participants is posted on the first full day of the conference; of these participants, models are judged on-site at the conference to determine the twelve (12) semifinalists.

B. No more than two (2) team members report to the event area at the time and place stated in the conference program to submit the model entry.

C. Models are evaluated by judges. Neither students nor advisors are present at this time.

D. A list of twelve (12) semifinalists (in random order) is posted.

SEMIFINAL ROUND

A. Semifinalists report at the time and place stated in the conference program to sign up for a presentation/interview.

B. Up to two (2) representatives from each semifinalist team report at the assigned time and place to participate in the presentation/interview.

C. No more than two (2) team members pick up the team's entry from the display area at the time and place stated in the conference program.

D. The top ten (10) finalists are announced at the awards ceremony.

REGULATIONS AND REQUIREMENTS

Students will work to develop their leadership and 21st century skills in the process of preparing for and participating in this TSA competitive event. The development and application of those skills must be evident in their submission, demonstration, and/or communication pertaining to the entry.

PRE-CONFERENCE

A. Documentation Portfolio:

1. Documentation materials (comprising a "portfolio") are required and must be submitted as a multi-page PDF document with pages in this order:

    a. Title page with the event title, the team identification number, the conference city and state, and the year; one (1) page

    b. Table of contents; pages as needed

    c. A description of the individual/team's interpretation of the design challenge and an explanation of the style and merits of the design concepts; maximum of two (2) pages

    d. List and description of each of the construction systems (any and all that apply) and their incorporation and application to the solution: delivery, construction methods and materials, electrical wiring, plumbing, HVAC, and site requirements; maximum of six (6) pages

    e. A schedule of finish materials for all exterior and interior surfaces of the architectural design (this is not a list of the model construction materials); one (1) page

    f. A complete set of student created drawings (can be CAD drawings) appropriate scaled to fit the PDF format required for submission.

        i. Drawings; pages as needed

            1. Site Plan

            2. Overall Floor Plan(s)

            3. Enlarged Floor Plans as required to describe design elements

            4. Roof Plan

            5. Exterior Elevations

            6. Building Section(s)

            7. Interior Elevation(s) or Perspective(s)

        ii. A 3D modeling/rendering drawing of the individual/team's final design with appropriate details included; one (1) page

    g. Work Log (see Forms Appendix); pages as needed

    h. Mentorship Verification form; participants are required to seek the mentorship of an architect or other professional involved with construction and/or renovation (see Mentorship Verification form); one (1) page

    i. List of resources/references; pages as needed

    j. Photographs of the finished model (maximum of four photos per page); maximum of three (3) pages

B. The mentorship verification form may include the necessary names of students/adults and is exempt from the general rule that no identifying information may be used. However, students are not allowed to use their full names, their school name, or the state they are from anywhere else in the entry (including title blocks on drawings).

PRELIMINARY ROUND

A. Model:

1. The architectural model must be placed on a site board, the size of which is posted along with the annual problem each year on the TSA website under *Themes & Problems*.

2. Model construction concepts, materials, techniques, and applications:

    a. Foam core sheet or similar materials are suggested (but not limited to) for use as interior walls, exterior walls, and roof construction.

    b. Foam core board that is ½" thick or greater is recommended for use as the site board for the model.

    c. Dowels may be used to represent columns or circular components.

3. Participants should pay close attention to the scale of all materials as they relate to the scale of the model.

4. The model may not include any electrical or battery-powered enhancements.

5. No glass or liquid may be used as part of any model.

6. No additional points will be awarded for superfluous aesthetic additions.

EVALUATION

PRELIMINARY ROUND

Tier 1

A. The documentation portfolio

Tier 2

B. The architectural model

SEMIFINAL ROUND

A. The presentation/interview

Refer to the official rating form for more information.

TSA HONOR STATEMENT

All work must be created and completed by individual competitors or teams. Plagiarism, the use of Generative Artificial Intelligence (GenAI) software, copyright violation, cheating, and falsification of information are prohibited. Participants may NOT use any generative artificial intelligence (GenAI) tools (e.g. ChatGPT, Google Gemini, GitHub Copilot, etc.). Any attempt to gain an unfair advantage will not be tolerated. Competitors at any level of TSA competition understand and agree to abide by the TSA Honor Statement.

If it is determined that a student violated the TSA Honor Statement, a rules violation of twenty percent (20%) will be incurred.

STEM INTEGRATION

This event aligns with the STEM (Science, Technology, Engineering, and Mathematics) educational standards.

LEADERSHIP AND 21ST CENTURY SKILLS

This event provides opportunity for students to build and develop leadership and 21st century skills including but not limited to – Communication, Collaboration/Social Skills, Initiative, Problem Solving/Risk Taking, Critical Thinking, Perseverance/Grit, Creativity, Relationship Building/Teamwork, Dependability/Integrity, and Flexibility/Adaptability

CAREERS RELATED TO THIS EVENT

This competition has connections to one (1) or more of the careers below:

- Appraiser
- Architect
- Construction manager
- Interior designer
- Urban and regional planner

HIGH SCHOOL ARCHITECTURAL DESIGN MENTORSHIP VERIFICATION

I certify that I have served as a mentor to the student(s) named below.

_____

Student(s) involved (please print)

_____

Signature of student(s)

_____

Date

_____

TSA chapter advisor (printed name and signature)

_____

Date

_____

Name of mentor (please print)

_____

Occupation (please print)

_____

Employer (please print)

_____

Signature of mentor

_____

Date

ARCHITECTURAL DESIGN

2025 & 2026 OFFICIAL RATING FORM

HIGH SCHOOL

Judges: Using minimal (1-4 points), adequate (5-8 points), or exemplary (9-10 points) performance levels as a guideline in the rating form, record the scores earned for the event criteria in the column spaces to the right. The X1 or X2 notation in the criteria column is a multiplier factor for determining the points earned. (Example: an "adequate" score of 7 for an X1 criterion = 7 points; an "adequate" score of 7 for an X2 criterion = 14 points.) A score of zero (0) is acceptable if the minimal performance for any criterion is not met.

Go/No Go Specifications

- Before judging the entry, ensure that the items below are present; indicate presence with a check mark in the box.
- If an item is missing, leave the box next to the item blank and place a check mark in the box labeled ENTRY NOT EVALUATED.
- If a check mark is placed in the ENTRY NOT EVALUATED box, the entry is not to be judged.

☐ TIER 1 – PDF of the documentation portfolio was submitted by the necessary deadline
☐ TIER 2 – Design Challenge and Model is present
☐ ENTRY NOT EVALUATED

TIER 1 – DOCUMENTATION PORTFOLIO (110 points)

CRITERIA	Minimal performance	Adequate performance	Exemplary performance	Record scores in the column spaces below.
	1-4 points	5-8 points	9-10 points	
Portfolio Components (X1)	Portfolio is unorganized and/or is missing three (3) or more components.	Portfolio has most components and is generally organized per the order of the event guide listing; it has sufficient content.	All components are included in the portfolio; content and organization per the order of the event guide listing are excellent.	
Description of Design Interpretation (X1)	The description of the design and style is unclear or vague.	The description of the design and explanation of the style are included; they are adequately presented.	The description and merits of the design and explanation of the style are clear, effective, and convincing.	
Construction Systems (X1)	There is little or no evidence of attention to the various construction systems.	Most, but not all, construction systems are addressed; they are generally well presented.	All applicable construction systems are addressed, clearly documented, and well presented.	
Schedule of Finish Materials (X1)	Many elements of the interior and exterior finish schedules are missing or incomplete.	Most, but not all, elements of the interior and exterior finish schedules are included.	All interior and exterior finish schedules/materials are detailed and explained clearly.	
Drawings (X2)	A few of the required drawings are present, but they are lacking in quality.	Most, but not all, of the required drawings are included and are in the proper format.	All required drawings are included and in the proper format.	
3D Modeling/ Rendering (X1)	The drawing is present and displays minimal effort.	The drawing is complete, clear, and includes details.	The drawing is high quality, clear, and includes necessary details.	
Work Log (X1)	The Work Log lacks major elements of documentation.	The Work Log is somewhat complete and generally reflects the time and work necessary for the project.	The Work Log completely and accurately reflects the time and work necessary for the project.	
Mentorship Verification (X1)	The verification form is missing or present and missing information or signatures.	The verification form is present and missing necessary information or signatures.	The verification form is complete and has all of the necessary information and signatures.	
Resources/ References (X1)	There is little or no effort to provide resources and references.	Resources and references included are generally presented appropriately.	There is clear evidence of the appropriate use of applicable resources and references.	

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TIER 1 – DOCUMENTATION PORTFOLIO (110 points) – continued

Photographs of the Model (X1)	The photographs only show simple views of the model and are of poor quality.	The photographs show multiple views from various angles and the quality is good.	The photographs are high quality and show multiple views and angles of the model's interior (with roof removed, if applicable) and exterior.	
TIER 1 – DOCUMENTATION PORTFOLIO SUBTOTAL (110 points)				

Rules violations (a deduction of 20% of the total possible points for the above sections) must be initialed by the judge, coordinator, and manager of the event. Record the deduction in the space to the right. Indicate the rule violated: _____	

TIER 1 – SUBTOTAL (110 points)	

Record scores in the column spaces below.

TIER 2 – DESIGN CHALLENGE (50 points)

CRITERIA	Minimal performance	Adequate performance	Exemplary performance	
	1-4 points	5-8 points	9-10 points	
Effectiveness of Design (X2)	The design is ineffective in meeting the needs of the challenge.	The design is somewhat effective in meeting the needs of the challenge.	The design is clearly effective in meeting the needs of the challenge.	
Access and Flow (X1)	The design reflects an ineffective traffic flow pattern and/or use of space to gain access to the structure.	The design reflects a somewhat effective traffic flow pattern and use of space to access the structure.	The design presents a clear, effective traffic flow pattern and full consideration of the use of space.	
Aesthetic Appeal No additional points will be awarded for superfluous aesthetic additions (X1)	There is little evidence of consideration of aesthetics and curb appeal in the design.	There is some evidence that aesthetics and curb appeal have been considered in the design.	There is clear evidence that aesthetics and curb appeal are fully and effectively integrated into the design.	
Creativity and innovation (X1)	The design lacks originality and exhibits few, if any, creative and/or innovative applications.	Some unique, innovative, and creative concepts are incorporated in the overall design.	Unique, creative, and innovative approaches are fully incorporated into the design.	
TIER 2 – DESIGN CHALLENGE SUBTOTAL (50 points)				

TIER 2 – MODEL (50 points)

Record scores in the column spaces below.

CRITERIA	Minimal performance	Adequate performance	Exemplary performance	
	1-4 points	5-8 points	9-10 points	
Quality of Construction (X2)	Construction is of poor quality and appearance, with little or no attention to neatness.	Construction is somewhat neat and has appropriate quality and appearance.	Construction is of excellent quality and exemplary appearance.	
Use of Materials (X1)	The choice of materials is ineffective and inadequate for the type and scale needed.	There is effective choice of materials and some attention to scale.	There is effective and excellent use of materials and accurate choice of scale.	
Design Representation (X2)	The model is ineffective in depicting the requirements of the design challenge.	The model is somewhat effective in depicting the requirements of the design challenge.	The model clearly and effectively incorporates and depicts all aspects of the design challenge.	
			TIER 2 – MODEL SUBTOTAL (50 points)	

Rules violations (a deduction of 20% of the total possible points for the above sections) must be initialed by the judge, coordinator, and manager of the event. Record the deduction in the space to the right.

Indicate the rule violated: _____

PRELIMINARY SUBTOTAL (210 points)	

SEMIFINAL PRESENTATION/INTERVIEW (50 points)

Record scores in the column spaces below.

CRITERIA	Minimal performance	Adequate performance	Exemplary performance	
	1-4 points	5-8 points	9-10 points	
Organization of Presentation (X1)	Participant(s) seems unorganized and unprepared for the presentation.	Participant(s) is/are generally prepared/organized in the overall presentation.	The presentation is logical, well organized, and easy to follow.	
Knowledge (X2)	Participant(s) seems to have little understanding of the concepts of the design challenge; vague answers to interview questions are provided.	An understanding of the concepts of the design challenge, and answers to questions, are adequate.	There is clear evidence of a thorough understanding of the design challenge; questions are answered well.	
Articulation (X1)	Communication of the design process is unclear, unorganized, and or illogical; leadership and/or 21st century skills are not evident.	Communication of the design process is somewhat logical and clear; leadership and/or 21st century skills are somewhat evident.	Communication of the design process is clear, concise, and logical; leadership and/or 21st century skills are clearly evident.	
Delivery (X1)	The team/individual is verbose and/or uncertain in the presentation/interview; participant posture, gestures, and lack of eye contact diminish the delivery.	The team/individual is somewhat well-spoken and clear in the presentation/interview; participant posture, gestures, and eye contact result in an acceptable delivery.	The team/individual is well-spoken and distinct in the presentation/interview; participant posture, gestures, and eye contact result in a polished, natural, and effective delivery.	
			SEMIFINAL PRESENTATION/INTERVIEW SUBTOTAL (50 points)	

Rules violations (a deduction of 20% of the total possible points for the above sections) must be initialed by the judge, coordinator, and manager of the event. Record the deduction in the space to the right.

Indicate the rule violated: _____

SEMIFINAL SUBTOTAL (50 points)	

To arrive at the TOTAL score, add any subtotals and subtract rules violation points, as necessary. **TOTAL** (260 points)	

Comments:

_____

I certify these results to be true and accurate to the best of my knowledge.

JUDGE

Printed name: _____   Signature: _____

ARCHITECTURAL DESIGN
EVENT COORDINATOR INSTRUCTIONS

PERSONNEL

A. Event coordinator

B. Assistants for check-in, two (2)

C. Judges:

1. Two (2) or more (documentation)

2. Two (2) or more (models; preferably the same judges who reviewed the documentation)

3. Two (2) or more (semifinal presentation/interview; preferably the same judges who reviewed the documentation)

MATERIALS

A. Coordinator's packet, containing

1. Event guidelines, one (1) copy for the coordinator and for each judge

2. TSA Event Coordinator Report

3. Stick-on labels for entries, as needed

B. Measuring tape

C. Tables for entries

D. Tables and chairs for judges

RESPONSIBILITIES

PRE-CONFERENCE

A. National TSA will collect entries until 11:59pm ET on a designated date in mid-May. The results will be shared with the CRC manager, event coordinator, and assigned judges.

B. Review entries as they are submitted to the designated online storage utility.

C. Manage communication and Pre-conference evaluation (at least two [2] or more judges should be recruited earlier in the year). Coordinate with National TSA and/or the Judge Manager.

AT THE CONFERENCE

A. Attend the mandatory coordinator's meeting at the designate time and location.

B. Report to the CRC room and check the contents of the coordinator's packet.

C. Review the event guidelines and check to see that enough personnel have been scheduled.

D. Inspect the area or room in which the event is being held for appropriate set-up, including room size, chairs, tables, outlets, etc. Notify the event manager of any potential problems.

E. At least one (1) hour before the event is to begin, meet with judges and assistants to review time limits, procedures, regulations, evaluation, and all other details related to the event. If questions arise that cannot be answered, speak to the event manager before the event begins.

F. Ensure the judges have access to the online judging system.

EVENT CHECK-IN

A. Check in the model entries at the time and place stated in the conference program.

B. If check-in is on the first day of the conference, requirements for attire do NOT apply during check-in.

C. Late entries are considered on a case-by-case basis and only when the lateness is caused by events beyond the participant's control.

D. In order to compete, participants must be on the entry list or must have CRC approval.

E. Each entry must include the team's identification number in the upper right-hand corner of the entry.

F. Instruct participants to position displays for viewing.

G. Secure the entries in the designated area.

PRELIMINARY ROUND

A. Judges independently evaluate the entries (top 24 models) to determine the twelve (12) semifinalists.

B. Decisions about rules violations must be discussed and verified with the judges, event coordinator, and CRC manager to determine either:

1. To deduct twenty percent (20%) of the total possible points in this round or

2. To disqualify the entry

The event coordinator, judges, and CRC manager must initial either of these actions on the rating form.

C. Create a sign-up sheet for semifinalist presentation/interviews.

SEMIFINAL ROUND

A. Semifinalists report at the time and place stated in the conference program to sign up for a presentation/interview time.

B. Semifinalists report at the assigned time and place for the presentation/interview.

C. Manage completion of the on-site presentation/interviews.

D. Discuss rule violations (e.g. 20% deduction, disqualification) and have all relevant parties initial the rating form.

E. If necessary, manage security and the removal of materials from the area.

AUDIO PODCASTING

OVERVIEW

Applying leadership and 21st century skills, participants use digital audio technology to create original content around a pre-determined technology theme. Podcasting encourages good storytelling, voice acting, and folly sound effects to create a coherent creative work. The theme will be posted on the TSA website under *Themes & Problems*. Semifinalists complete an on-site challenge to produce additional podcast(s). Required criteria, such as lines of dialog, topics, etc. will be revealed at the semifinalists orientation meeting.

ELIGIBILITY

Three (3) teams per state may participate. Teamwork is strongly encouraged, but an individual may participate solo in this team event.

TIME LIMITS

PRELIMINARY ROUND

A. All components of the chapter's entry (audio file URL and documentation PDF) must be finished, submitted, and accessible via the Internet by 11:59pm ET on a designated date mid-May.

B. The audio piece must be more than one (1) minute and less than five (5) minutes in length.

C. A deduction of five (5) points total will be incurred for each fifteen (15) seconds under the one (1) minute minimum and for each fifteen (15) seconds over the five (5) minute maximum length.

D. The timing starts with the first sound and continues until the last sound ends.

SEMIFINAL ROUND

A. The number of podcasts and timing will be revealed at the semifinalist orientation meeting.

B. Participants have thirty-six (36) hours, beginning at the semifinalists meeting, to complete and submit the entire production.

C. The time limits for the on-site audio podcast will provided at the semifinalist orientation meeting.

D. A deduction of five (5) points will be incurred for each fifteen (15) seconds under the minimum and for each fifteen (15) seconds over the maximum length.

E. The timing starts with the first sound and continues until the last sound ends.

ATTIRE

TSA competition attire is required for this event.

PROCEDURE

PRE-CONFERENCE

A. Participants review the TSA Honor Statement for Competitive Events found in the General Rules and listed in the individual competitive event rules.

B. Participants design an original audio podcast piece.

C. Participants record their design process within a documentation portfolio.

D. Participants submit a URL to the audio file (in MP3 or suitable format) and a documentation PDF of the required documentation by 11:59pm ET on a designated date in mid-May.

E. Submission information will be provided on the TSA website under *Competition Updates*.

PRELIMINARY ROUND

A. Judges independently assess the entries using the following procedure:

1. Judges score the Audio Podcast criteria to determine the top twenty-four (24) preliminary contestants, which will not be posted.

2. Judges score the Documentation Portfolio criteria of those top twenty-four contestants to determine the top twelve (12) semifinalist teams.

B. A list of the twelve (12) semifinalists (in random order) will be posted on the first full day of the conference.

SEMIFINAL ROUND

A. Semifinalists report at the time and place stated in the conference program to receive the on-site challenge information. TSA competition attire is required to receive the on-site challenge.

B. The event coordinator distributes the materials, information, directions, and deadlines to each team.

C. Each team supplies its own audio production and editing equipment to complete its entry.

D. Teams are responsible for submitting a hyperlink of their audio solution and a PDF of a completed Student Copyright Checklist using the submission procedures provided by the event coordinator.

E. Entries are reviewed independently by judges.

F. The top ten (10) finalists are announced at the awards ceremony.

REGULATIONS AND REQUIREMENTS

Students will work to develop their leadership and 21st century skills iin the process of preparing for and participating in this TSA competitive event. The development and application of those skills must be evident in their submission, demonstration, and/or communication pertaining to the entry.

PRE-CONFERENCE

A. The audio podcast and required documentation must be uploaded or located online and accessible for evaluation by the posted deadline.

B. The entry must point directly to the team's entry. Entries that require a software download or a request that access be granted will not be judged.

C. Entries received, or changes made to submitted entries after this deadline will not be judged.

D. The audio podcast may include the first name of the students in the podcast and is exempt from the general rule that no identifying information may be used. However, students will not be allowed to use last names, their school name, or the state they are from.

E. Audio Podcast:

1. The URL must point directly to the audio file and not require any permissions or installation of software for evaluation.

2. Music may accompany the audio piece but is not required.

3. The audio piece must be greater than one (1) minute and less than five (5) minutes in length.

4. There will be a five (5)-point deduction for:

a. each five (5) seconds under the one (1)-minute minimum

b. each 15 seconds over the five (5)-minute maximum length.

5. All audio pieces must be the original work of the team and must have been completed within the current school year.

6. Free, non-copyrighted sounds, loops, or other audio elements may be incorporated into audio pieces. The sources of these elements and the way in which they are used in the audio piece must be described in the portfolio.

7. Each actual and/or synthesized voice used in the final piece must be illustrated in a timeline format in the portfolio.

8. Where applicable, all ideas, sounds, and loops from other sources must be cited. If copyrighted material is used, proper written permission must be included.

F. Podcast Cover Art

1. All entries must include a podcast cover art graphic (JPEG or PNG).

2. The graphic must fit a square ratio, set to 1400 x 1400 pixels.

PRELIMINARY ROUND

A. Documentation Portfolio:

1. The documentation portfolio should be complete, well written, and professional in organization and appearance.

2. Documentation materials (comprising a "portfolio") are required and must be submitted as a multi-page PDF document with pages in this order:

a. Title page with the title of the audio piece, the event title, Chapter ID, the conference city and state, and the year; one (1) page

b. Table of contents; pages as needed

c. Podcast Cover Art. The graphic must fit a square ratio, set to 1400 x 1400 pixels.; one (1) page

d. Work Log (see Forms Appendix); pages as needed

e. Self-evaluation of the piece using criteria from the official rating form; pages as needed.

f. Audio composition. Each actual and/or synthesized voice used in the final audio must be illustrated graphically using a timeline format; pages as needed

g. When audio elements are used that were NOT created by the team, the source, effects applied, the way each element was incorporated into the audio piece and how each element corresponds to the audio must be included; pages as needed.

h. List of hardware, software, and instruments used in the development of the audio piece; one (1) page

i. List of references that includes sources for materials (non-copyrighted); pages as needed

j. Completed Student Copyright Checklist (see Forms Appendix); one (1) page

SEMIFINAL ROUND

A. Semifinalists report at the time and place stated in the conference program to receive the on-site challenge information. TSA competition attire is required to receive the on-site challenge.

B. The event coordinator explains any recording restrictions for the specific property.

C. All participant voice audio must be the original work of the team and must have been completed during the event timeline.

D. On-site Submission Information:

1. Participants may choose any audio hosting site (such as an UNLISTED YouTube URL), or a sharable link in cloud storage, as long as the audio podcast is located online and accessible for evaluation.

2. The URL must point directly to the participant's entry. Entries that require a software download or request access be granted will not be judged.

3. Entries received or changes made to submitted entries after the deadline will not be judged.

4. Students must complete the Student Copyright Checklist (see Forms Appendix) and save it as a PDF to be submitted electronically with the entry online.

5. When applicable, all ideas and sounds from other sources must be cited. Copyright materials may NOT be used. If including a citation page, the page must be included as the second page of the Student Copyright Checklist in the PDF in D.4.

6. National TSA will not provide wireless Internet.

EVALUATION

PRELIMINARY ROUND

Tier 1

A. The audio podcast

Tier 2

B. The documentation portfolio

SEMIFINAL ROUND

A. The completed on-site audio podcast(s)

Refer to the official rating form for more information.

TSA HONOR STATEMENT

All work must be created and completed by individual competitors or teams. Plagiarism, the use of Generative Artificial Intelligence (GenAI) software, copyright violation, cheating, and falsification of information are prohibited. Participants may NOT use any generative artificial intelligence (GenAI) tools (e.g. ChatGPT, Google Gemini, GitHub Copilot, etc.). Any attempt to gain an unfair advantage will not be tolerated. Competitors at any level of TSA competition understand and agree to abide by the TSA Honor Statement.

If it is determined that a student violated the TSA Honor Statement, a rules violation of twenty percent (20%) will be incurred.

STEM INTEGRATION

This event aligns with the STEM (Science, Technology, Engineering, and Mathematics) educational standards.

LEADERSHIP AND 21ST CENTURY SKILLS

This event provides opportunity for students to build and develop leadership and 21st century skills including but not limited to – Communication, Collaboration/Social Skills, Initiative, Problem Solving/Risk Taking, Critical Thinking, Perseverance/Grit, Creativity, Relationship Building/Teamwork, Dependability/Integrity, and Flexibility/Adaptability

CAREERS RELATED TO THIS EVENT

This competition has connections to one (1) or more of the careers below:

- Artist
- Audio designer or engineer
- Audio operator or technician
- Broadcast technician
- Music composer

AUDIO PODCASTING
2025 & 2026 OFFICIAL RATING FORM
HIGH SCHOOL

Judges: Using minimal (1-4 points), adequate (5-8 points), or exemplary (9-10 points) performance levels as a guideline in the rating form, record the scores earned for the event criteria in the column spaces to the right. The X1 or X2 notation in the criteria column is a multiplier factor for determining the points earned. (Example: an "adequate" score of 7 for an X1 criterion = 7 points; an "adequate" score of 7 for an X2 criterion = 14 points.) A score of zero (0) is acceptable if the minimal performance for any criterion is not met.

Go/No Go Specifications

- Before judging the entry, ensure that the items below are present; indicate presence with a check mark in the box.
- If an item is missing, leave the box next to the item blank and place a check mark in the box labeled ENTRY NOT EVALUATED.
- If a check mark is placed in the ENTRY NOT EVALUATED box, the entry is not to be judged.

☐ TIER 1 – Audio composition was submitted in proper format and accessible

☐ TIER 2 – PDF of the documentation portfolio was submitted

☐ ENTRY NOT EVALUATED

TIER 1 – AUDIO PODCAST (70 points)				Record scores in the column spaces below.
CRITERIA	Minimal performance	Adequate performance	Exemplary performance	
	1-4 points	5-8 points	9-10 points	
Creativity and Uniqueness (X1)	The podcast feels like a standard piece; it does not make strides to distinguish itself from any other podcast.	The work involves some original aspects or manipulations of podcast ideas and form; it explores and includes at least one (1) or more podcast elements.	The episodes includes highly original, unusual, or imaginative episode ideas; it explores and includes at least two (2) or more podcast elements.	
Artisanship (X1)	The work gives no sense of a completed podcast episode idea; there is no clear beginning, middle, or end section; the form appears random, rather than organized.	One (1) podcast element has been used to organize the episode's ideas, content, and overall form, which are somewhat coherent.	The episode(s) presents at least one (1) complete episode idea; the piece has a coherent and organized form with a clear beginning, middle, and end; additional elements are used to organize the episode's ideas and form.	
Energy and Style (X2)	The piece lacks liveliness, vitality, and vigor; there is no flair, elegance, or grace to the form.	The episodes generates an initial level of energy that appeals to the listener; the style and content is somewhat distinctive.	The liveliness and forcefulness of the episodes excite the listener; the style is truly unique and electrifying.	
Appropriateness (X1)	The podcast episodes, ideas or concepts are not appropriate and acceptable for use in the event.	The podcast idea or concept presented is acceptable and somewhat fitting.	The podcast episodes' ideas or concepts presented are fitting and serve as an excellent example of the type of work expected.	
Overall Appeal (X2)	The work does not present an effective general impression; the podcast content do not hold the listener's interest.	The podcast includes some interesting content and form ideas; the general impression is pleasant and moderately effective.	There is strong, interesting, and effective audio appeal; the work is designed to be enjoyed by the listeners.	
TIER 1 – AUDIO PODCAST SUBTOTAL (70 points)				

Rules violations (a deduction of 20% of the total possible points for the above sections) must be initialed by the judge, coordinator, and manager of the event. Record the deduction in the space to the right.

Indicate the rule violated: _____

TIME DEDUCTIONS					
There will be a five (5) point deduction for each fifteen (15) seconds under the minimum time or each fifteen (15) seconds over the maximum time allowed for the audio podcast.					
Total time under		Fifteen (15)-second intervals under		Under time deduction	
Total time over		Fifteen (15)-second intervals over		Over time deduction	
				TOTAL TIME DEDUCTION	

TIER 1 – SUBTOTAL (70 points)	

Record scores in the column spaces below.

TIER 2 – DOCUMENTATION PORTFOLIO (50 points)				
CRITERIA	Minimal performance	Adequate performance	Exemplary performance	
	1-4 points	5-8 points	9-10 points	
Portfolio Components (X1)	Portfolio is unorganized and/or is missing three (3) or more components.	Portfolio has most components and is generally organized per the order of the event guide listing; it has sufficient content.	All components are included in the portfolio; content and organization per the order of the event guide listing are excellent.	
Podcast Cover Art (X2)	The cover art is present, but not creative and doesn't reflect the podcast.	The cover art present and the correct size; the cover art is of good quality and creates the desire to enjoy the podcast.	The cover art is present and the correct size; the cover art is exemplary and truly promotes the podcast; it is evident that the team connects the cover art to the podcast.	
Work Log and Self-Evaluation (X1)	The Work Log and/or self-evaluation are incomplete, and/or missing key components.	The Work Log and/or self-evaluation are somewhat complete and incorporate reflections and efforts of the team.	A complete and concisely written Work Log and self-evaluation are provided and incorporate the efforts and reflections of the team.	
Track Timeline (X1)	The track timeline is incomplete and/or not created correctly; the timeline does not correlate with the actual music production.	The track timeline is largely complete and attempts to correlate with the actual podcast production.	The track timeline is of exemplary quality; it correlates completely with the podcast production and is easy to follow.	
TIER 2 – DOCUMENTATION PORTFOLIO SUBTOTAL (50 points)				

Rules violations (a deduction of 20% of the total possible points for the above sections) must be initialed by the judge, coordinator, and manager of the event. Record the deduction in the space to the right. Indicate the rule violated: _____	

PRELIMINARY SUBTOTAL (120 points)	

SEMIFINAL ON-SITE PODCAST (70 points)

CRITERIA	Minimal performance	Adequate performance	Exemplary performance	
	1-4 points	5-8 points	9-10 points	
Creativity and Uniqueness (X1)	The podcast feels like a standard piece; it does not make strides to distinguish itself from any other podcast.	The work involves some original aspects or manipulations of podcast ideas and form; it explores and includes at least one (1) or more podcast elements.	The episodes includes highly original, unusual, or imaginative episode ideas; it explores and includes at least two (2) or more podcast elements.	
Artisanship (X1)	The work gives no sense of a completed podcast episode idea; there is no clear beginning, middle, or end section; the form appears random, rather than organized.	One (1) podcast element has been used to organize the episode's ideas, content, and overall form, which are somewhat coherent.	The episode(s) presents at least one (1) complete episode idea; the piece has a coherent and organized form with a clear beginning, middle, and end; additional elements are used to organize the episode's ideas and form.	
Energy and Style (X2)	The piece lacks liveliness, vitality, and vigor; there is no flair, elegance, or grace to the form.	The episodes generates an initial level of energy that appeals to the listener; the style and content is somewhat distinctive.	The liveliness and forcefulness of the episodes excite the listener; the style is truly unique and electrifying.	
Appropriateness (X1)	The podcast episodes, ideas or concepts are not appropriate and acceptable for use in the event.	The podcast idea or concept presented is acceptable and somewhat fitting.	The podcast episodes' ideas or concepts presented are fitting and serve as an excellent example of the type of work expected.	
Overall Appeal (X2)	The work does not present an effective general impression; the podcast content do not hold the listener's interest.	The podcast includes some interesting content and form ideas; the general impression is pleasant and moderately effective.	There is strong, interesting, and effective audio appeal; the work is designed to be enjoyed by the listeners.	
SEMIFINAL ON-SITE PODCAST SUBTOTAL (70 points)				

TIME DEDUCTIONS

There will be a five (5) point deduction for each fifteen (15) seconds under the minimum time or each fifteen (15) seconds over the maximum time allowed for the audio podcast.			
Total time under		Fifteen (15)-second intervals under		Under time deduction	
Total time over		Fifteen (15)-second intervals over		Over time deduction	
TOTAL TIME DEDUCTION			

Rules violations (a deduction of 20% of the total possible points for the above sections) must be initialed by the judge, coordinator, and manager of the event. Record the deduction in the space to the right.

Indicate the rule violated: _____

SEMIFINAL SUBTOTAL (70 points)

To arrive at the TOTAL score, add any subtotals and subtract rules violation points, as necessary.   **TOTAL (190 points)**

Comments:

_____

I certify these results to be true and accurate to the best of my knowledge.

JUDGE

Printed name: _____ Signature: _____

AUDIO PODCASTING
EVENT COORDINATOR INSTRUCTIONS

PERSONNEL

A. Event coordinator

B. Judges:

1. Preliminary round, two (2) for each forty (40) entries

2. Semifinal round, two (2)

MATERIALS

A. Coordinator's packet, containing:

1. Event guidelines, one (1) copy for the coordinator and for each judge

2. TSA Event Coordinator Report

B. One (1) stopwatch per group of judges

C. Interview questions

D. Tables and chairs for judges

RESPONSIBILITIES

PRE-CONFERENCE/PRELIMINARY ROUND

A. National TSA will collect entries until 11:59pm ET on a designated date in mid-May. The submissions are shared with the CRC manager, event coordinator, and assigned judges.

B. Review entries as they are submitted to the designated online storage utility.

C. Manage communication and Pre-conference evaluation (at least two [2] or more judges should be recruited earlier in the year). Coordinate with National TSA and/or the Judge Manager.

AT THE CONFERENCE

A. Attend the mandatory coordinator's meeting at the designated time and location.

B. Report to the CRC room and check the contents of the coordinator's packet.

C. Review the event guidelines and check to see that enough personnel have been scheduled.

D. Inspect the area(s) in which the event is being held for appropriate set-up, including room size, chairs, tables, outlets, etc. Notify the event manager of any potential problems.

E. At least one (1) hour before the event is set to begin, meet with judges/assistants to review time limits, procedures, regulations, evaluation, and all other details related to the event. If questions arise that cannot be answered, speak to the event manager before the event begins.

F. Ensure the judges have access to the online judging system.

PRELIMINARY ROUND

A. On the first full day of competition, post a list of the twelve (12) semifinalists in random order.

SEMIFINAL ORIENTATION

A. Prior to the semifinalist orientation meeting, the coordinator should tour the facilities and develop a list of restricted areas and/or specific restrictions for the event. This event should be shared with the event manager prior to the event meeting. The coordinator should mention at the event meeting that teams must be courteous to all guests in common areas or designated filming areas.

B. Meet with all participants at the designated time and place to deliver the specific criteria, including any required props and dialog. Ensure that all participants understand regulations regarding equipment allowed, behavior, deadlines, and submission requirements.

C. Share the online submission link with the participants.

D. Late entries are considered on a case-by-case basis and only when the dley is caused by events beyond the participant's control.

E. In order to compete, participants must be on the entry list, or must have approval of the CRC.

SEMIFINAL ROUND

A. Close the online submission link.

B. Ensure the judges have access to the entries.

C. Judges independently evaluate the entries.

D. Decisions about rules violations must be discussed and verified with the judges, event coordinator, and CRC manager to determine either:

   1. To deduct 20% of the total possible points or

   2. To disqualify the entry

   The event coordinator, judges, and CRC manager must initial either of these actions on the rating form.

E. The event coordinator, judges, and the CRC manager must initial either of these actions on the rating form.

BIOTECHNOLOGY DESIGN

OVERVIEW

Applying leadership and 21st century skills, participants conduct research on a contemporary biotechnology based on an annual theme, document their research, and create an effective interactive display. The information gathered may be student-performed research or a recreation or simulation of research performed by the scientific community. If appropriate, a model or prototype depicting some aspect of the issue may be included. Semifinalists present and are interviewed about their topic. The topic for the current school year will be posted on the TSA website under *Themes & Problems*.

ELIGIBILITY

One (1) team per chapter may participate.

TIME LIMITS

A. Up to ten (10) minutes for the presentation/inteview broken down as follows:
   1. one (1) minute for set-up
   2. seven (7) minutes for the presentation
   3. two (2) minutes to respond to questions from judges

ATTIRE

TSA competition attire is required for this event.

PROCEDURE

PRE-CONFERENCE

A. Participants review the TSA Honor Statement for Competitive Events found in the General Rules and listed in the individual competitive event rules.
B. Participants review the annual topic found on the TSA website under *Themes & Problems*.
C. Participants concentrate their efforts researching a selected contemporary biotechnology issue.
D. Participants prepare their documentation portfolio, interactive display, and multimedia presentation according to the regulations.

PRELIMINARY ROUND

A. No more than two (2) team members report at the time and place stated in the conference program to set up the display.
B. Entries are evaluated by the judges with neither students nor advisors present based on the following criteria:
   1. Judges score the Display criteria to determine the top twenty-four (24) preliminary contestants, which will not be posted.
   2. Judges score the Documentation Portfolio criteria of those top twenty-four (24) contestants to determine the top twelve (12) semifinalists.
C. A list of twelve (12) semifinalist teams (in random order) is posted.

SEMIFINAL ROUND

A. Semifinalist team representative report at the time and place stated in the conference program to sign up for a presentation/interview time.
B. Up to two (2) representatives from each semifinalist team, with their multimedia presentation, report to the event area at the time and place assigned.
C. Semifinalists team representatives participate in an on-site presentation/interview that lasts a maximum of ten (10) minutes (see Time Limits).
D. The multimedia presentation must be presented on a student provided laptop during the finalist interview.
E. The top ten (10) finalists are announced at the awards ceremony.

REGULATIONS AND REQUIREMENTS

Students will work to develop their leadership and 21st century skills in the process of preparing for and participating in this TSA competitive event. The development and application of those skills must be evident in their submission, demonstration, and/or communication pertaining to the entry.

PRELIMINARY ROUND

A. Students must understand the fundamental concepts and principles of the contemporary biotechnology topic. Research on a problem within that topic should focus on significant impacts (opportunities and risks) on the environment, economy, and society, as well as any important ethical considerations.

B. Interactive Display:

1. The total size of the display may not exceed 15" deep x 2.5' wide x 4' high, including the portfolio.

2. A model or prototype is optional.

3. Power

   a. AC electricity may not be used.

   b. Dry cell or photo-voltaic cells may be used for power, if desired.

   c. Any power source used must fit within the maximum display area.

4. All power must be switched off once the team has completed set-up.

5. If the team wants judges to activate any electronic device in the display/model/prototype, complete instructions must be provided and clearly displayed to judges on how to power up the display/model/prototype, logging in, etc.

6. No harmful or illegal substances, viruses, live plants, or animals may be used as a part of the display. No potentially dangerous processes may be demonstrated or included as part of the display.

7. The display must be presented as if it were in a children's museum that is geared towards the audience specific to the current year's theme.

C. Documentation Portfolio:

1. Documentation materials (comprising "a portfolio") are required and must be secured in a clear front report cover with the following single-sided, 8½" x 11" pages, in this order:

   a. Title page with the event title, the team identification number, the conference city and state, and the year; one (1) page

   b. Table of contents; pages as needed

   c. Definition and explanation of the problem; one (1) page

   d. An explanation of the chosen solution, and other possible solutions and why they were rejected; maximum of three (3) pages

   e. A scenario of possible real-life applications; one (1) page

   f. Supplementary information such as logs, graphs, sketches, drawings, illustrations, photographs, etc.; maximum of four (4) pages

   g. A print-out of the accompanying multimedia presentation (printed with three [3] slides per page, recommended); pages as needed

   h. Work Log (see Forms Appendix); pages as needed

   i. A minimum of three (3) different types of resources, such as books, interviews, professional journals, websites, magazines, etc. All must be cited using a professional citation style of the competitors choosing. Some examples of professional citation styles include MLA, APA, Chicago, and IEEE; pages as needed.

SEMIFINAL ROUND

A. Semifinalist team representative report at the time and place stated in the conference program to sign up for a presentation/interview.

B. Up to two (2) representatives from each team report at the time and place assigned with the following computer hardware for the presentation:

1. a laptop computer

2. projection equipment is not permitted

3. laptop computers must operate on battery power

C. Representatives may reference their display and documentation during the presentation.

D. The representatives remove their presentation materials from the event area at the conclusion of the presentation/interview.

EVALUATION

PRELIMINARY ROUND

Tier 1

A. The interactive display

TIer 2

B. The documentation portfolio

SEMIFINAL ROUND

A. The presentation/interview

Refer to the official rating form for more information.

TSA HONOR STATEMENT

All work must be created and completed by individual competitors or teams. Plagiarism, the use of Generative Artificial Intelligence (GenAI) software, copyright violation, cheating, and falsification of information are prohibited. Participants may NOT use any generative artificial intelligence (GenAI) tools (e.g. ChatGPT, Google Gemini, GitHub Copilot, etc.). Any attempt to gain an unfair advantage will not be tolerated. Competitors at any level of TSA competition understand and agree to abide by the TSA Honor Statement.

If it is determined that a student violated the TSA Honor Statement, a rules violation of twenty percent (20%) will be incurred.

STEM INTEGRATION

This event has connections with the STEM (Science, Technology, Engineering, and Mathematics) educational standards.

LEADERSHIP AND 21ST CENTURY SKILLS

This event provides opportunity for students to build and develop leadership and 21st century skills including but not limited to – Communication, Collaboration/Social Skills, Initiative, Problem Solving/Risk Taking, Critical Thinking, Perseverance/Grit, Creativity, Relationship Building/Teamwork, Dependability/Integrity, and Flexibility/Adaptability

CAREERS RELATED TO THIS EVENT

This competition has connections to one (1) or more of the careers below:

- Bioinformatics processor
- Food scientist
- Microbiologist
- Radiographer
- Quality control analyst

BIOTECHNOLOGY DESIGN

2025 & 2026 OFFICIAL RATING FORM

HIGH SCHOOL

Judges: Using minimal (1-4 points), adequate (5-8 points), or exemplary (9-10 points) performance levels as a guideline in the rating form, record the scores earned for the event criteria in the column spaces to the right. The X1 or X2 notation in the criteria column is a multiplier factor for determining the points earned. (Example: an "adequate" score of 7 for an X1 criterion = 7 points; an "adequate" score of 7 for an X2 criterion = 14 points.) A score of zero (0) is acceptable if the minimal performance for any criterion is not met.

Go/No Go Specifications

- Before judging the entry, ensure that the items below are present; indicate presence with a check mark in the box.
- If an item is missing, leave the box next to the item blank and place a check mark in the box labeled ENTRY NOT EVALUATED.
- If a check mark is placed in the ENTRY NOT EVALUATED box, the entry is not to be judged.

☐ TIER 1 – Display is present
☐ TIER 2 – Documentation Portfolio is present
☐ ENTRY NOT EVALUATED

TIER 1 – DISPLAY (80 points)				Record scores in the column spaces below.
CRITERIA	Minimal performance	Adequate performance	Exemplary performance	
	1-4 points	5-8 points	9-10 points	
Interactivity (X1)	The display is difficult to understand and interact with, and is presented in an illogical manner; it is not user-friendly.	The display is somewhat organized, but poses some challenges for interaction.	The display is interactive, organized, clear, and user-friendly.	
Explanation of Impacts (X2)	Explanation is missing a description of the issue's relevance to environmental, economic, social, and/or ethical considerations.	Explanation addresses some of the issue's relevance to environmental, economic, social, and/or ethical considerations.	Explanation clearly conveys the issue's relevance to environmental, economic, social, and/or ethical considerations.	
Supporting Information (X1)	Support information does not help to clarify the issue, and/or it is of little significance to the issue.	Support information is somewhat appropriate and helps supplement the solution by providing clarity to the issue.	Support information is highly effective and of excellent quality.	
Communication of Issue (X1)	It is difficult to understand the issue being communicated; an illogical explanation is presented.	The issue is communicated and thoughts are somewhat organized.	The issue is communicated in an organized, clear, and concise manner.	
Communication of Solution (X1)	It is difficult to understand the solution being communicated; an illogical explanation is presented.	The solution is communicated and thoughts are somewhat organized.	The solution is communicated in an organized, clear, and concise manner.	
Creativity (X1)	The display lacks creativity; no, or very few, design principles are integrated in the display.	Some elements of creativity exist in the display, and essential design principles are generally evident.	The display exudes creativity; essential design principles and elements are well integrated.	
Aesthetics and Artisanship (X1)	Display is unorganized and sloppy; display seems to be an afterthought or thrown together.	Display is somewhat organized and aesthetically pleasing.	Display is logical, organized, cohesive, and aesthetically pleasing.	
TIER 1 – DISPLAY SUBTOTAL (80 points)				

Rules violations (a deduction of 20% of the total possible points for the above sections) must be initialed by the judge, coordinator, and manager of the event. Record the deduction in the space to the right.

Indicate the rule violated: _____

TIER 1 – SUBTOTAL (80 points)

Record scores in the column spaces below.

TIER 2 – DOCUMENTATION PORTFOLIO (50 points)

CRITERIA	Minimal performance 1-4 points	Adequate performance 5-8 points	Exemplary performance 9-10 points	
Portfolio (X1)	Portfolio is unorganized and/or is missing three (3) or more components.	Portfolio has most components and is generally organized per the order of the event guide listing; it has sufficient content.	All components are included in the portfolio; content and organization per the order of the event guide listing are excellent.	
Definition and Explanation of Issue (X1)	Definition and explanation of the issue are unclear.	Issue is defined and generally explained.	Clear and concise definition and explanation of the issue are evident.	
Scenario and Research Base (X1)	Research is inadequate, and/or very few credible sources are referenced.	Research has been conducted appropriately, with some credible sources included.	Research indicates evidence of a comprehensive assortment of materials that are credible sources.	
Support Materials (X1)	Support materials do not help clarify the documentation or are of little significance to the issue.	Support materials are appropriate and somewhat supplement documentation by lending some clarity.	Support materials are of excellent quality; if not original, they are cited; support materials clarify the issue.	
Quality and Effectiveness (X1)	Portfolio appears to have been thrown together; distracting errors in punctuation, grammar, and spelling are evident in the documentation.	Portfolio is generally organized; punctuation, grammar, and spelling are generally correct, with few errors.	Work is of exceptional quality and well organized; punctuation, grammar, and spelling are correct, with no errors.	
TIER 2 – DOCUMENTATION PORTFOLIO SUBTOTAL (50 points)				

Rules violations (a deduction of 20% of the total possible points for the above sections) must be initialed by the judge, coordinator, and manager of the event. Record the deduction in the space to the right.

Indicate the rule violated: _____

PRELIMINARY SUBTOTAL (130 points)

BIOTECHNOLOGY DESIGN

SEMIFINAL PRESENTATION/INTERVIEW (60 points)

CRITERIA	Minimal performance	Adequate performance	Exemplary performance	
	1-4 points	5-8 points	9-10 points	
Organization (X1)	Participants seem unorganized and unprepared for the presentation, with an illogical explanation of the problem and solution.	Participants are generally prepared for the presentation; explanation of problem and solution are communicated and generally organized.	The presentation is logical, well organized, and easy to follow; the problem and solution are communicated in an organized and concise manner.	
Articulation (X1)	Communication of the solution is unclear, unorganized, and or illogical; leadership and/or 21st century skills are not evident.	Communication of the solution is somewhat logical and clear; leadership and/or 21st century skills are somewhat evident.	Communication of the solution is clear, concise, and logical; leadership and/or 21st century skills are clearly evident.	
Delivery (X1)	The team is verbose and/or uncertain in its presentation/ interview; participants' posture, gestures, and lack of eye contact diminish the delivery.	The team is somewhat well-spoken and clear in its presentation/ interview; participants' posture, gestures, and eye contact result in an acceptable delivery.	The team is well-spoken and distinct in its presentation/interview; participants' posture, gestures, and eye contact result in a polished, natural, and effective delivery.	
Knowledge (X2)	Participants seem to have little understanding of the concepts in their project; answers to questions may be vague.	Participants exhibit an understanding of the concepts in their project.	Participants show clear evidence of a thorough understanding of the project.	
Team Participation (X1)	The majority of the presentation/ interview is made by one member of the team; the partner(s) may be disengaged.	Team members generally are engaged in the process, though one member may take on more responsibility than the other(s).	All team members are actively involved in the presentation/ interview and responses to questions.	
SEMIFINAL PRESENTATION/INTERVIEW SUBTOTAL (60 points)				

Rules violations (a deduction of 20% of the total possible points for the above sections) must be initialed by the judge, coordinator, and manager of the event. Record the deduction in the space to the right.

Indicate the rule violated: _____

SEMIFINAL SUBTOTAL (60 points)	

To arrive at the TOTAL score, add any subtotals and subtract rules violation points, as necessary. **TOTAL (190 points)**	

Comments:

_____

I certify these results to be true and accurate to the best of my knowledge.

JUDGE

Printed name: _____   Signature: _____

BIOTECHNOLOGY DESIGN
EVENT COORDINATOR INSTRUCTIONS

PERSONNEL

A. Event coordinator

B. Assistants for check-in, two (2)

C. Judges:

    1. Preliminary round, two (2) or more

    2. Semifinal round, two (2) or more

MATERIALS

A. Coordinator's packet, containing:

    1. Event guidelines, one (1) copy for the coordinator and for each judge

    2. TSA Event Coordinator Report

    3. Stick-on labels for entries, as needed

B. Tape measure for judges

C. Stopwatch

D. Display tables for entries (minimum depth 18")

E. Table and chairs for judges and two (2) semifinalist team representatives

RESPONSIBILITIES

AT THE CONFERENCE

A. Attend the mandatory coordinator's meeting at the designated time and location.

B. Report to the CRC room and check the contents of the coordinator's packet.

C. Review the event guidelines and check to see that enough personnel have been scheduled.

D. Inspect the area(s) in which the event is to be held for appropriate set-up, including room size, tables, chairs, etc. Notify the event manager of any potential problems.

E. Ensure the judges have access to the online judging system.

F. At least one (1) hour before the event is to begin, meet with judges and assistants to review time limits, procedures, regulations, evaluation, and all other details related to the event. If questions arise that cannot be answered, speak to the event manager before the event begins.

EVENT CHECK-IN

A. Check in the entries at the time and place stated in the conference program.

B. If check-in is on the first day of the conference, requirements for attire do NOT apply during check-in.

C. Late entries are considered on a case-by-case basis and only when the lateness is caused by events beyond the participant's control.

D. In order to compete, participants must be on the entry list or must have CRC approval.

E. Each entry must include the team's identification number in the upper right-hand corner of the entry.

F. Instruct participants to position displays for viewing.

G. Secure the entries in the designated area.

PRELIMINARY ROUND

A. Judges independently assess the entries:

    1. The initial round of judging scores the Display entries to determine the top twenty-four (24) participants.

    2. The second round of judging scores the Documentation Portfolios of the twenty-four (24) identified participants based on the initial round of judging to determine the twelve (12) semifinalists.

B. Decisions about rules violations must be discussed and verified with the judges, event coordinator, and CRC manager to determine either:

    1. To deduct twenty percent (20%) of the total possible points or

    2. To disqualify the entry

    The event coordinator, judges, and CRC manager must initial either of these actions on the rating form.

C. Judges determine the twelve (12) semifinalists.

D. Create and post a sign-up sheet.

SEMIFINAL ROUND

A. Semifinalists report at the time and place stated in the conference program to sign-up for a presentation/interview time.

B. Semifinalists report at the assigned time and place for the presentation/interview.

C. Manage the semifinalist presentations/interviews.

D. Discuss rule violations (e.g. 20% deduction, disqualification) and have all relevant parties initial the rating form.

E. If necessary, manage security and the removal of materials from the event area.

BOARD GAME DESIGN

OVERVIEW

Applying leadership and 21st century skills, participants develop, build, and package a board game that focuses on the subject of their choice. The game should be interesting, exciting, visually appealing, and intellectually challenging. Each team designs the packaging, instructions, pieces, and/or cards associated with creating and piloting a new board game. Semifinalists set up the game, demonstrate how the game is played, explain the game's features, and discuss the design process.

ELIGIBILITY

One (1) team per chapter may participate.

TIME LIMITS

SEMIFINAL ROUND

A. Up to five (5) minutes to set up the game and five (5) minutes to repackage the game.

B. Up to twenty (20) minutes for the demonstration/ interview broken down as follows:

1. five (5) minutes for set-up

2. seven (7) minutes for the demonstration

3. three (3) minutes to respond to questions from judges

4. five (5) minutes to repackage the game before leaving.

C. A time deduction as noted in the rubric will be incurred for not adhering to any time designations/ restrictions.

ATTIRE

TSA competition attire is required for this event.

PROCEDURE

PRE-CONFERENCE

A. Participants review the TSA Honor Statement for Competitive Events found in the General Rules and listed in the individual competitive event rules.

B. Participants design and create the game entry, including the physical packaging. All components must be designed, engineered, created, and assembled together solely by the team.

C. Participants create a documentation portfolio to record the process.

PRELIMINARY ROUND

A. No more than two (2) team members report at the time and place stated in the conference program to submit the:

1. completed Board Game entry

2. documentation portfolio on a USB flash drive

B. Entries are evaluated by the judges with neither students nor advisors present based on the following criteria:

1. Judges score the Packaging and Board Game criteria to determine the top twenty-four (24) preliminary contestants, which will not be posted.

2. Judges score the Documentation Portfolio criteria of those top twenty-four contestants to determine the top twelve (12) semifinalist teams.

C. A list of twelve (12) semifinalist teams (in random order) is posted.

SEMIFINAL ROUND

A. Semifinalist teams report at the time and place stated in the conference program to sign up for an demonstration/interview time.

B. Semifinalist teams report at the assigned time and place for the demonstration/interview.

C. Semifinalist teams may be represented by two (2) to three (3) members.

D. Semifinalist teams will set up the game and give a brief demonstration of the game.

E. Semifinalist teams answer questions about the documentation, the game's purpose, value, design, rules, and the development process.

F. Semifinalist teams repackage the game.

G. Judges independently assess the entries.

H. The top ten (10) finalists are announced during the awards ceremony.

I. Semifinalist teams and all preliminary teams pick up their entry from the display area at the time and place stated in the conference program.

REGULATIONS AND REQUIREMENTS

Students will work to develop their leadership and 21st century skills in the process of preparing for and participating in this TSA competitive event. The development and application of those skills must be evident in their submission, demonstration, and/or communication pertaining to the entry.

PRELIMINARY ROUND

A. Participants design, create and package an entirely original board game including all parts, pieces and/or cards needed to play the game as well as accompanying instructions. If applicable, dice and sand timers may be commercially produced.

B. No identifying information other than a team identification number is to appear anywhere on the board game or portfolio.

C. Board Game:

1. The physical board game should be of high quality and designed for the intended age group.

2. The packaged game must be no larger than 12" x 18" x 3".

   a. The game must be designed, engineered, created, and packaged solely by the team.

   b. The materials used in packaging and manufacturing the game are to be determined by the team.

3. Game Instructions:

   a. must be clear, understandable, and age-appropriate

   b. must be included in both the packaged game and in the documentation portfolio

   c. must explain the rules in explicit detail

   d. The team must determine which format best presents the game's instructions.

4. The game must be able to be set up within five (5) minutes of opening the package.

5. Once evaluation of the game is complete, a player (judge) must be able to repackage it within five (5) minutes.

6. The game must include original work of the team. Work that is not created by the team must have proper documentation, showing copyright permissions and/or license for usage in the game segment.

7. When creating the game, the game must be free of any weapons or violence as stated in the general rules.

D. Documentation Portfolio:

1. Documentation materials (comprising "a portfolio") are required and must be submitted as a multi-page PDF document on a USB flash drive with pages in this order:

   a. Title page with the name of the board game, the event title, the conference city and state, the year; and the team identification number; one (1) page

   b. Table of Contents; one (1) page

   c. Overview of the game; one (1) page

   d. Intended audience (age range and number of players) and a game description/reasoning behind the choice of audience; one (1) page

   e. Game Instructions; pages as needed

   f. Description of the processes used to create the game and components; maximum of two (2) pages

   g. Engineering drawings of parts/game/packaging; pages as needed

   h. Cost summary for created game; one (1) page

   i. Work Log (see Forms Appendix); pages as needed

   j. Student Copyright Checklist (see Forms Appendix); one (1) page

   k. References/research sources; one (1) page

2. The USB flash drive and its contents become the property of TSA for communication purposes only. Publishing rights remain with the authors and illustrators.

SEMIFINAL ROUND

A. Two to three (2-3) members of each semifinalist team report to the event area at the time and place stated in the conference program.

B. Team members have five (5) minutes to set up the game.

C. The team members will give a brief demonstration of the game and then answer interview questions. The demonstration/interview will last no more than ten (10) minutes.

D. The team will have five (5) minutes to repackage the game before leaving

EVALUATION

PRELIMINARY ROUND

Tier 1

A. The packaging

B. The board game

Tier 2

C. The documentation portfolio

SEMIFINAL ROUND

A. The demonstration

B. The interview

Refer to the official rating form for more information.

TSA HONOR STATEMENT

All work must be created and completed by individual competitors or teams. Plagiarism, the use of Generative Artificial Intelligence (GenAI) software, copyright violation, cheating, and falsification of information are prohibited. Participants may NOT use any generative artificial intelligence (GenAI) tools (e.g. ChatGPT, Google Gemini, GitHub Copilot, etc.). Any attempt to gain an unfair advantage will not be tolerated. Competitors at any level of TSA competition understand and agree to abide by the TSA Honor Statement.

If it is determined that a student violated the TSA Honor Statement, a rules violation of twenty percent (20%) will be incurred.

STEM INTEGRATION

This event has connections with the STEM (Science, Technology, Engineering, and Mathematics) educational standards.

LEADERSHIP AND 21ST CENTURY SKILLS

This event provides opportunity for students to build and develop leadership and 21st century skills including but not limited to – Communication, Collaboration/Social Skills, Initiative, Problem Solving/Risk Taking, Critical Thinking, Perseverance/Grit, Creativity, Relationship Building/Teamwork, Dependability/Integrity, and Flexibility/Adaptability

CAREERS RELATED TO THIS EVENT

This competition has connections to one (1) or more of the careers below:

- Product/packaging design
- Board game designer
- Electronic game designer
- Electronic game technician
- Technical writer

Technology Student Association (TSA) High School Competitive Events Guide for the 2025 and 2026 National TSA Conferences

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BOARD GAME DESIGN
2025 & 2026 OFFICIAL RATING FORM
HIGH SCHOOL

Judges: Using minimal (1-4 points), adequate (5-8 points), or exemplary (9-10 points) performance levels as a guideline in the rating form, record the scores earned for the event criteria in the column spaces to the right. The X1 or X2 notation in the criteria column is a multiplier factor for determining the points earned. (Example: an "adequate" score of 7 for an X1 criterion = 7 points; an "adequate" score of 7 for an X2 criterion = 14 points.) A score of zero (0) is acceptable if the minimal performance for any criterion is not met.

Go/No Go Specifications

- Before judging the entry, ensure that the items below are present; indicate presence with a check mark in the box.
- If an item is missing, leave the box next to the item blank and place a check mark in the box labeled ENTRY NOT EVALUATED.
- If a check mark is placed in the ENTRY NOT EVALUATED box, the entry is not to be judged.

☐ TIER 1 – Packaging/Board game is present
☐ TIER 2 – Documentation is present only on the USB flash drive
☐ ENTRY NOT EVALUATED

TIER 1 – PACKAGING (30 points)

Record scores in the column spaces below.

CRITERIA	Minimal performance	Adequate performance	Exemplary performance	
	1-4 points	5-8 points	9-10 points	
Appearance (X1)	Three (3) or more elements of the packaging look unfinished, are not aesthetically appealing, and are not retail ready.	One to two (1-2) elements of the packaging look unfinished, are not aesthetically appealing, and are not retail ready.	Packaging appearance is retail ready and aesthetically pleasing.	
Functionality/ Durability (X1)	Packaging is missing three (3) or more necessary components for game play, and/or one to five (1-5) necessary parts are not reusable or sturdy.	Packaging is missing one to two (1-2) necessary components for game play, and/or one to two (1-2) necessary parts are not reusable or sturdy.	Packaging is reusable and meets all needs for the game; construction of the packaging is complete and sturdy.	
Incorporation of Rules (X1)	Rules of the game are not integrated as part of the packaging, and/or the rules are lacking in durability and quality.	Rules of the game are not fully integrated as part of the packaging design; rules are adequate in durability and quality.	Rules are an integrated part of the packaging and are of exceptional durability and quality.	
TIER 1 – PACKAGING SUBTOTAL (30 points)				

TIER 1 – BOARD GAME (30 points)

Record scores in the column spaces below.

CRITERIA	Minimal performance	Adequate performance	Exemplary performance	
	1-4 points	5-8 points	9-10 points	
Appearance (X1)	Three (3) or more elements of the game look unfinished; game is not aesthetically appealing or retail ready.	One to two (1-2) elements of the game look unfinished; game is adequately aesthetically appealing and retail ready.	Game looks finished, is aesthetically appealing, and is retail ready.	
Functionality/ Durability (X1)	Game is missing three (3) or more necessary components for game play, and/or one to five (1-5) necessary parts are not reusable or sturdy.	Game is missing one to two (1-2) necessary components for game play, and/or one to two (1-2) necessary parts are not reusable or sturdy.	Game has all necessary components for game play, and game pieces are all reusable and sturdy.	

TIER 1 – BOARD GAME (30 points) – continued

Board Game Quality (X1)	The overall quality of the board game appears to be completed with minimal effort; the game and materials lack quality.	The game shows great effort in quality, craftsmanship, and displays high skills of teamwork that has created a high quality game.	The game displays highest quality materials and craftsmanship; the game is excellent in quality and shows that the team focused on the appearance of the final product.	
TIER 1 – BOARD GAME SUBTOTAL (30 points)				

Rules violations (a deduction of 20% of the total possible points for the above sections) must be initialed by the judge, coordinator, and manager of the event. Record the deduction in the space to the right. Indicate the rule violated: _____	

TIER 1 – SUBTOTAL (60 points)	

TIER 2 – DOCUMENTATION PORTFOLIO (70 points)

CRITERIA	Minimal performance	Adequate performance	Exemplary performance	
	1-4 points	5-8 points	9-10 points	
Portfolio Components (X1)	Portfolio is unorganized and/or is missing three (3) or more components.	Portfolio has most components and is generally organized per the order of the event guide listing; it has sufficient content.	All components are included in the portfolio; content and organization per the order of the event guide listing are excellent.	
Overview of the Game (X1)	The overview and purpose of the game are unclear.	The overview and purpose of the game are generally clear.	The overview clearly explains the purpose of the game and how the game is played.	
Intended Audience (X1)	The intended audience and reasoning behind the game are not clear and/or are poorly supported.	The intended audience and reasoning behind the game are clear and generally supported.	The intended audience is clearly expressed and reasoning behind game play is well supported.	
Game Instructions (X1)	The instructions for the game are not clear for the intended age range.	The instructions for the game are generally clear for the intended age range.	The instructions for the game are clearly understandable for the age range intended.	
Description of Processes (X1)	The processes used to create the game are not clearly described and/or are missing four (4) or more aspects of the creation of the game.	The description for the creation of the game and the aspects of the game creation are generally clear.	The processes used to create the game are clearly described and explain all aspects of the game creation.	
Engineering Drawings (X1)	Four (4) or more engineered drawings for all parts, game boards, and packaging are missing and/or are of poor quality.	One to three (1-3) engineered drawings for all parts, game boards, and packaging are missing or are of adequate quality.	Engineered drawings for all parts, game boards, and packaging are present and are of excellent quality.	
Cost Summary (X1)	Cost breakdown for the game is missing or two (2) or more of the following categories are incomplete: quantity of materials used, cost of materials, and/or total cost of the project.	Cost breakdown for the game is present and generally clear with minor information missing for the following categories: quantity of materials used, cost of materials, and/or total cost of the project.	Complete cost breakdown for the game, including the quantity of the materials used, cost of the materials, and total cost of the project are present, complete, and clearly identified.	
TIER 2 – DOCUMENTATION PORTFOLIO SUBTOTAL (70 points)				

Rules violations (a deduction of 20% of the total possible points for the above sections) must be initialed by the judge, coordinator, and manager of the event. Record the deduction in the space to the right. Indicate the rule violated: _____	

PRELIMINARY SUBTOTAL (130 points)	

SEMIFINAL DEMONSTRATION/INTERVIEW (50 points)

CRITERIA	Minimal performance	Adequate performance	Exemplary performance	
	1-4 points	5-8 points	9-10 points	
Theme of Game and Age of the Audience (X1)	The theme of the game is not addressed and/or was unclear; the intended age range of the game is not addressed and the description of the audience was not appropriate.	The theme of the game is adequately addressed; the intended age range of the game is addressed but one to three (1-3) elements of the description did not match the game.	The theme of the game is clearly expressed and easily interpreted; the age range of the intended audience is clearly addressed and the description of the audience matched the game.	
Presentation of Rules and Demonstration of Game Play (X1)	Rules are confusing and difficult for the audience to understand; more than five (5) questions clarifying the rules are asked in order to start the game play; game play is confusing and unorganized; how players win or lose is not addressed.	Rules are somewhat clear for the audience to understand; game play requires less than four (4) questions to clarify the rules; game play is somewhat confusing but organized; how players win or lose is somewhat addressed.	Rules are clearly explained and game play is easily started after presentation of rules, with no clarifying questions needed; various scenarios of the game are addressed and explained; how players win or lose is clearly explained.	
Engagement and Participation (X2)	The team must be prompted to provide answers and information; a clear team leader dominates the interview, while other team members are unresponsive.	Team members generally answer questions with responses of acceptable length and depth; most team members participate adequately in the interview and engage the judges when answering questions.	All team members contribute in the interview; while there may be a clear team leader, all members provide appropriate substantive material to the conversation; the team engages the judges in the interview, which becomes less of a question and answer session and more of a conversation about the topic and solution.	
Articulation (X1)	Communication of the design process is unclear, unorganized, and or illogical; leadership and/or 21st century skills are not evident.	Communication of the design process is somewhat logical and clear; leadership and/or 21st century skills are somewhat evident.	Communication of the design process is clear, concise, and logical; leadership and/or 21st century skills are clearly evident.	
SEMIFINAL DEMONSTRATION/INTERVIEW SUBTOTAL (50 points)				

Rules violations (a deduction of 20% of the total possible points in the semifinalist sections above) must be initialed by the evaluator, coordinator, and manager of the event. Record the deduction in the space to the right. Indicate the rule violated: _____	

TIME DEDUCTIONS

One (1) point per ten-second (10) interval is to be deducted for game setup over the five (5) minutes allotted for the game setup. The same one (1) point per ten-second (10) interval penalty applies to more than five (5) minutes allotted to put the game away. Setup begins when the box opens and ends when all pieces/game board are in position. Repackaging starts when the first piece is picked up and ends when the lid is closed.

Total time for presentation		Presentation deduction	
Total time for set-up		Set-up deduction	
		TOTAL TIME DEDUCTION	

SEMIFINAL SUBTOTAL (50 points)	

To arrive at the TOTAL score, add the **PRELIMINARY SUBTOTAL** and the **SEMIFINAL SUBTOTAL.** **TOTAL (180 points)**	

Comments:

_____

I certify these results to be true and accurate to the best of my knowledge.

JUDGE

Printed name: _____ Signature: _____

BOARD GAME DESIGN
EVENT COORDINATOR INSTRUCTIONS

PERSONNEL

A. Event coordinator

B. Judges:

   1. Preliminary round, two (2) or more

   2. Semifinal Round, two (2) or more

C. Assistants for check-in, one (1)

MATERIALS

A. Coordinator's packet, containing:

   1. Event guidelines, one (1) copy for the coordinator and for each judge

   2. TSA Event Coordinator Report

   3. Stick-on labels for identifying entries

B. Measuring tape

C. Stopwatch

D. Display tables for entries (minimum depth 18")

E. Tables and chairs for event coordinator, semifinalist judges, and participants

F. Laptop with a USB drive and ability to open and view PDF's

RESPONSIBILITIES

AT THE CONFERENCE

A. Attend the mandatory coordinator's meeting at the designated time and location.

B. Report to the CRC room and check the contents of the coordinator's packet.

C. Review the event guidelines and check to see that enough personnel have been scheduled.

D. Inspect the area(s) in which the event is to be held for appropriate set-up, including room size, tables, chairs, etc. Notify the event manager of any potential problems.

E. At least one (1) hour before the event is to begin, meet with judges and assistants to review time limits, procedures, regulations, evaluation, and all other details related to the event. If questions arise that cannot be answered, speak to the event manager before the event begins.

F. Ensure the judges have access to the online judging system.

EVENT CHECK-IN

A. Check in the entries at the time stated in the conference program.

B. If check-in is on the first day of the conference, requirements for attire do NOT apply during check-in.

C. Late entries are considered on a case-by-case basis and only when the lateness is caused by events beyond the participant's control.

D. In order to compete, participants must be on the entry list or must have CRC approval.

E. Each entry must include the team's identification number in the upper right-hand corner of the entry.

F. Instruct participants to position the entries for viewing.

G. Secure the entries in the designated area.

PRELIMINARY ROUND

A. Judges independently assess the entries using the following procedure:

   1. Judges score the Packaging and Board Game criteria to determine the top twenty-four (24) preliminary contestants, which will not be posted.

   2. Judges score the Documentation Portfolio criteria of those top twenty-four contestants to determine the top twelve (12) semifinalist teams.

B. Decisions about rules violations must be discussed and verified with the judges, event coordinator, and CRC manager to determine either:

   1. To deduct twenty percent (20%) of the total possible points in this round or

   2. To disqualify the entry

   The event coordinator, judges, and CRC manager must initial either of these actions on the rating form.

C. Create semifinalist sign-up sheet for the demonstration/interview.

SEMIFINAL ROUND

A. Semifinalists report at the time and place stated in the conference program to sign-up for a demonstration/interview.

B. The sign-up list is fifteen (15) minute intervals to allow a team to setup at the same time that a team is repackaging.

C. Semifinalists report at the assigned time and place stated in the conference program for the demonstration/interview.

D. Manage semifinalist presentations/interviews.

E. Judges should be sure to ask questions.

F. Discuss rule violations (e.g. 20% deduction, disqualification) and have all relevant parties initial the rating form.

G. If necessary, manage security and the removal of materials from the event area.

CHAPTER TEAM

OVERVIEW

Applying leadership and or 21st century skills participants take a parliamentary procedures test in order to qualify for the semifinals. Semifinalist teams are challenged to complete an opening ceremony, items of business, parliamentary actions, and a closing ceremony within a specified time period.

ELIGIBILITY

A. One (1) team of six (6) members per chapter may participate.

B. Team members do not have to be elected officers of the local chapter.

C. Team members who take the test and advance to the semifinalist portion of the event must be the same six (6) members.

TIME LIMITS

PRELIMINARY ROUND

A. One (1) hour to complete a parliamentary procedures test.

SEMIFINAL ROUND

A. Fifteen (15) minutes with no penalty, and up to seventeen (17) minutes with penalty (see Time over chart) are permitted to complete required set-up time, parliamentary actions, items of business, and a presentation.

B. The time begins when the team is handed the event materials; the time ends when the gavel is rapped to close the meeting, or at seventeen (17) minutes (at that point all team members other than the secretary must leave the room; the secretary may then be taken to another room to complete the minutes).

C. The secretary has five (5) additional minutes to complete the minutes of the meeting.

D. Teams are penalized five (5) points per thirty (30) seconds for going over the allotted time, based on the following scale:

Time over fifteen (15) minutes	Penalty
15:01 to 15:30	five (5) points per evaluator
15:31 to 16:00	ten (10) points per evaluator
16:01 to 16:30	fifteen (15) points per evaluator
16:31 to 17:00	twenty (20) points per evaluator

ATTIRE

TSA competition attire, with additional requirements that apply for the Chapter Team event, is required. Refer to the National TSA Dress Code section of this guide or the TSA website.

PROCEDURE

PRE-CONFERENCE

A. Participants review the TSA Honor Statement for Competitive Events found in the General Rules and listed in the individual competitive event rules.

PRELIMINARY ROUND

A. Participants report for the test at the time and place stated in the conference program for the parliamentary procedures test.

B. TSA competition attire, with additional requirements that apply for the Chapter Team event, is required for the preliminary round.

C. A parliamentary procedures test is administered at the same time to all team members.

D. Twelve (12) teams with the highest averaged scores are selected as semifinalists for the oral presentation. A semifinalist list in random order is posted.

SEMIFINAL ROUND

A. A semifinalist team representative will report at the time and place stated in the conference program to receive an oral presentation time.

B. Semifinalist teams report at the assigned time and place for the oral presentation.

C. Each team follows the procedure for opening and closing a local chapter meeting.

D. Using knowledge of parliamentary procedures, each team follows an order of business to dispose of five (5) given parliamentary actions provided by the event coordinator and then closes the meeting according to the prescribed procedure.

E. There is a possibility for three (3) additional actions to be demonstrated for bonus points. If the actions are demonstrated correctly, then bonus points are awarded based on the degree of difficulty of the actions performed.

F. The top ten (10) finalists are announced at the awards ceremony.

REGULATIONS AND REQUIREMENTS

Students will work to develop their leadership and 21st century skills in the process of preparing for and participating in this TSA competitive event. The development and application of those skills must be evident in their submission, demonstration, and/or communication pertaining to the entry.

PRELIMINARY ROUND

A. Team members take the test individually.

B. TSA Competition attire, with additional requirements that apply for the Chapter Team event, is required for the preliminary round.

C. Teams consist of a president, vice president, secretary, treasurer, reporter, and sergeant-at-arms.

D. Tests may be administered online or via a scan-type answer sheet. Please review the *Competition Updates* page on TSA website.

E. Participants are responsible for bringing two (2) sharpened No. 2 pencils to the test site.

F. If scan-type answer sheets are used, failure to correctly complete the scantron form will result in a test score of zero.

G. The same six (6) team members compete in the semifinal round, should the team qualify.

SEMIFINAL ROUND

A. TSA Competition attire, with additional requirements that apply for the Chapter Team event, is required for the semifinal round.

B. Meeting Set-up:

1. Officer symbols and a gavel are placed on a long table with the United States flag standing to the right of the president's rostrum and the host state flag to the left.

2. The president's rostrum should be centered between the two (2) flags.

3. The symbols of the officers should be placed in front of the respective officers.

4. The host state banners are optional and do not add to or subtract from a team's scores.

C. Teams demonstrate a call to order, pledge to the flag, roll call, order of business, and closing ceremony.

1. Written materials, other than those provided by national TSA, may not be taken to the event room.

2. A set of secretary's minutes, a treasurer's report, a copy of the TSA creed, and a list of five (5) parliamentary actions are provided by the event coordinator when the team members enter the performance room.

   a. For the parliamentary actions, the list identifies the five (5) actions of parliamentary procedure to be performed by any member of the team. Participants should cooperate to complete the items of business.

   b. Bonus points are awarded for three (3) additional motions (advanced and/or more challenging parliamentary actions will score higher) by the officers, other than the presiding officer.

3. The event coordinator also supplies each team with paper, six (6) pens, a calculator, and six (6) 3" x 5" notecards.

4. A timepiece may be used by the team, if desired.

   a. Official timing begins as soon as the parliamentary actions are provided and stop at the team's final gavel to end the meeting.

   b. Five (5) points will be deducted for every thirty (30)-second interval over the allotted time (see Time Limits).

5. Concerning the reading of the TSA creed by the secretary during the closing ceremony, a chapter has the option to recite the creed using one (1) or more of its team members.

6. No reference should be made to a team's school, chapter name, city, or state.

7. The state name on a TSA patch is acceptable.

D. At the conclusion of the oral presentation, each team secretary has five (5) minutes to write a copy of chapter minutes that are submitted to a judge. The coordinator begins timing the five (5) minutes when the secretary is seated at the area designated for the writing of the minutes.

E. All materials given to team members, as well as the chapter minutes and a completed treasurer's report, must be handed to the judges before the team leaves the room.

F. Any semifinalist team that fails to appear at the designated time is placed at the end of the list and allowed to participate at the discretion of the judges and event coordinator if time permits.

G. Teams are welcome to use desired pronouns during the oral demonstration.

EVALUATION
PRELIMINARY ROUND

A. Each team's average test score.

SEMIFINAL ROUND

A. The demonstration of a chapter business meeting.

Refer to the official rating form for more information.

TSA HONOR STATEMENT

All work must be created and completed by individual competitors or teams. Plagiarism, the use of Generative Artificial Intelligence (GenAI) software, copyright violation, cheating, and falsification of information are prohibited. Participants may NOT use any generative artificial intelligence (GenAI) tools (e.g. ChatGPT, Google Gemini, GitHub Copilot, etc.). Any attempt to gain an unfair advantage will not be tolerated. Competitors at any level of TSA competition understand and agree to abide by the TSA Honor Statement.

If it is determined that a student violated the TSA Honor Statement, a rules violation of twenty percent (20%) will be incurred.

NOTE

There are a number of ways to learn about parliamentary procedure. The standard reference is *Robert's Rules of Order, Newly Revised*. Information about the latest edition of parliamentary procedure may be found online at robertsrules.com. Additional information may be found online at www.parliamentarians.org.

For writing proper minutes, also refer to *Robert's Rules of Order, Newly Revised*.

STEM INTEGRATION

This event aligns with the STEM (Science, Technology, Engineering, and Mathematics) educational standards.

LEADERSHIP AND 21ST CENTURY SKILLS

This event provides opportunity for students to build and develop leadership and 21st century skills including but not limited to – Communication, Collaboration/Social Skills, Initiative, Problem Solving/Risk Taking, Critical Thinking, Perseverance/Grit, Creativity, Relationship Building/Teamwork, Dependability/Integrity, and Flexibility/Adaptability

CAREERS RELATED TO THIS EVENT

Careers will vary, based on the student's area of interest.

CHAPTER TEAM OFFICIAL MINUTES

Team ID number_____

Date _____

Location of conference_____

Use the back of this page, if necessary.

Secretary's signature _____ **Date** _____

CHAPTER TEAM TREASURER'S REPORT

Team ID number_____

Date _____

Location of conference_____

Balance as of _____ $ _____

Receipts:

                                        Total receipts $ _____

Expenditures:

                                        Total expenses $ _____

Balance as of _____ $ _____

Submitted by _____

CHAPTER OPENING AND CLOSING CEREMONIES

OPENING CEREMONY

At the prescribed time for meetings, the president assumes his/her position behind the rostrum in the front center of the room. Other officers are seated to the left and right of the president. They are seated in the following order from stage left to right: vice president, treasurer, secretary, president, reporter, and sergeant-at-arms.

<div align="center">

HOST STATE BANNER (OPTIONAL)

U.S. FLAG   SGT.-AT-ARMS   REPORTER   PRESIDENT   SECRETARY   TREASURER   VICE PRES.   STATE FLAG

(OFFICERS FACING AUDIENCE)

AUDIENCE

</div>

President:	(raps gavel twice) Will the meeting please come to order. Mr./Ms. Sergeant-at-Arms, are all the officers in their places?
Sergeant-at-Arms:	They are, Mr./Ms. President.
President:	(raps gavel three [3] times for assembly to rise) Mr./Ms. Sergeant-at-Arms, please lead the assembly in the Pledge to the Flag of the United States of America.
Sergeant-at-Arms:	(leads Pledge to the Flag)
President:	(raps once and assembly is seated) Mr./Ms. Secretary, will you please call the roll.
Secretary:	Mr./Ms. Sergeant-at-Arms.
Sergeant-at-Arms:	Present. The symbol of my office is the "hearty handshake" (officer points to symbol), and it is my responsibility to see that the assembly is comfortable and properly welcomed. It is also my duty to serve as doorkeeper for this organization.
Secretary:	Mr./Ms. Reporter.
Reporter:	Present. The symbol of my office is the beacon tower (officer points to symbol), and it is my duty to see that our school, community, and national association have a complete report of our organization's activities.
Secretary:	Mr./Ms. President.
President:	Present. The symbol of my office is the gavel (officer points to symbol). The duties vested in me by my office are to preside at all regular and special meetings of this organization and to promote cooperation in carrying out the activities and work of our organization. Mr./Ms. Secretary.
Secretary:	Present. The symbol of my office is the pen (officer points to symbol), and it is my responsibility to see that accurate and proper records are kept of all business and correspondence of this association. Mr./Ms. Treasurer.
Treasurer:	Present. The symbol of my office is a balanced budget (officer points to symbol), and it is the duty of my office to keep accurate records of all funds and see that our financial obligations are met promptly.
Secretary:	Mr./Ms. Vice President.

Vice President:	Present. The symbol of my office is a star (officer points to symbol), and it is the duty of my office to see that we always have a strong membership, a good work program, and are alert to the welfare of our chapter.
Secretary:	Mr./Ms. President, all officers are present and in their place.
President:	Mr./Ms. Sergeant-at-Arms, do we have guests present?
Sergeant-at-Arms:	(If so, introduce guest[s]. If not, state the following:) No, Mr./Ms. President.
President:	Mr./Ms. Secretary, we are ready to transact our business.

Teams dispose of the assigned business following the suggested order of business.

CLOSING CEREMONY

President:	(raps three [3] times; assembly rises) Mr./Ms. Secretary, will you please (read) or (lead us in) the TSA Creed.
Secretary:	(recites the TSA Creed) (When presented at state and national competitions, the creed may be presented using a more original method.)
President:	Will the assembly repeat the TSA Motto after me. (motto is spoken) Does anyone know of any reason why this assembly should not adjourn? If not, I will entertain a motion to adjourn. (following motion to adjourn, a second, and a vote) I now declare this meeting adjourned until a special meeting is called or until our next regular meeting. (raps once with gavel)

SUGGESTED ORDER OF BUSINESS FOR CHAPTER MEETINGS

1. The president calls the meeting to order with opening ceremonies.
2. Roll call is taken and a quorum is established.
3. The secretary reads the minutes of the previous meeting. Any necessary corrections and/or additions are made and the minutes are approved as read or corrected.
4. The treasurer's report is received as read and placed on file, subject for audit.
5. The chairperson calls for committee and officer reports, as necessary. If a committee has no report, it should so state.
6. Unfinished business is addressed.
7. New business is addressed.
8. The program, if any, is held at this time. The chairperson presides with the assistance of the program chairperson or the committee chairperson.
9. Announcements.
10. Adjournment with closing ceremonies.

CHAPTER TEAM
2025 & 2026 OFFICIAL RATING FORM
HIGH SCHOOL

Judges: Using minimal (1-4 points), adequate (5-8 points), or exemplary (9-10 points) performance levels as a guideline in the rating form, record the scores earned for the event criteria in the column spaces to the right. The X1 or X2 notation in the criteria column is a multiplier factor for determining the points earned. (Example: an "adequate" score of 7 for an X1 criterion = 7 points; an "adequate" score of 7 for an X2 criterion = 14 points.) A score of zero (0) is acceptable if the minimal performance for any criterion is not met.

Go/No Go Specifications

- Before judging the entry, ensure that the items below are present; indicate presence with a check mark in the box.
- If an item is missing, leave the box next to the item blank and place a check mark in the box labeled ENTRY NOT EVALUATED.
- If a check mark is placed in the ENTRY NOT EVALUATED box, the entry is not to be judged.

☐ ENTRY NOT EVALUATED

PRELIMINARY TEAM TEST (10 points)

Record scores in the column spaces below.

Record the scores of the six (6) team members in the boxes below. Calculate the average of their scores. Divide the average by five (5) for the score that the team will receive out of ten (10) points. Record the score in the column space to the right.

#1	#2	#3	#4	#5	#6

Rules violations (a deduction of 20% of the total possible points for the above sections) must be initialed by the judge, coordinator, and manager of the event. Record the deduction in the space to the right.

Indicate the rule violated: _____

PRELIMINARY ROUND SUBTOTAL (10 points)

SEMIFINAL BUSINESS MEETING DEMONSTRATION (190 points)

Record scores in the column spaces below.

CRITERIA	Minimal performance	Adequate performance	Exemplary performance
	1-4 points	5-8 points	9-10 points
PREPARATION FOR MEETING (30 points)			
Official Attire/Poise (X2)	Appearance is untidy; grooming is lacking; clothing is not consistent in coloration and visual appearance; shoes are the wrong color; poise and confidence are missing.	Overall appearance is neat and consistent; grooming is good, and professional appearance is adequate.	Overall appearance is cohesive, polished, and businesslike.
Placement of Flags and Officer Symbols; Officer Seating (X1)	Flags are not placed in the correct order; and/or officer symbols are not in the correct order; and/or are not aligned properly on the table; and/or not all officers are seated in the proper arrangement, resulting in a sloppy and haphazard appearance.	Placements and seating are generally businesslike and professional, with some inconsistencies (e.g., flags are in the correct order but are not aligned with other aspects of the officer gear; and/or several of the officer symbols are in proper order, but some are misaligned; and/or officers are seated properly, but some chairs are misaligned, etc.).	Flags are completely aligned and in proper order and placement; officer gear is placed in the correct order and in proper alignment on the table; the seating arrangement is precise, businesslike, and professional.

SEMIFINAL BUSINESS MEETING DEMONSTRATION (190 points) – continued

KNOWLEDGE OF TSA (20 points)

Opening Ceremony (X1)	Many items of sequence and order are incorrect and officers make several mistakes.	Officers make few, if any, sequence and order mistakes, resulting in a fairly smooth opening ceremony.	The opening is smooth and efficient; the opening ceremony progresses as it should.	
Closing Ceremony (X1)	Officers make several mistakes; creed recitation is sloppy, and the overall effort is unpolished.	Appropriate procedures are followed, with some mistakes made (e.g., creed recitation).	The closing is outstanding, with no mistakes; the presentation is highly polished.	

KNOWLEDGE OF PARLIAMENTARY PROCEDURE (140 points)

Voting Procedures (X1)	Several obvious mistakes are made in voting procedures.	Few mistakes are made in voting procedures.	All voting procedures are correct, smooth, and efficient.	
Debate (exclude president) (X3)	Only a few officers participate effectively in the debate, which is loosely presented.	Most officers participate in the debate process and are somewhat convincing.	All officers participate in and present a highly cohesive debate.	
Parliamentary Actions (X5)	Only one (1) of the required actions is completed correctly.	At least two (2) of the actions are completed correctly, with adequate effort.	All five (5) actions are completed correctly, with notable and inspiring effort.	
Communication (X2)	Communication is unclear; some mumbling occurs and/or voices are too loud or too soft; and/or problems occur with verbal expression (e.g., grammar, sentence structure); leadership and/or 21st century skills are not evident.	Communication is generally clear, with appropriate volume of voices and only minor problems with articulation or verbal expression; leadership and/or 21st century skills are somewhat evident.	Communication is clear, concise, and easy to understand; voices are well modulated, and speakers are articulate; leadership and/or 21st century skills are clearly evident.	
Treasurer's Report (X1)	The report is incorrect or not complete; math and spelling errors are evident.	The report generally is correct and complete, with few math and/or spelling errors.	The report is correct and complete, with no math or spelling errors.	
Chapter Minutes (X2)	The format of the minutes is incorrect or not complete; grammar and spelling errors are evident.	The format of the minutes is generally correct and complete, with few grammar and/or spelling errors.	The minutes are formatted correctly, are complete, and have no grammar or spelling errors.	
SEMIFINAL BUSINESS MEETING DEMONSTRATION SUBTOTAL (190 points)				

Rules violations (a deduction of 20% of the total possible points for the above sections) must be initialed by the judge, coordinator, and manager of the event. Record the deduction in the space to the right.

Indicate the rule violated: _____

TIME DEDUCTIONS (NO TEAM MAY GO BEYOND 17 MINUTES)

A five-(5) point deduction will be incurred for every thirty (30)-second interval over the allotted time. Multiply the number of intervals by five (5) and record the total deduction in the column to the right.

# of intervals X 5 = _____ (total deduction)

SEMIFINAL SUBTOTAL (190 points)	

BONUS (20 POSSIBLE POINTS)				
For Additional Motions and Parliamentary Actions (by officers other than the president) (X2)	One (1) advanced action is performed in addition to the required items of business OR multiple elementary actions are performed in addition to the required items of business.	Two (2) advanced actions are performed in addition to the required items of business.	Three (3) advanced actions are performed in addition to the required items of business.	

To arrive at the TOTAL score, add any subtotals and subtract rules violation points, as necessary. **TOTAL (200 points)**	

Comments:

_____

I certify these results to be true and accurate to the best of my knowledge.

JUDGE

Printed name: _____   Signature: _____

CHAPTER TEAM
EVENT COORDINATOR INSTRUCTIONS

PERSONNEL

A. Event coordinator

B. Judges, two (2) or more

C. Assistants, two (2) or more for the test and two (2) or more for the oral presentations

D. Timekeeper

MATERIALS

A. Coordinator's packet, containing:
   1. Event guidelines, one (1) copy for the coordinator and each judge
   2. TSA Event Coordinator Report

B. Opening and closing ceremonies script

C. List of parliamentary actions; one (1) copy for each semifinalist team and copies for the judges

D. Copies of secretary's minutes; one (1) copy for each semifinalist team and copies for the judges

E. Copies of treasurer's report template; one (1) copy for each semifinalist team

F. Copies of the Chapter Team Official Minutes template; one (1) copy for each semifinalist team

G. Paper, pens, one (1) calculator, and six (6) 3" x 5" note cards, per team

H. Officer's symbols and gavel

I. United States flag

J. State flag (optional)

K. Stopwatches

L. Table rostrum, if available

M. One (1) long table or two (2) tables, and six (6) chairs for team members

N. One (1) table and three (3) chairs for judges

RESPONSIBILITIES

AT THE CONFERENCE

A. Attend the mandatory coordinator's meeting at the designated time and location.

B. Report to the CRC room and check the contents of the coordinator's folder.

C. Review the event guidelines and check to see that enough personnel have been scheduled.

D. Inspect the area or room in which the event is to be held for appropriate set-up, including room size, chairs, tables, outlets, etc. Notify the event manager of any potential problems.

E. At least one (1) hour before the event is scheduled to begin, meet with judges/assistants to review time limits, procedures, and regulations. If questions arise that cannot be answered, speak to the event manager before the event begins.

F. Ensure the judges have access to the online judging system.

PRELIMINARY ROUND

A. Begin the event at the scheduled time by closing the doors and checking the entry list.

B. All participants and evaluators should be in the room at this time.

C. In order to compete, participants must be on the entry list or have approval from the CRC.

D. Late entries are considered on a case-by-case basis and only when the delay is caused by events beyond participant control.

E. Administer the written test.

F. Determine individual and team scores.

G. Decisions about rules violations must be discussed and verified with the judges, event coordinator, and CRC manager to determine either:
   1. To deduct twenty percent (20%) of the total possible points in this round or
   2. To disqualify the entry

   The event coordinator, judges, and CRC manager must initial either of these actions on the rating form.

H. The event coordinator, judges, and CRC manager must all initial either of these actions on the rating form.

SEMIFINAL ROUND

A. Check in semifinalists at the time stated in the conference program. Inform the teams of their order of performance and review the procedure to be followed.

B. When the team enters the oral performance room, the materials (secretary's minutes, copy of Chapter Team Official Minutes form for secretary's minutes, a treasurer's report, a copy of the TSA creed, and a list of parliamentary actions) are provided to the president. At this point, begin the allotted time.

C. The event coordinator or an assistant is responsible for introducing each team by entry number only when the previous team has finished its presentation.

D. Teams may take chapter paraphernalia (officer symbols and gavel only) into the performance room if desired, or they may use what is provided by the event coordinator.

E. Decisions about rules violations must be discussed and verified with the judges, event coordinator, and CRC manager to determine either:

   1. To deduct twenty percent (20%) of the total possible points in this round or

   2. To disqualify the entry

   The event coordinator, judges, and CRC manager must initial either of these actions on the rating form.

F. If necessary, manage security and the removal of materials from the area.

CHILDREN'S STORIES

OVERVIEW

Applying leadership and 21st century skills, participants create an illustrated children's story of high artistic, instructional, and social value. The narrative may be written in prose or poetry and take the form of a fable, adventure story, or other structure. The physical story book should be of high quality, designed to meet the year's given theme, which will be posted on the TSA website under *Themes & Problems*.

ELIGIBILITY

Three (3) teams or three (3) individuals per state may participate.

TIME LIMITS

SEMIFINAL ROUND

A. Ten (10) minutes per team are allotted for the teams to complete a presentation on the illustration technique, design process, writing and editing process, and book construction.

B. Five (5) minutes are allotted for the interview.

ATTIRE

TSA competition attire is required for this event.

PROCEDURE

PRE-CONFERENCE

A. Participants review the TSA Honor Statement for Competitive Events found in the General Rules and listed in the individual competitive event rules.

B. Partcipants review the annual design challenge found on the TSA website under *Themes & Problems*.

C. Participants concentrate their efforts researching children's books and literature, particularly the creation of storybooks similar to the annual design challenge (e.g., pop-ups, interactive books, etc.).

D. Participants develop a high-quality children's storybook with illustrations.

E. Participants record their design process in a documentation portfolio.

F. Participants "field test" their storybook and document outcomes and findings.

PRELIMINARY ROUND

A. No more than two (2) team representatives report to the time and place stated in the conference program to submit:

1. The storybook

2. The documentation portfolio

B. Entries are reviewed by judges with neither students nor advisors present.

1. Judges score the Storybook criteria to determine the top twenty-four (24) preliminary contestants, which will not be posted.

2. Judges score the Documentation Portfolio criteria of those top twenty-four contestants to determine the top twelve (12) semifinalist teams.

C. A list of twelve (12) semifinalist teams (in random order) is posted.

SEMIFINAL ROUND

A. Participants report at the time and place stated in the conference program to sign up for a presentation and interview time.

B. Participants report at the assigned time and place for the presentation and interview.

C. The presentation and interview is limited to up to three (3) members. All members that are present will participate in the presentation and interview process, which lasts up to ten (10) minutes for the presentation and up to five (5) minutes for the interview.

D. No more than two (2) team members pick up the team's entry from the display area at the time and place stated in the conference program.

E. Ten (10) finalists are announced during the conference award ceremony.

REGULATIONS AND REQUIREMENTS

Students will work to develop their leadership and 21st century skills in the process of preparing for and participating in this TSA competitive event. The development and application of those skills must be evi-dent in their submission, demonstration, and/or communication pertaining to the entry.

PRE-CONFERENCE/PRELIMINARY ROUND

A. Storybook:

1. Participants design and create an entirely original storybook, complete with narrative and illustrations to meet the annual design challenge.

2. The physical storybook should be of high quality, designed to meet the age group for which it is intended. For the purposes of this event, children are defined as those twelve (12) years or younger.

3. Together with the storybook, the narrative and accompanying illustrations should result in an experience that delights, enlightens, and contributes to the wholesome development of a child.

4. The storybook and narrative with accompanying illustrations should take no more than ten (10) minutes to read and view.

5. The maximum reading time is twelve (12) minutes, and no minimum.

6. The physical storybook must not exceed 12" x 12" when closed.

7. There is no limit on the number of inside pages (may be one or two-sided).

8. The team must determine which format best presents the team's narrative and illustrations.

9. There must be a minimum of seven (7) illustrations that enhance the story and deepen the child's understanding and enjoyment of the reading experience.

   a. An illustration on the book's cover may count as one (1) of the required seven (7) illustrations.

   b. The team may use the cover illustration within the story as well.

   c. All illustrations MUST be original, freehand, and/or computer-generated drawings made by the team member(s).

   d. All computer-generated work MUST be developed from primitive lines and shapes and be the sole work of the team members.

   e. Physical or computer templates, previously existing drawings, characters, backgrounds, etc., are NOT PERMITTED.

10. The storybook may include the name of the author(s) and illustrator(s) on the cover and is exempt from the general rule that no identifying information may be used.

11. Copyrighted material is NOT PERMITTED.

12. All components, including the physical binding, must be the original work of the team members. No professional binding is allowed.

13. If narrative or illustrations appear in the story and they are not authored by one of the team members, the team is disqualified.

14. Photographic verification of the book construction process must be included in the portfolio.

15. The story must be no more than fifteen hundred (1500) words.

    a. There is a five (5)-point deduction for every hundred (100) words over the fifteen hundred (1500) word limit.

    b. Stories containing two thousand (2000) or more words is disqualified.

    c. There is no minimum number of words required.

    d. The word count (number of words comprising the story's narrative) must be listed on the inside of the front cover of the book.

16. Publishing rights remain with the authors and illustrators.

B. Documentation Portfolio:

1. Documentation materials (comprising "a portfolio") are required and must be secured in a clear front report cover with the following single-sided, 8½" x 11" pages, in this order:

   a. Title page with the title of the story, the event title, the conference city and state, the year, and the team/individual chapter ID number; one (1) page

   b. Table of contents; pages as needed

   c. Purpose of story; one (1) page

      i. Story's intent

      ii. Summary of storyline and theme

      iii. Intended audience (age, gender, demographics, and special disabilities, if any)

   d. Photographic verification of book construction and binding; pages as needed

   e. Work Log (see Forms Appendix); pages as needed

   f. Field Test Summary. A "field test" is a reading of the storybook to a group of children in the intended target age range; maximum of two (2) pages

      i. A minimum of two (2) field tests must be conducted.

      ii. Participants must document each field test with a summary paragraph that details the outcome findings.

      iii. Each summary paragraph must include the date, time, and location of the field test.

      iv. Each "field test" must be signed off by the chapter advisor.

   g. Research summary: A written summary of the research, writing strategies, problems encountered, and solutions developed in the writing and illustrating of the story; one (1) page.

   h. Project summary: A written summary of the research into the creation of storybooks similar to the annual design challenge (e.g. paper folding, interactive features in books). The summary must include the process and challenges the team encountered and the solutions developed in overcoming them; one (1) page.

   i. A list of tools, software (if any), and techniques used in the creation of the physical storybook and illustrations, not to exceed one (1) page.

   j. References/research sources; one (1) page.

SEMIFINAL ROUND

A. A team representative of each semifinalist team reports at the time and location in the conference program to receive a presentation/interview time.

B. A maximum of three (3) team members will be given up to ten (10) minutes to present their book and discuss their design process with the judges and then up to five (5) minutes for an interview.

C. All team members must be prepared to answer interview questions and discuss illustrations included in the story.

EVALUATION

PRELIMINARY ROUND

Tier 1

A. The physical storybook

Tier 2

B. The documentation portfolio

SEMIFINAL ROUND

A. The presentation

B. The interview

Refer to the official rating form for more information.

TSA HONOR STATEMENT

All work must be created and completed by individual competitors or teams. Plagiarism, the use of Generative Artificial Intelligence (GenAI) software, copyright violation, cheating, and falsification of information are prohibited. Participants may NOT use any generative artificial intelligence (GenAI) tools (e.g. ChatGPT, Google Gemini, GitHub Copilot, etc.). Any attempt to gain an unfair advantage will not be tolerated. Competitors at any level of TSA competition understand and agree to abide by the TSA Honor Statement.

If it is determined that a student violated the TSA Honor Statement, a rules violation of twenty percent (20%) will be incurred.

STEM INTEGRATION

Depending upon the subject written about, this event may align with one or more STEM (Science, Technology, Engineering, and Mathematics) educational standards. Please refer to the STEM Integration section of this guide for more information.

LEADERSHIP AND 21ST CENTURY SKILLS

This event provides opportunity for students to build and develop leadership and 21st century skills including but not limited to – Communication, Collaboration/Social Skills, Initiative, Problem Solving/Risk Taking, Critical Thinking, Perseverance/Grit, Creativity, Relationship Building/Teamwork, Dependability/Integrity, and Flexibility/Adaptability

CAREERS RELATED TO THIS EVENT

This competition has connections to one (1) or more of the careers below:

- Writer
- Illustrator
- Educator
- Editor
- Publisher
- Graphic artist

CHILDREN'S STORIES
2025 & 2026 OFFICIAL RATING FORM
HIGH SCHOOL

Judges: Using minimal (1-4 points), adequate (5-8 points), or exemplary (9-10 points) performance levels as a guideline in the rating form, record the scores earned for the event criteria in the column spaces to the right. The X1 or X2 notation in the criteria column is a multiplier factor for determining the points earned. (Example: an "adequate" score of 7 for an X1 criterion = 7 points; an "adequate" score of 7 for an X2 criterion = 14 points.) A score of zero (0) is acceptable if the minimal performance for any criterion is not met.

Go/No Go Specifications

- Before judging the entry, ensure that the items below are present; indicate presence with a check mark in the box.
- If an item is missing, leave the box next to the item blank and place a check mark in the box labeled ENTRY NOT EVALUATED.
- If a check mark is placed in the ENTRY NOT EVALUATED box, the entry is not to be judged.

☐ TIER 1 – Storybook is present
☐ TIER 2 – Documentation portfolio is present
☐ ENTRY NOT EVALUATED

Record scores in the column spaces below.

TIER 1 – STORYBOOK (130 points)

CRITERIA	Minimal performance 1-4 points	Adequate performance 5-8 points	Exemplary performance 9-10 points	
Story Narrative (X3)	Narrative is poorly written; there is little apparent purpose; it is lacking a coherent theme and storyline.	Narrative's purpose is somewhat clear, with a focused theme and storyline; pacing and the development of characters and events is somewhat paced, but has room for improvement.	Narrative is extremely well written with a clear purpose; storyline is fast paced and exciting; the details are rich and enchanting.	
Illustrations (X3)	Artisanship of the illustrations reflects little technical skill; illustrations add little value to the story's narrative, storyline, and/or theme.	Artisanship of most illustrations reflects some technical skill; illustrations add some value to the story's narrative, storyline, and theme.	Artisanship of illustrations is excellent, reflecting sophisticated technical skills; illustrations enhance the story's narrative, storyline, and theme, and they are of high esthetic quality.	
Book Binding, Construction and Concept (X3)	Book construction demonstrates little or no creativity or innovation; minimal consideration is given to basic design principles and book construction; book is poorly constructed or is not bound.	Construction of the book is of good quality and demonstrates some degree of creativity and innovation; demonstrates an understanding of basic design principles; adequate choice of materials was used in its construction; book is bound with adequate materials.	Book is designed with attention to detail; construction is of high quality and demonstrates a thorough understanding of design principles; an excellent choice of materials was used in the construction of the book; the book was bound with appropriate materials and shows understanding of proper techniques.	
Impact (X3)	Story (narrative, with the illustrations) is lacking in purpose and coherence; it is not very interesting; it lacks artistic, and/or instructional, and/or social value.	Story (narrative, with the illustrations) reflects a purpose and incorporates artistic, instructional, and social value; it is somewhat compelling and entertaining.	Story (narrative, with the illustrations) is beautifully told; it is compelling, entertaining, purposeful, and it reflects high artistic, instructional, and social value.	
Theme (X1)	The annual theme is not addressed.	The annual theme is somewhat addressed but doesn't contribute to the effectiveness of the overall design.	The annual theme is addressed and contributes to the effectiveness of the overall design.	
TIER 1 – STORYBOOK SUBTOTAL (130 points)				

Story length violation: For stories exceeding 1,500 words, a deduction of 5 points will be incurred for every 100 words more than 1,500 up to 2,000. Stories of 2000 words or greater will be disqualified. Example: 1600 – 1699 words - 5 points; 1700 – 1799 words - 10 points; 1800 – 1899 words - 15 points; 1900 – 1999 words - 20 points; 2000 words and above, disqualified.

Rules violations (a deduction of 20% of the total possible points for the above sections) must be initialed by the judge, coordinator, and manager of the event. Record the deduction in the space to the right.

Indicate the rule violated: _____

TIER 1 – SUBTOTAL (130 points)

Record scores in the column spaces below.

TIER 2 – DOCUMENTATION PORTFOLIO (90 points)				
CRITERIA	Minimal performance	Adequate performance	Exemplary performance	
	1-4 points	5-8 points	9-10 points	
Portfolio Components (X1)	Portfolio is unorganized and/or is missing three (3) or more components.	Portfolio is missing one (1) or two (2) components and/or is loosely organized.	Portfolio has all required components and is well organized.	
Purpose of Story (X1)	Story's intent, storyline, and theme are poorly explained and/or the intended audience is not identified.	Story's intent, storyline, theme, and intended audience are adequately explained.	Story's intent, storyline, theme, and intended audience are complete and well explained.	
Photographic Verification (X1)	Photographic verification is very unorganized or is missing.	Photographic verification is somewhat disorganized and is missing a few components; the process is somewhat outlined.	Photographic verification has all components and is well organized; the process is clearly outlined.	
Work Log (X1)	Log is poorly organized and/or incomplete.	Log is adequately detailed and organized and contains most of the required components.	Log is well documented and contains all the required components.	
Field Test (X1)	Field test report is poorly organized and is missing one (1) or more field tests; missing advisor's signature.	The field test report is organized but is missing critical information about the field tests.	The field test report is organized and contains the date, time and location of field tests; contains advisor's signature.	
Research Summary (X1)	Summary of the research, design, and writing process is poorly done and/or is incomplete.	Summary of the research, design, and writing process is somewhat clear and generally complete.	Summary of the research, design, and writing process is very well written, detailed, clear, and complete.	
Project Summary (X1)	Summary of the project is poorly written and missing the process and challenges faced.	The summary is somewhat clear and is missing the process or the challenges faced.	The summary is clear and concise and contains a detailed summary of the project process and challenges faced.	
List of Tools/ Software (X1)	List is missing several components and/or it is unorganized.	Most tools and software used are included; the list is generally organized and complete.	All tools and software is included; the list is organized and complete.	
References and Resources (X1)	There are few references listed and/or the references listed show little relevance to the project's goal or are not credible.	There are a sufficient number of references listed and the research base has some credible references.	Many quality references are listed, reflecting research in writing and illustrating for children, and in child development.	
TIER 2 – DOCUMENTATION PORTFOLIO SUBTOTAL (90 points)				

Rules violations (a deduction of 20% of the total possible points for the above sections) must be initialed by the judge, coordinator, and manager of the event. Record the deduction in the space to the right.

Indicate the rule violated: _____

PRELIMINARY SUBTOTAL (220 points)

SEMIFINAL PRESENTATION AND INTERVIEW (40 points)

Record scores in the column spaces below.

CRITERIA	Minimal performance	Adequate performance	Exemplary performance	
	1-4 points	5-8 points	9-10 points	
Knowledge (X3)	Participants seem to have little understanding of the concepts in their project; answers to questions may be vague.	Participants exhibit a general understanding of the concepts in their project.	Participants show clear evidence of a thorough understanding of their project.	
Articulation (X1)	Communication of the design process is unclear, unorganized, and or illogical; leadership and/or 21st century skills are not evident.	Communication of the design process is somewhat logical and clear; leadership and/or 21st century skills are somewhat evident.	Communication of the design process is clear, concise, and logical; leadership and/or 21st century skills are clearly evident.	

SEMIFINAL PRESENTATION AND INTERVIEW SUBTOTAL (40 points)

Rules violations (a deduction of 20% of the total possible points for the above sections) must be initialed by the judge, coordinator, and manager of the event. Record the deduction in the space to the right.

Indicate the rule violated: _____

SEMIFINAL SUBTOTAL (40 points)

To arrive at the TOTAL score, add any subtotals and subtract rules violation points, as necessary.   **TOTAL (260 points)**

Comments:

_____

I certify these results to be true and accurate to the best of my knowledge.

JUDGE

Printed name: _____   Signature: _____

CHILDREN'S STORIES
EVENT COORDINATOR INSTRUCTIONS

PERSONNEL

A. Event coordinator

B. Judges:

1. Preliminary round, two (2) or more

2. Semifinal round, two (2) or more

C. Assistants for check-in, two (2)

MATERIALS

A. Coordinator's packet, containing:

1. Event guidelines, one (1) copy for the coordinator and for each judge

2. TSA Event Coordinator Report

3. Stick-on labels for identifying entries

B. Stopwatch

C. Storage containers or display tables for entries (tables minimum depth 18")

D. Table and chairs for judges and two (2) semifinalist team representatives

RESPONSIBILITIES

AT THE CONFERENCE

A. Attend the mandatory coordinator's meeting at the designated time and location.

B. Report to the CRC room and check the contents of the coordinator's packet.

C. Review the event guidelines and check to see that enough personnel have been scheduled.

D. Inspect the area(s) in which the event is to be held for appropriate set-up, including room size, tables, chairs, etc. Notify the event manager of any potential problems.

E. At least one (1) hour before the event is scheduled to begin, meet with the judges to review time limits, procedures, regulations, evaluation, and all other details related to the event. If questions arise that cannot be answered, speak to the event manager before the event begins.

F. Ensure the judges have access to the online judging system.

EVENT CHECK-IN

A. Check in the entries at the time stated in the conference program.

B. Participants check in:

1. The storybook

2. A hard copy of the portfolio

C. Each entry must include the participant's identification number on the inside cover of the entry.

D. Late entries are considered on a case-by-case basis and only when the lateness is caused by events beyond the participant's control.

E. In order to compete, participants must be on the entry list or must have approval of the CRC.

F. Ensure the judges have access to the online judging system.

G. If check-in is on the first day of the conference, requirements for attire do NOT apply during check-in.

H. Position the entries for evaluation and viewing.

I. Secure the entries in the designated area

PRELIMINARY ROUND

A. Judges independently assess the entries using the following procedure:

1. Judges score the Storybook criteria to determine the top twenty-four (24) preliminary contestants, which will not be posted.

2. Judges score the Documentation Portfolio criteria of those top twenty-four (24) contestants to determine the top twelve (12) semifinalist teams.

B. Decisions about rules violations must be discussed and verified with the judges, event coordinator, and CRC manager to determine either:

1. To deduct twenty percent (20%) of the total possible points in this round or

2. To disqualify the entry

The event coordinator, judges, and CRC manager must initial either of these actions on the rating form.

C. Create semifinalist sign-up sheet for the semifinal interviews.

SEMIFINAL ROUND

A. Semifinalists report at the time and place stated in the conference program to sign-up for the presentation and interview.

B. Semifinalists report at the assigned time and place for the presentation and interview.

C. Manage the semifinalist presentation and interviews.

D. Discuss rule violations (e.g. 20% deduction, disqualification) and have all relevant parties initial the rating form.

E. If necessary, manage security and the removal of materials from the event area.

CODING

OVERVIEW

Applying leadership and 21st century skills, participants will take a test related to coding concepts (e.g., language syntax, data structures, control flow, object oriented programming, etc.) in order to qualify for the semifinals. Semifinalist teams will be asked to respond to an annual coding-related design challenge by developing a software program that will accurately address an on-site problem in a specified, limited amount of time. Specific elements to be used, such as the programming language, operating system, or application programming interface (API), will be released on-site. Every effort will be made to support a wide variety of programming languages, and the specific languages, which will be posted on the TSA website under *Themes & Problems*. Completed solutions are objectively measured to determine the best and most effective solution for the stated problem.

ELIGIBILITY

Three (3) teams of two (2) individuals per state may participate.

TIME LIMITS

PRELIMINARY ROUND

A. The one (1)-hour test is administered to all members of the team at the same time.

SEMIFINAL ROUND

A. Up to two (2) hours is allowed for the design and development of the solution.

ATTIRE

TSA competition attire is required for this event.

PROCEDURE

PRE-CONFERENCE

A. Participants review the TSA Honor Statement for Competitive Events found in the General Rules and listed in the individual competitive event rules.

PRELIMINARY ROUND

A. Participants report to the event area at the time and place stated in the conference program for the test.

B. Participants follow the specific regulations and adhere to the directions provided on-site by the event coordinator.

C. Both team members must report to the testing area at the same time but will take the test individually.

D. The twenty-four (24) top-scoring teams qualify as semifinalists.

E. A semifinalist list (in random order) is posted.

SEMIFINAL ROUND

A. Participants bring their own computer systems to the event area at the time and place stated in the conference program.

B. Participants are given a problem, evaluation criteria, materials, and allotted two (2) hours for the design and development of the solution.

C. Each solution is tested and presented to the judges as soon as possible after the coding phase is completed.

D. The top ten (10) finalists are announced at the awards ceremony.

REGULATIONS AND REQUIREMENTS

Students will work to develop their leadership and 21st century skills in the process of preparing for and participating in this TSA competitive event. The development and application of those skills must be evident in their submission, demonstration, and/or communication pertaining to the entry.

PRELIMINARY ROUND

A. Test may be administered online or via a scan-type answer sheet. Please review the *Competition Updates* page on the TSA website.

B. Scan-type forms are furnished by the event coordinator, if applicable.

C. Participants are responsible for bringing two (2) sharpened No.2 pencils to the test site.

D. Participant identification numbers must be entered on the scan form in the space indicated.

E. Failure to follow instructions will result in the score sheet not being scored.

F. Participants must stop work immediately when time is called.

G. Should a participant complete the test before the time allocated is over, the participant will submit the test and scantron form to the coordinator without any form of communication with any other member. Failure to do so results in disqualification of the participation.

H. All tests must be turned in before leaving the test area.

I. The average of the scores of all two (2) team members determines team ranking.

SEMIFINAL ROUND

A. The specific languages permitted in the on-site competition are posted each year on the TSA website under *Themes & Problems*.

B. All work must be completed in the event area during the time specified for the event.

C. Each team must bring:
   1. one (1) laptop capable of networking via Wi-Fi with Microsoft Edge, Google Chrome, or Mozilla Firefox installed. Laptop must be fully charged with enough battery for the duration of the semifinal round.
   2. Pencils, paper, and an external mouse are recommended but not required for each team.
   3. Portable power bank (if desired).

D. External keyboard and monitors are not permitted.

E. Printed reference materials are not allowed.

F. Participants may have access to the internet, if required to complete to the coding challenges.

G. Participants do NOT have access to electrical power/outlets during the event.

H. Participants must have all software development tools needed for the competition downloaded and accessible on their laptop or other device.

I. Participants may only use the permissible programming language's standard library during the on-site competition. No third-party libraries may be used, only standard libraries distributed with the programming language may be used.

J. Participants may NOT use any generative artificial intelligence (AI) tools (e.g. ChatGPT, Google Gemini, GitHub Copilot, etc.) for the coding challenges.

K. Participants are presented with a series of coding problems that must be completed on-site at the conference.

L. All solutions must be tested, demonstrated, and presented by participants in front of the judges exclusively through electronic submission and evaluation.

EVALUATION

A. The successful completion of the problems and the time in which it takes individuals or teams to complete all the challenges.
   1. In the event of two or more teams receiving the same amount of points, the team who scored the points fastest will have the higher placement.

Refer to the official rating form for more information.

TSA HONOR STATEMENT

All work must be created and completed by individual competitors or teams. Plagiarism, the use of Generative Artificial Intelligence (GenAI) software, copyright violation, cheating, and falsification of information are prohibited. Participants may NOT use any generative artificial intelligence (GenAI) tools (e.g. ChatGPT, Google Gemini, GitHub Copilot, etc.). Any attempt to gain an unfair advantage will not be tolerated. Competitors at any level of TSA competition understand and agree to abide by the TSA Honor Statement.

If it is determined that a student violated the TSA Honor Statement, a rules violation of twenty percent (20%) will be incurred.

RESOURCES

The USA Computing Olympiad website and the ACM-ICPC International website are helpful resources for the Coding event. Additional resources that can be used to prepare for the event are listed below:

icpc.baylor.edu/compete/preparation

www.codechef.com

www.usaco.org/index.php?page=contests

blog.hackerearth.com/2013/09/competitive-programming-getting-started_11.html

www.quora.com/What-is-the-best-strategy-to-improve-my-skills-in-competitive-programming-in-2-3-months

www.hackerrank.com/challenges

www.acsl.org

www.codewars.com

STEM INTEGRATION

Depending upon the subject of the problem, this event may align with the STEM (Science, Technology, Engineering, and Mathematics) educational standards.

LEADERSHIP AND 21ST CENTURY SKILLS

This event provides opportunity for students to build and develop leadership and 21st century skills including but not limited to – Communication, Collaboration/Social Skills, Initiative, Problem Solving/Risk Taking, Critical Thinking, Perseverance/Grit, Creativity, Relationship Building/Teamwork, Dependability/Integrity, and Flexibility/Adaptability

CAREERS RELATED TO THIS EVENT

This competition has connections to one (1) or more of the careers below:

- Software engineer
- Mathematician
- Computer scientist
- Computer engineer
- Data engineer
- Technical architect

CODING
2025 & 2026 OFFICIAL RATING FORM
HIGH SCHOOL

Judges: Using minimal (1-4 points), adequate (5-8 points), or exemplary (9-10 points) performance levels as a guideline in the rating form, record the scores earned for the event criteria in the column spaces to the right. The X1 or X2 notation in the criteria column is a multiplier factor for determining the points earned. (Example: an "adequate" score of 7 for an X1 criterion = 7 points; an "adequate" score of 7 for an X2 criterion = 14 points.) A score of zero (0) is acceptable if the minimal performance for any criterion is not met.

Go/No Go Specifications

- Before judging the entry, ensure that the items below are present; indicate presence with a check mark in the box.
- If an item is missing, leave the box next to the item blank and place a check mark in the box labeled ENTRY NOT EVALUATED.
- If a check mark is placed in the ENTRY NOT EVALUATED box, the entry is not to be judged.

☐ Computer hardware is present (semifinals only)
☐ ENTRY NOT EVALUATED

TEST SCORE (50 points)

Average of the two (2) team member's test scores.	**TEST SCORE SUBTOTAL (50 points)**

Rules violations (a deduction of 20% of the total possible points for the above sections) must be initialed by the judge, coordinator, and manager of the event. Record the deduction in the space to the right.

Indicate the rule violated: _____

PRELIMINARY ROUND SUBTOTAL (50 points)

TESTING OF SOLUTION (80 points)

Evaluation: A finite unit of measure, such as elapsed time, linear distance, and/or strength, etc., is used to determine ranking.

1st: 80 Points	**2nd:** 75 Points	**3rd:** 70 Points	**4th:** 65 Points	**5th:** 60 Points	**6th:** 55 Points	**7th:** 50 Points	**8th:** 45 Points
9th: 40 Points	**10th:** 35 Points	**11th:** 30 Points	**12th:** 25 Points	**13th:** 20 Points	**14th:** 15 Points	**15th:** 10 Points	**16th:** 5 Points

TESTING OF SOLUTION SUBTOTAL (80 points)

Rules violations (a deduction of 20% of the total possible points for the above sections) must be initialed by the judge, coordinator, and manager of the event. Record the deduction in the space to the right.

Indicate the rule violated: _____

SOLUTION SUBTOTAL (80 points)

To arrive at the TOTAL score, add any subtotals and subtract rules violation points, as necessary.   **TOTAL (130 points)**

Comments:

_____

I certify these results to be true and accurate to the best of my knowledge.

JUDGE

Printed name: _____   Signature: _____

CODING
EVENT COORDINATOR INSTRUCTIONS

PERSONNEL

A. Event coordinator

B. Judges, two (2) or more

C. Assistants for set-up, monitoring, and clean-up of on-site activity, two (2) or more

D. Timer for exam, one (1)

E. Proctors for exam, three (3)

MATERIALS

A. Coordinator's packet, containing:
   1. Event guidelines, one (1) copy for the coordinator and for each judge
   2. TSA Event Coordinator Report

B. If hard copies of the test are being used, have one (1) for each participant (these tests must be returned immediately following the event).

C. Scantron answer sheets; one (1) for each participant.

D. Projector

E. White board or wall for projecting the images

F. Tables and chairs for participants

G. Tables and chairs for judges, to be used for information distribution and evaluation

H. A copy of a well-written, technologically appropriate problem for each participating team and each judge that can be objectively measured

I. Adequate conditions, tools, materials, monitoring, and testing devices for the problem
   1. Stopwatch for timekeeper
   2. Tables and chairs or tablet armchairs to accommodate all participants
   3. Scantron instruction forms

J. Coordinators are responsbile for creating the test to be administered at the National TSA Conference; copies are provided by the national TSA office.

RESPONSIBILITIES

AT THE CONFERENCE

A. Attend the mandatory coordinator's meeting at the designated time and location.

B. Report to the CRC room and check the contents of the coordinator's packet.

C. Review the event guidelines and check to see that enough personnel have been scheduled.

D. Inspect the area(s) in which the event is to be held for appropriate set-up, including room size, chairs, tables, outlets, etc. Notify the event manager of any potential problems.

E. At least one (1) hour before the event is to begin, meet with judges to review time limits, procedures, regulations, evaluation, and all other details pertaining to the event. If questions arise that cannot be answered, speak to the event manager before the event begins.

F. Ensure the judges have access to the online judging system.

PRELIMINARY ROUND

A. Begin the event at the scheduled time by closing the doors and checking the entry list.

B. All participants and event judges should be in the room at this time.

C. Late participants and/or entries are considered on a case-by-case basis and only when lateness is caused by events beyond the participant's control.

D. In order to compete, participants must be on the entry list or must have approval of the CRC.

E. Distribute the scantron forms to the participants, if applicable.
   1. Direct participants to fill in their participant identification number and test code letter in the appropriate spaces.
   2. Provide an opportunity for any questions about the scan form.

F. Ensure the following testing procedure is applied with the help of the proctors.

   1. If the test is administered as hard copies, instruct the participants to keep the tests face down until they are directed to turn them over and begin.

   2. If exams are administered electronically, instruct participants not to begin until the scheduled time.

G. Acting as the timer and with proctors positioned around the event room, direct the participants to turn their test over, place their code number and the code letter found on the test on the scan form, and begin.

H. Exactly one (1) hour from the time that the participants begin the test, call time.

   1. Direct students to check out with a test proctor once they are finished with their test.

   2. Proctors should collect all tests and then students should immediately leave the testing room.

   3. If a line forms, students must remain completely silent. Any talking will result in a zero score for test of the person(s) talking.

I. Decisions about rules violations must be discussed and verified with the judges, event coordinator, and manager to determine either:

   1. To deduct twenty percent (20%) of the total possible points in this round or

   2. To disqualify the entry

   The event coordinator, judges, and CRC manager must initial either of these actions on the rating form.

ON-SITE CODING CHALLENGE

A. Begin the event at the scheduled time by closing the doors and checking the entry list.

B. All participants and judges should be in the room at this time.

C. Late participants and/or entries are considered on a case-by-case basis and only when lateness is caused by events beyond participant control.

D. In order to compete, participants must be on the entry list or must have approval of the CRC.

E. Check in the semifinalist teams and equipment. Participants must bring:

   1. One (1) laptop

   2. One (1) computer (optional)

   3. Teams may also bring pencils and paper.

   4. Portable power bank (if desired)

F. Teams will have access to electrical power/outlets during the event.

G. Teams will be provided access to the internet (if required) during the event.

H. Students must have all software development tools needed for the competition downloaded and accessible on their computers.

I. Once teams are seated and general announcements have been given, distribute and review the problem and start the time.

J. All solutions must be tested, demonstrated and presented by participants in front of the judges. Judges and assistants observe, with judges evaluating solutions as soon as appropriate.

K. Decisions about rules violations must be discussed and verified with the judges, event coordinator, and CRC manager to determine either:

   1. To deduct twenty percent (20%) of the total possible points in this round or

   2. To disqualify the entry

   The event coordinator, judges, and CRC manager must initial either of these actions on the rating form.

L. If necessary, manage security and the removal of materials from the area.

COMPUTER-AIDED DESIGN (CAD), ARCHITECTURE

OVERVIEW

Applying leadership and/or 21st century skills, participants have the opportunity to use complex computer graphic skills, tools, and processes to develop representations of architectural subjects such as foundation and/or floor plans, and/or elevation drawings, and/or details of architectural ornamentation or cabinetry.

ELIGIBILITY

Two (2) individuals per state may participate.

Participants may compete in either CAD, Architecture or CAD, Engineering, but not both events.

TIME LIMITS

A. Thirty (30) minutes are allowed for set-up time.

B. Three (3) hours are allowed for participants to develop drawing(s).

C. Two (2) hours is allotted for the interview and final evaluation. Interviews will be limited to two (2) minutes per participant.

ATTIRE

TSA competition attire is required for this event.

PROCEDURE

A. Participants review the TSA Honor Statement for Competitive Events found in the General Rules and listed in the individual competitive event rules.

B. Participants bring their own computer systems (see Regulation A) to the event area at the time and place stated in the conference program.

C. Each participant, with one (1) assistant (an instructor, fellow student, or adult chaperone), is allowed to set up and test the equipment. At the end of the thirty (30) minute period, assistants are required to leave the area.

D. Participants are given a design problem to solve in a three (3) hour work session.

E. Participants work independently, without assistance from judges, teachers, or fellow participants.

F. Participants are advised to save their work on their hard drive or on a USB every fifteen (15) minutes.

G. At the end of the session, participants save their work on their hard drives and on a USB flash drive.

H. Judges circulate to evaluate the progress the participants.

I. If a participant finishes their solution, they may notify the event coordinator and leave the event room, but they must return to their station at the end time of the event for their interview. Failure to do so will result in scoring no points for the interview.

J. At the completion of the three (3) hour time to develop drawings students will participate in a two (2) minute interview about their project. Participants shall reserve two (2) additional hours for the final evaluation process.

K. Participants report to the event area at the time and place stated by in the conference program to pick up their equipment.

L. The top ten (10) finalists are announced during the award ceremony.

REGULATIONS AND REQUIREMENTS

Students will work to develop their leadership and 21st century skills in the process of preparing for and participating in this TSA competitive event. The development and application of those skills must be evident in their submission, demonstration, and/or communication pertaining to the entry.

A. Participants provide their own computer systems including:

1. computer hardware (only one [1] CPU and one [1] monitor), capable of reading a USB flash drive; laptops are recommended

2. software needed for the challenge; preference is that software is downloaded; if the software is online, National TSA will not provide access to the Internet or guarantee hot spots will work in the competition space

3.   one (1) USB flash drive; used only to back-up the entry; the USB will be returned at the completion of judging

4.   power strip/surge protector

5.   reference materials (can only be hard copy, no Internet is provided)

B.   A table, chair, sketching paper, and electricity is supplied for each participant.

C.   Participants are required to provide their own pencils.

D.   Participants are not permitted to share solutions to problems, reference materials, hardware, or software.

E.   Participants identify their work using only their student identification number.

EVALUATION

A.   The design solution (evaluated on screen according to the criteria on the official rating form)

B.   The interview

Refer to the official rating form for more information.

TSA HONOR STATEMENT

All work must be created and completed by individual competitors or teams. Plagiarism, the use of Generative Artificial Intelligence (GenAI) software, copyright violation, cheating, and falsification of information are prohibited. Participants may NOT use any generative artificial intelligence (GenAI) tools (e.g. ChatGPT, Google Gemini, GitHub Copilot, etc.). Any attempt to gain an unfair advantage will not be tolerated. Competitors at any level of TSA competition understand and agree to abide by the TSA Honor Statement.

If it is determined that a student violated the TSA Honor Statement, a rules violation of twenty percent (20%) will be incurred.

STEM INTEGRATION

This event aligns with the STEM (Science, Technology, Engineering, and Mathematics) educational standards.

LEADERSHIP AND 21ST CENTURY SKILLS

This event provides opportunity for students to build and develop leadership and 21st century skills including but not limited to – Communication, Collaboration/Social Skills, Initiative, Problem Solving/Risk Taking, Critical Thinking, Perseverance/Grit, Creativity, Relationship Building/Teamwork, Dependability/Integrity, and Flexibility/Adaptability

CAREERS RELATED TO THIS EVENT

This competition has connections to one (1) or more of the careers below:

- Architect
- Automobile designer
- CAD professional
- Machine designer

CAD, ARCHITECTURE
2025 & 2026 OFFICIAL RATING FORM
HIGH SCHOOL

Judges: Using minimal (1-4 points), adequate (5-8 points), or exemplary (9-10 points) performance levels as a guideline in the rating form, record the scores earned for the event criteria in the column spaces to the right. The X1 or X2 notation in the criteria column is a multiplier factor for determining the points earned. (Example: an "adequate" score of 7 for an X1 criterion = 7 points; an "adequate" score of 7 for an X2 criterion = 14 points.) A score of zero (0) is acceptable if the minimal performance for any criterion is not met.

Go/No Go Specifications

- Before judging the entry, ensure that the items below are present; indicate presence with a check mark in the box.
- If an item is missing, leave the box next to the item blank and place a check mark in the box labeled ENTRY NOT EVALUATED.
- If a check mark is placed in the ENTRY NOT EVALUATED box, the entry is not to be judged.

☐ Computer hardware is present
☐ CAD software
☐ ENTRY NOT EVALUATED

SOLUTION TO PROBLEM (40 points)				Record scores in the column spaces below.
CRITERIA	Minimal performance	Adequate performance	Exemplary performance	
	1-4 points	5-8 points	9-10 points	
Architectural Design (X1)	The building design is not unique and shows little attention to detail; the drawing does not effectively model the problem assigned.	The building design is unique and shows some attention to detail; the drawing somewhat effectively model the problem assigned.	The building design is unique and sophisticated, with great attention to detail; the drawing completely and effectively model the problem assigned.	
Design Concept and Functionality (X1)	The design is not informed by organizational principles; spaces are impractical, disorganized, and not appropriately dimensioned.	The design is mostly informed by organizational principles; spaces are somewhat practical and functional with appropriate dimensions.	The design is imformed by clear organizational principles; spaces are practical and functional with appropriate dimensions.	
Form and Spatial Principles (X1)	The design demonstrates little understanding and application of architectural and spatial principles.	The design demonstrates some understanding and application of architectural and spatial principles.	The design demonstrates a fundamental understanding and application of architectural and spatial principles.	
Aesthetics (X1)	The design is unappealing and fails to capture the observer's attention.	The design is somewhat pleasing and appealing and attempts to capture the observer's attention.	The overall design is pleasing and appealing and effectively draws attention to its appearance/beauty.	
SOLUTION TO PROBLEM SUBTOTAL (40 points)				

COMPUTER-AIDED DESIGN (CAD), ARCHITECTURE

LAYOUT (60 points)

CRITERIA	Minimal performance	Adequate performance	Exemplary performance	
	1-4 points	5-8 points	9-10 points	
Views (X2)	The correct views have not been selected and/or used throughout the drawing process and final layout.	Most of the views that have been selected and used are correct and in the proper layout format.	All of the views that have been selected and used are correct and in the proper layout.	
Detailing (X2)	Many of the details are missing or incorrectly placed.	Most of the details are included and correctly placed.	All the necessary details are included and placed correctly.	
Dimensioning (X1)	Many of the necessary dimensions are missing and/or are incorrectly placed.	Most of the necessary dimensions are included and/or are generally correctly placed.	All necessary dimensions are included and correctly placed.	
Scale (X1)	The scale selected for the drawings is incorrect and improperly noted.	The scale selected for most aspects of the drawings is generally correct and properly noted.	The scale selected for all aspects of the drawings is correct and properly noted.	
			LAYOUT SUBTOTAL (60 points)	

ARCHITECTURAL APPLICATION (20 points)

CRITERIA	Minimal performance	Adequate performance	Exemplary performance	
	1-4 points	5-8 points	9-10 points	
Use of Symbols (X1)	Many, if not most, of the symbols selected and used are incorrect.	Most of the symbols selected and used are generally correct and/or appropriately placed.	All of the symbols selected and used are correct and appropriately placed.	
Appropriate Standards (X1)	There is little or no evidence of an appropriate application of architectural standards in the completed design and drawings.	There is some evidence of an appropriate application of architectural standards in the completed design and drawings.	There is clear evidence of an effective and appropriate application of architectural standards in the completed design and drawings.	
			ARCHITECTURAL APPLICATION SUBTOTAL (20 points)	

INTERVIEW (30 points)

CRITERIA	Minimal performance	Adequate performance	Exemplary performance	
	1-4 points	5-8 points	9-10 points	
CAD Functions (X1)	There is little evidence of an understanding and application of CAD functions.	There is evidence of a general understanding and effective application of CAD functions.	A complete and effective understanding and application of CAD functions is evident.	
CAD Features (X1)	There is little evidence of an understanding and application of CAD special features.	There is a general understanding and application of CAD special features.	There is a complete understanding and application of the various special features of CAD.	
Articulation (X1)	Communication of the solution is unclear, unorganized, and or illogical; leadership and/or 21st century skills are not evident.	Communication of the solution is somewhat logical and clear; leadership and/or 21st century skills are somewhat evident.	Communication of the solution is clear, concise, and logical; leadership and/or 21st century skills are clearly evident.	
			INTERVIEW SUBTOTAL (30 points)	

Rules violations (a deduction of 20% of the total possible points for the above sections) must be initialed by the judge, coordinator, and manager of the event. Record the deduction in the space to the right.

Indicate the rule violated: _____

To arrive at the TOTAL score, add any subtotals and subtract rules violation points, as necessary.   **TOTAL (150 points)**

Comments:

_____

I certify these results to be true and accurate to the best of my knowledge.

JUDGE

Printed name: _____   Signature: _____

COMPUTER-AIDED DESIGN (CAD), ARCHITECTURE EVENT COORDINATOR INSTRUCTIONS

PERSONNEL

A. Event coordinator

B. Judges, two (2) or more

C. Assistants, one (1)

MATERIALS

A. Coordinator's packet, containing:

1. Event guidelines, one (1) copy for the coordinator and for each judge

2. TSA Event Coordinator Report

B. Tables and chairs for competitors and judges

C. One (1) ream of 8½" x 11" white copier paper

D. Stopwatch

E. Statement of problem as a hard-copy sketch for each participant, pages as needed

F. Statement of problem as a hard-copy sketch for each judge, pages as needed

RESPONSIBILITIES

AT THE CONFERENCE

A. Attend the mandatory coordinator's meeting at the designated time and location.

B. Report to the CRC room and check the contents of the coordinator's packet.

C. Review the event guidelines and check to see that enough personnel have been scheduled.

D. Inspect the area(s) in which the event is to be held for appropriate set-up, including room size, chairs, tables, outlets, etc. Notify the event manager of any potential problems.

E. At least one (1) hour before the event is to begin, meet with judges to review time limits, procedures, regulations, evaluation, and all other details related to the event. If questions arise that cannot be answered, speak to the event manager before the event begins.

F. Ensure the judges have access to the online judging system.

ON-SITE CHALLENGE

A. As participants arrive, check the coordinator's report and assign participants to work stations.

B. All participants and judges should be in the room at this time.

C. Late entries are considered on a case-by-case basis and only when the delay is caused by events beyond participant control.

D. In order to compete, participants must be on the entry list or must have approval of the CRC.

E. Allow thirty (30) minutes for participants and their assistants (no more than one [1] per participant) to set up equipment.

F. At the end of the thirty (30)-minute set-up time, non-participants are required to leave the event area.

G. Review with the participants the time limits, procedures, regulations, and protocol of the event.

H. Remind participants to save their work at regular time intervals.

I. Distribute copies of the CAD problem. Answer any appropriate questions concerning the problem.

J. Begin the event and announce the ending time.

K. During the event, the judges and assistants monitor and evaluate participant progress and work.

L. Record the order participants finish their solution. Participants may leave the room once finished, but must report back to their station at the end of the event time for their interview.

M. Announce the time remaining to work at one (1) hour, thirty (30) minutes, fifteen (15) minutes, and five (5) minutes before time is called.

N. When time is called, participants stop and save their work on their hard drives and on their USB flash drives.

O. Participants remain at their computers for up to two (2) hours as judges circulate to evaluate the entries.

P. Conduct the interviews as the submissions are reviewed. Interviews should be a maximum of two (2) minutes in length.

Q. Decisions about rules violations must be discussed and verified with the judges, event coordinator, and CRC manager to determine either:

1. To deduct twenty percent (20%) of the total possible points in this round or

2. To disqualify the entry

The event coordinator, judges, and CRC manager must initial either of these actions on the rating form.

R. If necessary, manage security and the removal of materials from the area.

COMPUTER-AIDED DESIGN (CAD), ENGINEERING

OVERVIEW

Applying leadership and 21st century skills, participants use complex computer graphic skills, tools, and processes to develop three (3)-dimensional representations of engineering subjects such as a machine part, tool, device, or manufactured product.

ELIGIBILITY

Two (2) individuals per state may participate.

Participants may compete in either CAD, Architecture or CAD, Engineering, but not both events.

TIME LIMITS

A. Thirty (30) minutes are allowed for set-up time.

B. Three (3) hours are allowed for participants to develop drawing(s).

C. Two (2) hours is allotted for the interview and final evaluation. Interviews will be limited to two (2) minutes per participant.

ATTIRE

TSA competition attire is required for this event.

PROCEDURE

A. Participants review the TSA Honor Statement for Competitive Events found in the General Rules and listed in the individual competitive event rules.

B. Participants bring their own computer systems (see Regulation A) to the event area at the time and place stated in the conference program.

C. Each participant, with one (1) assistant (an instructor, fellow student, or adult chaperone), is allowed to set up and test the equipment. At the end of the thirty (30) minute set-up period, assistants are required to leave the area.

D. Participants are given a design problem to solve in a three (3) hour work session.

E. Participants work independently, without assistance from judges, teachers, or fellow participants.

F. Participants are advised to save their work on their hard drives every fifteen (15) minutes.

G. At the end of the session, participants save their work on their hard drives and on a USB flash drive.

H. Judges circulate to evaluate the progress the participants.

I. If a participant finishes their solution, they may notify the event coordinator and leave the event room, but they must return to their station at the end time of the event for their interview. Failure to do so will result in scoring no points for the interview.

J. At the completion of the three (3) hour time to develop drawings students will participate in a two (2) minute interview about their project. Participants shall reserve two (2) additional hours for the final evaluation process.

K. Participants report to the event area at the time and place stated by in the conference program to pick up their equipment.

L. The top ten (10) finalists are announced during the award ceremony.

REGULATIONS AND REQUIREMENTS

Students will work to develop their leadership and 21st century skills in the process of preparing for and participating in this TSA competitive event. The development and application of those skills must be evident in their submission, demonstration, and/or communication pertaining to the entry.

A. Participants provide their own computer systems including:

1. computer hardware (only one [1] CPU and one [1] monitor), capable of reading a USB flash drive; laptops are recommended

2. software needed for the challenge; preference is that software is downloaded; if the software is online, National TSA will not provide access to the Internet or guarantee hot spots will work in the competition space

3. one (1) USB flash drive; used only to back-up the entry; the USB will be returned at the completion of judging

4. power strip/surge protector

5. reference materials (can only be hard copy; no internet is provided)

B. A table, chair, sketching paper, and electricity is supplied for each participant.

C. Participants are required to provide their own pencils.

D. Participants are not permitted to share solutions to problems, reference materials, hardware, or software.

E. Participants identify their work using only their student identification number.

EVALUATION

A. The design solution (evaluated on screen according to the criteria on the official rating form)

B. The interview

Refer to the official rating form for more information.

TSA HONOR STATEMENT

All work must be created and completed by individual competitors or teams. Plagiarism, the use of Generative Artificial Intelligence (GenAI) software, copyright violation, cheating, and falsification of information are prohibited. Participants may NOT use any generative artificial intelligence (GenAI) tools (e.g. ChatGPT, Google Gemini, GitHub Copilot, etc.). Any attempt to gain an unfair advantage will not be tolerated. Competitors at any level of TSA competition understand and agree to abide by the TSA Honor Statement.

If it is determined that a student violated the TSA Honor Statement, a rules violation of twenty percent (20%) will be incurred.

STEM INTEGRATION

This event aligns with the STEM (Science, Technology, Engineering, and Mathematics) educational standards.

LEADERSHIP AND 21ST CENTURY SKILLS

This event provides opportunity for students to build and develop leadership and 21st century skills including but not limited to – Communication, Collaboration/Social Skills, Initiative, Problem Solving/Risk Taking, Critical Thinking, Perseverance/Grit, Creativity, Relationship Building/Teamwork, Dependability/Integrity, and Flexibility/Adaptability

CAREERS RELATED TO THIS EVENT

This competition has connections to one (1) or more of the careers below:

- Engineer
- Automobile designer
- CAD professional
- Machine designer

CAD, ENGINEERING
2025 & 2026 OFFICIAL RATING FORM
HIGH SCHOOL

Judges: Using minimal (1-4 points), adequate (5-8 points), or exemplary (9-10 points) performance levels as a guideline in the rating form, record the scores earned for the event criteria in the column spaces to the right. The X1 or X2 notation in the criteria column is a multiplier factor for determining the points earned. (Example: an "adequate" score of 7 for an X1 criterion = 7 points; an "adequate" score of 7 for an X2 criterion = 14 points.) A score of zero (0) is acceptable if the minimal performance for any criterion is not met.

Go/No Go Specifications

- Before judging the entry, ensure that the items below are present; indicate presence with a check mark in the box.
- If an item is missing, leave the box next to the item blank and place a check mark in the box labeled ENTRY NOT EVALUATED.
- If a check mark is placed in the ENTRY NOT EVALUATED box, the entry is not to be judged.

☐ Computer hardware is present
☐ CAD Software
☐ ENTRY NOT EVALUATED

SOLUTION TO PROBLEM (70 points)

Record scores in the column spaces below.

CRITERIA	Minimal performance 1-4 points	Adequate performance 5-8 points	Exemplary performance 9-10 points	
Accuracy (X2)	The solution demonstrates a poor understanding of the geometry; All solution elements are accurate and precise, effectively modeling the problem assigned.	The solution demonstrates an some understanding of the geometry; All solution elements are accurate and precise, effectively modeling the problem assigned.	The solution demonstrates an exemplary understanding of the geometry; All solution elements are accurate and precise, effectively modeling the problem assigned.	
Completeness (X1)	The solution models little of the problem assigned.	The solution models most of the problem assigned.	The solution models all portions of the problem assigned.	
CAD Tools & Functions (X2)	The solution demonstrates a poor degree of competency with CAD tools and features.	The solution demonstrates a some degree of competency with CAD tools and features.	The solution demonstrates a high degree of competency with CAD tools and features.	
CAD Features (X1)	The solution demonstrates a poor understanding and application of various special features of CAD.	The solution demonstrates a moderate understanding and application of various special features of CAD.	The solution demonstrates a complete understanding and application of various special features of CAD.	
Model Efficiency (X1)	The solution reflects an poor usage of features, with some sketches, features and tools being unnecessary.	The solution reflects an average usage of features, with some sketches, features and tools being unnecessary.	The solution reflects an economy of features, using only necessary sketches, features, and tools.	
			SOLUTION TO PROBLEM SUBTOTAL (70 points)	

COMPUTER-AIDED DESIGN (CAD), ENGINEERING

LAYOUT (40 points)				Record scores in the column spaces below.
CRITERIA	Minimal performance	Adequate performance	Exemplary performance	
	1-4 points	5-8 points	9-10 points	
Title Block (X1)	The title block and other identifying information for the solution is incomplete.	The title block and other identifying information for the solution is mostly complete.	The title block and other identifying information for the solution is complete with all necessary information.	
Views (X1)	The solution utilizes few correct views and placement with no section or auxiliary views.	The solution utilizes most of correct views and placement with any section and auxiliary views.	The solution utilizes the correct views and placement with any necessary section and auxiliary views.	
Dimensioning (X1)	Many of the necessary dimensions are missing and/or placed incorrectly.	Most of the required dimensions are included and placed correctly.	All of the necessary dimensions are included and correctly placed.	
Scale (X1)	The scale selected for the drawings is incorrect and not properly noted.	The scale selected is generally correct and properly noted for most drawings.	The scale selected for all aspects of the drawings is correct and properly noted.	
			LAYOUT SUBTOTAL (40 points)	

ENGINEERING APPLICATION (20 points)				Record scores in the column spaces below.
CRITERIA	Minimal performance	Adequate performance	Exemplary performance	
	1-4 points	5-8 points	9-10 points	
Application of Practices (X1)	Many of the engineering practices selected and used are incorrectly applied.	Most of the engineering practices selected and used are correctly applied.	All of the engineering practices selected and used are correctly and appropriately applied.	
Appropriate Use of Conventions (X1)	There is little or no evidence of an effective application of engineering conventions in the completed design and drawings.	There is some evidence of an effective application of engineering conventions in the completed design and drawings.	There is clear evidence of an effective and knowledgeable application of engineering conventions in the completed design and drawings.	
			ENGINEERING APPLICATION SUBTOTAL (20 points)	

INTERVIEW (30 points)				Record scores in the column spaces below.
CRITERIA	Minimal performance	Adequate performance	Exemplary performance	
	1-4 points	5-8 points	9-10 points	
CAD Functions (X1)	There is little evidence of an understanding and application of CAD functions.	There is evidence of a general understanding and effective application of CAD functions.	A complete and effective understanding and application of CAD functions is evident.	
CAD Features (X1)	There is little evidence of an understanding and application of CAD special features.	There is a general understanding and application of CAD special features.	There is a complete understanding and application of the various special features of CAD.	
Articulation (X1)	Communication of the solution is unclear, unorganized, and or illogical; leadership and/or 21st century skills are not evident.	Communication of the solution is somewhat logical and clear; leadership and/or 21st century skills are somewhat evident.	Communication of the solution is clear, concise, and logical; leadership and/or 21st century skills are clearly evident.	
			INTERVIEW SUBTOTAL (30 points)	

Rules violations (a deduction of 20% of the total possible points for the above sections) must be initialed by the judge, coordinator, and manager of the event. Record the deduction in the space to the right.

Indicate the rule violated: _____

To arrive at the TOTAL score, add any subtotals and subtract rules violation points, as necessary. **TOTAL (160 points)**

Comments:

_____

I certify these results to be true and accurate to the best of my knowledge.

JUDGE

Printed name: _____ Signature: _____

COMPUTER-AIDED DESIGN (CAD), ENGINEERING EVENT COORDINATOR INSTRUCTIONS

PERSONNEL

A. Event coordinator

B. Judges, two (2) or more

C. Assistants, one (1)

MATERIALS

A. Coordinator's packet, containing:

1. Event guidelines, one (1) copy for the coordinator and for each judge

2. TSA Event Coordinator Report

B. Tables and chairs for competitors and judges

C. One (1) ream of 8½" x 11" white copier paper

D. Stopwatch

E. Statement of problem as a hard-copy sketch for each participant, pages as needed

F. Statement of problem as a hard-copy sketch for each judge, pages as needed

RESPONSIBILITIES

AT THE CONFERENCE

A. Attend the mandatory coordinator's meeting at the designated time and location.

B. Report to the CRC room and check the contents of the coordinator's packet.

C. Review the event guidelines and check to see that enough personnel have been scheduled.

D. Inspect the area(s) in which the event is to be held for appropriate set-up, including room size, chairs, tables, outlets, etc. Notify the event manager of any potential problems.

E. At least one (1) hour before the event is to begin, meet with judges to review time limits, procedures, regulations, evaluation, and all other details related to the event. If questions arise that cannot be answered, speak to the event manager before the event begins.

F. Ensure the judges have access to the online judging system.

ON-SITE CHALLENGE

A. As participants arrive, check the coordinator's report and assign participants to work stations.

B. All participants and judges should be in the room at this time.

C. Late entries are considered on a case-by-case basis and only when the delay is caused by events beyond participant control.

D. In order to compete, participants must be on the entry list or must have approval of the CRC.

E. Allow thirty (30) minutes for participants and their assistants (no more than one [1] per participant) to set up equipment.

F. At the end of the thirty (30)-minute set-up time, non-participants are required to leave the event area.

G. Review with the participants the time limits, procedures, regulations, and protocol of the event.

H. Remind participants to save their work at regular time intervals.

I. Distribute copies of the CAD problem. Answer any appropriate questions concerning the problem.

J. Begin the event and announce the ending time.

K. During the event, the judges and assistants monitor and evaluate participant progress and work.

L. Record the order participants finish their solution. Participants may leave the room once finished, but must report back to their station at the end of the event time for their interview.

M. Announce the time remaining to work at one (1) hour, thirty (30) minutes, fifteen (15) minutes, and five (5) minutes before time is called.

N. When time is called, participants stop and save their work on their hard drives and on their USB flash drives.

O. Participants remain at their computers for up to two (2) hours as judges circulate to evaluate the entries.

P. Conduct the interviews as the submissions are reviewed. Interviews should be a maximum of two (2) minutes in length.

Q. Decisions about rules violations must be discussed and verified with the judges, event coordinator, and CRC manager to determine either:

   1. To deduct twenty percent (20%) of the total possible points in this round or

   2. To disqualify the entry

   The event coordinator, judges, and CRC manager must initial either of these actions on the rating form.

R. If necessary, manage security and the removal of materials from the area.

DATA SCIENCE AND ANALYTICS

OVERVIEW

Applying leadership and 21st century skills, participants collect data, conduct an analysis of the data, and make predictions about the outcomes. Participants document their research and summarize their findings in a digital scientific poster. Semifinalists participate in a two (2) hour semifinal challenge visually representing a data set provided as an on-site challenge. Participants access the annual theme on the TSA website under *Themes & Problems*.

ELIGIBILITY

Three (3) teams of two (2) individuals per state may participate; individual entries are permitted.

TIME LIMITS

A. All components of the chapter's entry (documentation PDF) must be finished, submitted, and accessible via the Internet by 11:59pm ET on a designated date mid-May.

B. Preliminary round participant(s) must participate in an on-site presentation of their digital scientific poster, which will last no more than ten (10) minutes, broken down as follows:

1. Two (2) minutes to set-up
2. Six (6) minutes to present
3. Two (2) minutes to remove materials

C. Semifinalists participate in a two (2) hour on-site challenge submitted online or via TSA-provided USB drive.

ATTIRE

TSA competition attire is required for this event.

PROCEDURE

PRE-CONFERENCE

A. Participants review the TSA Honor Statement for Competitive Events found in the General Rules and listed in the individual competitive event rules.

B. Participants access the annual theme on the TSA website under *Themes & Problems*.

C. Participants will identify a topic as it relates to the annual theme and collect or compile data from various sources. The data source must include at least five hundred rows of data.

D. Participants create their documentation and digital scientific poster according to the regulations.

E. The documentation portfolio PDF of the chapter's entry must be finished, submitted, and accessible via the Internet by 11:59pm ET on a designated date in mid-May.

F. The submission information and deadline will be provided in January on the TSA website under *Competition Updates*.

PRELIMINARY ROUND

A. Judges evaluate entries based on the following criteria:

1. Judges review and score the Documentation Portfolio PDF criteria to determine the top twenty-four (24) entries.

B. The list of twenty-four (24) teams/individuals will be posted on-site on the first full day of conference.

C. The twenty-four (24) preliminary round contestants report at the time and place stated in the conference program to sign-up for a presentation time.

D. Participants report at the assigned time and place with their digital scientific poster to be presented using their own device. The device must be battery powered (e.g., laptop, tablet). No electricity or Internet connection is provided.

E. Participants are allowed six (6) minutes to present their digital scientific poster. Two (2) minutes will be allotted to set-up their presentation, and two (2) minutes to remove their materials.

F. A list of twelve (12) semifinalists (in random order) is posted.

SEMIFINAL ROUND

A. Participants have two (2) hours to collaborate on a visual representation of the data set provided on-site, which must be completed on-site within the specified time frame.

B. Semifinalist teams submit the following as a multi-page PDF on the TSA-provided USB drive.

  1. A visual representation

  2. A brief synopsis of their entry

C. Judges evaluate the entries with neither students nor advisors present.

D. Ten (10) finalists are announced during the conference awards ceremony.

REGULATIONS AND REQURIEMENTS

Students will work to develop their leadership and 21st century skills in the process of preparing for and participating in this TSA competitive event. The development and application of those skills must be evident in their submission, demonstration, and/or communication pertaining to the entry.

PRE-CONFERENCE

A. Participants must understand the fundamental concepts and principles of the contemporary issue researched. Research about the issue shall focus on:

  1. Analysis of the collected data.

  2. Representation of that data in various forms.

  3. Synthesis of the collected data in terms of factors influencing the issue, societal impacts, and ethical considerations.

B. Documentation Portfolio:

  1. The documentation portfolio must be saved as a multi-page PDF document with the pages presented in the following order:

    a. Title page with the event title, the conference city and state, the year, and the team ID number; one (1) page

    b. Table of contents; pages as needed

    c. Introduction and Data Overview; one (1) page

    d. Data Dictionary – provide a table with the following fields to describe only the fields within the dataset that were used for the purpose of your analysis: field name, data type (e.g. string, integer, boolean, etc.), description, and field example; maximum of two (2) pages

    e. Purpose – an explanation of the importance of the issue including problems and possible solutions (if applicable); one (1) page

    f. Methods – the methods used to obtain your data; one (1) page

    g. Results; pages as needed

      i. analysis of the data collected

      ii. support materials such as graphs and any pertinent data collected

    h. Conclusions – synthesis of the data collected; maximum of two (2) pages

    i. Next Steps – next steps to further analyze the data, collect more data, or minimize the impact of the issue; one (1) page

    j. Digital Scientific Poster:

      i. Participants must create the digital scientific poster. An editable, downloadable template is available on the TSA website under *Themes & Problems*. Use of the provided template is optional; one (1) page.

      ii. Participants shall incorporate visuals to the digital scientific poster.

    k. Bibliography/references – A list of references and credible resources in a professional citation style of the competitors choosing. Failure to use a professional citation style will result in a rules violation of 20% (twenty percent). Some examples of professional citation styles include MLA, APA, Chicago, and IEEE; a minimum of three (3) different types of resources must be used; work must be original or cited; pages as needed

    l. Appendix – A collection of the raw analysis, to include Excel workbooks, code files, etc.; pages as needed

m. Citation of all ideas, fonts, and images from sources other than the designer, and/or that are copyrighted (most fonts and images found on the web are copyrighted material unless purchased or offered as free-domain). Clip art must be documented; pages as needed

n. Student Copyright Checklist (see Forms Appendix); one (1) page

o. Consent and Release Forms – Recognizable individuals pictured in the images (minors require parental consent) must give their written consent before the images can be used in this event (see Photo/Film/Video Consent and Release Form in Forms Appendix); pages as needed

SEMIFINAL ROUND

A. Participants report at the time and place identified in the conference program for the on-site problem.

B. Participants must have the following computer hardware:

1. One (1) laptop

2. Extra charged laptop battery (if desired)

3. One (1) computer mouse, optional

4. Converter to allow for a USB input into the laptop, if needed

5. Portable power bank (if desired)

C. Semifinalists will receive the on-site problem (data set) on a TSA-provided USB drive

D. Semifinalists have two (2) hours to create their visual representation and write a brief synopsis of no more than two hundred and fifty (250) words, including snapshots of the visual representation.

E. All work must be completed at the conference during the time specified for the event.

F. Any entries that are started prior to the conference will result in disqualification.

G. No electricity or access to Internet will be provided.

H. Participants save their visualization and supporting documentation as a multi-page PDF document and submit the entry on the TSA-provided USB drive by the designated deadline.

I. Participants may NOT use any generative artificial intelligence (AI) tools (e.g. ChatGPT, Google Gemini, GitHub Copilot, etc.).

EVALUATION

PRELIMINARY ROUND

Tier 1

A. The documentation portfolio

Tier 2

B. The presentation

SEMIFINAL ROUND

A. The visual representation of the provided data set and synopsis

Refer to the official rating form for more information.

TSA HONOR STATEMENT

All work must be created and completed by individual competitors or teams. Plagiarism, the use of Generative Artificial Intelligence (GenAI) software, copyright violation, cheating, and falsification of information are prohibited. Participants may NOT use any generative artificial intelligence (GenAI) tools (e.g. ChatGPT, Google Gemini, GitHub Copilot, etc.). Any attempt to gain an unfair advantage will not be tolerated. Competitors at any level of TSA competition understand and agree to abide by the TSA Honor Statement.

If it is determined that a student violated the TSA Honor Statement, a rules violation of twenty percent (20%) will be incurred.

STEM INTEGRATION

This event has connections with the STEM (Science, Technology, Engineering, and Mathematics) educational standards.

LEADERSHIP AND 21ST CENTURY SKILLS

This event provides opportunity for students to build and develop leadership and 21st century skills including but not limited to – Communication, Collaboration/Social Skills, Initiative, Problem Solving/Risk Taking, Critical Thinking, Perseverance/Grit, Creativity, Relationship Building/Teamwork, Dependability/Integrity, and Flexibility/Adaptability

CAREERS RELATED TO THIS EVENT

This competition has connections to one (1) or more of the careers below:

- Data scientist
- Data analyst
- Actuary
- Economist
- Epidemiologist
- Forensic accountant
- Market researcher
- Meteorologist
- Operations research analyst
- Quality engineer
- Data engineer

DATA SCIENCE AND ANALYTICS

2025 & 2026 OFFICIAL RATING FORM

HIGH SCHOOL

Judges: Using minimal (1-4 points), adequate (5-8 points), or exemplary (9-10 points) performance levels as a guideline in the rating form, record the scores earned for the event criteria in the column spaces to the right. The X1 or X2 notation in the criteria column is a multiplier factor for determining the points earned. (Example: an "adequate" score of 7 for an X1 criterion = 7 points; an "adequate" score of 7 for an X2 criterion = 14 points.) A score of zero (0) is acceptable if the minimal performance for any criterion is not met.

Go/No Go Specifications

- Before judging the entry, ensure that the items below are present; indicate presence with a check mark in the box.
- If an item is missing, leave the box next to the item blank and place a check mark in the box labeled ENTRY NOT EVALUATED.
- If a check mark is placed in the ENTRY NOT EVALUATED box, the entry is not to be judged.

☐ TIER 1 – Documenation portfolio PDF was submitted pre-conference
☐ TIER 2 – Digital scientific poster is present
☐ ENTRY NOT EVALUATED

Record scores in the column spaces below.

TIER 1 – DOCUMENTATION PORTFOLIO (70 points)

CRITERIA	Minimal performance 1-4 points	Adequate performance 5-8 points	Exemplary performance 9-10 points	
Portfolio (X1)	Portfolio is unorganized and/or missing three (3) or more components.	Portfolio has most components and it is somewhat organized.	One (1) or no components are missing in the portfolio; content and organization are clearly evident.	
Introduction, Data Overview, and Data Dictionary (X1)	Definition and explanation of the issue and data are unclear.	Issue and data is somewhat defined and explained.	Clear and concise definition and explanation of the issue and data are evident.	
Purpose and Methods (X1)	Research is inadequate, and/or very few credible sources are referenced.	Research has been conducted appropriately, with some credible sources included.	Research indicates evidence of a comprehensive assortment of materials that are credible sources.	
Results (X2)	The data is not represented in charts and graphs.	The data is represented in charts and graphs and somewhat supports the analysis of the team.	The data is represented in charts and graphs and supports the analysis of the team.	
Conclusions and Next Steps (X1)	Support materials do not help clarify the documentation or are of little significance to the issue.	Support materials are appropriate and help supplement documentation by providing clarity to the issue.	Support materials are of excellent quality; if not original, they are cited; support materials clarify the issue.	
Quality, Effectiveness, and Mechanics (X1)	Portfolio appears to have been thrown together; distracting errors in punctuation, grammar, and spelling are evident in the documentation.	Portfolio is generally organized; punctuation, grammar, and spelling are generally correct, with few errors.	Work is of exceptional quality and well organized; punctuation, grammar, and spelling are correct, with no errors.	
TIER 1 – DOCUMENTATION PORTFOLIO SUBTOTAL (70 points)				

Rules violations (a deduction of 20% of the total possible points for the above sections) must be initialed by the judge, coordinator, and manager of the event. Record the deduction in the space to the right.

Indicate the rule violated: _____

	TIER 1 – SUBTOTAL (70 points)	

TIER 2 – SCIENTIFIC POSTER PRESENTATION (90 points)

CRITERIA	Minimal performance	Adequate performance	Exemplary performance	
	1-4 points	5-8 points	9-10 points	
Definition and Explanation of the Issue (X1)	An unclear definition and explanation of the issue is presented.	Issue is defined and explained adequately.	The portfolio is clearly organized and has either one or no missing components.	
Explanation of Impacts (X1)	Explanation is missing a discussion of the issue's relevance to environmental, economic, social, and/or ethical considerations.	Explanation addresses some of the issues relevant to environmental, economic, social, and/or ethical considerations.	Explanation includes a full discussion of the issue's relevance to environmental, economic, social, and/or ethical considerations.	
Supporting Information (X2)	Support information is not represented in graphs/charts and does not help to clarify documentation, and/or it is of little significance to the issue.	Support information is represented in graphs/charts, is somewhat appropriate and helps supplement the documentation by providing some clarity to the issue.	Support information is represented in graphs/charts, is highly effective and of excellent quality.	
Research, References, and Resources (X1)	Documentation lacks an adequate research base, and/or very few credible sources are referenced.	Research is conducted appropriately, with adequate credible sources.	Comprehensive research base that includes credible sources is evident.	
Communication of the project (X2)	It is difficult to understand the project being communiated; an illogical explanation presented; leadership and/or 21st century skills are not evident.	The project is communicated to some degree although some illogical inconsistencies exist; leadership and/or 21st century skills are somewhat evident.	The issue is communicated in an organized, clear, and concise manner; leadership and/or 21st century skills are evident.	
Creativity (X1)	The display lacks creativity; no, or very few, design principles are integrated in the display.	Some elements of creativity exist in the display, and essential design principles are generally evident.	The display exudes creativity; essential design principles and elements are well integrated.	
Aesthetics and Artisanship (X1)	Work is unorganized and sloppy; display seems to be an afterthought or thrown together.	Display shows an organized presentation of the issue.	Display is exemplary in logically communicating important data.	

TIER 2 – SCIENTIFIC POSTER PRESENTATION SUBTOTAL (90 points)	

Rules violations (a deduction of 20% of the total possible points for the above sections) must be initialed by the judge, coordinator, and manager of the event. Record the deduction in the space to the right.

Indicate the rule violated: _____

PRELIMINARY SUBTOTAL (160 points)	

Record scores in the column spaces below.

SEMIFINAL VISUALIZATION AND SYNOPOSIS (80 points)

CRITERIA	Minimal performance	Adequate performance	Exemplary performance	
	1-4 points	5-8 points	9-10 points	
Conceptualization (X2)	It is difficult to understand the concept being communicated in the visualization and synopsis.	The concept is somewhat communicated, but many aspects remain unclear.	The concept is communicated in an organized, clear, and concise manner.	
Creativity (X2)	The visualization lacks creativity; no, or very few, design principles are integrated in the visualization.	Some elements of creativity are expressed, with most design principles integrated.	The visualization exudes creativity; essential design principles and elements are integrated.	
Aesthetics and Artisanship (X1)	Unorganized, sloppy work is evident; the visualization seems to be an afterthought and/or thrown together.	A largely organized presentation of layout and design principles is evident.	An exemplary use of layout and design principles to logically communicate important data is evident.	
Graphical Representations (X2)	Graphical representations do not help to clarify visualization, or they are of little significance to the project.	Graphical representations are appropriate and help supplement the visualization by providing clarity to the project.	Graphical representations are of excellent quality; and clarify abstract concepts.	
Originality (X1)	The visualization lacks imagination, originality, and artistic detail.	The visualization is somewhat effective, inventive, and inspiring.	The visualization is inspiring, inventive, resourceful, and motivating.	
SEMIFINAL VISUALIZATION AND SYNOPOSIS SUBTOTAL (80 points)				

Rules violations (a deduction of 20% of the total possible points for the above sections) must be initialed by the judge, coordinator, and manager of the event. Record the deduction in the space to the right.

Indicate the rule violated: _____

SEMIFINAL SUBTOTAL (80 points)

To arrive at the TOTAL score, add any subtotals and subtract rules violation points, as necessary.   **TOTAL (240 points)**

Comments:

_____

I certify these results to be true and accurate to the best of my knowledge.

JUDGE

Printed name: _____   Signature: _____

DATA SCIENCE AND ANALYTICS EVENT COORDINATOR INSTRUCTIONS

PERSONNEL

A. Event coordinator

B. Judges:

1. Preliminary round, two (2) or more (documentation)
2. Preliminary Round: Two (2) or more (presentation)
3. Semifinal Round: Two (2) or more (preferably the same judges from the preliminary round)

MATERIALS

A. Coordinator's packet, containing:

1. Event guidelines, one (1) copy for the coordinator and for each judge
2. TSA Event Coordinator Report

B. Table and chairs for event coordinator and judges

C. Twelve (12) TSA-provided USB thumbdrives with semifinalist on-site problem (data set)

D. Laptop that is able to open a PDF from a USB

RESPONSIBILITIES

PRE-CONFERENCE/PRELIMINARY ROUND

A. National TSA will collect entries until 11:59pm ET on a designated date in mid-May and send out receipt confirmations to participant(s). The results will be shared with the CRC manager, event coordinator, and assigned judges.

B. Review entries as they are submitted to the designated online storage utility.

C. Manage communication and Pre-conference evaluation (at least two [2] or more judges should be recruited earlier in the year). Coordinate with National TSA and/or the Judge Manager.

AT THE CONFERENCE

A. Attend the mandatory event coordinator's meeting at the designated time and location.

B. Report to the CRC room and obtain the contents of the coordinator's packet; check the contents.

C. Review the event guidelines and check to see that enough judges have been scheduled.

D. Inspect the area(s) in which the event is to be held for appropriate set-up, including room size, tables, chairs, etc. Notify the event manager of any potential problems.

E. At least one (1) hour before the event is to begin, meet with judges and assistants to review time limits, procedures, regulations, evaluation, and all other details related to the event. If questions arise that cannot be answered, speak to the event manager before the event begins.

F. Ensure the judges have access to the online judging system.

PRELIMINARY ROUND

A. A list of twenty-four (24) preliminary round participants will be posted on the first full day of conference.

B. Preliminary round presentation participants report to the event area at the time and place stated in the conference program to sign-up for a presentation time.

C. Participants report at the assigned time and place with a digital copy of the scientific poster for their presentation on their own device.

D. Manage the on-site presentations/interviews.

E. Judges assess the entries and may ask questions.

F. Decisions about rules violations must be discussed and verified with the judges, event coordinator, and CRC manager to determine either:

1. To deduct twenty percent (20%) of the total possible points in this round or
2. To disqualify the entry

The event coordinator, judges, and CRC manager must initial either of these actions on the rating form.

SEMIFINAL ROUND

A. Judges report at the time and location referenced in the conference program for the on-site semifinalist problem.

B. Semifinal participant(s) have two (2) hours to submit their entries on the TSA-provided thumb drive in PDF format.

C. Judges use the same official rating form for both the preliminary and semifinal round of evaluation.

D. Discuss rule violations (e.g. 20% deduction, disqualification) and have all relevant parties initial the rating form.

E. If necessary, manage security and the removal of materials from the event area.

DEBATING TECHNOLOGICAL ISSUES

OVERVIEW

Applying leadership and 21st century skills, team members collaborate to prepare for a debate against a team from another chapter. The teams are instructed to take either the Pro or Con side of a selected subtopic.

The theme and subtopics for this event will be posted on the TSA website under *Themes & Problems*.

ELIGIBILITY

Three (3) teams of two (2) individuals per state may participate.

TIME LIMITS

Refer to Preliminary Round Procedure for time limits.

ATTIRE

TSA competition attire is required for this event.

PROCEDURE

PRE-CONFERENCE

A. Participants review the TSA Honor Statement for Competitive Events found in the General Rules and listed in the individual competitive event rules.

B. Participants review the annual theme and subtopics posted on the TSA website under *Themes & Problems*.

C. Participants research all subtopics and should be prepared to debate any of the subtopics from both Pro and Con views.

D. Prepare a summary of references and print (and have available at the conference) a minimum of four (4) copies on an 8½" x 11" sheet of paper; both sides of the paper may be used.

1. The event title, the event's yearly topic, and a line for the team/chapter ID number must be printed at the top of the front side of the paper.

2. The reference summary must be typewritten (handwritten is not acceptable).

3. Font size must not be less than 10 point.

4. MLA format must be used to cite sources. Listing URLs does not constitute an appropriate citation.

5. References for all three (3) subtopics are to be submitted on one (1) sheet of paper, not a separate sheet for each subtopic.

CHECK-IN

A. One participant from each team must attend a Pre-Debate meeting at a time and place stated in the conference program to:

1. Submit a copy of the team's summary of references. Failure to provide an appropriately formatted summary of references disqualifies the team from participation.

2. Sign up for a debate time.

3. Receive general information and directions.

PRELIMINARY ROUND

A. Participants report to the preparation room fifteen minutes before the scheduled debate time.

B. Participants will draw the subtopic and Pro/Con at the time of their debate. Each debate may have a different subtopic.

C. Two (2) teams will debate using Pro or Con side of a selected subtopic.

D. Judges independently judge each debate.

E. A list of twelve (12) semifinalists (in random order) is posted.

SEMIFINAL ROUND

A. Semifinalists report to the event area at the time and place stated in the conference program to receive an assigned debate time.

B. Semifinalist debates follow the same procedure as in the preliminary round.

C. Ten (10) finalists will be announced during the conference awards ceremony.

REGULATIONS AND REQUIREMENTS

Students will work to develop their leadership and 21st century skills in the process of preparing for and participating in this TSA competitive event. The development and application of those skills must be evident in their submission, demonstration, and/or communication pertaining to the entry.

PRELIMINARY ROUND

Debate Procedures

A. Participants report to the preparation room fifteen (15) minutes before the scheduled debate time.

B. While in the preparation room, the subtopic and the Pro/Con schedule cards will be drawn and the teams will be have five (5) minutes to prepare.

C. At the end of the five (5) minutes of preparation time for the teams, they are escorted to the debate room.

D. Order of debate format:

1. Pro Speaker (maximum of 2 minutes)

2. Con Speaker (maximum of 2 minutes)

3. Break (1 minute)

4. Pro Cross Examination of Con (maximum of 2 minutes)

5. Con Cross Examination of Pro (maximum of 2 minutes)

6. Break (1 minute)

7. Pro Rebuttal (maximum of 2 minutes)

8. Con Rebuttal (maximum of 2 minutes)

E. The escort introduces the Pro team by identification number and the team is instructed to sit to the left side of the podium.

1. The first speaker should sit next to the podium.

2. At this time, participants present their schedule card and a copy of the team's summary of references to the judges.

F. The Con team is introduced by identification number and instructed to sit to the right side of the podium.

1. The first speaker should sit next to the podium.

2. At this time, participants present their schedule card and a copy of the team's summary of references to the judges.

G. When the judges and teams are ready, the Pro speaker is instructed to move to the podium and begin.

1. Timing starts when the speaker begins.

2. After one (1) minute and forty-five (45) seconds, the timer holds up a 4" x 6" card that reads "15 seconds."

3. Penalty points are deducted if a speaker exceeds the allotted time.

H. When the Pro speaker is finished and has been seated, the Con speaker moves to the podium and begins, according to the same procedure noted above.

I. When the Con speaker is finished and has been seated, the timer announces a one (1)-minute conference period in which both teams may prepare their questions for cross examination.

J. During cross-examination, the team answering the questions remains seated.

K. At the conclusion of the one (1)-minute conference period, the timer announces that the conference period is over and the Pro questioning speaker approaches the podium.

1. Timing starts when the speaker begins.

2. After one (1) minute and forty-five (45) seconds, the timer holds up a 4" x 6" card that reads "15 seconds."

3. If the con team is in the process of answering a question, the team may finish its answer, provided it does not exceed an additional 15 seconds beyond the allotted two (2) minutes. At this time, the team is cut off by the timer.

L. When the Pro questioning speaker is seated, the Con questioning speaker approaches the podium.

1. Timing starts when the speaker begins.

2. After one (1) minute and forty-five (45) seconds, the timer holds up a 4" x 6" card that reads "15 seconds."

3. If the pro team is in the process of answering a question, the team may finish its answer, provided it does not exceed an additional 15 seconds beyond the allotted two (2) minutes. At this time, the team is cut off by the timer.

M. At the conclusion of the cross examination, the teams are given a one (1) minute conference break to prepare their rebuttals.

N. The timer announces the end of the conference break and the Pro rebuttal speaker approaches the podium.

1. Timing starts when the speaker begins.

2. After one (1) minute and forty-five (45) seconds the timer holds up a 4" x 6" card that reads "15 seconds."

3. Penalty points are deducted if a speaker exceeds the allotted time.

O. When the Pro rebuttal speaker is finished and has been seated, the Con rebuttal speaker moves to the podium and begins, according to the same procedure noted above in Procedure N.

P. When the Con rebuttal speaker is finished and has been seated, the timer announces to both teams that they may leave the debate room.

Debate Details and Notes

A. Room set-up:

Pro Team	Podium	Con Team
Judge	Timer	Judge

B. Electronic devices of any sort (cell phones, smart watches, laptops, etc are not allowed in the debate room.

C. Teams are penalized five (5) points for speaking over the allotted time.

D. Pre-written notes may be used. Notes must be written on 3" x 5" notecards.

E. Handwritten notes may be taken during the debate.

F. A three (3)-ring binder of reference materials, as noted on the summary of references provided to the judges, may be used during the debate.

G. No audio-visual materials of any type may be used.

H. Participants are not allowed to hear the debates of other teams, aside from the team they are debating.

I. Participants may use their own stopwatches to time themselves. These may only be traditional stopwatches; cell phone stop watches are NOT ALLOWED.

J. No observers or assistants are allowed in the preparation room.

K. Participants must both present at different times during the debate. Only one (1) speaker per side is allowed at the podium at any time.

L. Cross examination (questioning) of the opposing team is to remain civil. Any aggressive behavior, belittling of opponents, or shouting results in immediate disqualification of the offending team.

M. If there is an odd number of teams entered in the event, one team debates twice, based on a random drawing for teams that wish to go twice. (Note that the coordinator may not force a team to go twice if it does not wish to do so.)

N. If a team debates twice, it may or may not have the same subtopic or Pro/Con side of the debate.

1. The team also is required to provide an additional copy of the Resource List (Pre-conference C) to the judges.

2. The highest score of the twice-debating team is used as its score.

SEMIFINAL ROUND

A. Participants report to the event area at the time and place stated in the conference program to receive an assigned debate time and general information from the judging team.

B. Participants report to the preparation room at the assigned time.

C. Preliminary round procedures are used for the semifinal round.

D. If observers are allowed in the debate room during the semifinal debates, the following shall be observed:

1. No audio or visual recording devices are allowed.

2. No talking or gesturing is permitted.

3. Observers are not allowed to enter or leave during a debate.

4. There is no applause until the debate is completed.

Please refer to the conference page of the TSA website or the Spectator Events page of the conference program for additional information.

EVALUATION

A. The debate

Note: Scores are reset for the semifinal round and are not added to the preliminary scores.

Refer to the official rating form for more information.

TSA HONOR STATEMENT

All work must be created and completed by individual competitors or teams. Plagiarism, the use of Generative Artificial Intelligence (GenAI) software, copyright violation, cheating, and falsification of information are prohibited. Participants may NOT use any generative artificial intelligence (GenAI) tools (e.g. ChatGPT, Google Gemini, GitHub Copilot, etc.). Any attempt to gain an unfair advantage will not be tolerated. Competitors at any level of TSA competition understand and agree to abide by the TSA Honor Statement.

If it is determined that a student violated the TSA Honor Statement, a rules violation of twenty percent (20%) will be incurred.

STEM INTEGRATION

This event aligns with the STEM (Science, Technology, Engineering, and Mathematics) educational standards.

LEADERSHIP AND 21ST CENTURY SKILLS

This event provides opportunity for students to build and develop leadership and 21st century skills including but not limited to – Communication, Collaboration/Social Skills, Initiative, Problem Solving/Risk Taking, Critical Thinking, Perseverance/Grit, Creativity, Relationship Building/Teamwork, Dependability/Integrity, and Flexibility/Adaptability

CAREERS RELATED TO THIS EVENT

This competition has connections to one (1) or more of the careers below:

- Broadcast media specialist
- Lawyer
- Motivational speaker
- Public relations executive

DEBATING TECHNOLOGICAL ISSUES
2025 & 2026 OFFICIAL RATING FORM
HIGH SCHOOL

Judges: Using minimal (1-4 points), adequate (5-8 points), or exemplary (9-10 points) performance levels as a guideline in the rating form, record the scores earned for the event criteria in the column spaces to the right. The X1 or X2 notation in the criteria column is a multiplier factor for determining the points earned. (Example: an "adequate" score of 7 for an X1 criterion = 7 points; an "adequate" score of 7 for an X2 criterion = 14 points.) A score of zero (0) is acceptable if the minimal performance for any criterion is not met.

Go/No Go Specifications

- Before judging the entry, ensure that the items below are present; indicate presence with a check mark in the box.
- If an item is missing, leave the box next to the item blank and place a check mark in the box labeled ENTRY NOT EVALUATED.
- If a check mark is placed in the ENTRY NOT EVALUATED box, the entry is not to be judged.

☐ Two (2) team members are present
☐ Summary of references is present for each round and is formatted correctly
☐ ENTRY NOT EVALUATED

DEBATE (110 points)

CRITERIA	Minimal performance 1-4 points	Adequate performance 5-8 points	Exemplary performance 9-10 points	Record scores in the column spaces below
Points of Argument (X1)	Team does not get the attention of the audience, and/or does not outline points clearly.	Team makes an effort to grab the attention of the audience; previewing points are somewhat organized in a logical manner.	Introduction uses an attention getter, clearly states the thesis, and previews main points of the argument; the team is cognizant of the audience.	
Organization (X1)	The main idea may not be focused or developed; the introduction is undeveloped; transitions may be needed.	The main idea is adequately presented, but the organizational structure may need to be strengthened; ideas are generally developed and flow smoothly.	The main idea is clearly presented, well-developed, and firmly supported.	
Topic Knowledge (X2)	The team does not have a grasp of the information; inaccurate, generalized, or inappropriate supporting material is used; there is an over-dependence on notes.	The team has a partial grasp of the information; supporting material is adequate and the team is at ease.	The team has a clear grasp of information; citations are introduced and attributed accurately; the team demonstrates full knowledge, with explanations and elaboration, of the subject area.	
Delivery (X2)	Delivery detracts from the message; eye contact may be very limited; presenter may tend to look at the floor, mumble, speak inaudibly, fidget, or read from notecards; gestures and movements may be jerky or excessive.	Delivery generally seems effective, however, use of volume, eye contact, vocal control, etc., may not be consistent; some hesitancy may be observed; vocal tone, facial expressions, and/or other nonverbal expressions do not detract from the message.	Delivery is extemporaneous, natural, confident, and enhances the message; posture, eye contact, smooth gestures, facial expressions, volume, pace, etc., indicate confidence, a commitment to the topic, and a willingness to communicate.	
Cross Examination (X1)	Questions posed to the opposing team show a minimal knowledge of the subtopic and do not leave much room for discussion; discourse initiated by the team to opponents is often hostile/aggressive and unproductive.	Questions posed to the opposing team show an adequate knowledge of the subtopic and prompt reasonable discussion; discourse initiated by the team to opponents is sometimes unproductive.	Questions posed to the opposing team show excellent knowledge of the subtopic and prompt eloquent discussion; discourse initiated by the team to opponents is respectful and its relevance propels the debate forward.	

DEBATE (110 points) – continued				
Question Responses (X1)	The team's responses are minimally sourced and do not fully answer the questions posed.	The team's responses are moderately sourced and mostly answer the questions posed.	The team's responses are fully sourced and completely answer the questions posed.	
Rebuttal (X1)	Rebuttal is unorganized, unclear, and/or incoherent; rebuttal includes no counter to points made from the opposing team.	Rebuttal is somewhat organized, and it creates a mostly logical counter to the opposing team's points.	Rebuttal is logical, concise, and creative; counter arguments from the opposing team are incorporated in the rebuttal in a unique and interesting way.	
Voice and Language (X1)	Language choices may be limited, peppered with slang or jargon, too complex, or too dull; language is questionable or inappropriate for the audience.	Language used is mostly appropriate, respectful, or inoffensive; word choices are adequate.	Language is familiar to the audience, appropriate for the setting, and free of bias; word choices are vivid and precise.	
Group Member Participation (X1)	One team member speaks for the initial, cross examination, question responses, and the rebuttal; the other team member is disengaged; leadership and/or 21st century skills are not evident.	Each team member speaks in the debate—one for the initial portion and the other for the rebuttal; during questioning, both team members have adequate knowledge of the topic and subtopic and share ownership equally; leadership and/or 21st century skills are somewhat evident.	Each team member speaks eloquently in the debate—one for the initial portion of the debate and the other for the rebuttal; during questioning, both team members show clear understanding, knowledge, and ownership of the topic and subtopic; leadership and/or 21st century skills are clearly evident.	
			DEBATE SUBTOTAL (110 points)	

Rules violations (a deduction of 20% of the total possible points for the above section) must be initialed by the evaluator, coordinator, and manager of the event. Record the deduction in the space to the right. Indicate the rule violated: _____	

Time violation (a deduction of five [5] points total will be incurred for exceeding the debate time limit). Record the deduction in the space to the right.	

To arrive at the TOTAL score, add any subtotals and subtract rules violation points, as necessary.　　　**TOTAL (110 points)**	

Comments:

_____

I certify these results to be true and accurate to the best of my knowledge.

JUDGE

Printed name: _____　　Signature: _____

DEBATING TECHNOLOGICAL ISSUES EVENT COORDINATOR INSTRUCTIONS

PERSONNEL

A. Event coordinator

B. Judges:

    1. Preliminary round, two (2) or more

    2. Semifinal round, two (2) or more

C. Timekeeper/Announcers

    1. One (1) timekeeper/announcer per heat room; timekeepers may serve as judges

D. Escorts for moving teams from preparation room to debate room

    1. One (1) per heat room; escorts may not serve as judges

MATERIALS

A. Coordinator's packet, containing:

    1. Event guidelines, one (1) copy for the coordinator and for each judge

    2. TSA Event Coordinator Report

B. Signs that read "DEBATE in PROGRESS" for all rooms, as needed

C. One (1) stopwatch for each debate room

D. A 4" x 6" card with the message "15 seconds" written on the card, one (1) card for each debate room

E. Two (2) 3" x 5" cards with "Pro" written on the card; two (2) 3" x 5" cards with "Con" written on the card; and one (1) 3" x 5" card with "2 minutes" written on it for each debate room

F. Copies of schedule cards (pro/con for each debate room)

G. Podium for each debate room

H. One (1) table and two (2) chairs for the Pro side and one (1) table and two (2) chairs for the Con side for each debate room

I. One (1) table and three (3) chairs for judges and timekeeper/announcer for each debate room; one (1) chair in the back of the room for the escort

J. Chairs for observers during the debate, if applicable

K. Three (3) tables and three (3) chairs in the preparation room for event personnel and participants

RESPONSIBILITIES

AT THE CONFERENCE

A. Attend the mandatory coordinator's meeting at the designated time and location.

B. Report to the CRC room and check the contents of the coordinator's packet.

C. Review the event guidelines and check to see that enough personnel have been scheduled.

D. Inspect the area or room in which the event is to be held for appropriate set-up, including room size, chairs, tables, outlets, etc. Notify the event manager of any potential problems.

E. Develop a heat schedule, taking into consideration the number of preparation and debate rooms, the number of entries, and the time allotted for the event. Twenty (20) minutes should be allowed for each debate.

F. From the list of subtopics, choose one subtopic to be used for each round. The subtopic chosen must apply for all teams.

G. At least one (1) hour before the event is scheduled to begin, meet with judges/assistants to review time limits, procedures, regulations, evaluation, and any other details pertaining to the event. If questions arise that cannot be answered, speak to the event manager before the event begins.

H. Ensure the judges have access to the online judging system.

EVENT CHECK-IN

A. Create the following sign-up sheets:

    1. Debate time

B. Pre-debate meeting:

    1. Collect the summary of references from each team and determine the number of teams present.

    2. Allow the team representative to sign up for a preliminary round debate time. Heat rooms will be determined in the preparation room.

    3. Provide general information and directions.

DEBATING TECHNOLOGICAL ISSUES

PRELIMINARY ROUND

A. Begin the event by checking in the participants when they arrive at the preparation room at their scheduled time.

B. When two (2) teams and a debate room are available, have one (1) team draw one (1) or two (2) schedule cards (one [1] card has Pro written on it and the other card has Con written on it) and the other team will draw from a set of cards that have the subtopics listed.

   1. The pro/con position and the subtopic will apply for this round's debate.

   2. Collect the summary of references page from each team.

   3. The team is responsible to sit on the correct pro and con sides of the podium and identify the subtopic to the judges before the debate begins.

C. Record the view each team is presenting on the scheduling sheet.

D. Have the escort take the teams to the debate room.

E. The escort announces to the judges the identification number of the Pro team first and then the Con team.

   1. Each team then sits on a designated side of the podium.

   2. The judges need to record each team's identification number on the judge's evaluation sheet.

F. The escort should remain in the debate room until the end of the debate, when s/he escorts each team from the room. This process of escorting teams into and then out of the debate room for competition takes place until all teams have participated.

G. If there is an odd number of teams entered in this event, teams are randomly selected to determine the team that debate twice. If a team debates twice, its highest score is used to determine placement.

H. When the timekeeper/announcer has confirmed that the teams and judges are ready to begin, s/he instructs the Pro speaker to approach the podium and begin.

I. The timing of each debate starts when the speaker begins; however, if there are any unreasonable delays, the speaker is warned by the timer and timing begins.

J. Timing of the conference break starts once the Con speaker has completed the presentation. The timekeeper informs the teams that they are in the conference break and also informs the teams when the period is over.

K. Once the conference break is over, the Pro cross examination speaker approaches the podium and begins, followed by the Con cross examination speaker.

L. Timing of the second conference break begins once the Con cross examination speaker is seated.

M. Once the second conference break is over, the Pro rebuttal speaker approaches the podium and begins, followed by the Con rebuttal speaker.

N. When the Con rebuttal speaker is finished, s/he should return to his/her seat. The timekeeper collects the summary of references from both teams. When the evaluators are ready, the timekeeper announces to the teams that they are to leave the room and they are escorted out by the escort.

O. The judges informs the escort when they are ready for a new set of teams so that the escort may return to the preparation room.

P. Following the last team's presentation, the judges complete the scoring, making adjustments for time penalties.

Q. Decisions about rules violations must be discussed and verified with the judges, event coordinator, and CRC manager to determine either:

   1. To deduct twenty percent (20%) of the total possible points in this round or

   2. To disqualify the entry

   The event coordinator, judges, and CRC manager must initial either of these actions on the rating form.

R. Create a sign-up sheet for the semifinal debates.

SEMIFINAL ROUND

A. Assign semifinalists a debate time.

B. At the time and place stated in the conference program, meet with semifinalists to review scheduling and procedures.

C. Follow the preliminary round procedures, including the selection of pro/con and the selection of the subtopic for the semifinal round of debates.

D. All communication related to judges and participants during the debate should be handled by the timekeeper.

E. Discuss rule violations (e.g. 20% deduction, disqualification) and have all relevant parties initial the rating form.

F. If necessary, manage security and the removal of materials from the event area.

DIGITAL VIDEO PRODUCTION

OVERVIEW

Applying leadership and 21st century skills, participants use digital video skills, tools, and processes to communicate, entertain, inform, analyze, or illustrate the annual theme on the TSA website under *Themes & Problems*.

ELIGIBILITY

Three (3) teams or three (3) individuals per state may participate.

TIME LIMITS

PRELIMINARY ROUND

A. All components of the chapter's entry (digital video URL and documentation PDF) must be finished, submitted, and accessible via the Internet by 11:59pm ET on a designated date mid-May.

B. The digital video must not exceed three (3) minutes in length.

C. A deduction of five (5) points total will be incurred for entries over the three (3) minute maximum length.

D. The timing starts with the first sound and continues until the last sound ends.

SEMIFINAL ROUND

A. Up to ten (10) minutes are allowed for the interview.

ATTIRE

TSA competition attire is required for this event.

PROCEDURE

PRE-CONFERENCE

A. Participants review the TSA Honor Statement for Competitive Events found in the General Rules and listed in the individual competitive event rules.

B. Participants access the annual theme on the TSA website under *Themes & Problems*.

C. Participants concentrate their efforts on the design of an original digital video, while observing the regulations and requirements.

D. Participants record their processes in a documentation portfolio.

E. Participants submit the digital video URL and documentation PDF by 11:59pm ET on a designated date in mid-May.

F. The submission information and deadline will be provided in January on the TSA website under *Competition Updates*.

PRELIMINARY ROUND

A. Entries are evaluated by the judges with neither students nor advisors present based on the following criteria:

1. Judges score the Digital Video criteria to determine the top twenty-four (24) preliminary contestants, which will not be posted.

2. Judges score the Documentation Portfolio criteria of those top twenty-four contestants to determine the top twelve (12) semifinalist teams.

B. A list of twelve (12) semifinalists (in random order) is posted on the first full day of conference.

SEMIFINAL ROUND

A. Semifinalists report at the time and place stated in the conference program to sign up for an interview time.

B. Semifinalists report at the assigned time and place for the interview.

C. The top ten (10) finalists are announced at the awards ceremony.

REGULATIONS AND REQUIREMENTS

Students will work to develop their leadership and 21st century skills in the process of preparing for and participating in this TSA competitive event. The development and application of those skills must be evident in their submission, demonstration, and/or communication pertaining to the entry.

PRE-CONFERENCE/PRELIMINARY ROUND

A. The Video:

1. Participants may choose any video hosting site (such as an UNLISTED YouTube URL), or a shareable link in cloud storage, as long as the video is located online and accessible for evaluation.

2. If a URL is provided, the URL must point directly to the participant's entry. Entries that require a software download or a request that access be granted will not be judged.

3. The video entry must be submitted in a common video format suitable for viewing with VLC Player, utilizing a Microsoft Windows operating system.

4. Entries received, or changes made to submitted entries after the deadline will not be judged.

5. All video footage, graphics, special effects, and audio clips must be originally created/filmed by the participants.

6. All ideas, text, images, and sound from other sources must be properly cited.

7. If copyrighted material is used, proper written permission must be included.

B. The documenation portfolio must be submitted with the video URL address in the form of a multi-page PDF attachment in the following order:

1. Title page with the event title, the title of the video, the conference city and state, and the year; one (1) page

2. Table of contents; pages as needed

3. Purpose and description of the video; one (1) page

4. Team's self-evaluation of the video, using criteria from the official rating form; one (1) page

5. Hand sketched storyboard (screenshots are not acceptable); pages as needed

6. Digital video script; pages as needed

7. List of hardware and software used in the development of the video; one (1) page

8. List of references that includes sources for materials (copyrighted and non-copyrighted); pages as needed

9. Permission letters for copyrighted material (including clips and images); pages as needed

10. Student Copyright Checklist (see Forms Appendix); one (1) page

11. Signed Photo/Film/Video Consent and Release forms for all video participants (see Photo/Film/Video Consent and Release Forms in Forms Appendix); pages as needed

12. Work Log (see Forms Appendix); pages as needed

C. The video and documentation portfolio must adhere to the general rules F. Prohibited Materials, References, and Images.

EVALUATION

PRELIMINARY ROUND

Tier 1

A. The digital video

Tier 2

B. The documentation portfolio

SEMIFINAL ROUND

A. The interview

Refer to the official rating form for more information.

TSA HONOR STATEMENT

All work must be created and completed by individual competitors or teams. Plagiarism, the use of Generative Artificial Intelligence (GenAI) software, copyright violation, cheating, and falsification of information are prohibited. Participants may NOT use any generative artificial intelligence (GenAI) tools (e.g. ChatGPT, Google Gemini, GitHub Copilot, etc.). Any attempt to gain an unfair advantage will not be tolerated. Competitors at any level of TSA competition understand and agree to abide by the TSA Honor Statement.

If it is determined that a student violated the TSA Honor Statement, a rules violation of twenty percent (20%) will be incurred.

STEM INTEGRATION

This event aligns with the STEM (Science, Technology, Engineering, and Mathematics) educational standards.

LEADERSHIP AND 21ST CENTURY SKILLS

This event provides opportunity for students to build and develop leadership and 21st century skills including but not limited to – Communication, Collaboration/Social Skills, Initiative, Problem Solving/Risk Taking, Critical Thinking, Perseverance/Grit, Creativity, Relationship Building/Teamwork, Dependability/Integrity, and Flexibility/Adaptability

CAREERS RELATED TO THIS EVENT

This competition has connections to one (1) or more of the careers below:

- Audio/video operator or technician
- Cinematographer
- Film/video editor
- Screen editor

DIGITAL VIDEO PRODUCTION

2025 & 2026 OFFICIAL RATING FORM

HIGH SCHOOL

Judges: Using minimal (1-4 points), adequate (5-8 points), or exemplary (9-10 points) performance levels as a guideline in the rating form, record the scores earned for the event criteria in the column spaces to the right. The X1 or X2 notation in the criteria column is a multiplier factor for determining the points earned. (Example: an "adequate" score of 7 for an X1 criterion = 7 points; an "adequate" score of 7 for an X2 criterion = 14 points.) A score of zero (0) is acceptable if the minimal performance for any criterion is not met.

Go/No Go Specifications

- Before judging the entry, ensure that the items below are present; indicate presence with a check mark in the box.
- If an item is missing, leave the box next to the item blank and place a check mark in the box labeled ENTRY NOT EVALUATED.
- If a check mark is placed in the ENTRY NOT EVALUATED box, the entry is not to be judged.

☐ TIER 1 – Video is located online and accessible
☐ TIER 2 – PDF of the documentation portfolio was submitted
☐ ENTRY NOT EVALUATED

TIER 1 – DIGITAL VIDEO (70 points)				Record scores in the column spaces below.
CRITERIA	Minimal performance	Adequate performance	Exemplary performance	
	1-4 points	5-8 points	9-10 points	
Video (X1)	The video shots have obvious problems with focus, steadiness, and framing.	The video shots are somewhat focused and framed and there is a limited use of close-ups.	The video is enhanced by steady, creative shots and incorporates excellent use of close-ups.	
Audio (X1)	The audio quality is poor, a result of primary use of the on-camera microphone for recording.	The audio quality is clear with good levels, and reflects the correct use of microphones and audio techniques.	The audio quality is excellent, with use of additional audio clips/cues that enhance the video production.	
Lighting (X1)	The video reflects poor ambient lighting choices and/or the use of heavy back-lighting.	The video reflects adequate lighting on subjects and the proper use of lighting techniques.	The video reflects an excellent and creative use of lighting, which propels the story emotionally.	
Continuity and Pacing (X1)	The sequencing is confusing or incomprehensible; shots are left on too long, and edit points/transitions are "glitchy."	The pace and timing are generally structured; the shots move along, helping to tell the story, and there is some use of transitions.	The shots are logically paced and move the story along in an interesting way, with excellent and purposeful use of transitions.	
Creativity and Originality (X1)	There is little original thought or creativity in the design and production, resulting in what appears to be a simple piecing together of events.	The video reflects some original and creative elements.	Originality and creativity are at the forefront of the video, with thematic elements incorporated in a highly authentic way.	
Video Effectiveness (X2)	The work does not meet the project goals, has an unclear message, and reflects sloppy work. The year's theme is not well represented or represented at all.	The video is focused, with a clear message and a rich variety of supporting material. The yearly theme is the centerpiece of the work and easily understood by the viewer.	The topic is presented with some insight, and the video meets most project goals. The theme is represented somewhat but may not be fully clear to the viewer.	
TIER 1 – DIGITAL VIDEO SUBTOTAL (70 points)				

Time violation (a deduction of five (5) points total will be incurred for exceeding the three (3)-minute limit for the length of the video). Record the deduction in the space to the right.

Rules violations (a deduction of 20% of the total possible points for the above sections) must be initialed by the judge, coordinator, and manager of the event. Record the deduction in the space to the right.

Indicate the rule violated: _____

TIER 1 – SUBTOTAL (70 points)

TIER 2 – DOCUMENTATION PORTFOLIO (30 points)			
CRITERIA	Minimal performance	Adequate performance	Exemplary performance
	1-4 points	5-8 points	9-10 points
Portfolio Components (X1)	Portfolio is unorganized and/or is missing three (3) or more components.	Portfolio has most components and is generally organized per the order of the event guide listing; it has sufficient content.	All components are included in the portfolio; content and organization per the order of the event guide listing are excellent.
Purpose and Description (X1)	The purpose and description of the video are unclear and hard to visualize.	The purpose and description of the video are somewhat clear.	The documentation provides a clear and concisely written purpose and description that interests the reader.
Storyboard (X1)	The hand-sketched storyboard and script are sloppy, appear to be thrown together as an after-thought, and/or do not correlate with the video.	The storyboard and script are drawn appropriately and generally correlate with the completed video.	The storyboard and script are of exceptional aesthetic and artistic quality, and they clearly correlate with the video.
TIER 2 – DOCUMENTATION PORTFOLIO SUBTOTAL (30 points)			

Record scores in the column spaces below.

Rules violations (a deduction of 20% of the total possible points for the above sections) must be initialed by the judge, coordinator, and manager of the event. Record the deduction in the space to the right.

Indicate the rule violated: _____

PRELIMINARY SUBTOTAL (100 points)

DIGITAL VIDEO PRODUCTION

SEMIFINAL INTERVIEW (40 points)

CRITERIA	Minimal performance	Adequate performance	Exemplary performance	
	1-4 points	5-8 points	9-10 points	
Organization (X1)	The team/individual seems unprepared and unorganized for the interview.	The team/individual is adequately prepared and organized for the interview.	The responses to the interview questions are organized within the team and impressive.	
Knowledge (X1)	The team/individual seems to have very little understanding of the concepts and gives vague interview answers.	The team/individual has a generalized understanding of the concepts discussed and answers questions well.	There is clear evidence of a thorough understanding of the concepts discussed.	
Articulation (X1)	Communication of the design concept is unclear, unorganized, and or illogical; leadership and/or 21st century skills are not evident.	Communication of the design concept is somewhat logical and clear; leadership and/or 21st century skills are somewhat evident.	Communication of the design concept is clear, concise, and logical; leadership and/or 21st century skills are clearly evident.	
Delivery (X1)	The team/individual is verbose and/or uncertain in the interview; posture, gestures, and lack of eye contact diminish the delivery.	The team/individual is somewhat well-spoken and clear in the interview; posture, gestures, and eye contact result in an acceptable delivery.	The team/individual is well-spoken and distinct in the interview; posture, gestures, and eye contact result in a polished, natural, and effective delivery.	
			SEMIFINAL INTERVIEW SUBTOTAL (40 points)	

Rules violations (a deduction of 20% of the total possible points for the above sections) must be initialed by the judge, coordinator, and manager of the event. Record the deduction in the space to the right.

Indicate the rule violated: _____

SEMIFINAL SUBTOTAL (40 points)	

To arrive at the TOTAL score, add any subtotals and subtract rules violation points, as necessary. **TOTAL (140 points)**	

Comments:

_____

I certify these results to be true and accurate to the best of my knowledge.

JUDGE

Printed name: _____   Signature: _____

DIGITAL VIDEO PRODUCTION
EVENT COORDINATOR INSTRUCTIONS

PERSONNEL

A. Event coordinator

B. Judges

1. Preliminary round, two (2) or more

2. Semifinal round, two (2) or more

MATERIALS

A. Coordinator's packet, containing:

1. Event guidelines, one (1) copy for the coordinator and for each judge

2. TSA Event Coordinator Report

B. One (1) stopwatch per team of judges

C. Interview questions

D. Tables and chairs for judges

E. Computers with the semi-finalist video files and URLs

RESPONSIBILITIES

PRE-CONFERENCE

A. National TSA will collect entries until 11:59pm ET on a designated date in mid-May. The results are shared with the CRC manager, event coordinator, and assigned judges.

B. Review entries as they are submitted to the designated online storage utility.

C. Manage communication and Pre-conference evaluation (at least two [2] or more judges should be recruited earlier in the year). Coordinate with National TSA and/or the Judge Manager.

AT THE CONFERENCE

A. Attend the mandatory coordinator's meeting at the designated time and location.

B. Report to the CRC room and check the contents of the coordinator's packet.

C. Review the event guidelines and check to see that enough personnel have been scheduled.

D. Inspect the area(s) in which the event is to be held for appropriate set-up, including room size, chairs, tables, outlets, etc. Notify the event manager of any potential problems.

E. At least one (1) hour before the event is to begin, meet with judges and assistants to review time limits, procedures, regulations, evaluation, and all other details related to the event. If questions arise that cannot be answered, speak to the event manager before the event begins.

F. Ensure the judges have access to the online judging system.

PRELIMINARY ROUND

A. Judges independently assess the entries using the following procedure:

1. Judges score the Digital Video Criteria to determine the top twenty-four (24) preliminary contestants, which will not be posted.

2. Judges score the Documentation Portfolio criteria of those top twenty-four contestants to determine the top twelve (12) semifinalist teams.

B. On the first full day of the conference, post a list of the twelve (12) semifinalists in random order.

SEMIFINAL ROUND

A. At least one (1) hour before the event is scheduled to begin, meet with judges and review the time limits, procedures, and regulations.

B. Semifinalist(s) report at the time and place stated in the conference program to sign up for an interview time.

C. Semifinalist(s) report at the assigned time and place for the interview.

D. Distribute the guidelines for the interview.

E. Manage the on-site interviews.

F. Decisions about rules violations must be discussed and verified with the judges, event coordinator, and the CRC manager to determine either:

1. To deduct twenty percent (20%) of the total possible points in this round

2. To disqualify the entry

The event coordinator, judges, and CRC manager must initial either of these actions on the rating form.

G. If necessary, manage security and the removal of materials from the area.

DRAGSTER DESIGN

OVERVIEW

Applying leadership and 21st century skills, participants design, produce a working drawing for, and build a CO_2-powered dragster according to stated specifications, using only specified materials. Special annual design requirements (if any) will be posted for this event on the TSA website under *Themes & Problems*.

ELIGIBILITY

Two (2) individuals per chapter may participate.

TIME LIMITS

A. The dragster and drawing are submitted at the time and place stated in the conference program.

B. All raceable cars will make one (1) qualifying time run, then judges check for spec compliance, leaving the top sixteen (16) legal cars for the Final Race.

C. Sixteen (16) qualifying car builders participate in a five (5)-minute interview.

D. Drawings and cars must be picked up at the specified time and place stated in the conference program.

ATTIRE

TSA competition attire is required for this event.

PROCEDURE

PRE-CONFERENCE

A. Participants review the TSA Honor Statement for Competitive Events found in the General Rules and listed in the individual competitive event rules.

B. Participants prepare their documentation and Dragster model according to the regulations.

PRELIMINARY ROUND

A. Participants report to the time and place stated in the conference program to check in:
   1. the dragster
   2. one (1) full-size metric drawing of the complete vehicle, top and side views
   3. one (1) page, letter-sized printed document listing all parts and materials

B. Entries are reviewed by judges to determine safety on the track.

C. Safe dragsters race for qualifying time on the same lane of the raceway.

D. Entries are evaluated by the judges with neither students nor advisors present based on the following criteria:
   1. Judges determine the top sixteen (16) qualifying entries based on the time trials and event criteria to determine the semifinalists.
   2. Judges score the dragster construction, interview, and race points to determine the top ten (10) finalists.

E. Dragsters that do not meet event regulations are disqualified and lower qualifying cars are moved up until sixteen (16) dragsters that meet specifications are determined.

F. A semifinalist list (in random order) is posted.

SEMINFINAL ROUND

A. The top sixteen (16) dragster builders report to the track at the posted time for a five (5)-minute interview.

B. The top sixteen (16) entries race in a double-elimination format to earn points for the race portion of the event.

Dragster body

	MINIMUM	MAXIMUM

1. One (1) piece of any species of wood or from plastics, including urethane modeling foam. May be produced using traditional hand tools, power tool, CNC Milling and 3D printing, following applicable safety rules.
  a. Two (2) or more like or unlike pieces of material glued together are not considered one (1)-piece
  b. Any type of lamination will result in disqualification.
  c. No add-ons, such as body strengtheners, fenders, plastic canopy, exhausts, or air foils may be attached to or enclosed within the vehicle. Hydro dipping technique is permitted.
  d. Fiberglass, vinyl wrap, and shrink wrap are considered body strengtheners and cannot be used on the car body for any reason.
  e. Decals may be used for decoration only; they may not be used to gain an aerodynamic advantage, i.e., decals cannot cover the exterior axle holes or be used to cover open areas of the body.		

2. Body length	(2025) 280mm (2026) 250mm	(2025) 290mm (2026) 260mm
3. Body height with wheels		75mm
4. Body mass (completed car without CO_2)	(2025) 35g (2026) 50g	N/A
5. Body width at the point the axles pass through the body, front and back	35mm	42mm
6. Vehicle total width (including wheels).		90mm

Axles/axle holes/wheelbase

	MINIMUM	MAXIMUM
1. Dragsters must have two (2) axles per car, no more.		
2. Bottom of axle hole or bearing above bottom of car body. (NOTE: This will be only be measured at the side surfaces of the car body at the axle hole.)	5mm	10mm
3. Axle hole from front and rear of car	15mm	100mm
4. Minimum wheelbase (axle distance apart at farthest points)	105mm	Not Specified
5. Bearings, bushings and lubricants may be used.		
6. Glue may be used to secure bearings to body.		

Spacer washers/clips

	MINIMUM	MAXIMUM
1. Spacer washers		10
2. Axle clips		8
3. Silicone or any other type of glue/adhesive may not be used in place of wheel clips to hold wheels or axles in place.		

Power plant (CO$_2$ cartridge hole)

	MINIMUM	MAXIMUM
1. The power plant hole must be at the farthest point at the rear of the car and must be drilled parallel to the racing surface to assure proper puncture of the CO$_2$ cartridge. A minimum of 5mm thickness around the entire power plant hole must be maintained on the dragster for safety. The inside of the power plant hole must not be intentionally painted.		
2. Hole depth	45mm	55mm
3. Safety zone thickness	5mm	
4. Chamber diameter	19mm	20mm
5. Lowest point of chamber diameter to race surface (with wheels)	26mm	40mm

Screw eyes

	MINIMUM	MAXIMUM
1. Dragsters must have two (2) screw eyes (no more) per car that meet tolerances. Screw eyes must not make contact with the racing surface. The track string must pass through both screw eyelets, which are located on the center line of the bottom of the car. Glue may be used to reinforce the screw eyes. It is the responsibility of the car designer/engineer to see that the screw eye holes are tightly closed to prevent the track string from slipping out. As with all adjustments, this must be done prior to event check-in.		
2. Inside diameter	3mm	5mm
3. Minimum distance apart (at farthest points)	150mm	N/A

Wheels

	MINIMUM	MAXIMUM
1. A dragster must have four (4) wheels, no more. a. Two (2) wheels must meet the requirements in #2 and #3 below. b. The other two (2) wheels must meet the requirements in #4 and #5 below. c. All four (4) wheels must touch the racing surface at the same time. d. All wheels must roll. e. Wheels must be made entirely from plastic. f. Dimensions must be consistent for the full circumference of each wheel. g. Measurement represents the FULL surface contact point where wheel makes contact with the track.		
2. Front diameter	30mm	40mm
3. Front width (at surface contact point)	1.5mm	5mm
4. Rear diameter	35mm	40mm
5. Rear width (at full, unbroken, surface contact point)	12mm	18mm

C. Drawing, design, and body finish points are combined with race points to determine the final standings.

D. Following the race, participants pick up their entries from the display area at the time and place stated in the conference program.

E. The top ten (10) finalists are announced at the awards ceremony.

REGULATIONS AND REQUIREMENTS

Students will work to develop their leadership and 21st century skills in the process of preparing for and participating in this TSA competitive event. The development and application of those skills must be evident in their submission, demonstration, and/or communication pertaining to the entry.

PRELIMINARY ROUND

A. Participants must check the "Special Design Challenge Requirements" section for the current year's design challenge specifications, if any.

B. Drawings:
1. The two (2)-view (top and side) drawing with metric dimensions is made on one piece of drawing paper no larger than 11" x 17" in size.
2. Drawings are developed using standard engineering practices and procedures.
3. The drawing may be produced using traditional drafting methods or CAD.
4. The one (1) letter-sized page with the Materials List must be printed on or attached to the back of the technical drawing.
5. The title block includes only the participant's identification number, which is assigned at registration time and is placed on the entry and drawing during check-in.

C. Dragsters that do not meet the specifications/tolerances are disqualified from the race.

SEMINFINAL ROUND

A. The Race:
1. The official distance between the start line and the finish line on the race track is twenty (20) meters.
2. No repair or maintenance is allowed after the entries have been registered.
3. Any entry damaged during the race is evaluated by the event coordinator to determine whether or not the vehicle is allowed to race again.
4. In the event that the vehicle is damaged by conference personnel, the event coordinator rules as to whether or not the vehicle may be repaired by the student entering the vehicle. This is the only reason a student is allowed to touch his/her vehicle after registration.
5. Cars that lose wheels, bearings, screw-eyes will not continue to race.
6. Damaged wheels may not be replaced.
7. All CO_2 cartridges for the race are provided by national TSA.

B. The semifinal interview times require the competitor to sign up for a time slot after the top 16 cars are posted.

EVALUATION
PRELIMINARY ROUND
Tier 1

A. Sixteen (16) qualifying entries

SEMIFINAL ROUND
Tier 2

B. Dragster construction, interview, and race points

Refer to the official rating form for more information.

TSA HONOR STATEMENT

All work must be created and completed by individual competitors or teams. Plagiarism, the use of Generative Artificial Intelligence (GenAI) software, copyright violation, cheating, and falsification of information are prohibited. Participants may NOT use any generative artificial intelligence (GenAI) tools (e.g. ChatGPT, Google Gemini, GitHub Copilot, etc.). Any attempt to gain an unfair advantage will not be tolerated. Competitors at any level of TSA competition understand and agree to abide by the TSA Honor Statement.

If it is determined that a student violated the TSA Honor Statement, a rules violation of twenty percent (20%) will be incurred.

STEM INTEGRATION

This event aligns with the STEM (Science, Technology, Engineering, and Mathematics) educational standards.

LEADERSHIP AND 21ST CENTURY SKILLS

This event provides opportunity for students to build and develop leadership and 21st century skills including but not limited to – Communication, Collaboration/Social Skills, Initiative, Problem Solving/Risk Taking, Critical Thinking, Perseverance/Grit, Creativity, Relationship Building/Teamwork, Dependability/Integrity, and Flexibility/Adaptability

CAREERS RELATED TO THIS EVENT

This competition has connections to one (1) or more of the careers below:

- Aeronautical engineer
- Automotive designer
- Automotive modeler
- Industrial designer
- Industrial engineer
- Mechanical engineer
- Race car engineer

DRAGSTER DESIGN
2025 & 2026 OFFICIAL RATING FORM
HIGH SCHOOL

Judges: Using minimal (1-4 points), adequate (5-8 points), or exemplary (9-10 points) performance levels as a guideline in the rating form, record the scores earned for the event criteria in the column spaces to the right. The X1 or X2 notation in the criteria column is a multiplier factor for determining the points earned. (Example: an "adequate" score of 7 for an X1 criterion = 7 points; an "adequate" score of 7 for an X2 criterion = 14 points.) A score of zero (0) is acceptable if the minimal performance for any criterion is not met.

Go/No Go Specifications

- Before judging the entry, ensure that the items below are present; indicate presence with a check mark in the box.
- If an item is missing, leave the box next to the item blank and place a check mark in the box labeled ENTRY NOT EVALUATED.
- If a check mark is placed in the ENTRY NOT EVALUATED box, the entry is not to be judged.

☐ TIER 1 – Car is present
☐ TIER 2 – Dragster construction, interview, and race points
☐ ENTRY NOT EVALUATED

PRELIMINARY DRAGSTER QUALIFYING RACE / POST RACE INSPECTION	YES	NO
Qualified Top 16 in Qualifying Race Speed		
Passed Top 16 Regulations Inspection		
Qualified Top 16 Legal (still safe to race) Cars for Interview and Final Race		
Please mark an "X" for each criteria. If all three are marked YES, place an "X" in the final box.		

SEMIFINAL DRAGSTER CONSTRUCTION (60 points)

Record scores in the column spaces below.

CRITERIA	Minimal performance	Adequate performance	Exemplary performance	
	1-4 points	5-8 points	9-10 points	
Dragster Body Production Quality (X1)	Dragster exhibits poor production quality, with a crude and rough surface and little or no attention to detail.	Dragster shows evidence of proper production techniques; it is adequate but may need improvement.	Dragster displays excellent production techniques, with obvious attention to detail and quality.	
Body Paint/Finish (X1)	Surface preparation is inadequate; the body is unprimed, with poorly applied final finish.	Dragster body is painted and finished adequately.	Dragster body finish is exemplary; body is smooth, shiny, and exhibits quality.	
Vehicle Assembly (X1)	Dragster exhibits poor or sloppy assembly of parts (loose wheels, eye screws are not level, and/or they are loose, etc.).	Dragster is well assembled, and adequately meets standards.	Dragster is properly assembled, with obvious evidence of attention to detail.	
Drawing Scale and Dimensioning (X1)	The drawing is present, but is not to scale; dimensions are missing, or dimensioning is poorly done.	The drawing is acceptable and to scale; it is a close representation of the vehicle, but some dimensions may be missing.	The drawing is exemplary, exact, and includes all pertinent dimensions.	
Drawing Completion and Quality (X1)	The drawing is sloppy, missing parts, and lacking quality.	The drawing is complete, and the quality is adequate.	The drawing is complete and precise, and of exceptional quality.	

DRAGSTER DESIGN

SEMIFINAL DRAGSTER CONSTRUCTION (60 points) – continued

Materials List (X1)	Materials List is present, but has very few items listed and lacks organization; has the appearance of being thrown together at the last second.	Materials list is present and lists the majority of parts.	Materials list is complete and detailed.	
		SEMIFINAL DRAGSTER CONSTRUCTION SUBTOTAL (60 points)		

SUBTOTAL (60 points)	

Record scores in the column spaces below.

SEMIFINAL INTERVIEW (20 points)

CRITERIA	Minimal performance	Adequate performance	Exemplary performance	
	1-4 points	5-8 points	9-10 points	
Car Builder Interview (X2)	The participant shows very limited knowledge of (and has difficulty articulating) how the car was produced or decisions made during the production; the participant exhibits a basic understanding of design elements and functionality, and the rationale is inconsistent or absent.; leadership and/or 21st century skills are not evident.	The participant demonstrates some knowledge of the dragster production and has adequate knowledge of some processes or reasoning behind the vehicle design; leadership and/or 21st century skills are somewhat evident.	The participant demonstrates competence and knowledge related to the design and production of the dragster and articulates the "reasoning" behind the decisions made; leadership and/or 21st century skills are clearly evident.	
		SEMIFINAL INTERVIEW SUBTOTAL (20 points)		

SEMIFINAL RACE (55 points)

1st	2nd	3rd	4th	5th & 6th	7th & 8th	9th-12th	13th – 16th	
55 Points	50 Points	45 Points	40 Points	35 Points	30 Points	25 Points	15 Points	
					SEMIFINAL RACE SUBTOTAL (55 points)			

Rules violations (a deduction of 20% of the total possible points for the above sections) must be initialed by the judge, coordinator, and manager of the event. Record the deduction in the space to the right.

Indicate the rule violated: _____

To arrive at the TOTAL score, add any subtotals and subtract rules violation points, as necessary. **TOTAL (135 points)**	

Comments:

_____

I certify these results to be true and accurate to the best of my knowledge.

JUDGE

Printed name: _____   Signature: _____

DRAGSTER DESIGN
EVENT COORDINATOR INSTRUCTIONS

PERSONNEL

A. Event coordinator

B. Judges, two (2) or more

C. Recorder for double elimination chart, one (1)

D. Assistants, two (2)

MATERIALS

A. Coordinator's packet and box, containing:

1. Event guidelines, one (1) copy for the coordinator and for each judge

2. TSA Event Coordinator Report

3. Stick-on labels for entries, as needed

B. Time trial record sheet

C. Qualifier interview time slot sheet

D. Double elimination bracket chart

E. CO_2 cartridges

F. Metric scientific scales (triple beam balance or digital)

G. Mono-filament fishing line (suggest between 30 and 50 pound); four (4) pre-tied: two (2) on track and two (2) reserve, for the track

H. Race track set, including a starting gate and a finish gate, with a digital timer and winning lane indicator

I. Padding for the finish gate

J. Extra vehicles to test and demonstrate the track

K. Race brackets for placement of the semifinalists

L. Tables for the display of cars and for evaluation

M. Table at the starting line, for arranging and holding cars prior to the races

N. Table at the finish gate for the placement of cars after the races and to hold eliminated cars

O. Table for the official timekeeper

P. When using a computer controlled track, provide the proper computer for the software being used, all necessary connections, and a printer. This equipment is placed on the official timekeeper's table.

Q. Provide for a display of time trials and race brackets.

RESPONSIBLITIES

AT THE CONFERENCE

A. Attend the mandatory coordinator's meeting at the designated time and location.

B. Report to the CRC room and check the contents of the coordinator's packet.

C. Review the event guidelines and check to see that enough personnel have been scheduled.

D. Inspect the area(s) in which the event is to be held for appropriate set-up, including room size, tables, chairs, etc. Notify the event manager of any potential problems.

E. At least one (1) hour before the event is to begin, meet with judges and assistants to review time limits, procedures, regulations, evaluation, and all other details related to the event. If questions arise that cannot be answered, speak to the event manager before the event begins.

F. Ensure the judges have access to the online judging system.

EVENT CHECK-IN

A. Participants report to the time and place stated in the conference program and check in:

1. The dragster entry

2. Full-size metric drawing of the completed vehicle

3. A letter-sized, printed materials list fixed to or printed on the back of the technical drawing

B. Late entries are considered on a case-by-case basis and only when the lateness is caused by events beyond the participant's control.

C. In order to compete, participants must be on the entry list or must have approval of the CRC.

D. If check-in is on the first day of the conference, requirements for attire do NOT apply during check-in.

E. Check to see that each entry drawing includes the participant's identification number in the upper right-hand corner of the paper.

F. Position each entry (dragster and drawing) for evaluation and viewing.

G. Secure the entries in the designated area.

PRELIMINARY ROUND

A. Begin the time trials at the scheduled time.

   1. Every race-worthy car should be tested.

   2. Students do not have to be present.

   3. Public viewing is allowed.

   4. Each car is timed in the same lane.

   5. Cars are timed only once.

   6. It is important that each car be positioned as well as possible in the starting gate.

B. Position a judge at the starting gate to ensure that all cars are positioned in the starting gate correctly.

C. Position another judge at the finish line.

D. If there is a misfire or if a time is not properly recorded, a rerun may be ordered at the discretion of the event coordinator.

E. Record preliminary times on a time trial record sheet.

F. Judges independently assess the entries using the following procedure:

   1. Judges determine the top sixteen (16) qualifying entries based on the time trials and event criteria.

G. Entries that do not meet specifications are removed.

H. Cars that are damaged or broken during the qualifying round are deemed non-raceable and also are removed.

I. Only raceable cars, as determined by the judges, are allowed to compete for the semifinalist category.

J. Lower qualifying cars are moved up until there are sixteen (16) legal semifinalists.

K. Decisions about rules violations must be discussed and verified with the judges, event coordinator, and CRC manager to determine either:

   1. To deduct twenty percent (20%) of the total possible points in this round or

   2. To disqualify the entry

   The event coordinator, judges, and CRC manager must initial either of these actions on the rating form.

L. Place each car in the double elimination race bracket (see sample) according to the rank of its qualifying time.

SEMIFINAL ROUND

A. Assist judges with the evaluation of dragster design, construction, and drawing.

B. Post the top sixteen (16) cars with interviews times.

C. Car builders report to the track at the posted time for a five (5)-minute car builder interview.

D. Conduct interviews with the qualifying top sixteen (16) car builders.

E. Begin the semifinals at the scheduled time.

F. Run the semifinalist race. A sample double-elimination bracket follows.

G. Only the sixteen (16) qualifying cars are raced.

H. Students do not have to be present.

I. Public viewing is allowed.

J. Judges independently assess the entries using the following procedure:

   1. Judges score the dragster construction, interview, and race points to determine the top ten (10) finalists.Judges use qualifying times to break any ties among the sixteen (16) qualifying cars.

K. If necessary, manage the security and removal of materials from the event area.

RACE BRACKET FOR 16-CAR DOUBLE ELIMINATION

LOSERS   WINNERS

1
16
9
8
L1

L1 Loser
12
5
13
4
L2

L2 Loser

L5 Loser

L5

3
14
11
6
L3

L3 Loser
7
10
15
2
L4

L4 Loser

L6 Loser

L6

L7

CHAMPION

Loser of this game comes in 3rd place

L7 Loser

Winner of Loser's Bracket

Winner of Loser's Bracket must beat Winner of Winner's Bracket twice

Winner of this Game Goes to Winner's Bracket

Technology Student Association (TSA) High School Competitive Events Guide for the 2025 and 2026 National TSA Conferences

DRONE CHALLENGE (UAV)

OVERVIEW

Applying leadership and 21st century skills, participants design, build, assemble, document and test fly an open-source Unmanned Arial Vehicle according to stated specifications and to meet the challenge of the yearly theme/problem.

The annual theme will be posted on the TSA website under *Themes & Problems*.

ELIGIBILITY

Teams of two (2) to six (6) members. Three (3) teams per state.

TIME LIMITS

A. Ten (10) minutes prior to assigned times teams can set up their assigned pit area.

B. Thirty (30) minutes session to test and correct any problems. During this time judges will also perform a safety check.

C. Ten (10) minutes running clock to complete the challenge.

D. Ten (10) minutes for the semifinalist interview.

ATTIRE

TSA competition attire, safety glasses, and safety vests are required for this event.

PROCEDURE

PRE-CONFERENCE

A. Participants review the TSA Honor Statement for Competitive Events found in the General Rules and listed in the individual competitive event rules.

B. Participants access the annual theme on the TSA website under *Themes & Problems*.

C. Participants prepare their documentation and design, build, and test their UAV drone

PRELIMINARY ROUND

A. Participants will sign up for a setup and testing time at the time and place stated in the conference program and submit their drone and documentation portfolios.

B. Students will arrive at the assigned place and time to:

1. Set up their pit areas

2. Set up their drone

C. Entries are reviewed by judges to determine safety.

D. Safe drones will be given opportunity to test.

E. Top sixteen (16) scores on drone testing will have their documentation portfolios evaluated.

F. A list of twelve (12) semifinalists (in random order) is posted.

SEMINFINAL ROUND

A. Participants report at the time and place stated in the conference program to sign up for an interview time.

B. Participants report at the assigned time and place for the ten (10) minutes interview.

C. Portfolio, challenge, and interviews scores are combined with race points to determine the final standings.

D. The top ten (10) finalists are announced at the awards ceremony.

REGULATIONS AND REQUIREMENTS

Students will work to develop their leadership and 21st century skills in the process of preparing for and participating in this TSA competitive event. The development and application of those skills must be evident in their submission, demonstration, and/or communication pertaining to the entry.

PRELIMINARY ROUND

A. Participants must check for the current year's design challenge specifications on the TSA website under *Themes & Problems*.

B. Documentation Portfolio:

1. Documentation materials (comprising "a portfolio") are required and must be submitted as a multi-page PDF document on a USB flash drive with pages in this order:

   a. Title page with the name of the event, the event title, the conference city and state, the year; and the team identification number; one (1) page

   b. Table of Contents; one (1) page

c. Photo log of major steps in the production and assembly of the drone. From motors to frame mount to final flight ready UAV Drone. Showing all step of the mounting electronic speed controllers, video transmitters, flight controllers, video transmitters, flight controllers, cameras, antennas, etc., all being mounted and wired. Include captions describing the steps; pages as needed

d. Wiring schematic drawings of their UAV Drone components (modules) in their portfolio binder with associated wiring of component to components. Identified voltages would be an advantage; pages as needed

e. Explanation of Programming software for flight functioning and stabilization. (i.e., Q-Ground Control, Beta flight, etc.). Plus, any additional software and hardware used for mission function (robotic software, microcontroller software for Arduinos, raspberry pi, etc.); pages as needed

f. Engineered drawings of assembled UAV and all manufactured and modified parts. Drawings must be shown on a maximum sheet cut size B (11" x 17"), with the appropriate scale noted on the drawing; maximum of four (4) pages

g. Document all parts and components of the open source UAV Drone as a bill of materials spreadsheet; maximum of two (2) pages

h. Research of rules and regulations for drone flight at the national conference location. Local, regional, and federal regulations must be included; maximum of two (2) pages

i. Resources; pages as needed

j. Work Log (see Forms Appendix); pages as needed

k. Student Copyright Checklist (see Forms Appendix); one (1) page

UAV Drone Challenge Pit and Safety procedures

A. Pit Area Assignment. The Event Coordinator will provide a designated area for UAV Drone Teams to work on and prepare their UAV Drone for flight.

1. Teams are required to bring two welding blankets (4' x 6' minimum) to cover the table and floor in their pit area.

2. Teams bring to pit area, for inspection, primary UAV Drone and a backup UAV Drone (optional), radio controller(s), chargers, batteries, tools box, power strip, 3-prong electrical extension cord, replacement parts, spare parts and tools.

3. Computer/laptop must operate solely on battery power. The team can bring a power bank (if desired).

4. All equipment, portfolio, tools, chargers, and computers are to be arranged for inspection and safety check. The use of tools with combustible fuel sources is prohibited.

5. In the pit area, battery chargers and batteries, as they are being charged, must be placed on the fireproof welding blanket in the pits charging area.

B. When UAV Drone is out of the competition tent area, all propellers must be removed. NO EXCEPTIONS.

C. When a team member enters the competition tent field, only at the direction of the event coordinator may the team members attach the battery cable and turn on their UAV Drone and become ready to fly. When A UAV Drone is outside of the competition tent area, all batteries must be unplugged from the UAV Drone stack, which should consist of the flight controller receiver and the Electronic Speed Controller (ESE). NO EXCEPTIONS.

D. The judge will inspect the UAV Drone mounted propellers to ensure safe operation.

E. When the competition is taking place and when a practice session is under way with a UAV Drone in the competition field area flying, all UAV Drone in the pit area or outside the pit area must be POWERED OFF. This is an automatic ten (10) Point deduction if this occurs.

F. All batteries will be inspected prior to flight practice and the competition.

G. All UAV Drones must fly ONLY with the Competition field.

UAV Drone Specifications

A. Competing Unmanned Aerial Vehicles UAV Drone MUST HAVE four motors and four propeller blades.

B. UAV Drone must be assembled from open-sourced parts. The UAV Drone can be purchased as a kit that can be built, reconfigured, changed, and modified with different components.

C. The UAV Drone frame structure can be made from plastic, wood, 3D printed materials (carbon fiber, PLA plastic, ABS plastic, resin, metal combined plastic or resin). Parts can be purchased commercially and modified. NO COMMERCIALLY AVAILABLE DRONE WILL BE USED IN THE COMPETITON (i.e., Mavic Pro or Mavic Mini) OR PRACTICE SESSIONS.

D. Battery packs must only be commercially available lithium-ion or lithium-ion polymer batteries that are purchased from open-sourced 3rd parties (i.e., Amazon, hobby shops, etc.).

E. Drone Regulations

   1. The UAV Drone propellers can be in size from 4" (101mm) to 8" (152.4mm) in overall length.

   2. Sizes can be from 6" (152.4mm) to 14" (355.6mm) in outside motor propeller size diagonally.

   3. The UAV Drone must use propeller guards [but must fit inside a 18" x 18" (457.2mm x 457.2mm) go-no-go box for pre-flight inspections by the judges.]

   4. Drone must include incorporate the use of Magnets or Grippers to complete the theme for the year.

   5. Drone propellers must be removable for inspection.

   6. Landing gear must be adjustable or adaptable in size to cover a variety of mission requirements and payload sizes. Magnets or grippers are not adjustable or adaptable landing gear.

   7. A camera for the pilot is also required to be mounted to the drone.

EVALUATION

PRELIMINARY ROUND

Tier 1

A. Drone testing

Tier 2

B. Documentation portfolio

SEMINFINAL ROUND

A. The interview

Refer to the official rating form for more information.

TSA HONOR STATEMENT

All work must be created and completed by individual competitors or teams. Plagiarism, the use of Generative Artificial Intelligence (GenAI) software, copyright violation, cheating, and falsification of information are prohibited. Participants may NOT use any generative artificial intelligence (GenAI) tools (e.g. ChatGPT, Google Gemini, GitHub Copilot, etc.). Any attempt to gain an unfair advantage will not be tolerated. Competitors at any level of TSA competition understand and agree to abide by the TSA Honor Statement.

If it is determined that a student violated the TSA Honor Statement, a rules violation of twenty percent (20%) will be incurred.

STEM INTEGRATION

This event aligns with the STEM (Science, Technology, Engineering, and Mathematics) educational standards.

LEADERSHIP AND 21ST CENTURY SKILLS

This event provides opportunity for students to build and develop leadership and 21st century skills including but not limited to – Communication, Collaboration/Social Skills, Initiative, Problem Solving/Risk Taking, Critical Thinking, Perseverance/Grit, Creativity, Relationship Building/Teamwork, Dependability/Integrity, and Flexibility/Adaptability

DRONE CHALLENGE (UAV)

2025 & 2026 OFFICIAL RATING FORM

HIGH SCHOOL

Judges: Using minimal (1-4 points), adequate (5-8 points), or exemplary (9-10 points) performance levels as a guideline in the rating form, record the scores earned for the event criteria in the column spaces to the right. The X1 or X2 notation in the criteria column is a multiplier factor for determining the points earned. (Example: an "adequate" score of 7 for an X1 criterion = 7 points; an "adequate" score of 7 for an X2 criterion = 14 points.) A score of zero (0) is acceptable if the minimal performance for any criterion is not met.

Go/No Go Specifications

- Before judging the entry, ensure that the items below are present; indicate presence with a check mark in the box.
- If an item is missing, leave the box next to the item blank and place a check mark in the box labeled ENTRY NOT EVALUATED.
- If a check mark is placed in the ENTRY NOT EVALUATED box, the entry is not to be judged.

☐ TIER 1 – Drone/Welding Blankets
☐ TIER 2 – USB Documentation Portfolio
☐ ENTRY NOT EVALUATED

TIER 1 – TESTING OF DRONE (60 points)

Evaluation: Completion of predetermined challenge is used to determine ranking. Time that the challenge is completed in is used to break ties.

1st: 60 Points	**2nd:** 55 Points	**3rd:** 50 Points	**4th**: 45 Points	**5th:** 40 Points	**6th:** 35 Points
7th: 30 Points	**8th:** 25 Points	**9th:** 20 Points	**10th:** 15 Points	**11th:** 10 Points	**12th-16th:** 5 Points

TIER 1 – TESTING OF DRONE SUBTOTAL (60 points)

Rules violations (a deduction of 20% of the total possible points for the above sections) must be initialed by the judge, coordinator, and manager of the event. Record the deduction in the space to the right.

Indicate the rule violated: _____

TIER 1 – SUBTOTAL (60 points)

TIER 2 – DOCUMENTATION PORTFOLIO (80 points)

Record scores in the column spaces below.

CRITERIA	Minimal performance	Adequate performance	Exemplary performance	
	1-4 points	5-8 points	9-10 points	
Portfolio Components (X1)	Portfolio is unorganized and/or is missing three (3) or more components.	Portfolio has most components and is generally organized per the order of the event guide listing; it has sufficient content.	All components are included in the portfolio; content and organization per the order of the event guide listing are excellent.	
Photo Log (X1)	There are little photos of the drone construction/components installation are not included and/or captions are not present on any of the photos.	Most photos of the drone assembly/testing are included and most captions are present.	All photos of the drone assembly/testing are included and captions are present.	
Wiring Diagram (X1)	The wiring diagrams are not complete and/or many of the elements missing.	The wiring diagrams are present but may be missing several key components and detailing	All wiring diagrams are complete and correct, with all components and detailing.	
Programming Explanation/ Description (X1)	The explanation/description is unorganized and three (3) or more details or descriptions are missing.	The explanation/description is generally well organized and may be missing only one (1) or two (2) details or descriptions.	The explanation/description is exceptionally well organized and contains all required details and descriptions.	
Engineered Drawings (X1)	The engineered drawings are not complete, with many of the required elements missing.	The engineered drawings are present but may be missing several required key components and detailing.	All engineered drawings are complete and correct, with all components and detailing.	
Bill of Materials (X1)	Bill of Materials is included, but more than three (3) materials are missing.	A Bill of Materials is included, with one (1) or two (2) materials missing; Bill of Materials is generally organized.	All components of the Bill of Materials is included and highly organized.	
Drone Flight Regulations (X1)	The report is unorganized and three (3) or more details about drone flight regulations are missing.	Report is generally well organized and may be missing one (1) or two (2) details about information about local, regional, and federal drone flight regulations.	Report is well organized and contains information about local, regional, and federal drone flight regulations.	
Work Log (X1)	The Work Log is not complete.	The Work Log is included and mostly complete.	The Work Log is complete and fully documents project work.	
TIER 2 – DOCUMENTATION PORTFOLIO SUBTOTAL (80 points)				

Rules violations (a deduction of 20% of the total possible points for the above sections) must be initialed by the judge, coordinator, and manager of the event. Record the deduction in the space to the right.

Indicate the rule violated: _____

PRELIMINARY SUBTOTAL (140 points)

DRONE CHALLENGE (UAV)

SEMIFINAL INTERVIEW (40 points)				
CRITERIA	Minimal performance	Adequate performance	Exemplary performance	
	1-4 points	5-8 points	9-10 points	
Knowledge (X2)	Participants seem to have little understanding of the concepts in their project; answers to questions may be vague.	Participants exhibit a general understanding of the concepts in their project.	Participants show clear evidence of a thorough understanding of the concepts in their project.	
Articulation (X1)	Communication of the project is unclear, unorganized, and or illogical; leadership and/or 21st century skills are not evident.	Communication of the project is somewhat logical and clear; leadership and/or 21st century skills are somewhat evident.	Communication of the project is clear, concise, and logical; leadership and/or 21st century skills are clearly evident.	
Team Participation (X1)	The majority of the delivery is made by one (1) member of the team; the partners may be disengaged from the Interview.	Team members are generally engaged in the process, though one member may take on more responsibility than the others.	Team members are actively involved in the Interview and responses to interview questions; there is shared responsibility on the part of team members.	
			SEMIFINAL INTERVIEW SUBTOTAL (40 points)	

Rules violations (a deduction of 20% of the total possible points for the above sections) must be initialed by the judge, coordinator, and manager of the event. Record the deduction in the space to the right.

Indicate the rule violated: _____

SEMIFINAL SUBTOTAL (40 points)	

To arrive at the TOTAL score, add any subtotals and subtract rules violation points, as necessary. **TOTAL (180 points)**	

Comments:

_____

I certify these results to be true and accurate to the best of my knowledge.

JUDGE

Printed name: _____   Signature: _____

DRONE CHALLENGE (UAV) EVENT COORDINATOR INSTRUCTIONS

PERSONNEL

A. Event coordinator

B. Judges, two (2) or more

C. Pit Area Judge/Inspector (1)

D. Assistants, two (2)

MATERIALS

A. Coordinator's packet and box, containing:

1. Event guidelines, one (1) copy for the coordinator and for each judge

2. TSA Event Coordinator Report

3. Stick-on labels for entries, as needed

B. Time trial record sheet

C. Qualifier interview time slot sheet

D. Interview questions

E. Testing Arena – two (2) 10' x 10' tents frame only. Covered with bird netting.

F. Course materials based on theme

G. Table with power for the Pit Area for the competitors

H. Table for inspection and tabulation

I. 2-Step ladder with platform for judging and setup

J. Stations or caution tape to separate spectators and participants

K. Safety glasses and vests for judges and coordinators

L. Blue and red tamper proof tape for indicating frequency of controllers

M. Fire extinguisher

RESPONSIBILITIES

AT THE CONFERENCE

A. Attend the mandatory coordinator's meeting at the designated time and location.

B. Report to the CRC room and check the contents of the coordinator's packet.

C. Review the event guidelines and check to see that enough personnel have been scheduled.

D. Inspect the area(s) in which the event is to be held for appropriate set-up, including room size, tables, chairs, etc. Notify the event manager of any potential problems.

E. At least one (1) hour before the event is to begin, meet with judges and assistants to review time limits, procedures, regulations, evaluation, and all other details related to the event. If questions arise that cannot be answered, speak to the event manager before the event begins.

F. Ensure the judges have access to the online judging system.

EVENT CHECK-IN

A. Participants report to the time and place stated in the conference program and check in:

1. Portfolio

2. Sign up for setup/testing time

B. Late entries are considered on a case-by-case basis and only when the lateness is caused by events beyond the participant's control.

C. In order to compete, participants must be on the entry list or must have approval of the CRC.

D. If check-in is on the first day of the conference, requirements for attire do NOT apply during check-in.

E. Secure the entries in the designated area.

PRELIMINARY ROUND

A. Assist judges with the check in/setup of pit area.

B. Assist judges with the drone portion of the event and then the judging of the portfolios of the top sixteen (16) entries following the drone portion.

C. Decisions about rules violations must be discussed and verified with the judges, event coordinator, and CRC manager to determine either:

   1. To deduct twenty percent (20%) of the total possible points in this round or

   2. To disqualify the entry

   The event coordinator, judges, and CRC manager must initial either of these actions on the rating form.

D. Begin the time trials at the scheduled time.

   1. Every Drone that is compliant with rules should have the opportunity to be tested.

   2. Public viewing is allowed.

   3. Announce starting time stop if there is an issue teams do not get additional testing time if they need to complete a repair of adjustment.

E. Position a judge on either side of the testing area to view the trial.

F. If a time is not properly recorded, a rerun may be ordered at the discretion of the event coordinator.

G. Record preliminary times on a time trial record sheet.

H. The testing of the drone times will determine the top sixteen (16) results.

I. Evaluate the top sixteen (16) trials portfolios.

J. Create the semifinalist sign-up sheet.

SEMIFINAL ROUND

A. Post the top twelve (12) teams with interviews times.

B. Drone builders report to the designated area posted time for a ten (10)-minute Drone Team interview.

C. Conduct interviews with the qualifying top twelve (12) Drone Teams.

D. Begin the semifinals at the scheduled time.

E. Discuss rule violations (e.g. 20% deduction, disqualification) and have all relevant parties initial the rating form.

F. If necessary, manage the security and removal of materials from the event area.

ENGINEERING DESIGN

OVERVIEW

In 2008, the National Academy of Engineering tasked an international group of leading technological thinkers to identify the Grand Challenges for Engineering (GCE) in the 21st century. Fourteen (14) game-changing goals for improving life on the planet were identified and grouped into the themes of sustainability, health, security, and joy of living. Applying leadership and 21st century skills in conjunction with the engineering design process, teams develop a solution to one of the grand challenges based on the annual theme posted on the TSA website under *Themes & Problems*.

ELIGIBILITY

Three (3) teams of three (3) or more individuals per state may participate.

TIME LIMITS

A. Ten (10) minutes are allowed for the presentation.

B. Five (5) minutes are allowed for the team to respond to questions from the judges.

ATTIRE

TSA competition attire is required for this event.

PROCEDURE

PRE-CONFERENCE

A. Participants review the TSA Honor Statement for Competitive Events found in the General Rules and listed in the individual competitive event rules.

B. Participants access the annual theme posted on the TSA website under *Themes & Problems*.

C. Participants concentrate their efforts conducting research on engineering practices and brainstorming a solution.

D. Participants create and test a prototype/model of their solution.

E. Participants prepare their documentation and display according to the regulations.

PRELIMINARY ROUND

A. No more than two (2) team members report to the event area at the time and place stated in the conference program to check in:

1. the portfolio in PDF format on one (1) USB flash drive

2. a free-standing display

3. a prototype/model of the solution

B. Entries are evaluated by the judges with neither students nor advisors present based on the following criteria:

1. Judges score the Display and Prototype/Model criteria to determine the top twenty-four (24) preliminary contestants, which will not be posted.

2. Judges score the Documentation Portfolio criteria of those top twenty-four (24) contestants to determine the top twelve (12) semifinalists.

C. A list of twelve (12) semifinalists (in random order) is posted.

SEMIFINAL ROUND

A. Participants report at the time and place stated in the conference program to sign up for a presentation/interview time.

B. Participants report at the assigned time and place for the presentation/interview.

C. Three (3) semifinalist team members present in front of their display and model/prototype, which may be used as a reference.

D. Judges evaluate the entries.

E. The top ten (10) finalists are announced at the awards ceremony.

REGULATIONS AND REQUIREMENTS

Students will work to develop their leadership and 21st century skills in the process of preparing for and participating in this TSA competitive event. The development and application of those skills must be evident in their submission, demonstration, and/or communication pertaining to the entry.

PRELIMINARY ROUND

A. Students prepare an electronic portfolio that includes each step of the engineering design process when developing a solution to their selected grand engineering challenge based on the annual theme.

B. Documentation Portfolio:

1. Documentation materials (comprising "a portfolio") are required and must be submitted on one (1) USB flash drive in PDF format, with the following pages in this order:

   a. Title page with the challenge listed, event title, the team identification number, the conference city and state, and the year; one (1) page

   b. Table of contents; pages as needed

   c. Identification and definition of problem; one (1) page

   d. Information gathering that explains the importance of developing a solution to the grand engineering challenge and how a solution would impact the lives of people. A concise historical perspective of the challenge must also be included; one (1) page

   e. The identification and explanation of three (3) possible solutions to the challenge must be included. For each possible solution presented, a concise narrative must be included that supports the plausibility of each solution based on a specific scientific, technical, and/or engineering concept; one (1) page per solution, three (3) pages total

   f. Of the three (3) possible solutions, select the most plausible solution and create a prototype/model. Provide an appropriate, specific, and descriptive, visual representation of the solution (ex. engineering drawings, schematic, flowchart, etc.); pages as needed.

   g. A written summary of the of the iteration process in the design of the prototype and the results of each test; at a minimum, four (4) pages describing the below points are required:

      i. If a solution is not working or cannot be evaluated/tested, a narrative for a means of testing the chosen solution.

      ii. Refinements of the prototype based on evaluation/testing conducted. If a solution cannot be evaluated/tested, write in narrative form a reflection of possible refinements that could be made to the chosen solution based on the testing means developed.

      iii. A reflection of the effectiveness of the selected solution and the testing means developed (i.e. did or would the tests developed actually prove that the solution is plausible?).

      iv. Describe any other issues found during the iteration process.

   h. Communication of the solution – a written summary detailing how the solution meets the annual theme; one (1) page

   i. Work Log (see Forms Appendix); pages as needed

   j. References and resources page in a professional citation style of the competitors choosing. Failure to use a professional citation style will result in a rules violation of 20% (twenty percent). Some examples of professional citation styles include MLA, APA, Chicago, and IEEE; pages as needed

C. The Display:

1. A free-standing display must be used and the dimensions of the display may not exceed 15" deep x 2.5' wide x 4' high.

2. The display must include a pocket or device on the front that will secure and hold the USB thumb drive and be clearly labeled for the judges to retrieve the USB.

3. A tangible prototype/model must be included with the display and must physically fit within the display board dimensions.

4. If the display and/or prototype/model requires power, they must be powered by dry-cell batteries or photo-voltaic cells.

    a. The power supply must physically fit within the display board dimensions.

    b. All power must be switched off once the team has completed set-up.

    c. If teams want judges to activate any electronic device in their model/display, complete instructions must be provided to judges on how to power up the model/display.

5. No harmful or illegal substances are permitted. No viruses, live plants, or animals are permitted. No dangerous processes, experiments, and/or physical models may be displayed/demonstrated.

SEMIFINAL ROUND

A. Participants report at the time and place stated in the conference program to sign up for a presentation/interview time.

B. Participants report at the assigned time and place for the presentation/interview.

C. Three (3) semifinalist team members present in front of thier display and model/prototype, which may be used as a reference.

D. Judges evaluate the entries.

E. The top ten (10) finalists are announced at the awards ceremony.

EVALUATION

PRELIMINARY ROUND

Tier 1

A. The display

B. The prototype/model

Tier 2

C. The documentation portfolio

SEMIFINAL ROUND

A. The presentation/interview

Refer to the official rating form for more information.

TSA HONOR STATEMENT

All work must be created and completed by individual competitors or teams. Plagiarism, the use of Generative Artificial Intelligence (GenAI) software, copyright violation, cheating, and falsification of information are prohibited. Participants may NOT use any generative artificial intelligence (GenAI) tools (e.g. ChatGPT, Google Gemini, GitHub Copilot, etc.). Any attempt to gain an unfair advantage will not be tolerated. Competitors at any level of TSA competition understand and agree to abide by the TSA Honor Statement.

If it is determined that a student violated the TSA Honor Statement, a rules violation of twenty percent (20%) will be incurred.

STEM INTEGRATION

This event aligns with the STEM (Science, Technology, Engineering, and Mathematics) educational standards.

LEADERSHIP AND 21ST CENTURY SKILLS

This event provides opportunity for students to build and develop leadership and 21st century skills including but not limited to – Communication, Collaboration/Social Skills, Initiative, Problem Solving/Risk Taking, Critical Thinking, Perseverance/Grit, Creativity, Relationship Building/Teamwork, Dependability/Integrity, and Flexibility/Adaptability

CAREERS RELATED TO THIS EVENT

This competition has connections to one (1) or more of the careers below:

- Engineer
- Environmental scientist
- Health and safety specialist
- Manufacturing consultant
- Mechanical engineer

ENGINEERING DESIGN
2025 & 2026 OFFICIAL RATING FORM
HIGH SCHOOL

Judges: Using minimal (1-4 points), adequate (5-8 points), or exemplary (9-10 points) performance levels as a guideline in the rating form, record the scores earned for the event criteria in the column spaces to the right. The X1 or X2 notation in the criteria column is a multiplier factor for determining the points earned. (Example: an "adequate" score of 7 for an X1 criterion = 7 points; an "adequate" score of 7 for an X2 criterion = 14 points.) A score of zero (0) is acceptable if the minimal performance for any criterion is not met.

Go/No Go Specifications

- Before judging the entry, ensure that the items below are present; indicate presence with a check mark in the box.
- If an item is missing, leave the box next to the item blank and place a check mark in the box labeled ENTRY NOT EVALUATED.
- If a check mark is placed in the ENTRY NOT EVALUATED box, the entry is not to be judged.

☐ TIER 1 – Display and Prototype/model is present
☐ TIER 2 – Documentation portfolio is on one (1) USB flash drive
☐ ENTRY NOT EVALUATED

TIER 1 – DISPLAY AND PROTOTYPE/MODEL (40 points)   *Record scores in the column spaces below.*

CRITERIA	Minimal performance	Adequate performance	Exemplary performance	
	1-4 points	5-8 points	9-10 points	
Aesthetics (X1)	The display design is unattractive in appearance and shows a lack of understanding of graphic design principles.	The display design is somewhat attractive and shows an adequate understanding of the use of graphic design principles.	The display is of professional quality with an exemplary use of graphic design principles.	
Prototype/Model (X1)	Models are confusing and do not represent and/or support the proposed problem solution.	Models provide adequate representation and support of the proposed problem solution.	Models provide excellent representation and support of the proposed problem solution.	
Overall Impact (X2)	The display information and models do not detail or enhance the essential components of the team's problem identification and solution.	The display information and models somewhat detail and enhance the essential components of the team's problem identification and solution.	The display information and models greatly detail and enhance the essential components of the team's problem identification and solution.	
TIER 1 – DISPLAY AND PROTOTYPE/MODEL SUBTOTAL (40 points)				

Rules violations (a deduction of 20% of the total possible points for the above sections) must be initialed by the judge, coordinator, and manager of the event. Record the deduction in the space to the right. Indicate the rule violated: _____	

TIER 1 – SUBTOTAL (40 points)	

TIER 2 – DOCUMENTATION PORTFOLIO (110 points)

CRITERIA	Minimal performance	Adequate performance	Exemplary performance	Record scores in the column spaces below.
	1-4 points	5-8 points	9-10 points	
Portfolio Components (X1)	Portfolio is unorganized and/or is missing three (3) or more components.	Portfolio has most components and is generally organized per the order of the event guide listing; it has sufficient content.	All components are included in the portfolio; content and organization per the order of the event guide listing are excellent.	
Identification and Problem Definition (X1)	The problem is not clearly defined or communicated and does not fall within the grand challenge selected.	The problem is somewhat defined and communicated.	The problem is clearly written, concise, and well defined; the problem falls within the grand challenge selected.	
Information Gathering (X1)	There is little evidence of research; there is a lack of understanding of the issues cited.	There is some evidence of research; an adequate understanding of the issues is present.	Thorough research is clearly evident with a firm understanding of the issues established.	
Possible Solutions (X1)	A very brief explanation of the final solution is presented; there is a lack of creativity; descriptions are weak.	An adequate description of the solution is presented and supported by some amount of research and evidence; the solution is somewhat creative.	The solution is supported by the research gathered and scientific and engineering evidence; the solution is plausible and creative.	
Selected Solution (X2)	Solution conveys a sloppy design, and/or does not incorporate key elements in the engineering challenge; visual representations of the solutions are not appropriate or accurate and do not follow established conventions.	Solution incorporates most elements laid out in the engineering challenge; visual representations of the solutions are somewhat appropriate, accurate and loosely follow established conventions.	Solution exudes creativity and addresses all engineering challenge elements; visual representations of the solutions are appropriate, accurate and follow established conventions.	
Written Summary of Iteration Process (X2)	The summary has little support or evidence of the testing process of each stage of iteration.	The summary includes refinement and reflection provides evidence of multiple evaluations and testing.	The summary includes exemplary examples of refinement and reflection of the design process and details issues found during the iteration process.	
Communication of Solution (X1)	The solution is difficult to understand as communicated and is presented in an illogical manner.	The solution is communicated adequately, and thoughts are somewhat organized and/or concise.	The solution is communicated in an organized, clear, and concise manner.	
Work Log (X1)	The log is poorly organized and/or incomplete.	The log is adequately detailed, organized, and contains most of the required components.	The log is detailed and contains all the required components.	
References and Resources (X1)	There are few references listed, and/or references listed show little relevance to the project's goal.	There are a sufficient number of credible references listed.	Many credible references are listed, reflecting research in the areas covered.	
TIER 2 – DOCUMENTATION PORTFOLIO SUBTOTAL (110 points)				

Rules violations (a deduction of 20% of the total possible points for the above sections) must be initialed by the judge, coordinator, and manager of the event. Record the deduction in the space to the right. Indicate the rule violated: _____	

PRELIMINARY SUBTOTAL (150 points)	

SEMIFINAL PRESENTATION/INTERVIEW (50 points)

Record scores in the column spaces below.

CRITERIA	Minimal performance 1-4 points	Adequate performance 5-8 points	Exemplary performance 9-10 points	
Organization (X1)	Team seems unprepared and unorganized for the presentation, with an illogical explanation of the project.	Team is prepared for the presentation and is somewhat organized; team's presentation thesis is, for the most part, logical and/or clear.	Team's presentation with judges is well organized; the interview is concise and logical, with a clear explanation of the development of the project.	
Knowledge (X1)	Team members seem to have little understanding of the concepts in their project; vague interview answers are provided.	Team members have a generalized understanding of the concepts discussed and answer questions adequately.	Evidence is clear that team members have a thorough understanding of the concepts discussed; they answer questions thoroughly.	
Articulation (X1)	Communication of the solution is unclear, unorganized, and or illogical; leadership and/or 21st century skills are not evident.	Communication of the solution is somewhat logical and clear; leadership and/or 21st century skills are somewhat evident.	The interview provides a clear, concise, and easy-to-follow analysis of the solution; leadership and/or 21st century skills are clearly evident.	
Delivery (X1)	The team is verbose and/or uncertain in its presentation; participants' posture, gestures, and lack of eye contact diminish the delivery.	The team is somewhat well-spoken and clear in its presentation; participants' posture, gestures, and eye contact result in an acceptable delivery.	The team is well-spoken and distinct in its presentation; participants' posture, gestures, and eye contact result in a polished, natural, and effective delivery.	
Team Participation (X1)	Only one person in the group communicates with judges; there is little or no participation from other team members.	Team members all participate to some extent and generally seem to understand the concepts.	Team members seem to fully understand the concepts and share an equal role in the presentation.	
SEMIFINAL PRESENTATION/INTERVIEW SUBTOTAL (50 points)				

Rules violations (a deduction of 20% of the total possible points for the above sections) must be initialed by the judge, coordinator, and manager of the event. Record the deduction in the space to the right.

Indicate the rule violated: _____

SEMIFINAL SUBTOTAL (50 points)

To arrive at the TOTAL score, add any subtotals and subtract rules violation points, as necessary. **TOTAL (200 points)**

Comments:

_____

I certify these results to be true and accurate to the best of my knowledge.

JUDGE

Printed name: _____ Signature: _____

ENGINEERING DESIGN EVENT COORDINATOR INSTRUCTIONS

PERSONNEL

A. Event coordinator

B. Judges:

1. Preliminary round, two (2) for each thirty (30) entries

2. Semifinal round, two (2)

MATERIALS

A. Coordinator's packet, containing:

1. Event guidelines, one (1) copy for the coordinator and for each judge

2. TSA Event Coordinator Report

3. Stick on labels for entries

B. Laptop with a USB drive access and ability to read a PDF

C. One (1) stopwatch per team of judge

D. Measuring tape

E. Display tables for entries (minimum depth 18")

RESPONSIBILITIES

AT THE CONFERENCE

A. Attend the mandatory coordinator's meeting at the designated time and location.

B. Report to the CRC room and check the contents of the coordinator's packet.

C. Review the event guidelines and check to see that enough personnel have been scheduled.

D. Inspect the area(s) in which the event is to be held for appropriate set-up, including room size, tables, chairs, etc. Notify the event manager of any potential problems.

E. At least one (1) hour before the event is to begin, meet with judges and assistants to review time limits, procedures, regulations, evaluation, and all other details related to the event. If questions arise that cannot be answered, speak to the event manager before the event begins.

F. Ensure the judges have access to the online judging system.

EVENT CHECK-IN

A. Check in the entries at the time stated in the conference program.

B. If check-in is on the first day of the conference, requirements for attire do NOT apply during check-in.

C. Late entries are considered on a case-by-case basis and only when the delay is caused by events beyond participant control.

D. In order to compete, participants must be on the entry list or must have CRC approval.

E. Place an entry number on each USB storage drive, display, and prototype/model.

F. Instruct participants to position displays for viewing.

G. Secure the entries in the designated area.

PRELIMINARY ROUND

A. Judges independently assess the entries:

1. The initial round of judging scores the Display and Prototype/Model criteria of the entries to determine the top twenty-four (24) participants.

2. The second round of judging scores the documentation portfolios of the twenty-four (24) identified participants based on the initial round of judging to determine the twelve (12) semifinalists.

B. Decisions about rules violations must be discussed and verified with the judges, event coordinator, and CRC manager to determine either:

1. To deduct twenty percent (20%) of the total possible points in this round or

2. To disqualify the entry

The event coordinator, judges, and CRC manager must initial either of these actions on the rating form.

C. Create semifinalist sign-up sheet for each team's final presentation.

SEMIFINAL ROUND

A. Semifinalist teams report at the time and place stated in the conference program to sign up for a presentation/interview.

B. Semifinalist teams report at the assigned time and place for the presentation/interview.

C. Manage the completion of the on-site presentations/interviews.

D. Discuss rule violations (e.g. 20% deduction, disqualification) and have all relevant parties initial the rating form.

E. If necessary, manage security and the removal of materials from the event area.

EXTEMPORANEOUS SPEECH

OVERVIEW

Applying leadership and/or 21st century skills, participants verbally communicate their knowledge of technology or TSA subjects. Participants give a three-to-five (3-5) minute speech fifteen (15) minutes after having drawn a card on which a technology or TSA topic is written.

ELIGIBILITY

Three (3) individuals per state may participate.

TIME LIMITS

A. Each speech must be between three and five (3-5) minutes.

B. Participants are penalized one (1) point per ten (10) seconds for speaking over five (5) minutes or under three (3) minutes.

C. Time commences when the speaker begins talking and concludes at the end of the speech.

ATTIRE

TSA competition attire is required for this event.

PROCEDURE

PRE-CONFERENCE

A. Participants review the TSA Honor Statement for Competitive Events found in the General Rules and listed in the individual competitive event rules.

PRELIMINARY ROUND

A. Participants report at the time and place stated in the conference program to sign up for an assigned presentation time.

B. Participants report at the assigned time and place for the presentation preparation.

C. Each participant draws three (3) cards, each containing one (1) topic, from a box and selects one (1) topic from the three (3) on which to speak. The cards with the unused topics are returned to the box.

D. Preparation:

1. After having selected a topic, the first participant enters a preparation room separate from the speech delivery room and is given fifteen (15) minutes to prepare a speech.

2. Seven (7) minutes after the first participant enters the preparation room, the second participant enters the preparation room, goes to a different section, and begins his/her speech preparation, again with fifteen (15) minutes to prepare a speech.

3. Each participant, in turn, is allowed to enter the preparation room at seven (7)-minute intervals, thus enabling a consistent flow of participants to speak before the judges in a timely fashion. (This allows for one [1] minute to enter the room and announce the entry number, up to five [5] minutes for the presentation, and one [1] minute to exit the room.)

E. The event coordinator introduces each participant (using the participant identification number only) according to the order in which participants appear on the sign-up sheet.

F. The timekeeper visually notifies the speaker of the time remaining by using one (1) notecard. When the speaker has been speaking for four (4) minutes, a notecard will be shown with "Time remaining 1 minute" indicating that the speaker has one (1) minute remaining.

G. After speaking, the participant returns the topic card to the judges so that it can be returned to the topic box.

H. Judges independently evaluate each speech.

I. A list of twelve (12) semifinalists (in random order) is posted.

SEMIFINAL ROUND

A. Semifinalists report to the event area at the time and place stated in the conference program to receive an assigned presentation time.

B. Semifinalist speeches follow the same procedure as in the preliminary round.

C. Ten (10) finalists will be announced during the conference awards ceremony.

REGULATIONS AND REQUIREMENTS

Students will work to develop their leadership and 21st century skills in the process of preparing for and participating in this TSA competitive event. The development and application of those skills must be evident in their submission, demonstration, and/or communication pertaining to the entry.

PRELIMINARY ROUND

A. Participants deliver a speech addressing the assigned topic while observing the regulations:

1. No reference is to be made concerning the name of the participant or his/her school. Name tags provided by National TSA do not violate this rule.

2. Each speech must be the result of the participant's own effort.

3. No reference materials or devices may be used or brought to the preparation room.

4. Any notes for speaking must be written during the fifteen (15)-minute preparation period.

5. Each participant is provided a maximum of three (3) 3" x 5" blank notecards.

6. Although participants are permitted to use notes when speaking, it should be noted that deductions in scoring could be made for this practice if the use of notes detracts from the effectiveness of the speech.

7. The participant will state the topic and then will begin the speech. The speech time will commence when the speech begins.

8. Participants are penalized by each judge one (1) point per ten (10) seconds for speaking over five (5) minutes or under three (3) minutes.

B. A speakers stand or podium will be available.

SEMIFINAL ROUND

A. All regulations from the preliminary round apply to the semifinal round.

B. Observers may be allowed to sit in the audience during the semifinals if space is available and the coordinator provides permission.

C. Observers may not enter or leave during a speech.

D. No audio or visual recording devices (including cell phones, digital cameras, etc.) by the observers are permitted.

EVALUATION

A. Delivery of the speech

B. The degree to which the content addresses the selected topic

C. Adherence to the time limits

Refer to the official rating form for more information.

TSA HONOR STATEMENT

All work must be created and completed by individual competitors or teams. Plagiarism, the use of Generative Artificial Intelligence (GenAI) software, copyright violation, cheating, and falsification of information are prohibited. Participants may NOT use any generative artificial intelligence (GenAI) tools (e.g. ChatGPT, Google Gemini, GitHub Copilot, etc.). Any attempt to gain an unfair advantage will not be tolerated. Competitors at any level of TSA competition understand and agree to abide by the TSA Honor Statement.

If it is determined that a student violated the TSA Honor Statement, a rules violation of twenty percent (20%) will be incurred.

STEM INTEGRATION

This event aligns with the STEM (Science, Technology, Engineering, and Mathematics) educational standards.

LEADERSHIP AND 21ST CENTURY SKILLS

This event provides opportunity for students to build and develop leadership and 21st century skills including but not limited to – Communication, Collaboration/Social Skills, Initiative, Problem Solving/Risk Taking, Critical Thinking, Perseverance/Grit, Creativity, Relationship Building/Teamwork, Dependability/Integrity, and Flexibility/Adaptability

CAREERS RELATED TO THIS EVENT

This competition has connections to one (1) or more of the careers below:

- Advertising executive
- Public speaker
- Politician
- Sales and marketing executive
- Teacher

Participant/Team ID# _____

EXTEMPORANEOUS SPEECH

2025 & 2026 OFFICIAL RATING FORM

HIGH SCHOOL

Judges: Using minimal (1-4 points), adequate (5-8 points), or exemplary (9-10 points) performance levels as a guideline in the rating form, record the scores earned for the event criteria in the column spaces to the right. The X1 or X2 notation in the criteria column is a multiplier factor for determining the points earned. (Example: an "adequate" score of 7 for an X1 criterion = 7 points; an "adequate" score of 7 for an X2 criterion = 14 points.) A score of zero (0) is acceptable if the minimal performance for any criterion is not met.

SPEECH (100 points)				Record scores in the column spaces below.
CRITERIA	Minimal performance	Adequate performance	Exemplary performance	
	1-4 points	5-8 points	9-10 points	
Organization (X1)	The speech is unorganized and difficult to follow or understand.	The speech is somewhat organized and generally can be followed and understood.	The speech is well organized and easy to follow; the delivery is exceptional.	
Introduction (X1)	Introduction is weak, with little effort made to highlight the topic and/or to generate interest and enthusiasm for the topic.	Effort is evident, introduction creates a moderate level of interest.	Introduction is effective, stimulating, and engaging.	
Knowledge (X2)	Minimal knowledge of the subject is evident in the speech; the participant does not convey an understanding of the topic.	Adequate knowledge of the subject is evident, and the speaker conveys a general understanding of the topic.	Complete knowledge and understanding of the topic and the development of a theme are conveyed through content of the speech.	
Voice and Articulation (X1)	The presenter conveys an inconsistent use of proper grammar, word pronunciation, and acceptable tone and pitch.	The presenter generally uses proper grammar and pronunciation, and varies the use of tone and pitch.	Smooth and effective articulation, proper grammar, correct pronunciation, and varied tone and pitch are evident throughout the speech.	
Stage Presence (X1)	The presenter's appearance is unprofessional, sloppy, and inappropriate.	The presenter's appearance is adequate, appropriate, and somewhat professional.	The presenter's appearance is appropriate, professional, and polished.	
Impact (X3)	The speech is unconvincing, uninteresting, and lacks compelling and attention-holding details; leadership and/or 21st century skills are not evident	The speech is somewhat convincing and emphasizes several details; it adequately holds the attention of the audience and remains interesting; leadership and/or 21st century skills are somewhat evident.	The speech is completely convincing, full of emphasis, and holds the attention and interest of the audience; leadership and/or 21st century skills are clearly evident.	
Conclusion (X1)	Conclusion fails to summarize or clearly clarify the information presented in the speech.	Conclusion generally summarizes the content and topic of the speech.	The conclusion is effective, interesting, and memorable; it fully brings finality to the speech.	
SPEECH SUBTOTAL (100 points)				

Rules violations (a deduction of 20% of the total possible points for the above sections) must be initialed by the judge, coordinator, and manager of the event. Record the deduction in the space to the right.

Indicate the rule violated: _____

TIME DEDUCTIONS

One (1) point per ten (10)-second interval is to be deducted for speaking under the three (3) minutes or over the five (5) minutes allotted for the speech. Time commences when the participant begins speaking

Presentation Delivery Time	
TOTAL TIME DEDUCTION	

To arrive at the TOTAL score, add any subtotals and subtract rules violation points, as necessary. **TOTAL (100 points)**

Comments:

_____

I certify these results to be true and accurate to the best of my knowledge.

JUDGE

Printed name: _____ Signature: _____

EXTEMPORANEOUS SPEECH
EVENT COORDINATOR INSTRUCTIONS

PERSONNEL

A. Event coordinator

B. Judges, two (2) or more per heat/event room

C. Timekeepers, one (1) per heat/event room

D. Monitors, one (1) per event room

MATERIALS

A. Coordinator's packet, containing:

 1. Event guidelines, one (1) copy for the coordinator and for each judge

 2. TSA Event Coordinator Report

B. Speaker's stand/podium, one (1) per heat/event room

C. Stopwatch, one (1) per heat/event room and two (2) per preparation room

D. 5" x 7" notecard with "Time remaining 1 minute," one (1) card per heat/event room.

E. Table and chairs for judges and the timekeeper

F. Chairs for audience (if applicable)

G. 3" x 5" blank notecards, three (3) per participant

H. 3" x 5" topic cards—a minimum of fifteen (15) different topics from which to select

I. Tables and chairs in the preparation room

RESPONSIBILITIES

AT THE CONFERENCE

A. Attend the mandatory coordinator's meeting at the designated time and location.

B. Report to the CRC room and check the contents of the coordinator's packet.

C. Review the event guidelines and check to see that enough personnel have been scheduled.

D. Inspect the areas in which the heats are conducted for appropriate set-up including sufficient number and size of tables.

E. At least one (1) hour before the event is to begin, meet with judges and assistants to review time limits, procedures, regulations, evaluation, and all other details related to the event. If questions arise that cannot be answered, speak to the event manager before the event begins.

F. Ensure the judges have access to the online judging system.

EVENT CHECK-IN

A. Participants report at the time and place stated in the conference program to sign up for a presentation time.

B. Late entries are considered on a case-by-case basis and only when the lateness is caused by events beyond the participant's control.

C. In order to compete, participants must be on the entry list or must have CRC approval.

D. If check-in is on the first day of the conference, requirements for attire do NOT apply during check-in.

PRELIMINARY ROUND

A. Manage the smooth flow of participants according to these procedures:

 1. After having selected a topic, the first participant enters a preparation room that is separate from the speech delivery room and is given fifteen (15) minutes to prepare a speech.

 2. Seven (7) minutes after the first participant enters the preparation room, the second participant enters the preparation room, goes to a different section, and is given fifteen (15) minutes to prepare a speech.

 3. Each participant, in turn, is allowed to enter the preparation room at seven (7)-minute intervals, thus enabling a consistent flow of participants to speak before the judges in a timely fashion. (This allows for one [1] minute to enter the room and announce the entry number, up to five [5] minutes for the presentation, and one [1] minute to exit the room.)

B. When the participants have finished, each judge records the scores, consulting the timekeeper's record. The timekeepers notify judges of any time under three (3) minutes or over five (5) minutes for which deductions should be made.

C. Decisions about rules violations must be discussed and verified with the judges, event coordinator, and CRC manager to determine either:

1. To deduct twenty percent (20%) of the total possible points in this round or

2. To disqualify the entry

The event coordinator, judges, and CRC manager must initial either of these actions on the rating form.

D. Create a sign-up sheet for the semifinal round.

SEMIFINAL ROUND

A. Meet at the time and location in the conference program to determine the time for each semifinalist to begin preparation.

B. Manage the semifinalist speeches.

C. Using the same official rating form for the semifinalist, judges asses the semifinalist speeches and determine the ten (10) finalists.

D. Discuss rule violations (e.g. 20% deduction, disqualification) and have all relevant parties initial the rating form.

E. If necessary, manage security and the removal of materials from the area.

FASHION DESIGN AND TECHNOLOGY

OVERVIEW

Applying leadership and 21st century skills, participants demonstrate an expertise in fashion design principles by creating a wearable design that reflects the annual theme. Semifinalist teams participate in an on-site presentation/interview in which they present their garment designs and discuss the design process.

The theme for the current year is published on the TSA website under *Themes & Problems*.

ELIGIBILITY

Five (5) teams of two to four (2-4) individuals per state may participate.

TIME LIMITS

A. A. Ten (10) minutes are allowed for the presentation/interview broken down as follows:

  1. two (2) minutes for set-up
  2. three (3) minutes for the presentation
  3. three (3) minutes for the interview
  4. two (2) minutes for the removal of items

B. A deduction of five (5) points will be incurred for exceeding the presentation/interview time limit.

ATTIRE

TSA competition attire is required for this event.

PROCEDURE

PRE-CONFERENCE

A. Participants review the TSA Honor Statement for Competitive Events found in the General Rules and listed in the individual competitive event rules.

B. Participants access the annual theme on the TSA website under *Themes & Problems*.

C. Participants concentrate their efforts on designing a wearable prototype with technological elements.

D. Participants prepare their documentation portfolio according to the regulations.

PRELIMINARY ROUND

A. Participants check in the following at the time and place stated in the conference program (contained in a plastic storage container not exceeding 32 quarts):

  1. The wearable prototype
  2. Patterns
  3. The documentation portfolio

B. Entries are reviewed by judges with neither students nor advisors are present based on the following criteria:

  1. Judges score the Garment and Pattern criteria to determine the top twenty-four (24) preliminary round contestants, which will not be posted. Only the item(s) specified in the annual theme, patterns and portfolio are judged. Additional accessories, not named in the event requirements, are not to be considered in scoring.

  2. Judges score the Documentation Portfolio criteria of those top twenty-four (24) contestants to determine the top twelve (12) finalists.

C. A list of twelve (12) semifinalists (in random order) is posted.

SEMIFINAL ROUND

A. Participants report at the time and place stated in the conference program to sign up for a presentation/interview time.

B. Participants report at the assigned time and place for the presentation/interview.

C. Semifinalists present their designs and answer questions from the judges.

D. Models are present and wearing the prototypes designed by the team.

E. Participants are allowed ten (10) minutes to complete the presentation/interview broken down as follows:

  1. two [2] minutes for set-up
  2. three [3] minutes for the presentation
  3. three [3] minutes for the interview
  4. two [2] minutes for removal of items

  Points will be deducted from a team's score for exceeding the ten (10)-minute time frame allowed for the semifinal round.

F. Final evaluation by judges takes place immediately following the completion of the presentation/interview.

G. The top ten (10) finalists are announced at the awards ceremony.

REGULATIONS AND REQUIREMENTS

Students will work to develop their leadership and 21st century skills in the process of preparing for and participating in this TSA competitive event. The development and application of those skills must be evident in their submission, demonstration, and/or communication pertaining to the entry.

PRELIMINARY ROUND

A. Participants submit their portfolio, patterns, and prototype(s), in a plastic container not exceeding 32 quarts. The container must only include the portfolio, patterns, prototype(s), and components listed in the annual theme. A cardboard box is not a plastic container.

B. The portfolio, patterns, and prototype MUST be submitted together in the plastic storage container not exceeding 32 quarts.

C. ALL components of the entry (patterns, prototypes, etc.) must be the orginal work of the participants.

D. Prototypes (garments):

1. Any type of prototype (garment) that is typical of responsible clothing design and creation is considered appropriate.

2. The purchase/use of special textiles (water/ fireproof materials, etc.) is not required.

3. Information about textiles must be used in the research/design portfolio, but the prototype does not have to be constructed using these materials.

4. No hangers or dressmaker mannequins are allowed. All required components must be submitted in the plastic storage container not exceeding 32 quarts.

5. The prototype, with any additional items required by the annual theme, must be placed in the container with the portfolio and patterns.

6. The prototypes must be presentation quality.

7. All designs and prototypes/garments should be appropriate for viewing at the National TSA Conference.

8. Any portfolio or garment that depicts inappropriate or unacceptable designs is disqualified.

9. Only the required prototypes (garments) are to be submitted for evaluation. Additional items, including accessories and other garments, may be used only in the semifinalist presentation and may not be submitted for preliminary judging.

E. Patterns:

1. Full-sized student-made pattern(s) must be included.

2. Patterns must be made of appropriate lightweight vellum paper.

3. Patterns must NOT be purchased.

F. Documentation Portfolio:

1. Documentation materials (comprising "a portfolio") are required and must be secured in a clear front report cover with the following single-sided, 8½" x 11" pages, in this order:

   a. Title page with the event title, chapter ID#, the conference city and state, and the year; one (1) page

   b. Table of contents; one (1) page

   c. Literature research summary; maximum of two (2) pages

   d. Interpretation of theme; maximum of two (2) pages

   e. Explanation of the design and construction of the prototypes, textiles used, notions needed, sewing/construction techniques used, etc.; maximum of two (2) pages

   f. Design process sketches (hand-drawn); maximum of five (5) pages

   g. Computer-drawn final design print-outs; maximum of five (5) pages

   h. References/resources; maximum of five (5) pages

SEMIFINAL ROUND

A. If required, each semifinalist team must have access to student TSA member model(s) and the team-created prototypes in order to compete in the semifinals. Models must be members of the team's TSA chapter.

B. Spectators are not permitted during the semifinal challenge.

EVALUATION

PRELIMINARY ROUND

Tier 1

A. The prototype (wearable garments)

B. The patterns

Tier 2

C. The documentation portfolio

SEMIIFINAL ROUND

A. The presentation/interview

Refer to the official rating form for more information.

TSA HONOR STATEMENT

All work must be created and completed by individual competitors or teams. Plagiarism, the use of Generative Artificial Intelligence (GenAI) software, copyright violation, cheating, and falsification of information are prohibited. Participants may NOT use any generative artificial intelligence (GenAI) tools (e.g. ChatGPT, Google Gemini, GitHub Copilot, etc.). Any attempt to gain an unfair advantage will not be tolerated. Competitors at any level of TSA competition understand and agree to abide by the TSA Honor Statement.

If it is determined that a student violated the TSA Honor Statement, a rules violation of twenty percent (20%) will be incurred.

STEM INTEGRATION

This event aligns with the STEM (Science, Technology, Engineering, and Mathematics) educational standards.

LEADERSHIP AND 21ST CENTURY SKILLS

This event provides opportunity for students to build and develop leadership and 21st century skills including but not limited to – Communication, Collaboration/Social Skills, Initiative, Problem Solving/Risk Taking, Critical Thinking, Perseverance/Grit, Creativity, Relationship Building/Teamwork, Dependability/Integrity, and Flexibility/Adaptability

CAREERS RELATED TO THIS EVENT

This competition has connections to one (1) or more of the careers below:

- Fashion Layout Editor
- Fashion Magazine Editor
- Fashion Merchandiser
- Model
- Tailor

FASHION DESIGN AND TECHNOLOGY

2025 & 2026 OFFICIAL RATING FORM

HIGH SCHOOL

Judges: Using minimal (1-4 points), adequate (5-8 points), or exemplary (9-10 points) performance levels as a guideline in the rating form, record the scores earned for the event criteria in the column spaces to the right. The X1 or X2 notation in the criteria column is a multiplier factor for determining the points earned. (Example: an "adequate" score of 7 for an X1 criterion = 7 points; an "adequate" score of 7 for an X2 criterion = 14 points.) A score of zero (0) is acceptable if the minimal performance for any criterion is not met.

Go/No Go Specifications

- Before judging the entry, ensure that the items below are present; indicate presence with a check mark in the box.
- If an item is missing, leave the box next to the item blank and place a check mark in the box labeled ENTRY NOT EVALUATED.
- If a check mark is placed in the ENTRY NOT EVALUATED box, the entry is not to be judged.

☐ TIER 1 – Required garments/patterns and prototypes are present and in a plastic storage container not exceeding 32 quarts

☐ TIER 2 – Documentation portfolio is present

☐ ENTRY NOT EVALUATED

TIER 1 – GARMENTS (50 points)

Record scores in the column spaces below.

CRITERIA	Minimal performance	Adequate performance	Exemplary performance	
	1-4 points	5-8 points	9-10 points	
Proper Sewing/ Construction Techniques Used/ Evident (X2)	Prototype construction fails to meet accepted standards and/or techniques of construction.	Prototype construction meets acceptable standards and construction techniques.	Prototype construction is of high quality and indicates use of a variety of appropriate techniques.	
Use of Notions (buttons, zippers, snaps, embroidery, embellishments, etc) (X1)	Little or no use of notions is evident in the garments.	An adequate choice and variety of notions are used in the garments; notions are somewhat appropriate.	An excellent choice and variety of notions are used that enhance the overall appearance and quality of the garments.	
Creativity, Originality, and Difficulty of Garment Creation (X1)	Patterns lack creativity, and/or originality, and/or difficulty in execution.	Patterns are of decent quality and demonstrate some degree of difficulty and originality.	Patterns are of industry standard; they clearly demonstrate originality, creativity, and skill.	
Integration of Technology (X1)	Little or no use of technology is evident in the garments.	Technology is somewhat integrated, but it does not contribute to the overall design.	Technology is integrated successfully and adds value to the overall design of the garment.	
TIER 1 – GARMENTS SUBTOTAL (50 points)				

TIER 1 – PATTERNS (20 points)

Record scores in the column spaces below.

CRITERIA	Minimal performance	Adequate performance	Exemplary performance	
	1-4 points	5-8 points	9-10 points	
Two or More Hand-Made Garment Patterns (X2)	Patterns are poorly constructed, and/or are missing key components.	Patterns are generally well constructed; some key attributes and designs are included.	Patterns are designed to detail standards and are of appropriate specifications.	

TIER 1 – PATTERNS SUBTOTAL (20 points)

Rules violations (a deduction of 20% of the total possible points for the above sections) must be initialed by the judge, coordinator, and manager of the event. Record the deduction in the space to the right.

Indicate the rule violated: _____

TIER 1 – SUBTOTAL (70 points)

TIER 2 – DOCUMENTATION PORTFOLIO (70 points)

Record scores in the column spaces below

CRITERIA	Minimal performance	Adequate performance	Exemplary performance	
	1-4 points	5-8 points	9-10 points	
Portfolio Components (X1)	Portfolio is unorganized and/or is missing three (3) or more components.	Portfolio has most components and is generally organized per the order of the event guide listing; it has sufficient content.	All components are included in the portfolio; content and organization per the order of the event guide listing are excellent.	
Summary of Research (X1)	The summary is too brief and/or lacks the appropriate details expected for the event.	The summary of the research is sufficient; most of the key details are included.	The summary is organized, clear, and concise, with appropriate and necessary details included.	
Interpretation of Theme (X1)	The interpretation of the theme is very weak and unconvincing.	The interpretation of the theme is somewhat convincing, with some appropriate justification.	The interpretation of the theme is clear, concise, and thorough, with convincing justification.	
Explanation of Garment Prototypes (X1)	The explanation is unclear, poorly organized, and/or does not accurately describe the garment prototypes.	The explanation is loosely organized, with adequate attempts to describe the garment prototypes and their production.	The explanation is clear, concise, and/or demonstrates extensive knowledge of garment prototypes and production.	
Design Process Sketches (X1)	Sketches are poorly executed and/or lack necessary details in the design process.	Sketches are complete as drawn and include most notations and references to the design process.	Sketches are well executed, organized, and clearly represent the design process.	
Computer Drawings for Final Design (X1)	Computer drawings fail to accurately portray the final design; there are major omissions of important details.	Computer drawings somewhat illustrate the final design, with many important details included.	Computer drawings of the final design are clear, accurate, and effectively portray the final product.	
Resources/ References (X1)	Research is inadequate, with very few credible resources and references provided and/or documented.	Research is adequate with most important resources and references adequately documented; references are somewhat credible.	Research is comprehensive, and all resources and references are properly documented and credible.	

TIER 2 – DOCUMENTATION PORTFOLIO SUBTOTAL (70 points)

Rules violations (a deduction of 20% of the total possible points for the above sections) must be initialed by the judge, coordinator, and manager of the event. Record the deduction in the space to the right.

Indicate the rule violated: _____

PRELIMINARY SUBTOTAL (140 points)

FASHION DESIGN AND TECHNOLOGY

SEMIFINAL PRESENTATION/INTERVIEW (70 points)

CRITERIA	Minimal performance	Adequate performance	Exemplary performance	
	1-4 points	5-8 points	9-10 points	
Organization (X1)	Participants seem unorganized and unprepared for the presentation.	Participants are generally prepared for the presentation.	The presentation is logical, well organized, and easy to follow.	
Knowledge (X2)	Participants seem to have little understanding of the concepts in their project; answers to questions may be vague.	Participants exhibit an adequate understanding of the concepts in their project.	Participants show clear evidence of a thorough understanding of the project.	
Articulation (X1)	Presentation of the project is unclear, unorganized, and or illogical; leadership and/or 21st century skills are not evident.	Presentation of the project is somewhat logical and clear; leadership and/or 21st century skills are somewhat evident.	Presentation of the project is clear, concise, and easy-to-follow; leadership and/or 21st century skills are clearly evident.	
Delivery (X1)	The team is verbose and/or uncertain in its presentation/ interview; participants' posture, gestures, and lack of eye contact diminish the interview.	The team is somewhat well-spoken and distinct in its presentation/ interview; participants' posture gestures, and eye contact are acceptable.	The team is well-spoken and distinct in its presentation/interview; participants' posture, gestures, and eye contact result in a polished, natural, and effective interview.	
Quality of Prototype on Model (X2)	The prototype does not appear to fit and/or is inappropriate for the person modeling (color, style, textures, etc).	The prototype is generally well-made for the person modeling.	The prototype clearly is made and designed for the model – fitting nicely, with appropriate style, colors, textures, etc.	
SEMIFINAL PRESENTATION/INTERVIEW SUBTOTAL (70 points)				

TIME DEDUCTIONS

Time violation (a deduction of five (5) points total will be incurred for exceeding the semifinalist presentation time limit). Record the deduction in the space to the right.	
Rules violations (a deduction of 20% of the total possible points for the above sections) must be initialed by the judge, coordinator, and manager of the event. Record the deduction in the space to the right. Indicate the rule violated: _____	
SEMIFINAL SUBTOTAL (70 points)	
To arrive at the TOTAL score, add any subtotals and subtract rules violation points, as necessary. **TOTAL (210 points)**	

Comments:

_____

I certify these results to be true and accurate to the best of my knowledge.

JUDGE

Printed name: _____   Signature: _____

FASHION DESIGN AND TECHNOLOGY EVENT COORDINATOR INSTRUCTIONS

PERSONNEL

A. Event coordinator

B. Judge:

1. Preliminary round, two (2) or more

2. Semifinal round, two (2) or more

3. Timekeeper

MATERIALS

A. Coordinator's packet, containing:

1. Event guidelines, one (1) copy for the coordinator and for each judge

2. TSA Event Coordinator Report

3. Stick-on labels for entries, as needed

B. Stopwatch, one (1)

C. Tables for entries

D. Tables and chairs for judges

E. Chairs for audience

F. One (1) table, approximately six feet (6') long, for judges

RESPONSIBILITIES

AT THE CONFERENCE

A. Attend the mandatory coordinator's meeting at the designated time and location.

B. Report to the CRC room and check the contents of the coordinator's packet.

C. Review the event guidelines and check to see that enough personnel have been scheduled.

D. Inspect the area(s) in which the event is to be held for appropriate set-up, including room size, tables, chairs, etc. Notify the event manager of any potential problems.

E. At least one (1) hour before the event is to begin, meet with judges and assistants to review time limits, procedures, regulations, evaluation, and all other details related to the event. If questions arise that cannot be answered, speak to the event manager before the event begins.

F. Ensure the judges have access to the online judging system.

EVENT CHECK-IN

A. Check in the entries at the time and place stated in the conference program.

B. If check-in is on the first day of the conference, requirements for attire do NOT apply during check-in.

C. Late entries are considered on a case-by-case basis and only when the lateness is caused by events beyond the participant's control.

D. In order to compete, participants must be on the entry list or must have CRC approval.

E. Each entry must include the team's identification number in the upper right-hand corner of the entry.

PRELIMINARY ROUND

A. Judges independently evaluate each entry.

B. Entries are reviewed by judges with neither students nor advisors are present based on the following criteria:

1. Judges score the Garment and Pattern criteria to determine the top twenty-four (24) preliminary round contestants, which will not be posted.

2. Judges score the Documentation Portfolio criteria of those top twenty-four (24) contestants to determine the top twelve (12) finalists.

C. Decisions about rules violations must be discussed and verified with the judges, event coordinator, and CRC manager to determine either:

1. To deduct twenty percent (20%) of the total possible points in this round or

2. To disqualify the entry

The event coordinator, judges, and CRC manager must initial either of these actions on the rating form.

D. Judges determine twelve (12) semifinalists.

E. Create a semifinalist sign-up sheet.

SEMIFINAL ROUND

A. Participants report at the time and place stated in the conference program to sign up for a presentation/ interview time.

B. Participants report at the assigned time and place for the presentation/interview.

C. Manage semifinalist presentations.

D. Allow the first team to enter the event room, and provide two (2) minutes for set-up of materials.

E. The event coordinator or assistant introduces the team by entry number only.

F. Each team is allowed three (3) minutes for the presentation and three (3) minutes to answer interview questions.

G. Each team is allowed two (2) minutes to remove all materials.

H. Discuss rule violations (e.g. 20% deduction, disqualification) and have all relevant parties initial the rating form.

I. If necessary, manage security and the removal of materials from the event area.

FLIGHT ENDURANCE

OVERVIEW

Participants apply leadership and/or 21st century skills during the design iteration process in which participants build, fly, and adjust (trim) a rubber-band powered model aircraft to make long endurance flights inside a contained airspace. Models must be of fixed-wing design and comply with all event specifications.

ELIGIBILITY

Two (2) individuals per chapter may participate.

TIME LIMITS

Thirty (30) minutes is allowed to trim flights.

ATTIRE

TSA competition attire is required for this event.

PROCEDURE

PRE-CONFERENCE

A. Participants review the TSA Honor Statement for Competitive Events found in the General Rules and listed in the individual competitive event rules.

ON-SITE TESTING OF PRE-BUILT AND TRIMMED AIRCRAFT

A. Participants check in the following at the time and place stated in the conference program:
   1. The completed aircraft
   2. The portfolio
   3. Safety glasses

B. Aircraft will be stored in a secure holding area until the scheduled time for trim and official flights.

ON-SITE TESTING

A. Prior to trim flying, participants are strongly encouraged to check out the designated competition room for this event.

B. Participants attend a pilot's meeting to review the sequence for making official flights.

C. Participants arrive at the competition site for trim flying during the time designated for their heat.

D. Time allotted for the trim portion of the event may be extended according to the number of participants and site scheduling.

E. Participants have two (2) opportunities to fly their models for official times.

OFFICIAL FLIGHT TEST

A. In an orderly fashion, participants proceed to a group timer for permission to fly.

B. Participants place their models on the floor and wait for the release signal from the timer. Timing begins when the model rises off the ground.

C. Flight time ends when models hit the floor/ground or when they come to rest on an obstruction.

D. The timekeeper records the two (2) official flight times and landing bonus(s) for each participant.

E. Immediately following the second flight, the participant hands his/her motor to the judge for weighing. Place in a zip lock bag and record the entry number on the outside.

SCORING

A. Entries are evaluated by the judges with neither students nor advisors present based on the following criteria:
   1. Judges enter the flight times and landing bonus(s) for each entry to determine the top sixteen (16) contestants, which will not be posted.
   2. Judges complete the inspection of the model and flight box, enter the placement points, and judge the documentation portfolio to determine the ten (10) finalists.

B. A model or flight box that fails inspection will receive a zero (0) for the flight rankings.

C. The top ten (10) finalists are announced at the awards ceremony.

Flight Log:

Flight #	# of winds	Time aloft	Flight pattern	Trim adjustment	Advisor sign off
Participant ID#:			Dates:		
#1					
#2					
#3					
#4					
#5					
#6					
#7					
#8					
#9					
#10					

REGULATIONS AND REQUIREMENTS

Students will work to develop their leadership and 21st century skills in the process of preparing for and participating in this TSA competitive event. The development and application of those skills must be evident in their submission, demonstration, and/or communication pertaining to the entry.

A. Flight Endurance is an individual event.
   1. No one may assist the participant in any way during either trim or official flights.
   2. Violation of this regulation will result in disqualification.

B. Documentation Portfolio:
   1. Documentation materials (comprising "a portfolio") are required and must be secured in a clear front report cover with the following single-sided, 8½" x 11" pages, in this order:
      a. Title page with the event title, the member identification number, the conference city and state, and the year; one (1) page
      b. A flight log; pages as needed (see official sample above), with the previous ten (10) flights.
      c. The technical attributes of the design and a description and identification of parts; pages as needed
      d. An analysis of the modifications and an explanation of why each was made must be included; pages as needed

e. A technical review of the flight log that explains the trim adjustments and modifications required to improve endurance. Experts from the Academy of Model Aeronautics (AMA) and the National Free Flight Society (NFFS) may scrutinize this information for validity; one (1) page

f. Assembly drawing of plane (full size or scale drawing); pages as needed

g. Scaled engineered drawings of all structural parts of the plane; pages as needed

C. The model and its parts must be contained in a flight box that does not exceed 25cm x 40cm x 60cm. Flight box hardware, such as hinges, handles, and wheels, are not measured.
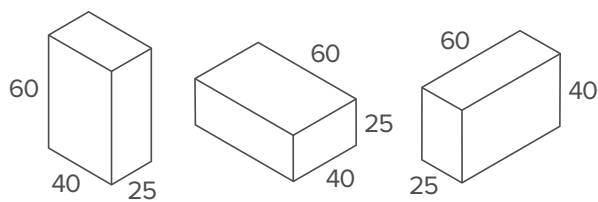
D. **A flight box that violates any part of Regulation C will disqualify the model.**

E. Models:

1. Models are to be made of any materials that are typically found in model construction. This includes, but is not limited to: wood, foam, foam board, and plastics.

   a. Hardeners are permitted but are not required.

   b. **The use of any materials that are deemed unsafe will not be tested and will be disqualified. This includes any model containing Boron Fibers or Filaments.**

2. Models must use a fixed-pitch propeller with a maximum of 170mm diameter.

   a. Propellers may be trimmed, shaped, balanced, or re-pitched, but must remain fixed in pitch.

   b. Variable-pitch propellers and/or mechanisms are NOT permitted.

3. Rotary-wing aircraft and aerostat (lighter than air) aircraft are NOT permitted.

4. Fuselage dimension: minimum of 300mm in length, measured with prop assembly attached.

5. Wingspan: maximum of 40cm horizontally projected, wing chord 9cm projected.

6. Rubber motor: maximum weight of motor is 1.50 grams, including the O-rings.

   a. No length measurement is made.

   b. Spare motors are allowed during the official flights.

   c. Two (2) rubber O-rings may be used on the rubber motor loop for easier handling of wound motors.

7. Model weight: minimum of 8.0 grams, maximum of 23.0 grams.

   a. Models are weighed without motors attached.

   b. Clay is permitted for trim ballast.

   c. Model is weighed with clay ballast.

8. Steel wire may be used only for the propeller shaft, motor hook, landing gear, and the connection between fuselage and tail. Small plastic tubes, such as coffee stirrers, may be used.

9. The two (2) wheels must be a minimum of 15mm in diameter, made of plastic or wood, and they must roll freely by the weight of the plane on a smooth surface.

10. When at rest, the landing gear must support the model without the fuselage and/or propeller touching the floor or launching pad.

F. Acceptable flight support equipment includes the following:

1. Mechanical rubber motor winders or battery-powered motor winders may be used. No AC-powered winders are allowed.

2. A winding stooge may be used to anchor the model while the motor is being wound. A person may not serve as a winding stooge.

3. A poster board launching platform is provided.

G. Only minor repairs are allowed during trim and time trials.

EVALUATION

PRELIMINARY ROUND

Tier 1

A. Flight times and landing bonus(s)

Tier 2

B. Inspection of model and flight box

C. Flight ranking points

D. Documentation portfolio

Refer to the official rating form for more information.

TSA HONOR STATEMENT

All work must be created and completed by individual competitors or teams. Plagiarism, the use of Generative Artificial Intelligence (GenAI) software, copyright violation, cheating, and falsification of information are prohibited. Participants may NOT use any generative artificial intelligence (GenAI) tools (e.g. ChatGPT, Google Gemini, GitHub Copilot, etc.). Any attempt to gain an unfair advantage will not be tolerated. Competitors at any level of TSA competition understand and agree to abide by the TSA Honor Statement.

If it is determined that a student violated the TSA Honor Statement, a rules violation of twenty percent (20%) will be incurred.

NOTES

Two organizations—the Academy of Model Aeronautics (AMA) and the National Free Flight Society (NFFS)—welcome your inquiries and offer suggestions, help, and technical information concerning model aircraft and flight technology.

Contact the AMA: www.modelaircraft.org.

Contact NFFS: www.freeflight.org.

STEM INTEGRATION

This event aligns with the STEM (Science, Technology, Engineering, and Mathematics) educational standards.

LEADERSHIP AND 21ST CENTURY SKILLS

This event provides opportunity for students to build and develop leadership and 21st century skills including but not limited to – Communication, Collaboration/Social Skills, Initiative, Problem Solving/Risk Taking, Critical Thinking, Perseverance/Grit, Creativity, Relationship Building/Teamwork, Dependability/Integrity, and Flexibility/Adaptability

CAREERS RELATED TO THIS EVENT

This competition has connections to one (1) or more of the careers below:

- Aeronautical engineer
- Aircraft systems engineer
- Physics teacher

FLIGHT ENDURANCE
2025 & 2026 OFFICIAL RATING FORM
HIGH SCHOOL

Judges: Using minimal (1-4 points), adequate (5-8 points), or exemplary (9-10 points) performance levels as a guideline in the rating form, record the scores earned for the event criteria in the column spaces to the right. The X1 or X2 notation in the criteria column is a multiplier factor for determining the points earned. (Example: an "adequate" score of 7 for an X1 criterion = 7 points; an "adequate" score of 7 for an X2 criterion = 14 points.) A score of zero (0) is acceptable if the minimal performance for any criterion is not met.

Go/No Go Specifications

- Before judging the entry, ensure that the items below are present; indicate presence with a check mark in the box.
- If an item is missing, leave the box next to the item blank and place a check mark in the box labeled ENTRY NOT EVALUATED.
- If a check mark is placed in the ENTRY NOT EVALUATED box, the entry is not to be judged.

☐ TIER 1 – Model is present for flight times
☐ TIER 2 – Inspection, flight rankings, and documentation portfolio
☐ ENTRY NOT EVALUATED

TIER 1 – FLIGHT TIMES

Flight times recorded to the nearest tenth (.1) of a second.

Duration of Flight #1	Seconds	
Duration of Flight #2	Seconds	
Landing Bonus – add ten (10) seconds for each successful landing	Seconds	
TIER 1 – TOTAL FLIGHT TIMES (combine flight #1, flight #2, and landing bonus)	SECONDS	

TIER 2 – FLIGHT RANKINGS (60 points)

1st	2nd	3rd	4th	5th & 6th	7th & 8th	9th-12th	13th – 16th
60 Points	55 Points	50 Points	45 Points	40 Points	35 Points	30 Points	20 Points

TIER 2 – FLIGHT RANKINGS (60 points)

TIER 2 – DOCUMENTATION PORTFOLIO (70 points)

Record scores in the column spaces below

CRITERIA	Minimal performance	Adequate performance	Exemplary performance	
	1-4 points	5-8 points	9-10 points	
Portfolio Components (X1)	Portfolio is unorganized and/or is missing three (3) or more components.	Portfolio has most components and is generally organized per the order of the event guide listing; it has sufficient content.	All components are included in the portfolio; content and organization per the order of the event guide listing are excellent.	
Flight Log (X1)	The flight log is incomplete; the advisor's signature is not included.	The flight log is generally complete; the advisor's signature is present.	The flight log is complete, with the advisor's signature; a thorough understanding of the flight log's purpose is evident.	

TIER 2 – DOCUMENTATION PORTFOLIO (70 points) – continued				
Technical Attributes (X1)	Attributes of the design reflect no knowledge of flight design.	Attributes of the design are included and adequately reflect basic knowledge of flight design.	Clear and precise attributes of the design are given; an in-depth knowledge of flight design is exhibited.	
Analysis of the Modifications and Explanation (X1)	Only one (1) modification is noted, and/or an explanation of why the modification was made is missing; leadership and/or 21st century skills are not evident.	Modifications are given with adequate explanations for how they improved flight endurance; leadership and/or 21st century skills are somewhat evident.	Modifications and an explanation of why they were made are provided; a clear and precise explanation for how they improved the flight endurance is provided; leadership and/or 21st century skills are clearly evident.	
Technical Review of Flight Log (X1)	Only one (1) review of trim adjustments or modifications are included to improve endurance.	Most reviews of trim adjustments or modifications are included to improve endurance.	The review of the flight log includes precise multiple explanations of trim adjustments and modifications to improve endurance.	
Assembly Drawing (X1)	Assembly drawing is unclear; the majority of the design principles are not addressed or are missing; pictures are missing.	Assembly drawing is partially clear; most of the design principles are addressed and/or present; some pictures are missing.	Assembly drawing is clear, accurate, and executed well; all design principles are addressed; no pictures are missing.	
Scaled Engineering Drawings (X1)	The majority of the parts are not described, sourced, or identified accurately; scaled engineered drawings are incomplete or missing.	Most parts are described and sourced accurately; scaled engineered drawings include most details.	All parts are described and sourced completely and accurately; engineering drawings are complete.	
TIER 2 – DOCUMENTATION PORTFOLIO SUBTOTAL (70 points)				

Rules violations (a deduction of 20% of the total possible points for the above sections) must be initialed by the judge, coordinator, and manager of the event. Record the deduction in the space to the right. Indicate the rule violated: _____	

To arrive at the TOTAL score, add any subtotals and subtract rules violation points, as necessary. **TOTAL (130 points)**	

Comments:

_____

I certify these results to be true and accurate to the best of my knowledge.

JUDGE

Printed name: _____   Signature: _____

FLIGHT ENDURANCE
EVENT COORDINATOR INSTRUCTIONS

PERSONNEL

A. Event coordinator

B. Assistants, two (2) or more

C. Judges, two (2) or more

D. Timekeepers, two (2)

MATERIALS

A. Coordinator's packet, containing:

1. Event guidelines, one (1) copy for the coordinator and for each judge

2. TSA Event Coordinator Report

B. Marking pens (sharpie and felt tip. fine point)

C. Two (2) metric tape measures

D. Two (2) rolls of caution tape

E. 125 zip lock bags (for motor storage for weighing)

F. Three (3) launch pads (poster board, 30" x 40")

G. Signs for door(s) reading Do Not Open, Flight in Progress, Knock for Entry

H. Stopwatches, three (3)

I. Electronic gram scale (to .01 gram)

RESPONSIBILITIES

AT THE CONFERENCE

A. Attend the mandatory coordinator's meeting at the designated time and location.

B. Report to the CRC room and check the contents of the coordinator's packet.

C. Review the event guidelines and check to see that enough judges and assistants have been scheduled.

D. Inspect the area(s) in which the event is to be held for appropriate set-up, including room size, tables, chairs, etc. Notify the event manager of any potential problems.

E. At least one (1) hour before the event is to begin, meet with judges and assistants to review time limits, procedures, regulations, evaluation, and all other details related to the event. If questions arise that cannot be answered, speak to the event manager before the event begins.

F. Ensure the judges have access to the online judging system.

EVENT CHECK-IN

A. Check in participants and evaluate models for special compliance during the scheduled trim session.

B. If check-in is on the first day of the conference, requirements for attire do NOT apply during check-in.

C. Anyone reporting who is not on the entry list may check in only after official notification is received from the CRC.

D. Late entries are considered on a case-by-case basis and only when the delay is caused by events beyond participant control.

E. Secure aircraft in the holding area so that they remain safe until the scheduled time for the official flights.

PRELIMINARY ROUND

A. Following the pilot's meeting, each entry is allowed to be flown and times recorded.

B. Up to three (3) groups may fly simultaneously in the assigned area for the event, with consideration for the safety of the models and participants.

C. Distribute a list of entrants assigned to each designated judge/timer.

D. Each flight is recorded to the nearest one-tenth (.1) of a second and landing bonus(s) are recorded.

E. Entries are evaluated by the judges with neither students nor advisors present based on the following criteria:

1. Judges enter the flight times and landing bonus(s) for each entry to determine the top sixteen (16) contestants, which will not be posted.

2. Judges complete the inspection of the model and flight box, enter the placement points, and judge the documentation portfolio to determine the ten (10) finalists.

F. Decisions about rules violations must be discussed and verified with the judges, event coordinator, and CRC manager to determine either:

1. to deduct twenty percent (20%) of the total possible points in this round or

2. to disqualify the entry

The event coordinator, judges, and CRC manager must initial either of these actions on the rating form.

G. If necessary, manage security and the removal of materials from the event area.

FLIGHT ENDURANCE

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FORENSIC SCIENCE

OVERVIEW

Participants take a test of basic forensic science theory to qualify as semifinalists. Applying leadership and 21st century skills, semifinalists examine a mock crime scene and demonstrate their knowledge of forensic science and crime scene analysis. Participants are expected to survey the scene and use proper techniques to collect evidence from the mock crime scene. Teams then collect their data and perform a detailed written analysis of the crime scene.

ELIGIBILITY

One (1) team of two (2) individuals per chapter may participate.

TIME LIMITS

PRELIMINARY ROUND

A. One (1) hour is allotted to complete the test.

SEMIFINAL ROUND

A. Twenty (20) minutes are allowed to review the crime scene and gather evidence.

B. Time commences when all participants are in the crime scene room and concludes after twenty (20) minutes.

C. An additional twenty (20) minutes are allowed for semifinalist teams to write their analysis.

D. Time begins when a team enters the analysis room and concludes at the end of twenty (20) minutes.

ATTIRE

TSA competition attire is required for this event.

PROCEDURE

PRE-CONFERENCE

A. Participants review the TSA Honor Statement for Competitive Events found in the General Rules and listed in the individual competitive event rules.

PRELIMINARY ROUND

A. Participants report for the test at the time and place stated in the conference program.

B. The forensic science test is administered to all team members at the same time.

C. Tests scores are averaged.

D. A list of twleve (12) semifinalists (in random order) is posted.

SEMIFINAL ROUND

A. Participants report at the time and place stated in the conference program to sign up for an on-site challenge time.

B. Participants report at the assigned time and place for the on-site challenge.

C. Each team is given a copy of the on-site problem to solve and is required to:

   1. Demonstrate three to four (3-4) techniques/procedures for evidence collection using their toolkits.

   2. Write an analysis of the crime scene (see Mock Crime Scene Analysis form).

D. The top ten (10) finalists are announced during the awards ceremony.

REGULATIONS AND REQUIREMENTS

Students will work to develop their leadership and 21st century skills in the process of preparing for and participating in this TSA competitive event. The development and application of those skills must be evident in their submission, demonstration, and/or communication pertaining to the entry.

PRELIMINARY ROUND

A. Team members take the test individually.

B. Tests may be administered online or via a scan-type answer sheet. Please review the *Competition Updates* page on the TSA website.

Technology Student Association (TSA) High School Competitive Events Guide for the 2025 and 2026 National TSA Conferences

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C. Scan-type forms are furnished by the event coordinator, if applicable.

D. Participants are responsible for bringing two (2) sharpened No.2 pencils to the test site.

E. Participant identification numbers must be entered on the scan form in the space indicated.

F. Failure to follow instructions will result in the score sheet not being scored.

G. Participants must stop work immediately when time is called.

H. Should a participant complete the test before the time allocated is over, the participant will submit the test and scantron form to the coordinator without any form of communication with any other member. Failure to do so results in disqualification of the participant.

I. All tests must be turned in before leaving the test area.

J. The average of the two team members scores determines the team ranking.

K. These same two (2) team members compete in the semifinal round, should the team qualify.

SEMIFINAL ROUND

A. No reference may be made concerning the name of the team, the team members, or their school.

B. Team members are to write their team identification number in the top right corner of the written analysis.

C. Each written analysis must be the result of the team's own effort.

D. No reference materials may be used during this event.

E. No observers are allowed in the event or preparation rooms during the event.

F. Teams are allowed to bring a tool kit to aid in their crime scene analysis. National TSA will not provide any items for a took kit. The tool kit can included the following items:

1. roll of string

2. personal protective equipment

3. tape measure (10 m)

4. tweezers

5. scissors

6. crime scene template

7. flashlight

8. pen or fine point marker (for labeling)

9. pencils

10. evidence collection bags

11. gloves

12. clipboard(s)

13. blank sheets of paper (for note taking)

14. Camera to aid in crime scene sketch. Cellphones not allowed. Photos must be deleted before leaving the holding room.

15. crime scene tape

16. measuring devices

17. evidence markers

18. tape

19. graph paper

20. ruler

21. magnifying glass

G. Participants analyze a crime scene and synthesize their findings in a written report/analysis.

H. Participants must be able to complete (at a minimum) the following:

1. Conduct primary survey of the crime scene.

2. Process a crime scene.

3. Collect evidence and keep detailed documentation.

4. Record and preserve evidence.

5. Collect trace evidence

6. Create a proportional drawing that accurately represents the crime scene. Note: The crime scene template in the toolkit may be used to create the drawing, but the drawing does not need to be to scale. Students will be provided with blank paper for drawing.

EVALUATION

PRELIMINARY ROUND

A. The averaged test scores

SEMIFINAL ROUND

A. Performance on the on-site challenge

Refer to the official rating form for more information.

TSA HONOR STATEMENT

All work must be created and completed by individual competitors or teams. Plagiarism, the use of Generative Artificial Intelligence (GenAI) software, copyright violation, cheating, and falsification of information are prohibited. Participants may NOT use any generative artificial intelligence (GenAI) tools (e.g. ChatGPT, Google Gemini, GitHub Copilot, etc.). Any attempt to gain an unfair advantage will not be tolerated. Competitors at any level of TSA competition understand and agree to abide by the TSA Honor Statement.

If it is determined that a student violated the TSA Honor Statement, a rules violation of twenty percent (20%) will be incurred.

STEM INTEGRATION

This event aligns with the STEM (Science, Technology, Engineering, and Mathematics) educational standards.

LEADERSHIP AND 21ST CENTURY SKILLS

This event provides opportunity for students to build and develop leadership and 21st century skills including but not limited to – Communication, Collaboration/Social Skills, Initiative, Problem Solving/Risk Taking, Critical Thinking, Perseverance/Grit, Creativity, Relationship Building/Teamwork, Dependability/Integrity, and Flexibility/Adaptability

CAREERS RELATED TO THIS EVENT

This competition has connections to one (1) or more of the careers below:

- Crime scene investigator
- Forensic anthropologist
- Forensic pathologist
- Forensic engineering scientist

HIGH SCHOOL FORENSIC SCIENCE
MOCK CRIME SCENE ANALYSIS

Use the space below to record/describe the processes/techniques used
to collect evidence from the mock crime scene and any applicable conclusions.

_____

_____

_____

_____

_____

_____

_____

_____

_____

_____

_____

_____

(ID# only)

_____

FORENSIC SCIENCE
2025 & 2026 OFFICIAL RATING FORM
HIGH SCHOOL

Judges: Using minimal (1-4 points), adequate (5-8 points), or exemplary (9-10 points) performance levels as a guideline in the rating form, record the scores earned for the event criteria in the column spaces to the right. The X1 or X2 notation in the criteria column is a multiplier factor for determining the points earned. (Example: an "adequate" score of 7 for an X1 criterion = 7 points; an "adequate" score of 7 for an X2 criterion = 14 points.) A score of zero (0) is acceptable if the minimal performance for any criterion is not met.

Go/No Go Specifications

- Before judging the entry, ensure that the items below are present; indicate presence with a check mark in the box.
- If an item is missing, leave the box next to the item blank and place a check mark in the box labeled ENTRY NOT EVALUATED.
- If a check mark is placed in the ENTRY NOT EVALUATED box, the entry is not to be judged.

☐ Toolkit is present
☐ ENTRY NOT EVALUATED

PRELIMINARY TEST SCORE (50 points)

Average of the two (2) team member's test scores.	**TEST SCORE SUBTOTAL (50 points)**

Rules violations (a deduction of 20% of the total possible points for the above sections) must be initialed by the judge, coordinator, and manager of the event. Record the deduction in the space to the right.

Indicate the rule violated: _____

PRELIMINARY SUBTOTAL (50 points)

SEMIFINAL ANALYSIS OF CRIME SCENE (70 points)

Record scores in the column spaces below.

CRITERIA	Minimal performance	Adequate performance	Exemplary performance	
	1-4 points	5-8 points	9-10 points	
Primary Survey/ Walkthrough (X1)	No initial survey is conducted; no verbal or written attempt is made to document/record the crime scene; furniture or other items are touched or moved.	A partial attempt at an initial survey is made; there is some evidence of a verbal assessment of the scene, and a few notes are taken; minor disruption is made to the crime scene.	A thorough survey of the scene is conducted to prioritize evidence collection; verbal assessment of the scene is made and notes are taken; no furniture or items are moved.	
Processing the Scene (X1)	Little to no investigation of the scene is evident; no sketches or diagrams are created; proper procedure is not followed for evidence collection, and/or there are obvious signs of contamination.	A mostly thorough investigation of the scene is conducted and some sketches or diagrams are created; proper procedure is followed for most of the evidence collection, and there are limited signs of contamination.	A thorough investigation of the scene is conducted and sketches or diagrams are created; proper procedure is followed for evidence collection, and there are no obvious signs of contamination.	
Evidence Collection (X2)	Three or more pieces of evidence are missing, and/or some of the collected items are not those specified.	Most pieces of evidence from the team's materials list are included and are correct.	All pieces of evidence in the team's materials list are included and are correct.	

SEMIFINAL ANALYSIS OF CRIME SCENE (70 points) – continued				
Technique (X1)	Little to no indication of proper technique is used in collecting the evidence.	Some indication of proper technique is used in collecting the evidence.	Proper technique is used in collecting most or all of the evidence.	
Crime Scene Analysis (X2)	Written analysis is weak and/or contains personal theories or conclusions; analysis does not clearly provide a detailed summary of the scene, processing, and evidence collection; leadership and/or 21st century skills are not evident.	Written analysis is somewhat complete and contains limited personal theories or conclusions; analysis provides a somewhat detailed summary of the scene, processing, and evidence collection; leadership and/or 21st century skills are somewhat evident.	Written analysis is strong and does not contain personal theories or conclusions; analysis clearly provides a detailed summary; leadership and/or 21st century skills are clearly evident.	
		SEMIFINAL ANALYSIS OF CRIME SCENE SUBTOTAL (70 points)		

Rules violations (a deduction of 20% of the total possible points for the above sections) must be initialed by the judge, coordinator, and manager of the event. Record the deduction in the space to the right.

Indicate the rule violated: _____

SEMIFINAL SUBTOTAL (70 points)	

To arrive at the TOTAL score, add any subtotals and subtract rules violation points, as necessary. **TOTAL (120 points)**	

Comments:

_____

I certify these results to be true and accurate to the best of my knowledge.

JUDGE

Printed name: _____ Signature: _____

FORENSIC SCIENCE
EVENT COORDINATOR INSTRUCTIONS

PERSONNEL

A. Event coordinator

B. Judges:

1. Preliminary round, two (2) or more

2. Semifinal round, two (2) or more

C. Timekeepers for recording start/stop times, one (1) per event room

D. Monitors, one (1) per event room

MATERIALS

A. Coordinator's packet containing:

1. Event guidelines, one (1) copy for the coordinator and for each judge

2. TSA Event Coordinator Report

B. Stopwatches for timekeepers, one (1) per room

C. Blank Mock Crime Scene Analysis forms; a minimum of one copy per semifinalist team

D. Tables and chairs in the analysis room

E. Copies of the semifinalist problem, (1) one per team and (1) per judge

F. Required evidence for the mock crime scene (based on the semifinalist problem)

G. Blank copier paper, one (1) per semifinalist team

RESPONSIBILITIES

AT THE CONFERENCE

A. Attend the mandatory coordinator's meeting at the designated time and location.

B. Report to the CRC room and check the contents of the coordinator's packet.

C. Review the event guidelines and check to see that enough personnel have been scheduled.

D. Inspect the area(s) in which the event is being held for appropriate set-up, including room size, chairs, tables, outlets, etc. Notify the event manager of any potential problems.

E. At least one (1) hour before the event is to begin, meet with judges and assistants to review time limits, procedures, regulations, evaluation, and all other details related to the event. If questions arise that cannot be answered, speak to the event manager before the event begins.

F. Ensure the judges have access to the online judging system.

PRELIMINARY ROUND

A. Begin the event at the scheduled time by closing the doors and checking the entry list.

B. All participants and judges should be in the room at this time.

C. Late entries are considered on a case-by-case basis and only when the delay is caused by events beyond participant control.

D. In order to compete, participants must be on the entry list or must have CRC approval.

E. Review any procedures and regulations.

F. Monitor the one (1)-hour test.

G. Determine team scores.

H. Decisions about rules violations must be discussed and verified with the judges, event coordinator, and CRC manager to determine either:

1. To deduct twenty percent (20%) of the total possible points in this round or

2. To disqualify the entry

The event coordinator, judges, and CRC manager must initial either of these actions on the rating form.

SEMIFINAL ROUND

A. Set up the mock crime scene in the designated room one (1) hour prior to the semifinalist sign-up time.

B. Facilitate semifinalist sign-up times at the designated location.

1. This may be the same room used for teams to write their analysis.

2. Sign-ups should not take place in the same room that is prepared for the crime scene.

C. When each team enters the crime scene room, distribute the problem.

D. Time begins when the problem is handed to each team.

E. Allow twenty (20) minutes for each team to review the crime scene in order to collect items, data, and/or other information necessary for preparing an analysis.

F. At the end of the twenty (20)-minute period, escort each team to the room designated for writing the analysis.

G. Provide twenty (20) minutes for each team to complete the written crime scene analysis.

H. Collect all materials, including any notes, prior to dismissing the participants.

I. Discuss rule violations (e.g. 20% deduction, disqualification) and have all relevant parties initial the rating form.

J. Manage security and removal of all materials from the crime scene area.

FUTURE TECHNOLOGY AND ENGINEERING TEACHER

OVERVIEW

As the need for student proficiency in technology (as one area of STEM) is increasing, so is the need for qualified technology education teachers. Technology is advancing at a rapid rate and teachers are expected to adopt this technology as fast as it's developed. Applying leadership and 21st century skills, participants create a portfolio demonstrating their interest and aptitude for the teaching profession, which will include a lesson plan and accompanying activity that incorporate standards of technological literacy. Semifinalists engage the judges with the proposed activity. (Use the International Technology and Engineering Educators Association ITEEA website at www.iteea.org for more information about the technology standards.) Topics also should reflect Science, Technology, Engineering, and Mathematics (STEM) initiatives and integration. Lesson plans/activities that explore knowledge, creativity, and skills in the following areas are suggested:

- Medical technology
- Agricultural and biotechnology
- Power and energy technology
- Information and communication technology
- Transportation technology
- Manufacturing technology
- Construction technology

ELIGIBILITY

Three (3) individuals per chapter may participate.

TIME LIMITS

PRE-CONFERENCE/PRELIMINARY ROUND

A. Participants review the TSA Honor Statement for Competitive Events found in the General Rules and listed in the individual competitive event rules.

B. All components of the chapter's entry (documentation portfolio PDF) must be finished, submitted, and accessible via the Internet by 11:59pm ET on a designated date mid-May.

SEMIFINAL ROUND

A. Semifinalists have fifteen (15) minutes for the presentation (and responses to judge questions) of their activity with the timing broken down as follows:

1. Three (3) minutes for any required set-up
2. Seven (7) minutes or less for the activity presentation
3. Three (3) minutes to answer questions from the judges
4. Two (2) minutes for breakdown and removal of materials.

B. One (1) point will be deducted for each ten (10)-second interval over the allotted time for the semifinal presentation.

ATTIRE

TSA competition attire is required for this event.

PROCEDURE

PRE-CONFERENCE/PRELIMINARY ROUND

A. In preparation for this event, participants thoroughly research and select two (2) educational technologies or applications that can be integrated into the classroom.

B. Participants assemble a portfolio containing their research on educational technologies/applications, a lesson plan incorporating ITEEA standards, and an activity that accompanies their lesson.

C. Participants submit their portfolio by 11:59pm ET on a designated date in mid-May.

D. Submission information is provided on the TSA website under *Competition Updates*.

E. A list of the twelve (12) semifinalists (in random order) will be posted on the first full day of the conference.

SEMIFINAL ROUND

A. In preparation for the semifinal round, participants prepare a seven (7) minute presentation demonstrating their activity.

B. Participants report at the time and place stated in the conference program to sign up for a scheduled time to present the activity.

C. Participants report at the assigned time and place for the presentation.

D. Participants respond to questions pertaining to their entry.

E. Participants have fifteen (15) minutes for the presentation (and responses to judge questions) broken down as follows:

    1. Three (3) minutes or less to set-up/prepare materials for the activity.

    2. Seven (7) minutes or less to present the activity.

    3. Three (3) minutes to answer questions from the judges.

    4. Two (2) minutes to breakdown and remove materials.

F. The top ten (10) finalists are announced during the awards ceremony.

REGULATIONS AND REQUIREMENTS

Students will work to develop their leadership and 21st century skills in the process of preparing for and participating in this TSA competitive event. The development and application of those skills must be evident in their submission, presentation, and/or communication pertaining to the entry.

PRE-CONFERENCE/PRELIMINARY ROUND

A. Documentation materials (comprising "a portfolio") are required and should be compiled into a single PDF file for submission. The portfolio must include the following pages, in this order:

    1. Title page with the event title, the conference city and state, the year, and the participant's identification number; one (1) page

    2. Table of contents; pages as needed

    3. Research summaries; one (1) page maximum for each technology/application

    4. Personal essay; one (1) page

    5. Lesson plan/activity; pages as needed

    6. Copies of handouts; pages as needed

    7. References and resources; pages as needed

    8. Student copyright checklist (see Forms Appendix); one (1) page

    9. Consent and Release Forms – Recognizable individuals pictured in any images (minors require parental consent) must give their written consent before the images can be used in this event (see Photo/Film/Video Consent and Release Form in Forms Appendix); pages as needed

B. Research Summary

    1. Using no more than two (2) pages, one (1) side only, participants summarize the information derived from the research about each of the two (2) educational technologies or applications selected.

    2. Participants should take into consideration the cost, intended age, and feasibility of the technologies/applications.

C. Essay

    1. Each participant must complete an essay, one (1) page (single-sided), explaining three (3) traits that a technology or engineering teacher should possess and why those specific characteristics are important.

    2. The essay must be typewritten and free of spelling and grammatical errors.

D. Lesson Plan

    1. A lesson plan describing the rationale, goals and objectives, standards correlation, and a description of the lesson and activity—including assessment—must be submitted.

    2. The lesson plan must be clearly labeled with the grade level for which it is intended.

    3. The ITEEA Standards for Technological Literacy must be used. Available online at www.iteea.org/Publications/StandardsOverview.aspx

E. The research summaries, essay, and lesson plan/activity must be the result of the participant's own efforts and not purchased or open source material. General content from either may be used, but it must be cited in MLA format.

F. The font size for any documentation component should be no less than size 10.

SEMIFNAL ROUND

A. Activity Presentation

1. Participants design and create a presentation to walk judges through the proposed activity.

2. Participants describe the rationale, goals and objectives, standards correlation, and a description of the lesson and activity.

3. The ITEEA Standards for Technological Literacy must be used.

4. The activity presentation must acknowledge the grade level for which it is intended.

5. Activity Presentation timing:

   a. The presentation cannot exceed seven (7) minutes.

   b. There is no minimum length restriction.

   c. The activity presentation is timed from the first sound or voice to the final sound or voice.

   d. The lesson plan presentation must include any applications being used and cite the applications in the credits or the introduction.

B. Entries must be the result of the participant's own efforts and not purchased or open source material.

C. Audio-visual materials such as charts, graphs, posters, displays, flip charts, transparencies, and models may be used.

D. Any audio visual equipment required for the presentation must be provided by the participant, including power strip with surge protector an extension cord.

E. Participants are not allowed to watch or hear the presentations of other participants.

F. Participants are encouraged to interact with the judges, who will act as students in the classroom.

G. One (1) point will be deducted for each ten (10)-second interval over the allotted time for the presentation, set up, and/or clean-up.

EVALUATION

PRELIMINARY ROUND

A. The documentation portfolio

SEMIFINAL ROUND

A. The presentation/interview

Refer to the official rating form for more information.

TSA HONOR STATEMENT

All work must be created and completed by individual competitors or teams. Plagiarism, the use of Generative Artificial Intelligence (GenAI) software, copyright violation, cheating, and falsification of information are prohibited. Participants may NOT use any generative artificial intelligence (GenAI) tools (e.g. ChatGPT, Google Gemini, GitHub Copilot, etc.). Any attempt to gain an unfair advantage will not be tolerated. Competitors at any level of TSA competition understand and agree to abide by the TSA Honor Statement.

If it is determined that a student violated the TSA Honor Statement, a rules violation of twenty percent (20%) will be incurred.

STEM INTEGRATION

This event aligns with the STEM (Science, Technology, Engineering, and Mathematics) educational standards.

LEADERSHIP AND 21ST CENTURY SKILLS

This event provides opportunity for students to build and develop leadership and 21st century skills including but not limited to – Communication, Collaboration/Social Skills, Initiative, Problem Solving/Risk Taking, Critical Thinking, Perseverance/Grit, Creativity, Relationship Building/Teamwork, Dependability/Integrity, and Flexibility/Adaptability

CAREERS RELATED TO THIS EVENT

This competition has connections to one (1) or more of the careers below:

- Technology education teacher
- STEM teacher
- University professor
- Professional development trainer

FUTURE TECHNOLOGY AND ENGINEERING TEACHER

2025 & 2026 OFFICIAL RATING FORM

HIGH SCHOOL

Judges: Using minimal (1-4 points), adequate (5-8 points), or exemplary (9-10 points) performance levels as a guideline in the rating form, record the scores earned for the event criteria in the column spaces to the right. The X1 or X2 notation in the criteria column is a multiplier factor for determining the points earned. (Example: an "adequate" score of 7 for an X1 criterion = 7 points; an "adequate" score of 7 for an X2 criterion = 14 points.) A score of zero (0) is acceptable if the minimal performance for any criterion is not met.

Go/No Go Specifications

- Before judging the entry, ensure that the items below are present; indicate presence with a check mark in the box.
- If an item is missing, leave the box next to the item blank and place a check mark in the box labeled ENTRY NOT EVALUATED.
- If a check mark is placed in the ENTRY NOT EVALUATED box, the entry is not to be judged.

☐ Portfolio PDF was submitted Pre-conference
☐ ENTRY NOT EVALUATED

PRELIMINARY DOCUMENTATION PORTFOLIO (80 points)

Record scores in the column spaces below

CRITERIA	Minimal performance 1-4 points	Adequate performance 5-8 points	Exemplary performance 9-10 points	
Portfolio components (X1)	Portfolio is unorganized and/or is missing three (3) or more components.	Portfolio has most components and is generally organized per the order of the event guide listing; it has sufficient content.	All components are included in the portfolio; content and organization per the order of the event guide listing are excellent.	
Research Summaries (X1)	Only one (1) educational technology/application is identified; the summary is inadequate.	Two (2) educational technologies/applications are adequately summarized.	Two (2) educational technologies/applications are documented, with excellent summaries.	
Personal Essay (X1)	The essay is too short, and/or not typewritten, and/or poorly written, and/or there are many spelling and grammatical errors.	The essay is generally well written, typewritten and the correct length, but it contains some spelling and grammatical errors.	The essay is well written, typewritten, the correct length, and contains little to no spelling or grammatical errors.	
Lesson Plan Components (X2)	The lesson plan is missing several of the stated components, including the standards correlation and/or instructional design focus; it is not creative or unique.	The lesson plan includes all of the stated components, and it is adequately organized, with an instructional design focus; it has some unique and creative aspects.	The lesson plan includes all of the stated components; it is well organized and has an instructional design focus; it is creative and unique.	
Handouts, Assessments, and Activity (X1)	Additional materials are poorly developed and do not have an impact on the lesson.	Additional materials are relatively well developed and have some impact on the lesson.	Additional materials are effective and greatly impact the lesson.	
Creativity (X1)	The submitted lesson plan demonstrates little creativity. The additional materials lack unique or original perspectives of the chosen topic.	The submitted lesson plan demonstrates adequate creativity. The additional materials convey some unique or original perspectives of the chosen topic.	The submitted lesson plan demonstrates exceptional creativity. The additional materials frame the topic in a unique and original way.	
Resources and References (X1)	A minor attempt is made to document resources and references.	Several resources and references are documented.	There is clear evidence of many applicable resources and references.	
PRELIMINARY DOCUMENTATION PORTFOLIIO SUBTOTAL (80 points)				

FUTURE TECHNOLOGY AND ENGINEERING TEACHER

Rules violations (a deduction of 20% of the total possible points for the above sections) must be initialed by the judge, coordinator, and manager of the event. Record the deduction in the space to the right.

Indicate the rule violated: _____

PRELIMINARY SUBTOTAL (80 points)

SEMIFINAL ACTIVITY PRESENTATION (100 points)

CRITERIA	Minimal performance	Adequate performance	Exemplary performance	
	1-4 points	5-8 points	9-10 points	
Organization (X1)	The presentation lacks organization; it is difficult to follow or understand.	The presentation is somewhat organized.	The presentation is clearly organized and easy to follow; it flows smoothly to the conclusion.	
Activity Components (X2)	The activity is missing several of the stated components, including the standards correlation and/or instructional design focus; it is not creative or unique.	The activity includes all of the stated components, and it is adequately organized, with an instructional design focus; it has some unique and creative aspects.	The activity includes all of the stated components; it is well organized and has an instructional design focus; it is creative and unique.	
Introduction (X1)	The introduction is weak, with little effort made to emphasize the topic and/or to generate interest and enthusiasm for the topic.	Sufficient effort is evident in the introduction, which creates some level of interest.	The introduction is effective, stimulating, and creates interest on the part of observers.	
Instructional Competence (X2)	The presenter's delivery of content lacks confidence; leadership and/or 21st century skills are not evident.	The presenter's delivery of content is generally professional and enthusiastic; leadership and/or 21st century skills are somewhat evident.	The presenter's delivery of content is professional, enthusiastic, confident, and full of personality; leadership and/or 21st century skills are clearly evident.	
Voice/Language (X1)	The participant conveys an inconsistent use of proper grammar, word pronunciation, and acceptable pitch and tone.	The participant generally uses proper grammar and pronunciation, and varies the use of tone and pitch.	The participant uses smooth and effective articulation, proper grammar, correct pronunciation, and varied tone and pitch throughout the presentation.	
Innovation/ Creativity (X2)	The presentation fails to convey innovation or originality.	The presentation is somewhat original and innovative in its delivery and topic development.	The presentation is imaginative and innovative in its delivery and topic development.	
Knowledge (X1)	Minimal knowledge of the subject is evident in the presentation; the content does not relate to the topic, and/or the participant does not convey an understanding of the topic.	Knowledge of the subject is evident, and the presenter relates and conveys a somewhat clear understanding of the topic.	Complete knowledge and understanding of the subject and relationship to the topic are conveyed throughout the lesson.	
SEMIFINAL ACTIVITY PRESENTATION SUBTOTAL (100 points)				

TIME DEDUCTIONS

One (1) point will be deducted for each ten (10)-second interval over the allotted time for the semifinal presentation.	
Total time	
Presentation deduction	
TOTAL TIME DEDUCTION	

Rules violations (a deduction of 20% of the total possible points for the above sections) must be initialed by the judge, coordinator, and manager of the event. Record the deduction in the space to the right.

Indicate the rule violated: _____

SEMIFINAL SUBTOTAL (100 points)

To arrive at the TOTAL score, add any subtotals and subtract rules violation points, as necessary.　　**TOTAL (180 points)**

Comments:

_____

I certify these results to be true and accurate to the best of my knowledge.

JUDGE

Printed name: _____　　Signature: _____

FUTURE TECHNOLOGY AND ENGINEERING TEACHER EVENT COORDINATOR INSTRUCTIONS

PERSONNEL

A. Event coordinator

B. Judges:

1. Preliminary round, two (2) or more

2. Semifinal round, two (2) or more (preferably the same judges as the preliminary round)

C. Assistants, two (2)

MATERIALS

A. Coordinator's packet, containing:

1. Event guidelines, one (1) copy for the coordinator and for each judge

2. TSA Event Coordinator Report

B. Stopwatch

C. Tables and chairs for participants and judges

D. Access to an AC electrical outlet

E. Copy of ITEEA publication *Standards for Technological Literacy*

RESPONSIBILITIES

PRE-CONFERENCE

A. National TSA will collect entries until 11:59pm ET on a designated date in mid-May and send out receipt confirmations to participants. The results are shared with the CRC manager, event coordinator, and assigned judges.

B. Review entries as they are submitted to the designated online storage utility.

C. Manage communication and Pre-conference evaluation (at least two [2] or more judges should be recruited earlier in the year). Coordinate with National TSA and/or the Judge Manager.

AT THE CONFERENCE

A. Attend the mandatory coordinator's meeting at the designated time and location.

B. Report to the CRC room and check the contents of the coordinator's packet.

C. Review the event guidelines and check to see that enough personnel have been scheduled.

D. Inspect the area or room in which the event is being held for appropriate set-up, including room size, chairs, tables, outlets, etc. Notify the event manager of any potential problems.

E. At least one (1) hour before the event is scheduled to begin, meet with judges to review time limits, procedures, regulations, evaluation, and all other details related to the event. If questions arise that cannot be answered, speak to the event manager before the event begins.

F. Ensure the judges have access to the online judging system.

PRELIMINARY ROUND

A. On the first full day of competition, post a list of the twelve (12) semifinalists in random order.

SEMIFINAL ROUND

A. Participants report at the time and place stated in the conference program to sign up for a presentation/interview time.

B. Participants report at the assigned time to the place stated, with supplies/materials (if applicable), for the presentation/interview.

C. Manage completion of the on-site activity presentation and interviews.

D. Decisions about rules violations must be discussed and verified with the judges, event coordinator, and the CRC manager to determine either:

1. To deduct twenty percent (20%) of the total possible points in this round

2. To disqualify the entry

The event coordinator, judges, and CRC manager must initial either of these actions on the rating form.

E. If necessary, manage security and the removal of materials from the event area.

GEOSPATIAL TECHNOLOGY

OVERVIEW

Applying leadership and 21st century skills, participants interpret geospatial data in multiple formats and formulate projections about the area of interest based on an annual theme posted on the TSA website under *Themes & Problems*. Participants develop a digital portfolio containing maps, data, and pertinent documentation, which is submitted pre-conference. Preliminary round participants summarize their findings in a visual infographic map to be submitted on-site. Semifinalists defend their projections in a presentation/interview.

ELIGIBILITY

One (1) team of two to three (2-3) individuals per chapter may participate.

TIME LIMITS

PRELIMINARY ROUND

A. All components of the chapter's entry (digital portfolio PDF) must be finished, submitted, and accessible via the Internet by 11:59pm ET on a designated date mid-May.

SEMIFINAL ROUND

A. No more than ten (10) minutes is allowed for the defense presentation, broken down as follows:

1. One (1) minute to set-up

2. Up to five (5) minutes to present

3. Up to four (4) minutes to respond to questions.

ATTIRE

TSA competition attire is required for this event.

PROCEDURE

PRE-CONFERENCE

A. Participants review the TSA Honor Statement for Competitive Events found in the General Rules and listed in the individual competitive event rules.

B. Participants review the annual challenge found on the TSA website under *Themes & Problems*.

C. Participants concentrate their efforts on researching the issue, collecting, analyzing, and synthesizing various types of Geospatial data, and making predictions.

D. Participants prepare their documentation portfolio and visual infographic map according to the regulations.

E. Participants submit the digital portfolio as a multi-page PDF document online by 11:59pm ET on a designated date in mid-May.

F. Submission information will be provided on the TSA website under *Competition Updates*.

PRELIMINARY ROUND

A. Pre-conference submission entries are reviewed by evaluators with neither students nor advisors present based on the following criteria:

1. Judges review and score the Digital Portfolio criteria to determine the top twenty-four (24) preliminary contestants.

B. The list of twenty-four (24) teams is posted on-site on the first full day of conference.

C. The twenty-four (24) teams selected to compete in the preliminary round report at the time and place stated in the conference program to submit their visual infographic map entries.

D. Judges review and score the Visual Infograhic Map criteria to determine the top twelve (12) semifinalist teams.

E. A list of twelve (12) semifinalist teams (in random order) is posted.

SEMIFINAL ROUND

A. Semifinalists report at the time and place stated in the conference program to sign up for a presentation/interview time.

B. Semifinalists report at the designated time and place for the presentation/interview.

C. Semifinalists participate in a defense presentation and interview that lasts no more than ten (10) minutes, broken down as follows:

1. One (1) minute to set-up

2. Five (5) minutes to present

3. Up to four (4) minutes to respond to questions.

D. Ten (10) finalists are announced during the conference awards ceremony.

REGULATIONS AND REQUIREMENTS

Students will work to develop their leadership and 21st century skills in the process of preparing for and participating in this TSA competitive event. The development and application of those skills must be evident in their submission, demonstration, and/or communication pertaining to the entry.

PRE-CONFERENCE

A. Participants must understand the fundamental concepts and principles of the issue researched. Research about the issue shall focus on:

   1. Analysis of the collected geospatial data, which may include but is not limited to: imagery, boundaries and places, demographics and lifestyles, basemaps, transportation, earth observations, urban systems, or historical maps

   2. Representation of the data using any online platform (e.g. ArcGIS)

   3. Synthesis of the prediction(s).

B. Documentation portfolio:

   1. The finished portfolio must be saved as a multi-page PDF document with the pages presented in the following order:

      a. Title page with the event title, the conference city and state, the year, and the team ID number; one (1) page

      b. Table of contents; pages as needed

      c. A description of the individual/team's interpretation of the challenge; one (1) page

      d. An explanation of the challenge; one (1) page

      e. Collected geospatial data; pages as needed.

      f. Analysis maps; pages as needed

      g. Analysis of collected geospatial data; pages as needed.

      h. Written explanation of the team's prediction; maximum of two (2) pages

      i. Resource page, including citations and copyright letters if applicable; pages as needed

      j. Work Log (see Forms Appendix); pages as needed

      k. Student Copyright Checklist (see Forms Appendix); one (1) page

   2. The digital portfolio PDF must be finished, submitted, and accessible via the Internet by 11:59pm ET on a designated date in mid-May.

PRELIMINARY ROUND

A. Visual infographic map:

   1. Must have the team identification number clearly labeled in the upper right-hand corner of the submission.

   2. May not reveal the school, chapter name, or city.

   3. Cannot exceed dimensions of 15" deep x 2.5' wide x 4' high.

   4. Must focus on the predicted outcomes/findings from the analyzed data

   5. All ideas, text, images, and sound from other sources must be cited.

EVALUATION

PRELIMINARY ROUND

Tier 1

A. The documentation portfolio

Tier 2

B. The visual infographic map

SEMIFINAL ROUND

A. The defense presentation/interview

Refer to the official rating form for more information.

TSA HONOR STATEMENT

All work must be created and completed by individual competitors or teams. Plagiarism, the use of Generative Artificial Intelligence (GenAI) software, copyright violation, cheating, and falsification of information are prohibited. Participants may NOT use any generative artificial intelligence (GenAI) tools (e.g. ChatGPT, Google Gemini, GitHub Copilot, etc.). Any attempt to gain an unfair advantage will not be tolerated. Competitors at any level of TSA competition understand and agree to abide by the TSA Honor Statement.

If it is determined that a student violated the TSA Honor Statement, a rules violation of twenty percent (20%) will be incurred.

STEM INTEGRATION

Depending upon the subject of the problem, this event may align with one or more STEM (Science, Technology, Engineering, and Mathematics) educational standards.

LEADERSHIP AND 21ST CENTURY SKILLS

This event provides opportunity for students to build and develop leadership and 21st century skills including but not limited to – Communication, Collaboration/Social Skills, Initiative, Problem Solving/Risk Taking, Critical Thinking, Perseverance/Grit, Creativity, Relationship Building/Teamwork, Dependability/Integrity, and Flexibility/Adaptability

CAREERS RELATED TO THIS EVENT

This competition has connections to one (1) or more of the careers below:

- Geographic Information Systems (GIS) Analyst
- Geospatial Programmer
- Cartographer
- Photogrammetrist
- Land Surveyor
- Surveying Technician
- Mapping Technician
- Logistics planning manager
- Transportation systems technician
- Infrastructure planning manager

Technology Student Association (TSA) High School Competitive Events Guide for the 2025 and 2026 National TSA Conferences

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GEOSPATIAL TECHNOLOGY

2025 & 2026 OFFICIAL RATING FORM

HIGH SCHOOL

Judges: Using minimal (1-4 points), adequate (5-8 points), or exemplary (9-10 points) performance levels as a guideline in the rating form, record the scores earned for the event criteria in the column spaces to the right. The X1 or X2 notation in the criteria column is a multiplier factor for determining the points earned. (Example: an "adequate" score of 7 for an X1 criterion = 7 points; an "adequate" score of 7 for an X2 criterion = 14 points.) A score of zero (0) is acceptable if the minimal performance for any criterion is not met.

Go/No Go Specifications

- Before judging the entry, ensure that the items below are present; indicate presence with a check mark in the box.
- If an item is missing, leave the box next to the item blank and place a check mark in the box labeled ENTRY NOT EVALUATED.
- If a check mark is placed in the ENTRY NOT EVALUATED box, the entry is not to be judged.

☐ TIER 1 –PDF of the digital portfolio was submitted
☐ TIER 2 – Visual infographic map is present
☐ ENTRY NOT EVALUATED

				Record scores in the column spaces below.
TIER 1 – DOCUMENTATION PORTFOLIO (90 points)				
CRITERIA	Minimal performance	Adequate performance	Exemplary performance	
	1-4 points	5-8 points	9-10 points	
Portfolio (X1)	Portfolio is unorganized and/or is missing three (3) or more components.	Portfolio has most components and is generally organized per the order of the event guide listing; it has sufficient content.	All components are included in the portfolio; content and organization per the order of the event guide listing are excellent.	
Interpretation of Challenge and Explanation of Predicted Outcomes (X2)	The predicted outcome and interpretation of challenge are missing or unclear.	The prediction and/or the interpretation of the challenge are somewhat clear and generally supported.	A clear and concise prediction and interpretation of the problem is made and supported strongly by the data.	
Collected Geospatial Data (X2)	Data is inconsistent and disorganized and does not contribute to the impact of the project.	Information is organized in a format that contributes to the impact of the project, but some data supports are missing, or do not align with the intended purpose.	All required forms of information are present in a format that greatly contributes to the purpose of the project.	
Analysis Maps (X1)	Maps provided are not appropriate, and/or they are missing a number of parts; the maps do not contribute to the overall impact of the project.	Maps have most needed parts; information is adequate; the maps align with the intended purpose.	Maps provided contain all or nearly all needed parts, with information that is clear and appropriately supports the purpose of the project.	
Analysis Documents (X1)	Few documents are provided that explain the data and their relationship to the prediction.	Most documents show the correlation between the data and the prediction.	The data is thoroughly analyzed and well represented.	
Project Journal and Descriptions (X1)	Little or no documentation of the project has been included, and/or it is disorganized.	Partially complete documentation of the project is included.	The project documentation is organized, orderly, and largely or entirely complete.	
References (X1)	References are missing or incomplete.	Most references are present, but are not accurately recorded.	A fully organized and well-documented reference sheet is included.	
TIER 1 – DOCUMENTATION PORTFOLIO SUBTOTAL (90 points)				

Rules violations (a deduction of 20% of the total possible points for the above sections) must be initialed by the judge, coordinator, and manager of the event. Record the deduction in the space to the right.

Indicate the rule violated: _____

TIER 1 – SUBTOTAL (90 points)

Record scores in the column spaces below.

TIER 2 – THE VISUAL INFOGRAPHIC MAP (50 points)

CRITERIA	Minimal performance	Adequate performance	Exemplary performance
	1-4 points	5-8 points	9-10 points
Predicted Outcome (X2)	The predicted outcome of the data analysis is inconsistent with the data findings or is missing from the visual presentation.	The predicted outcome based on the data analysis is logical, but it is not represented clearly in the visual presentation; some ideas are confusing.	The predicted outcome demonstrates an original and innovative use of data and is represented in the visual presentation; the prediction is logical and easy to follow.
Use of Data (X1)	Little or no use of data is included.	Some data is used and adequately represented.	The use of data is included and complete and in an appropriate format; the data clearly supports the prediction.
Aesthetics and Creativity (X1)	The visual design is confusing, disorganized, and lacking creativity.	The visual design has some appealing and interesting elements, but the elements detract from the ideas or message.	The visual design is appealing, interesting, and contributes greatly to the overall idea or message.
Content Design (X1)	The content seems disconnected and unorganized.	The content displays some cohesion between ideas, but some content is not relevant to the overall idea.	The content demonstrates connections between ideas that results in an interesting infographic.

TIER 2 – THE VISUAL INFOGRAPHIC MAP SUBTOTAL (50 points)

Rules violations (a deduction of 20% of the total possible points for the above sections) must be initialed by the judge, coordinator, and manager of the event. Record the deduction in the space to the right.

Indicate the rule violated: _____

PRELIMINARY SUBTOTAL (140 points)

GEOSPATIAL TECHNOLOGY

SEMIFINAL DEFENSE PRESENTATION/INTERVIEW (60 points)

CRITERIA	Minimal performance	Adequate performance	Exemplary performance	
	1-4 points	5-8 points	9-10 points	
Organization (X1)	Participants seem unorganized and unprepared for the interview; illogical explanation of problem and prediction is presented.	Participants are generally prepared for the interview; explanation of problem and prediction are generally communicated.	Interview is logical and easy to follow; the problem and prediction are communicated in a concise manner.	
Presentation (X1)	Presentation is full of illogical thoughts that lack clarity, and/or there is insufficient information provided describing the project.	Presentation is somewhat logical, easy-to-follow, and/or there is sufficient information provided describing the project.	Presentation is clear, concise, and there is ample information provided describing the project.	
Confidence (X1)	Majority of the delivery is made by one (1) member of the team; partner(s) may be disengaged from the presentation.	Team members are engaged in the process, though one (1) member may take on more responsibility than the others.	All team members are actively involved in the interview and responses to questions; there is shared responsibility among the team members.	
Knowledge (X2)	Team members exhibit little understanding of the concepts in their project; answers to questions may be vague.	Participants exhibit a general understanding of the concepts in their project.	Participants show clear evidence of a thorough understanding of the project.	
Articulation (X1)	Communication of the solution is unclear, unorganized, and or illogical; leadership and/or 21st century skills are not evident.	Communication of the solution is somewhat logical and clear; leadership and/or 21st century skills are somewhat evident.	Communication of the solution is clear, concise, and logical; leadership and/or 21st century skills are clearly evident.	
SEMIFINAL DEFENSE PRESENTATION/INTERVIEW SUBTOTAL (60 points)				

Rules violations (a deduction of 20% of the total possible points for the above sections) must be initialed by the judge, coordinator, and manager of the event. Record the deduction in the space to the right.

Indicate the rule violated: _____

SEMIFINAL SUBTOTAL (60 points)

To arrive at the TOTAL score, add the PRELIMINARY SUBTOTAL and the SEMIFINAL SUBTOTAL.   **TOTAL (200 points)**

Comments:

_____

I certify these results to be true and accurate to the best of my knowledge.

JUDGE

Printed name: _____   Signature: _____

GEOSPATIAL TECHNOLOGY EVENT COORDINATOR INSTRUCTIONS

PERSONNEL

A. Event coordinator

B. Judges:

1. Preliminary round, two (2) or more (documentation)
   Preliminary round, two (2) or more (map)

2. Semifinal round, two (2) or more

MATERIALS

A. Coordinator's packet, containing:

1. Event guidelines, one (1) copy for the coordinator and for each judge.

2. TSA Event Coordinator Report

3. Stick-on labels for identifying entries

B. Tables and chairs for event coordinator and evaluators

RESPONSIBILITIES

PRE-CONFERENCE

A. National TSA will collect entries until 11:59pm ET on a designated date in mid-May and send out receipt confirmations to participants. The results are shared with the CRC manager, event coordinator, and assigned judges.

B. Review entries as they are submitted to the designated online storage utility.

C. Manage communication and Pre-conference evaluation (at least two [2] or more judges should be recruited earlier in the year). Coordinate with National TSA and/or the Judge Manager.

AT THE CONFERENCE

A. Attend the mandatory coordinator's meeting at the designated time and location.

B. Report to the CRC room and check the contents of the coordinator's packet.

C. Review the event guidelines and check to see that enough evaluators and assistants have been scheduled.

D. Inspect the area(s) in which the event is being held for appropriate set-up, including room size, tables, chairs, etc. Notify the event manager of any potential problems.

E. One (1) hour before the semifinal event is to begin, meet with evaluators to review time limits, procedures, regulations, evaluation, and all other details related to the event. If questions arise that cannot be answered, speak to the event manager before the event begins.

F. Ensure the judges have access to the online judging system.

PRELIMINARY ROUND

A. On the first full day of conference, post a list of the twenty-four (24) preliminary round participants.

B. Participants report to the time and place stated in the conference program to submit their visual infographic maps.

C. Late participants and/or entries are considered on a case-by-case basis and only when lateness is caused by events beyond the participant's control.

D. In order to compete, participants must be on the entry list or must have approval of the CRC.

E. Judges evaluate the entries with neither students nor advisors present.

F. Judges use the same official rating form for both the preliminary and semifinal round of judging.

G. Decisions about rules violations must be discussed and verified with the judges, event coordinator, and the CRC manager to determine either:

1. To deduct twenty percent (20%) of the total possible points in this round

2. To disqualify the entry

The event coordinator, judges, and CRC manager must initial either of these actions on the rating form.

H. If necessary, manage security and the removal of materials from the event area.

SEMIFINAL ROUND

A. Semifinalists report at the time and place stated in the conference program to sign up for a presentation/interview time.

B. Semifinalists report at the designated time and place for the presentation/interview.

C. Semifinalists locate and set-up their visual infographic maps in the event space.

D. Semifinalists participate in a defense presentation that lasts no more than ten (10) minutes, broken down as follows:

   1. One (1) minute to set-up

   2. Up to five (5) minutes to present

   3. Up to four (4) minutes to respond to questions.

E. Discuss rule violations (e.g. 20% deduction, disqualification) and have all relevant parties initial the rating form.

F. If necessary, manage security and the removal of materials from the event area.

MANUFACTURING PROTOTYPE

OVERVIEW

Applying leadership and 21st century skills, participants design, fabricate, and use Computer Integrated Manufacturing (CIM) to create a product that addresses the annual theme found on the TSA website under *Themes & Problems*. The product may use additive and/or subtractive manufacturing of any traditional, Computer Numerical Control (CNC), 3D printing, or laser technology available. A documentation portfolio and one (1) completed prototype are checked in and evaluated.

Semifinalist teams participate in an on-site challenge to demonstrate their product and give a promotional "sales pitch" to the judges.

ELIGIBILITY

One (1) team per chapter may participate.

TIME LIMITS

Up to two (2) minutes for the semifinal promotional sales pitch.

ATTIRE

TSA competition attire is required for this event.

PROCEDURE

PRE-CONFERENCE

A. Participants review the TSA Honor Statement for Competitive Events found in the General Rules and listed in the individual competitive event rules.

PRELIMINARY ROUND

A. Participants report to the time and place stated in the conference program with:
   1. the documentation portfolio
   2. the prototype of the product.
      (Please note the prototype must be fully functional)

B. Entries are evaluated by the judges with neither students nor advisors present based on the following criteria:

   1. Judges score the Component Analysis criteria to determine the top twenty-four (24) preliminary contestants, which will not be posted.

   2. Judges score the Documentation Portfolio criteria of those top twenty-four contestants to determine the top (12) semifinalist teams.

C. A list of twelve (12) semifinalists (in random order) is posted.

SEMIFINAL ROUND

A. Semifinalist teams report at the time and place stated in the conference program.

B. Two members of the team will give the semifinalist sales pitch/demonstration.

C. Each team makes a sales pitch about their product to "potential buyers" (judges) in the room and respond to questions.

D. The sales pitch/demonstration begins on the timekeeper's signal.

E. Judges evaluate the sales pitch/demonstration.

F. The top ten (10) finalists are announced at the awards ceremony.

REGULATIONS AND REQUIREMENTS

Students will work to develop their leadership and 21st century skills in the process of preparing for and participating in this TSA competitive event. The development and application of those skills must be evident in their submission, demonstration, and/or communication pertaining to the entry.

PRELIMINARY ROUND

A. Documentation Portfolio:

   1. Documentation materials (comprising "a portfolio") are required and should be secured in a clear front report cover with the following single-sided, 8½" x 11" pages, in this order:

      a. Title page with the event title, the team identification number, the conference city and state, and the year; one (1) page

      b. Table of contents; one (1) page

c. Photographs with descriptions showing research into existing solutions to the problem; one (1) page

d. Brainstorming sketching of possible solutions; one (1) page

e. An isometric assembly drawing showing the product and all its parts; the paper size is 11" x 17", folded, with the drawing facing out and placed in the portfolio; one (1) page

f. Detail drawings of each part manufactured labeled to match the items in the parts list (from the working drawing). The paper size is 8½" x 11"; pages as needed (to show all machined parts)

g. Photographic images (actual photographs, not renderings) showing the construction of the prototype; maximum of two (2) pages

h. Photographic images (actual photographs, not renderings) of designs tested, with a descriptive caption per image of what was improved by the testing of the design and what the team felt was the strengths and weaknesses of the final design; maximum of two (2) pages

i. Bill of Materials; one (1) page

j. Work Log (see Forms Appendix); pages as needed

B. Materials:

1. The prototype must be constructed using two (2) CNC or CIM processes, including, but not limited to:

   a. CNC Machining

   b. Laser Engraving

   c. 3D Printing

   d. CNC Vinyl Cutting

2. Traditional manufacturing methods may be used IN ADDITION to the two (2) required CNC/CIM processes.

3. The finished product must not exceed the dimensions 7" x 7" x 7".

4. Five (5) major parts are required; major parts are those with drawings that have been manufactured.

5. Plastic, wood, or metal may be used for any of the parts for the promotional product.

6. The prototype must be finished (sanded, painted, etc) as required by the design.

7. Stock fasteners may be used and may include, but are not limited to:

   a. Nuts

   b. Washers

   c. Screws

   d. Wing nuts

8. Stock electronic components may be used and may include, but are not limited to:

   a. Motors

   b. Sensors

   c. LED

SEMIFINAL ROUND

A. Sales pitch:

1. Using leadership and/or 21st century skills, participants present a two (2)-minute "sales pitch" about their promotional product.

2. Participants explain the production cost per unit, the materials used to make the product, and price breaks of units based on purchase.

3. No electronic devices may be used in the sales pitch.

4. A promotional flyer or brochure may be given to judges as part of the sales pitch; the brochure size is limited to one double-sided page on 8½" x 11" paper.

EVALUATION

PRELIMINARY ROUND

Tier 1

A. The component analysis

Tier 2

B. The documentation portfolio

SEMIFINAL ROUND

A. The sales pitch/demonstration

Refer to the official rating form for more information.

TSA HONOR STATEMENT

All work must be created and completed by individual competitors or teams. Plagiarism, the use of Generative Artificial Intelligence (GenAI) software, copyright violation, cheating, and falsification of information are prohibited. Participants may NOT use any generative artificial intelligence (GenAI) tools (e.g. ChatGPT, Google Gemini, GitHub Copilot, etc.). Any attempt to gain an unfair advantage will not be tolerated. Competitors at any level of TSA competition understand and agree to abide by the TSA Honor Statement.

If it is determined that a student violated the TSA Honor Statement, a rules violation of twenty percent (20%) will be incurred.

STEM INTEGRATION

This event aligns with the STEM (Science, Technology, Engineering, and Mathematics) educational standards.

LEADERSHIP AND 21ST CENTURY SKILLS

This event provides opportunity for students to build and develop leadership and 21st century skills including but not limited to – Communication, Collaboration/Social Skills, Initiative, Problem Solving/Risk Taking, Critical Thinking, Perseverance/Grit, Creativity, Relationship Building/Teamwork, Dependability/Integrity, and Flexibility/Adaptability

CAREERS RELATED TO THIS EVENT

This competition has connections to one (1) or more of the careers below:

- Commercial and industrial designer
- Engineer
- Mechanical engineer
- CNC programmer or operator

MANUFACTURING PROTOTYPE

2025 & 2026 OFFICIAL RATING FORM

HIGH SCHOOL

Judges: Using minimal (1-4 points), adequate (5-8 points), or exemplary (9-10 points) performance levels as a guideline in the rating form, record the scores earned for the event criteria in the column spaces to the right. The X1 or X2 notation in the criteria column is a multiplier factor for determining the points earned. (Example: an "adequate" score of 7 for an X1 criterion = 7 points; an "adequate" score of 7 for an X2 criterion = 14 points.) A score of zero (0) is acceptable if the minimal performance for any criterion is not met.

Go/No Go Specifications

- Before judging the entry, ensure that the items below are present; indicate presence with a check mark in the box.
- If an item is missing, leave the box next to the item blank and place a check mark in the box labeled ENTRY NOT EVALUATED.
- If a check mark is placed in the ENTRY NOT EVALUATED box, the entry is not to be judged.

_____

- ☐ TIER 1 – Prototype is present and the prototype was created with two CNC processes.
- ☐ TIER 2 – Documentation Portfolio is Present.
- ☐ ENTRY NOT EVALUATED

TIER 1 – COMPONENT ANALYSIS (80 points)				Record scores in the column spaces below.
CRITERIA	Minimal performance	Adequate performance	Exemplary performance	
	1-4 points	5-8 points	9-10 points	
Theme (X3)	The effort is basic, with only a loose association to the product theme.	The effort adequately addresses the product theme.	The effort to address the product theme exceeds expectations.	
Craftsmanship (X3)	The prototype shows minimal craftsmanship in design and creation.	The prototype shows adequate craftsmanship in design and creation.	The prototype shows exceptional craftsmanship in design and creation.	
Aesthetics (X2)	The prototype design is unattractive in appearance and does not accurately represent the theme.	The prototype is somewhat attractive in appearance and shows an adequate representation of the theme.	The prototype is of professional quality and demonstrates an exemplary representation of the theme.	
TIER 1 – COMPONENT ANALYSIS SUBTOTAL (80 points)				

Rules violations (a deduction of 20% of the total possible points for the above sections) must be initialed by the judge, coordinator, and manager of the event. Record the deduction in the space to the right. Indicate the rule violated: _____	

TIER 1 – SUBTOTAL (80 points)	

	Record scores in the column spaces below.

TIER 2 – DOCUMENTATION PORTFOLIO (110 points)

CRITERIA	Minimal performance	Adequate performance	Exemplary performance	
	1-4 points	5-8 points	9-10 points	
Portfolio Components (X1)	Portfolio is unorganized and/or is missing three (3) or more components.	Portfolio has most components and is generally organized per the order of the event guide listing; it has sufficient content.	All components are included in the portfolio; content and organization per the order of the event guide listing are excellent.	
Research (X1)	Research of previous ideas shows little effort or is missing captions	Research of previous ideas shows moderate effort or is missing a few captions of the photos.	Research of previous ideas shows exceptional effort with photographs and captions.	
Brainstorming (X1)	There are one (1) or two (2) brainstorming sketches.	There are three to five (3-5) brainstorming sketches	There are more than five (5) brainstorming sketches	
Isometric Assembly Drawing (X2)	The isometric assembly drawing is not complete, with many of the required elements missing.	The isometric assembly drawing is present, but it is missing several required key elements.	The isometric assembly drawing is complete and correct, with all required elements included.	
Detail Drawings (X1)	The detail drawings are not complete, with many of the required elements missing.	The detail drawings are present but may be missing several required key elements.	The detail drawings are complete and correct, with all required elements included.	
Photos of Construction of Prototype (X1)	Only one (1) photograph of designs tested is included or captions are not present on any of the photos.	Two (2) photographs of designs tested are included and captions are present.	More than two (2) photographs of designs tested are included and captions are present.	
Descriptions/ Product Testing (X2)	There is little description of the design testing process and analysis.	One description of design testing and analysis is included.	Several descriptions of design testing and analysis are included.	
Bill of Materials (X1)	Bill of Materials is included, but more than one (1) material is missing.	A Bill of Materials is included, with one (1) material missing; Bill of Materials is generally organized.	All components of the Bill of Materials is included and highly organized.	
Work Log (X1)	The Work Log is not complete.	The Work Log is included and mostly complete.	The Work Log is complete and fully documents project work.	
TIER 2 – DOCUMENTATION PORTFOLIO SUBTOTAL (110 points)				

Rules violations (a deduction of 20% of the total possible points for the above sections) must be initialed by the judge, coordinator, and manager of the event. Record the deduction in the space to the right. Indicate the rule violated: _____	

PRELIMINARY SUBTOTAL (190 points)	

MANUFACTURING PROTOTYPE

SEMIFINAL SALES PITCH/DEMONSTRATION (50 points)

CRITERIA	Minimal performance	Adequate performance	Exemplary performance	
	1-4 points	5-8 points	9-10 points	
Organization (X1)	Participants seem unorganized and unprepared for the sales pitch/demonstration; illogical explanation of the project is presented.	Participants are generally prepared for the sales pitch/demonstration; explanation of the project is communicated and generally organized.	The sales pitch/demonstration is logical, well organized, and easy to follow; the project concept is communicated in a concise manner.	
Knowledge (X1)	Participants seem to have little understanding of the concepts in their project; answers to questions may be vague.	Participants exhibit a general understanding of the concepts in their project.	Participants show clear evidence of a thorough understanding of the concepts in their project.	
Articulation (X1)	Communication of the project is unclear, unorganized, and or illogical; leadership and/or 21st century skills are not evident.	Communication of the project is somewhat logical and clear; leadership and/or 21st century skills are somewhat evident.	Communication of the project is clear, concise, and logical; leadership and/or 21st century skills are clearly evident.	
Delivery (X1)	The sales pitch is full of illogical thoughts that lack clarity, and/or there is insufficient information provided describing the project.	The sales pitch is somewhat logical, easy-to-follow, and/or there is sufficient information provided describing the project.	The sales pitch is clear, concise, and there is ample information provided describing the project.	
Team Participation (X1)	The majority of the delivery is made by one (1) member of the team; the partners may be disengaged from the sales pitch.	Team members are generally engaged in the process, though one member may take on more responsibility than the others.	Team members are actively involved in the sales pitch and responses to interview questions; there is shared responsibility on the part of team members.	
SEMIFINAL SALES PITCH/DEMONSTRATION SUBTOTAL (50 points)				

Rules violations (a deduction of 20% of the total possible points for the above sections) must be initialed by the judge, coordinator, and manager of the event. Record the deduction in the space to the right.

Indicate the rule violated: _____

SEMIFINAL SUBTOTAL (50 points)

To arrive at the TOTAL score, add any subtotals and subtract rules violation points, as necessary. **TOTAL (240 points)**

Comments:

_____

I certify these results to be true and accurate to the best of my knowledge.

JUDGE

Printed name: _____   Signature: _____

MANUFACTURING PROTOTYPE
EVENT COORDINATOR INSTRUCTIONS

PERSONNEL

A. Event coordinator

B. Judges:

1. Preliminary round, two (2) or more

2. Semifinal round, two (2) or more

C. Timekeeper, one (1)

D. Assistants at check-in, two (2) or more

MATERIALS

A. Coordinator's packet, containing

1. Event guidelines, one (1) copy for the coordinator and for each judge

2. TSA Event Coordinator Report

3. Stick-on labels for entries, as needed

B. Stopwatch

C. Measuring tape

D. Tables and chairs for check-in assistants, the timer, judges, and the event coordinator

E. Tables for display of entries; chairs for each team member

RESPONSIBILITIES

AT THE CONFERENCE

A. Attend the mandatory coordinator's meeting at the designated time and location.

B. Report to the CRC room and check the contents of the coordinator's packet.

C. Review the event guidelines and check to see that enough personnel have been scheduled.

D. Inspect the area(s) in which the event is to be held for appropriate set-up, including room size, tables, chairs, etc. Notify the event manager of any potential problems.

E. At least one (1) hour before the event is to begin, meet with judges and assistants to review time limits, procedures, regulations, evaluation, and all other details related to the event. If questions arise that cannot be answered, speak to the event manager before the event begins.

F. Ensure the judges have access to the online judging system.

EVENT CHECK-IN

A. Check in the entries at the time and place stated in the conference program.

B. If check-in is on the first day of the conference, requirements for attire do NOT apply during check-in.

C. Late entries are considered on a case-by-case basis and only when the lateness is caused by events beyond the participant's control.

D. In order to compete, participants must be on the entry list or must have CRC approval.

E. Each entry must include the team's identification number in the upper right-hand corner of the entry.

F. Instruct participants to position the entries for viewing.

G. Secure the entries in the designated area.

PRELIMINARY ROUND

A. Judges independently assess the entries using the following procedure:

1. Judges score the Component Analysis criteria to determine the top twenty-four (24) preliminary contestants, which will not be posted.

2. Judges score the Documentation Portfolio criteria of those top twenty-four contestants to determine the top twelve (12) semifinalist teams.

B. Decisions about rules violations must be discussed and verified with the judges, event coordinator, and CRC manager to determine either:

1. To deduct twenty percent (20%) of the total possible points in this round or

2. To disqualify the entry

The event coordinator, judges and CRC manager must initial either of these actions on the rating form

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C. Judges determine the twelve (12) semifinalists.

D. Create semifinalist sign-up sheet for the sales pitch/demonstration.

SEMIFINAL ROUND

A. Participants report at the time and place stated in the conference program to sign-up for a sales pitch/demonstration.

B. Participants report at the assigned time and place for the sales pitch/demonstration.

C. Manage the sales pitch/demonstration sessions.

D. Discuss rule violations (e.g. 20% deduction, disqualification) and have all relevant parties initial the rating form.

E. If necessary, manage security and the removal of materials from the event area.

MUSIC PRODUCTION

OVERVIEW

Applying leadership and 21st century skills, participants produce an original musical piece that reflects the annual theme on the TSA website under *Themes & Problems*.

ELIGIBILITY

Three (3) teams per state may participate. Teamwork is strongly encouraged, but an individual may participate solo in this team event.

TIME LIMITS

PRELIMINARY ROUND

A. All components of the chapter's entry (music piece URL and documentation PDF) must be finished, submitted, and accessible via the Internet by 11:59pm ET on a designated date mid-May.

B. The musical piece must be more than one (1) minute and less than three (3) minutes in length.

C. A deduction of five (5) points total will be incurred for each fifteen (15) seconds under the one (1) minute minimum and for each fifteen (15) seconds over the three (3) minute maximum length.

D. The timing starts with the first sound and continues until the last sound ends.

SEMIFINAL ROUND

A. Up to ten (10) minutes is alloted for the interview.

ATTIRE

TSA competition attire is required for this event.

PROCEDURE

PRE-CONFERENCE

A. Participants review the TSA Honor Statement for Competitive Events found in the General Rules and listed in the individual competitive event rules.

B. Participants access the annual theme on the TSA website under *Themes & Problems*.

C. Participants record their design process within a documentation portfolio.

D. Participants submit a URL to the audio file (in MP3 or suitable format) and a multi-page PDF of the required documentation by 11:59pm ET on a designated date in mid-May.

E. The submission information and deadline will be provided in January on the TSA website under *Competition Updates*.

PRELIMINARY ROUND

A. Judges independently assess the entries using the following procedure:

1. Judges score the Music Piece criteria to determine the top twenty-four (24) preliminary contestants, which will not be posted.

2. Judges score the Documentation Portfolio criteria of those top twenty-four contestants to determine the top twelve (12) semifinalist teams.

B. A list of the twelve (12) semifinalists (in random order) will be posted on the first full day of the conference.

SEMIFINAL ROUND

A. Two (2) representatives from each semifinalist team report at the time and place stated in the conference program to sign up for an interview time.

B. No more than two (2) representatives from each semifinalist team report at the assigned time and place for the interview.

C. The top ten (10) finalists are announced at the awards ceremony.

REGULATIONS AND REQUIREMENTS

Students will work to develop their leadership and 21st century skills in the process of preparing for and participating in this TSA competitive event. The development and application of those skills must be evident in their submission, demonstration, and/or communication pertaining to the entry.

PRE-CONFERENCE

A. The musical piece and required documentation must be uploaded or located online and accessible for evaluation by the posted deadline.

B. The entry must point directly to the team's entry. Entries that require a software download or a request that access be granted will not be judged.

C. Entries received, or changes made to submitted entries after this deadline will not be judged.

D. Musical Piece:

1. The URL to the musical piece must point directly to the file and not require any permissions or installation of software for evaluation.

2. Lyrics may accompany the musical piece but are not required.

3. The musical piece must be greater than one (1) minute and less than three (3) minutes in length.

4. There will be a five (5)-point deduction for:

   a. each fifteen (15) seconds under the one (1)-minute minimum

   b. each fifteen (15) seconds over the three (3)-minute maximum length

5. All musical pieces must be the original work of the team and must have been completed within the current school year.

6. Free, non-copyrighted sounds, loops, or other musical elements may be incorporated into musical pieces. The sources of these elements and the way in which they are used in the musical piece must be described in the portfolio, and the track list must illustrate these elements.

7. Each actual instrument, voice, and/or synthesized instrument track used in the final music piece must be illustrated in a timeline format in the portfolio.

8. Where applicable, all ideas, sounds, and loops from other sources must be cited. If copyrighted material is used, proper written permission must be included (see the Student Copyright Checklist in the Forms Appendix).

PRELIMINARY ROUND

A. Documentation Portfolio:

1. The documentation portfolio should be complete, well written, and professional in organization and appearance.

2. Documentation materials (comprising a "portfolio") are required and must be submitted as a multi-page PDF document with pages in this order:

   a. Title page with the title of the musical piece, the event title, the conference city and state, and the year; one (1) page
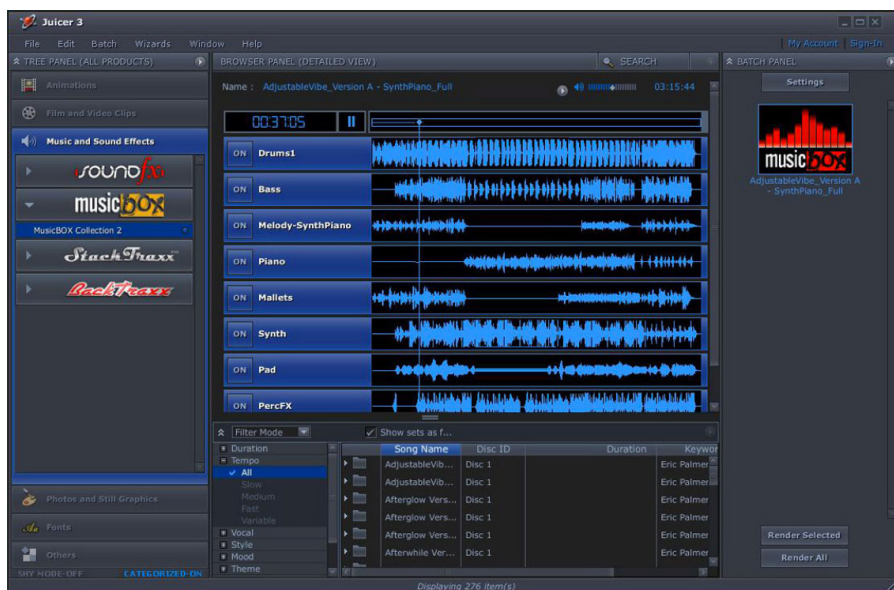
b. Table of contents; pages as needed

c. Work Log (see Forms Appendix); pages as needed

d. Self-evaluation of the piece using criteria from the official rating form; one (1) page

e. Lyrics (if desired); pages as needed

f. Audio composition track list: Each actual instrument, voice, and/or synthesized instrument track used in the final music piece must be illustrated graphically using a timeline format similar to that shown in the graphic; pages as needed.

g. When musical elements are used that were NOT created by the team, the source, effects applied, the way each element was incorporated into the song, and how each element corresponds to the musical piece's track list must be included; pages as needed.

h. List of hardware, software, and instruments used in the development of the musical piece; one (1) page

i. List of references that includes sources for materials (non-copyrighted); pages as needed

j. Student Copyright Checklist (see Forms Appendix); one (1) page

EVALUATION

PRELIMINARY ROUND

Tier 1

A. The musical piece

Tier 2

B. The documentation portfolio

SEMIFINAL ROUND

A. The interview

Refer to the official rating form for more information.

TSA HONOR STATEMENT

All work must be created and completed by individual competitors or teams. Plagiarism, the use of Generative Artificial Intelligence (GenAI) software, copyright violation, cheating, and falsification of information are prohibited. Participants may NOT use any generative artificial intelligence (GenAI) tools (e.g. ChatGPT, Google Gemini, GitHub Copilot, etc.). Any attempt to gain an unfair advantage will not be tolerated. Competitors at any level of TSA competition understand and agree to abide by the TSA Honor Statement.

If it is determined that a student violated the TSA Honor Statement, a rules violation of twenty percent (20%) will be incurred.

STEM INTEGRATION

This event aligns with the STEM (Science, Technology, Engineering, and Mathematics) educational standards.

LEADERSHIP AND 21ST CENTURY SKILLS

This event provides opportunity for students to build and develop leadership and 21st century skills including but not limited to – Communication, Collaboration/Social Skills, Initiative, Problem Solving/Risk Taking, Critical Thinking, Perseverance/Grit, Creativity, Relationship Building/Teamwork, Dependability/Integrity, and Flexibility/Adaptability

CAREERS RELATED TO THIS EVENT

This competition has connections to one (1) or more of the careers below:

- Artist
- Audio designer or engineer
- Audio operator or technician
- Broadcast technician
- Music composer

MUSIC PRODUCTION
2025 & 2026 OFFICIAL RATING FORM
HIGH SCHOOL

Judges: Using minimal (1-4 points), adequate (5-8 points), or exemplary (9-10 points) performance levels as a guideline in the rating form, record the scores earned for the event criteria in the column spaces to the right. The X1 or X2 notation in the criteria column is a multiplier factor for determining the points earned. (Example: an "adequate" score of 7 for an X1 criterion = 7 points; an "adequate" score of 7 for an X2 criterion = 14 points.) A score of zero (0) is acceptable if the minimal performance for any criterion is not met.

Go/No Go Specifications

- Before judging the entry, ensure that the items below are present; indicate presence with a check mark in the box.
- If an item is missing, leave the box next to the item blank and place a check mark in the box labeled ENTRY NOT EVALUATED.
- If a check mark is placed in the ENTRY NOT EVALUATED box, the entry is not to be judged.

☐ TIER 1 – Audio composition was submitted in proper format and accessible

☐ TIER 2 – PDF of the documentation portfolio was submitted

☐ ENTRY NOT EVALUATED

TIER 1 – MUSICAL PIECE (70 points)				Record scores in the column spaces below.
CRITERIA	Minimal performance	Adequate performance	Exemplary performance	
	1-4 points	5-8 points	9-10 points	
Creativity and Uniqueness (X1)	The musical idea is overly familiar or is a cliché; no variety or exploration of musical elements (range, timbre, dynamics, tempo, rhythm, and melody) are evident.	The work involves some original aspects or manipulations of musical ideas; it explores and includes at least one (1) or more musical elements.	The piece includes highly original, unusual, or imaginative musical ideas; it explores and includes at least two (2) or more musical elements.	
Artisanship (X1)	The piece gives no sense of a completed musical idea; there is no clear beginning, middle, or end section; the form appears random, rather than organized.	One (1) musical element has been used to organize the musical ideas and overall form, which are somewhat coherent.	The piece presents at least one (1) complete musical idea; the piece has a coherent and organized form with a clear beginning, middle, and end; musical elements are used to organize the musical ideas and form.	
Energy and Style (X2)	The piece lacks liveliness, vitality, and vigor; there is no flair, elegance, or grace to the form.	The piece generates an initial level of energy that appeals to the listener; the style is somewhat distinctive.	The liveliness and forcefulness of the piece excite the listener; the style is truly unique and electrifying.	
Appropriateness (X1)	The musical piece does not incorporate the theme well or at all.	The musical piece is acceptable and is fitting to the theme.	The musical piece is an excellent example to represent the given theme.	
Overall Appeal (X2)	The work does not present an effective general impression; the musical ideas do not hold the listener's interest.	The work includes some interesting musical ideas; the general impression is pleasant and moderately effective.	There is strong, interesting, and effective audio appeal; the work is designed to be enjoyed by the listeners.	
TIER 1 – MUSICAL PIECE SUBTOTAL (70 points)				

Rules violations (a deduction of 20% of the total possible points for the above sections) must be initialed by the judge, coordinator, and manager of the event. Record the deduction in the space to the right.

Indicate the rule violated: _____

TIME DEDUCTIONS

There will be a five (5) point deduction for each fifteen (15) seconds under the minimum time or each fifteen (15) seconds over the maximum time allowed for the visualization.

Total time under		Fifteen (15)-second intervals under		Under time deduction	
Total time over		Fifteen (15)-second intervals over		Over time deduction	
TOTAL TIME DEDUCTION					

TIER 1 – SUBTOTAL (70 points)

TIER 2 – DOCUMENTATION PORTFOLIO (30 points)

Record scores in the column spaces below

CRITERIA	Minimal performance	Adequate performance	Exemplary performance	
	1-4 points	5-8 points	9-10 points	
Portfolio Components (X1)	The portfolio is unorganized and/or missing three (3) or more components.	The portfolio is adequately organized and includes most components.	All components of the portfolio are included, and the organization of the content is clearly evident.	
Work Log and Self-Evaluation (X1)	The Work Log and/or self-evaluation are incomplete, and/or missing key components.	The Work Log and/or self-evaluation are somewhat complete and incorporate reflections and efforts of the team.	A complete and concisely written Work Log and self-evaluation are provided and incorporate the efforts and reflections of the team.	
Track Timeline (X1)	The track timeline is incomplete and/or not created correctly; the timeline does not correlate with the actual music production.	The track timeline is largely complete and attempts to correlate with the actual music production.	The track timeline is of exemplary quality; it correlates completely with the music production and is easy to follow.	
TIER 2 – DOCUMENTATION PORTFOLIO SUBTOTAL (30 points)				

Rules violations (a deduction of 20% of the total possible points for the above sections) must be initialed by the judge, coordinator, and manager of the event. Record the deduction in the space to the right.

Indicate the rule violated: _____

PRELIMINARY SUBTOTAL (100 points)

MUSIC PRODUCTION

SEMIFINAL INTERVIEW (40 points)				Record scores in the column spaces below.
CRITERIA	Minimal performance	Adequate performance	Exemplary performance	
	1-4 points	5-8 points	9-10 points	
Organization (X1)	The team/individual seems unprepared and unorganized for the interview.	The team/individual is adequately prepared and organized for the interview.	The responses to the interview questions are organized within the team and impressive.	
Knowledge (X1)	The team/individual seems to have very little understanding of the concepts and gives vague interview answers.	The team/individual has a generalized understanding of the concepts discussed and answers questions well.	There is clear evidence of a thorough understanding of the concepts discussed.	
Articulation (X1)	Communication of the design concept is unclear, unorganized, and or illogical; leadership and/or 21st century skills are not evident.	Communication of the design concept is somewhat logical and clear; leadership and/or 21st century skills are somewhat evident.	Communication of the design concept is clear, concise, and logical; leadership and/or 21st century skills are clearly evident.	
Delivery (X1)	The team/individual is verbose and/or uncertain in the interview; posture, gestures, and lack of eye contact diminish the delivery.	The team/individual is somewhat well-spoken and clear in the interview; posture, gestures, and eye contact result in an acceptable delivery.	The team/individual is well-spoken and distinct in the interview; posture, gestures, and eye contact result in a polished, natural, and effective delivery.	
SEMIFINAL INTERVIEW SUBTOTAL (40 points)				

Rules violations (a deduction of 20% of the total possible points for the above sections) must be initialed by the judge, coordinator, and manager of the event. Record the deduction in the space to the right. Indicate the rule violated: _____	

SEMIFINAL SUBTOTAL (40 points)	

To arrive at the TOTAL score, add any subtotals and subtract rules violation points, as necessary. **TOTAL (140 points)**	

Comments:

_____

I certify these results to be true and accurate to the best of my knowledge.

JUDGE

Printed name: _____   Signature: _____

MUSIC PRODUCTION EVENT COORDINATOR INSTRUCTIONS

PERSONNEL

A. Event coordinator

B. Judges:
1. Preliminary round, two (2) for each forty (40) entries
2. Semifinal round, two (2)

MATERIALS

A. Coordinator's packet, containing:
1. Event guidelines, one (1) copy for the coordinator and for each judge
2. TSA Event Coordinator Report

B. One (1) stopwatch per group of judges

C. Interview questions

D. Tables and chairs for judges

RESPONSIBILITIES

PRE-CONFERENCE/PRELIMINARY ROUND

A. National TSA will collect entries until 11:59pm ET on a designated date in mid-May. The submissions are shared with the CRC manager, event coordinator, and assigned judges.

B. Review entries as they are submitted to the designated online storage utility.

C. Manage communication and Pre-conference evaluation (at least two [2] or more judges should be recruited earlier in the year). Coordinate with National TSA and/or the Judge Manager.

AT THE CONFERENCE

A. Attend the mandatory coordinator's meeting at the designated time and location.

B. Report to the CRC room and check the contents of the coordinator's packet.

C. Review the event guidelines and check to see that enough personnel have been scheduled.

D. Inspect the area(s) in which the event is being held for appropriate set-up, including room size, chairs, tables, outlets, etc. Notify the event manager of any potential problems.

E. At least one (1) hour before the event is set to begin, meet with judges/assistants to review time limits, procedures, regulations, evaluation, and all other details related to the event. If questions arise that cannot be answered, speak to the event manager before the event begins.

F. Ensure the judges have access to the online judging system.

PRELIMINARY ROUND

A. On the first full day of competition, post a list of the twelve (12) semifinalists in random order.

SEMIFINAL ROUND

A. Semifinalists report at the time and place stated in the conference program to sign up for an interview time.

B. Semifinalists report at the time and place stated in the conference program for the interview.

C. Manage the interviews.

D. Discuss rule violations (e.g. 20% deduction, disqualification) and have all relevant parties initial the rating form.

E. If necessary, manage security and the removal of materials from the event area.

ON DEMAND VIDEO

OVERVIEW

Applying leadership and 21st century skills, participants showcase video skills, tools, and processes to communicate, entertain, inform, analyze and/or illustrate a topic, idea, subject, or concept through a film produced on-site at the National TSA Conference. Required criteria, such as props and a line of dialogue, make the competition more challenging and will be revealed at the event orientation meeting.

ELIGIBILITY

One (1) team per chapter may participate.

TIME LIMITS

A. The video must be no longer than sixty (60) seconds in length. Videos over sixty (60) seconds will be disqualified.

B. Participants have thirty-six (36) hours, beginning at the event orientation meeting, to complete the entire production.

ATTIRE

TSA competition attire is required for this event.

PROCEDURE

PRE-CONFERENCE

A. Participants review the TSA Honor Statement for Competitive Events found in the General Rules and listed in the individual competitive event rules.

ON-SITE CHALLENGE

A. Participants report to the event area at the time and place stated in the conference program to receive the on-site challenge information. TSA competition attire is required to receive the on-site challenge.

B. The event coordinator distributes the materials, information, directions, and deadlines to each team.

C. Each team supplies its own video production and editing equipment to complete its entry.

D. Teams are responsible for submitting a HYPERLINK of their video solution and a PDF of a completed Student Copyright Checklist using the submission procedures provided by the event coordinator.

E. The top ten (10) finalists are announced at the awards ceremony.

REGULATIONS AND REQUIREMENTS

Students will work to develop their leadership and 21st century skills in the process of preparing for and participating in this TSA competitive event. The development and application of those skills must be evident in their submission, demonstration, and/or communication pertaining to the entry.

A. Participants produce a video while observing the following:

1. Participants film their footage, which must be appropriate for the TSA community, only at officially sanctioned conference locations, as described by the event coordinator.

   a. Teams are not allowed to film in sleeping rooms, restrooms, bathrooms, restaurants, or elevators/escalators.

   b. Participants may not disturb any event in progress, enter a restricted evaluation area, interrupt a conference function, or participate in behavior unbecoming of a conference participant.

   c. At the event meeting, the event coordinator explains any further filming restrictions on the specific property.

   d. Failure to follow these instructions will result in disqualification.

2. TSA competition attire is optional for the participants in the video.

3. Teams may use no more than one (1) video camera for the video production.

4. Teams must edit their projects on a nonlinear editing system or their camera. Teams are responsible for providing their own editing equipment.

5. All video footage must be the original work of the team and must have been completed during the event timeline.

6. All members, adults, or children that are a prominent element in the video must be registered members of the conference.

B. On-site Submission Information:

1. Participants may choose any video hosting site (such as an UNLISTED YouTube URL), or a shareable link in cloud storage, as long as the video is located online and accessible for evaluation.

2. The URL must point directly to the participant's entry. Entries that require a software download or a request that access be granted will not be judged.

3. If the hosting site has a time displayed on the thumbnail that is greater that 1:00, the team must verify that the player page does not exceed 1:00.

4. Entries received, or changes made to submitted entries after the deadline will not be judged.

5. TSA will not penalize students for advertisements that are added to their video by third party sites (i.e.: YouTube).

6. Participants must complete the Student Copyright Checklist (see Forms Appendix) and save it as a multi-page PDF to be submitted electronically with the entry online. Failure to include the Student Copyright Checklist will result in disqualification.

7. Where applicable, all ideas, text, images, and sounds from other sources must be cited. Copyrighted materials may NOT be used. If including a citation page, the page must be included as a second page of the Student Copyright Checklist PDF in B.6.

8. National TSA will not provide wireless Internet.

EVALUATION

A. The completed video production.

Refer to the official rating form for more information.

TSA HONOR STATEMENT

All work must be created and completed by individual competitors or teams. Plagiarism, the use of Generative Artificial Intelligence (GenAI) software, copyright violation, cheating, and falsification of information are prohibited. Participants may NOT use any generative artificial intelligence (GenAI) tools (e.g. ChatGPT, Google Gemini, GitHub Copilot, etc.). Any attempt to gain an unfair advantage will not be tolerated. Competitors at any level of TSA competition understand and agree to abide by the TSA Honor Statement.

If it is determined that a student violated the TSA Honor Statement, a rules violation of twenty percent (20%) will be incurred.

STEM INTEGRATION

This event aligns with the STEM (Science, Technology, Engineering, and Mathematics) educational standards.

LEADERSHIP AND 21ST CENTURY SKILLS

This event provides opportunity for students to build and develop leadership and 21st century skills including but not limited to – Communication, Collaboration/Social Skills, Initiative, Problem Solving/Risk Taking, Critical Thinking, Perseverance/Grit, Creativity, Relationship Building/Teamwork, Dependability/Integrity, and Flexibility/Adaptability

CAREERS RELATED TO THIS EVENT

This competition has connections to one (1) or more of the careers below:

- Actor
- Audio/video operator or technician
- Cinematographer
- Film/video editor
- Screen editor
- Script writer

ON DEMAND VIDEO

2025 & 2026 OFFICIAL RATING FORM

HIGH SCHOOL

Judges: Using minimal (1-4 points), adequate (5-8 points), or exemplary (9-10 points) performance levels as a guideline in the rating form, record the scores earned for the event criteria in the column spaces to the right. The X1 or X2 notation in the criteria column is a multiplier factor for determining the points earned. (Example: an "adequate" score of 7 for an X1 criterion = 7 points; an "adequate" score of 7 for an X2 criterion = 14 points.) A score of zero (0) is acceptable if the minimal performance for any criterion is not met.

Go/No Go Specifications

- Before judging the entry, ensure that the items below are present; indicate presence with a check mark in the box.
- If an item is missing, leave the box next to the item blank and place a check mark in the box labeled ENTRY NOT EVALUATED.
- If a check mark is placed in the ENTRY NOT EVALUATED box, the entry is not to be judged.

- ☐ The video is submitted and accessible
- ☐ The video is sixty (60) seconds or less
- ☐ A PDF of the Student Copyright Checklist is uploaded
- ☐ ENTRY NOT EVALUATED

PRODUCTION (100 points)

CRITERIA	Minimal performance 1-4 points	Adequate performance 5-8 points	Exemplary performance 9-10 points	Record scores in the column spaces below.
Camera Handling (X1)	Serious problems with focus, steadiness, and framing are evident.	Most shots are focused and framed, with adequate close-ups included.	Steady and creative shots that enhance the video are utilized, and excellent close-ups are included.	
Lighting (X1)	Numerous shots are improperly lit; bleaching, shadows, or unbalanced conditions may be evident in some shots; there is no evidence of an attempt to correct problems.	Most shots are properly lit, either through ambient lighting or the use of techniques to correct poor lighting conditions.	All shots are well lit, either through ambient lighting or the use of techniques to correct poor lighting conditions.	
Audio (X1)	Audio may be unclear, distorted, or washed out from poor signal-to-noise ratio; there is evidence of the use of a built-in camera microphone that detracts from the message.	The audio is clear, with consideration given to a good signal-to-noise ratio; background or ambient noise may occasionally be a distraction.	The audio is clear and recorded with good signal-to-noise ratio, displaying skillful microphone choice, placement, and technique.	
Continuity and Pacing (X2)	The story sequencing is confusing; shots are too long or "clipped," with edit points appearing "glitchy."	The pace and timing are well structured; clips move along and tell the story, with moderate use of transitions.	Shots logically pace the story along in an interesting way, with an excellent and purposeful use of transitions.	
Video Effectiveness (X2)	The video does not meet project goals, presents an unclear message, and/or is sloppy overall; leadership and/or 21st century skills are not evident.	The video topic is presented with insights; the video adequately meets the objective; leadership and/or 21st century skills are somewhat evident.	The video is clearly focused, with a rich variety of supporting material; leadership and/or 21st century skills are clearly evident.	
Aesthetics and Artisanship (X1)	The work is unorganized and sloppy.	The work provides an organized and logical presentation of essential issues.	The work provides an exemplary use of layout and design principles to logically communicate important data.	
Use of Required Props (X1)	Props incorporated in the video appear as an afterthought.	Props incorporated in the video add some artistic value and tend to further the plot.	Props are integral to the production's plot and artistic value.	
Use of Required Dialogue (X1)	The line of dialogue is not well incorporated in the production, and/or the dialogue is not in sync with the plot.	The line of dialogue is adequately incorporated and somewhat essential to the production's plot.	The line of dialogue is communicated effectively and is integral to the production's plot.	

PRODUCTION SUBTOTAL (100 points)	

Rules violations (a deduction of 20% of the total possible points for the above sections) must be initialed by the judge, coordinator, and manager of the event. Record the deduction in the space to the right. Indicate the rule violated: _____	

To arrive at the TOTAL score, add any subtotals and subtract rules violation points, as necessary. **TOTAL (100 points)**	

Comments:

_____

I certify these results to be true and accurate to the best of my knowledge.

JUDGE

Printed name: _____   Signature: _____

ON DEMAND VIDEO
EVENT COORDINATOR INSTRUCTIONS

PERSONNEL

A. Event coordinator

B. Judges, two (2) or more

MATERIALS

A. Coordinator's packet, containing:

1. Event guidelines, one (1) copy for the coordinator and for each judge

2. TSA Event Coordinator Report

B. One (1) stopwatch per group of judges

C. Marking pens, three (3)

D. A well written on-site problem that is appropriate for the conference with criteria, props, a line of dialogue, and submission instructions; one (1) for each team and one (1) for each judge.

E. Tables and chairs for judges

F. Computer installed with VLC Media Player software and capable of viewing PDF files is needed for each judge team in addition to the rubric/scoring computer

G. Extension cords (25' minimum length), as needed

RESPONSIBILITIES

AT THE CONFERENCE

A. Attend the mandatory coordinator's meeting at the designated time and location.

B. Report to the CRC room and check the contents of the coordinator's packet.

C. Review the event guidelines and check to see that enough personnel have been scheduled.

D. Inspect the area(s) in which the event is being held for appropriate set-up, including room size, chairs, tables, outlets, etc. Notify the event manager of any potential problems.

E. The coordinator (and possibly an assistant) review the entries to mark as disqualified any video greater than sixty (60) seconds and/or missing the required documentation (Student Copyright Checklist).

F. At least one (1) hour before the event is to begin, meet with judges and assistants to review time limits, procedures, regulations, evaluation, and all other details related to the event. If questions arise that cannot be answered, speak to the event manager before the event begins.

G. Ensure the judges have access to the online judging system.

EVENT CHECK-IN

A. Prior to the event meeting, the coordinator should tour the conference facilities and develop a list of restricted areas and/or specific restrictions for the event. This list should be shared with the event manager prior to the event meeting. The coordinator should mention at the event meeting that teams must be courteous to all guests in common areas or designated filming areas.

B. Meet with all participants at the designated time and place to deliver the specific criteria, including required props and dialogue.

1. Ensure that all participants understand regulations regarding equipment allowed, behavior, deadlines, and submission requirements.

2. Share the online submission link with the participants.

3. Late entries are considered on a case-by-case basis and only when the delay is caused by events beyond participant control.

4. In order to compete, participants must be on the entry list, or must have approval of the CRC.

C. If check-in is on the first day of the conference, requirements for attire do NOT apply during check-in.

PRELIMINARY ROUND

A. Close the online submission link.

B. Determine the heat procedures and communicate the requirements to the judges.

C. Entries are reviewed by judges with neither students nor advisors are present at this time.

　1. The event is judged in sections with two (2) judges per section.

　2. The top twelve (12) entries will be reviewed by a second set of two (2) judges using the same rubric, but a new blank rubric. For example, if three sections are used, the top (4) from each section will advance. If six sections are used, the top two (2) from each section will advance.

　3. The top twelve (12) entries will not be published.

D. Ensure the judges have access to the entries.

E. Judges independently evaluate the entries.

F. Decisions about rules violations must be discussed and verified with the judges, event coordinator, and CRC manager to determine either:

　1. To deduct 20% of the total possible points or

　2. To disqualify the entry

　The event coordinator, judges, and CRC manager must initial either of these actions on the rating form.

G. Each group of evaluators averages the scores to determine the top ten (10) entries from that group. The number of evaluator groups depends on the number of entries with two (2) or more evaluators for every forty (40) entries.

H. If necessary, manage security and the removal of materials from the area.

PHOTOGRAPHIC TECHNOLOGY

OVERVIEW

Applying leadership and 21st century skills, participants demonstrate an expertise in using photographic and imaging technology processes to convey a message. Semifinalists communicate their logical processes through the on-site an interview and showcase their skills by capturing and editing photographs that are submitted on a USB during the conference. The annual theme will be posted on the TSA website under *Themes & Problems*.

ELIGIBILITY

One (1) individual per chapter may participate

TIME LIMITS

PRELIMINARY ROUND

A. All components of the chapter's entry (photographic portfolio PDF) must be finished, submitted, and accessible via the Internet by 11:59pm ET on a designated date mid-May.

SEMIFINAL ROUND

A. Twenty-four (24) hours to take, edit, and create a Semifinalist Challenge Portfolio of photos created during the semifinal session.

B. Five (5) minutes to present the solution to the judges and five (5) minutes to complete an interview.

ATTIRE

TSA competition attire is required for this event.

PROCEDURE

PRE-CONFERENCE

A. Participants review the TSA Honor Statement for Competitive Events found in the General Rules and listed in the individual competitive event rules.

B. Participants access the annual theme on the TSA website under *Themes & Problems*.

C. Participants produce a photographic portfolio while observing regulations.

D. Examples of tasks that participants may be asked to perform include, but are not limited to:
1. photographing a product for commercial use
2. green screen shots
3. macro photography
4. portraiture
5. staging a still life photo using provided materials.

E. Participants submit the photographic portfolio PDF by 11:59pm ET on a designated date in mid-May.

F. Submission information will be provided on the TSA website under *Competition Updates*.

PRELIMINARY ROUND

A. A list of the twelve (12) semifinalists (in random order) will be posted on the first full day of the conference.

SEMIFINAL ROUND

A. Participants report to the event area at the time and place stated in the conference program to:
1. receive the semifinal problem
2. sign up for presentation/interview time

B. All participants will have twenty-four (24) hours to complete and submit a Semifinal Portfolio on a USB at the time and place stated in the conference program.

C. The judges will evaluate the semifinal portfolio without the participate present.

D. Participants will then report to the event area at the time and place stated in the conference program at the presentation time.

E. Once in the presentation room, the participants will have two (2) minutes to open the presentation and prepare for their interview using the participants laptop and the USB submitted.

F. Five (5) minutes to present the solution to the judges and five (5) minutes to complete an interview.

G. Judges independently assess the entries and interview responses.

H. The top ten (10) finalists are announced at the awards ceremony.

REGULATIONS AND REQUIREMENTS

Students will work to develop their leadership and 21st century skills in the process of preparing for and participating in this TSA competitive event. The development and application of those skills must be evident in their submission, demonstration, and/or communication pertaining to the entry.

PRELIMINARY ROUND

A. Participants interpret the annual theme posted on the TSA website under *Themes & Problems* to unify the photographs included in the portfolio.

B. Participants are solely responsible for all aspects of the competition, including taking the photographs, editing, and completing the portfolio. This includes images used in special effects photography.

C. Photographic Portfolio:

1. The finished album must be saved as a multi-page PDF document with the pages in the following order:

    a. Title page – must include the event title, the conference city and state, the year, the participant's ID number; one (1) page.

    b. Table of contents; pages as needed

    c. Summary of the theme must follow the annual challenge, including a detailed description of how the theme was interpreted by the participant, why the particular subjects were chosen, as well as the challenges that were faced in the selection of the subjects, in taking the photos, and in selecting and editing the final images; pages as needed.

    d. The photographs:

        i. The entry must contain five (5) separate images as detailed in the annual theme posted on the TSA website under *Themes & Problems*:

            1. one (1) color image

            2. one (1) black and white image

            3. one (1) Macro image

            4. one (1) Still life

            5. one (1) Student choice

Note: Sepia tones, blue tones, or coloring of any type, other than black and white, are counted as color images.

        ii. The photograph (image) can be in portrait or landscape orientation depending on the photographer. The size of the photo on the page can range from as small as 5" x 7" to as large as 8" x 10" (if portrait).

        iii. One-half (½) page typewritten statements in 12-point Times New Roman font containing the following information must precede or be on the following page after the image. Statements should NOT appear on the same page as the final image:

            1. Camera make (Nikon, Canon, Panasonic, Sony, etc.)

            2. Camera model (CoolPix, Rebel, 5D, etc.)

            3. F-stop at which the photograph was taken

            4. Exposure time

            5. ISO speed

            6. Focal length

            7. A brief description of the image, how the photographer interprets it to meet the challenge criteria, and what edits were made to the original image to arrive at the final product. Include detailed information about the process/special effects applied to the image.

        iv. Any image submitted that combines images must have the unaltered images included in the Resources/References section of the entry.

    e. A references and resources page must include a list of resources used to complete the album, including camera, software, hardware, etc.; one (1) page

    f. Student Copyright Checklist (see Forms Appendix); one (1) page.

g. Photo/Film/Video Consent and Release Forms – recognizable individuals pictured in the images (minors require parental consent) must give their written consent before the images can be used in this event (see Photo/Film/Video Consent and Release Form in Forms Appendix); pages as needed

D. All prints used in this event should be appropriate for viewing at the National TSA Conference. Any entry that includes images depicting inappropriate or unacceptable behavior may result in disqualification.

SEMIFINAL ROUND

A. Semifinalists are required to provide their own equipment and any other related accessories needed to complete the semifinals portfolio presentation. These can include but not limited to the following:

1. A tripod
2. Portable, off-camera flash unit (e.g., a speedlight)
3. Cell phone cameras are not permitted.
4. A computer (laptop is preferred) with graphic editing software installed.
5. One (1) USB flash drive for use in the semifinal portfolio presentation.

   Note: USB flash drives become property of TSA and will not be returned to the participant.

B. Participants use the graphic editing software (e.g., Lightbox, Photoshop, Fireworks, etc.), to edit their images.

C. Each semifinalist must have a method to transfer the images to the computer for editing (such as a media reader).

D. No internet access will be provided.

E. Semifinalist Portfolio MUST include the following information. The written statement will be on the page that precedes each image of the solution using 12-point Times New Roman font:

1. Copy of the original, unedited image
2. Camera make (Nikon, Canon, Panasonic, Sony, etc.)
3. Camera model (CoolPix, Rebel, 5D, etc.)
4. F-stop at which each photograph was taken
5. Exposure time of each photograph
6. ISO speed of each photograph
7. Focal length of the lens for each photograph
8. For each image presented, participants must also write a brief statement (one to two sentences in length) on how the photographer believes the image meets the challenge (e.g., "I chose a standard formal portrait style in black and white to focus attention on the subject's face.").
   a. The statement must also include the edits made to the original image to arrive at the final image.
   b. This statement should NOT appear on the same page/slide as the image.
9. Student Copyright Checklist (see Forms Appendix); one (1) page.
10. Resources and References (if applicable). Images used in special effects photos (composite images, ghosted images, etc.) are to be placed in this section and should note the associated photo; pages as needed.
11. The above portfolio regulations are in addition to any special requirements communicated during the semifinal round informational session.

F. The Semifinal Portfolio is saved as a PDF on a USB drive using the participant's ID number as the file name.

G. The USB drive is submitted at the time and location provided in the conference program. The participant's ID number must be clearly displayed on the outside of the USB drive. The USB drive will become property of National TSA.

H. Once in the presentation room at the assigned time, the participants will have two (2) minutes to open the presentation and prepare for their interview using the participants laptop and the USB that was submitted. The setup time is not counted towards the presentation and interview time.

I. Participants are responsible for providing a charged laptop to view their semifinalist presentation. No access to power will be provided.

J. The member will give a brief presentation that details the thought processes creating each image of the semifinal portfolio allowing for time to answer interview questions. The presentation and interview will take no longer than ten (10) minutes.

K. Judges will independently assess the entries and interview responses.

L. The top ten (10) finalists are announced at the awards ceremony.

M. All prints used in this event should be appropriate for viewing at the National TSA Conference. Any entry that includes images depicting inappropriate or unacceptable behavior will result in disqualification.

EVALUATION

PRE-CONFERENCE/PRELIMINARY ROUND

A. The photographic portfolio

SEMIFINAL ROUND

A. The semifinalist portfolio

B. The interview

Refer to the official rating form for more information.

TSA HONOR STATEMENT

All work must be created and completed by individual competitors or teams. Plagiarism, the use of Generative Artificial Intelligence (GenAI) software, copyright violation, cheating, and falsification of information are prohibited. Participants may NOT use any generative artificial intelligence (GenAI) tools (e.g. ChatGPT, Google Gemini, GitHub Copilot, etc.). Any attempt to gain an unfair advantage will not be tolerated. Competitors at any level of TSA competition understand and agree to abide by the TSA Honor Statement.

If it is determined that a student violated the TSA Honor Statement, a rules violation of twenty percent (20%) will be incurred.

STEM INTEGRATION

This event aligns with the STEM (Science, Technology, Engineering, and Mathematics) educational standards.

LEADERSHIP AND 21ST CENTURY SKILLS

This event provides opportunity for students to build and develop leadership and 21st century skills including but not limited to – Communication, Collaboration/Social Skills, Initiative, Problem Solving/Risk Taking, Critical Thinking, Perseverance/Grit, Creativity, Relationship Building/Teamwork, Dependability/Integrity, and Flexibility/Adaptability

CAREERS RELATED TO THIS EVENT

This competition has connections to one (1) or more of the careers below:

- Advertising or public relations executive
- Graphic designer
- Photographer

Participant/Team ID# _____

PHOTOGRAPHIC TECHNOLOGY
2025 & 2026 OFFICIAL RATING FORM
HIGH SCHOOL

Judges: Using minimal (1-4 points), adequate (5-8 points), or exemplary (9-10 points) performance levels as a guideline in the rating form, record the scores earned for the event criteria in the column spaces to the right. The X1 or X2 notation in the criteria column is a multiplier factor for determining the points earned. (Example: an "adequate" score of 7 for an X1 criterion = 7 points; an "adequate" score of 7 for an X2 criterion = 14 points.) A score of zero (0) is acceptable if the minimal performance for any criterion is not met.

Go/No Go Specifications

- Before judging the entry, ensure that the items below are present; indicate presence with a check mark in the box.
- If an item is missing, leave the box next to the item blank and place a check mark in the box labeled ENTRY NOT EVALUATED.
- If a check mark is placed in the ENTRY NOT EVALUATED box, the entry is not to be judged.

☐ PDF of the photographic portfolio was submitted
☐ ENTRY NOT EVALUATED

PRELIMINARY PHOTOGRAPHIC PORTFOLIO (80 points)

Record scores in the column spaces below.

CRITERIA	Minimal performance 1-4 points	Adequate performance 5-8 points	Exemplary performance 9-10 points	
Portfolio (X1)	Portfolio is missing several components and/or is lacking in quality.	Most components are included: portfolio is generally organized and displays some quality in fonts and layout.	All components are included; effort and quality of work are evident. Portfolio displays high quality choice of fonts and layouts.	
Principles and Elements of Design and Composition and Creativity (X2)	There is little or no evidence of an understanding or creative use of compositional elements (line, shape, form, value, space, texture, color, framing, emphasis, balance, unity, contrast, movement/rhythm and pattern/repetition).	Images demonstrate some knowledge and creative use of compositional elements (line, shape, form, value, space, texture, color, framing, emphasis, balance, unity, contrast, movement/rhythm and pattern/repetition).	Images clearly demonstrate excellent and creative use of a variety of compositional elements (line, shape, form, value, space, texture, color, framing, emphasis, balance, unity, contrast, movement/rhythm and pattern/repetition).	
Technical Quality (X1)	Photos are out of focus; blurriness is unintentional and does not contribute to the overall composition; photos display incorrect exposure values, white balance, and/or range of tones; there is little or no consideration given to lighting and/or special effects.	Photos are in focus; photos display correct exposure values, white balance, and/or range of tones; images exhibit some attention to lighting and/or the use of special effects.	Photo subject(s) are in sharp focus; blurriness is used effectively to enhance the composition; photos display correct exposure values, white balance, and/or range of tones; images are enhanced by attention to lighting and/or the use of special effects.	
Impact and Theme (X2)	The images are flat and lack emotional depth; viewers are not drawn into the scene; images do not clearly convey the theme/challenge.	The images show some emotional depth; viewers make an emotional connection with the images/pictures and are drawn into the scene or learn something from the subject(s); images convey the competition theme/challenge.	The images show emotional depth; viewers make an instant emotional connection with the pictures and are drawn into the scene or learn something from the subject(s); images cleary convey the competition theme/challenge.	

PRELIMINARY PHOTOGRAPHIC PORTFOLIO (80 points) – continued

Written Statements (X1)	A written statement may or may not accompany each photo, and/or the statement includes only some of the photo's meta data (camera make/model, f/stop, exposure time, ISO speed, focal length), and/or an explanation of the relevance of the image to the challenge is not present and/or is written poorly.	A written statement accompanies each photo; the statement includes most of the photo's meta data (camera make/model, f/stop, exposure time, ISO speed, focal length); an explanation of the relevance of the image to the challenge is included.	A written statement accompanies each photo; the statement includes the photo's meta data (camera make/model, f/stop, exposure time, ISO speed, focal length); an explanation of the relevance of the image to the challenge is presented in a clear and concise manner.	
Resources/ References (X1)	A reference list is present, but graphic and/or software packages used are not mentioned, and/or appropriate format is not used, and/or the citations are inadequate.	A reference list is present and the primary software packages used are included; appropriate format is used for an adequate number of resources.	Detailed and concise resources/ references are provided; all software packages used are included; appropriate format is used for the citations.	
PRELIMINARY PHOTOGRAPHIC PORTFOLIO SUBTOTAL (80 points)				

Rules violations (a deduction of 20% of the total possible points for the above sections) must be initialed by the judge, coordinator, and manager of the event. Record the deduction in the space to the right.

Indicate the rule violated: _____

PRELIMINARY SUBTOTAL (80 points)	

SEMIFINALIST PORTFOLIO/INTERVIEW (80 points)

CRITERIA	Minimal performance	Adequate performance	Exemplary performance	
	1-4 points	5-8 points	9-10 points	
Principles and Elements of Design/ Composition and Creativity (X1)	There is little or no evidence of an understanding or creative use of compositional elements (line, shape, form, value, space, texture, color, framing, emphasis, balance, unity, contrast, movement/rhythm and pattern/repetition).	Images demonstrate some knowledge and creative use of compositional elements (line, shape, form, value, space, texture, color, framing, emphasis, balance, unity, contrast, movement/rhythm and pattern/repetition).	Images clearly demonstrate excellent and creative use of a variety of compositional elements (line, shape, form, value, space, texture, color, framing, emphasis, balance, unity, contrast, movement/ rhythm and pattern/repetition).	
Technical Skill (X2)	Participants do not demonstrate knowledge of and understanding of how to utilize photographic equipment and techniques such as lighting equipment, and/or off-camera flash, or do not use it altogether in the on-site challenge; participants show little or no creativity in staging and photographing subjects.	Participants demonstrate some knowledge of and understanding of how to utilize photographic equipment and techniques such as lighting equipment, and/or off-camera flash, or use it only minimally in the onside challenge; participants show some creativity in staging and photographing subjects.	Participants clearly demonstrate knowledge and understanding of how to utilize photographic equipment and techniques such as lighting equipment, and/or off-camera flash and use it creatively in the on-site challenge; participants show creativity in staging and photographing subjects; participants show a high level of skill in the use of the tools to create high quality images.	

SEMIFINALIST PORTFOLIO/INTERVIEW (80 points) – continued

Criteria				
Technical Quality (X1)	Photos are out of focus; blurriness is unintentional and does not contribute to the overall composition; photos display incorrect exposure values, white balance, and/or range of tones; there is little or no consideration given to lighting and/or special effects.	Photos are in focus; photos display correct exposure values, white balance, and/or range of tones; images exhibit some attention to lighting and/or the use of special effects.	Photo subject(s) are in sharp focus; blurriness is used effectively to enhance the composition; photos display correct exposure values, white balance, and/or range of tones; images are enhanced by attention to lighting and/or the use of special effects.	
Impact and Theme (X1)	The images are flat and lack emotional depth; viewers are not drawn into the scene; images do not clearly convey the theme/challenge.	The images show some emotional depth; viewers make an emotional connection with the images/pictures and are drawn into the scene or learn something from the subject(s); images convey the competition theme/challenge.	The images show emotional depth; viewers make an instant emotional connection with the pictures and are drawn into the scene or learn something from the subject(s); images cleary convey the competition theme/challenge.	
Portfolio (X1)	A written statement may or may not accompany each photo, and/or the statement includes only some of the photo's meta data (camera make/model, f/stop, exposure time, ISO speed, focal length), and/or an explanation of the relevance of the image to the challenge is not present and/or is written poorly.	A written statement accompanies each photo; the statement includes most of the photo's meta data (camera make/model, f/stop, exposure time, ISO speed, focal length); an explanation of the relevance of the image to the challenge is included.	A written statement accompanies each photo; the statement includes the photo's meta data (camera make/model, f/stop, exposure time, ISO speed, focal length); an explanation of the relevance of the image to the challenge is presented in a clear and concise manner.	
Interview (X2)	Communication of the design process is unclear, unorganized, and or illogical; leadership and/or 21st century skills are not evident.	Communication of the design process is somewhat logical and clear; leadership and/or 21st century skills are somewhat evident.	Communication of the design process is clear, concise, and logical; leadership and/or 21st century skills are clearly evident.	
SEMIFINALIST PORTFOLIO/INTERVIEW SUBTOTAL (80 points)				

Rules violations (a deduction of 20% of the total possible points for the above sections) must be initialed by the judge, coordinator, and manager of the event. Record the deduction in the space to the right.

Indicate the rule violated: _____

SEMIFINAL SUBTOTAL (80 points)

To arrive at the TOTAL score, add any subtotals and subtract rules violation points, as necessary. **TOTAL (160 points)**

Comments:

_____

I certify these results to be true and accurate to the best of my knowledge.

JUDGE

Printed name: _____   Signature: _____

PHOTOGRAPHIC TECHNOLOGY EVENT COORDINATOR INSTRUCTIONS

PERSONNEL

A. Event coordinator

B. Assistants for check-in, two (2)

C. Judges:

1. Preliminary round for portfolios, two (2) or more

2. Semifinal round, two (2) or more

MATERIALS

A. Coordinator's packet, containing

1. Event guidelines, one (1) copy for the coordinator and for each judge

2. TSA Event Coordinator Report

3. Stick-on labels for semifinal contestants, as needed

B. Stopwatch

C. Interview questions

D. Tables for entries

E. Tables and chairs for judges

F. Semifinalist on-site problem, one (1) copy for each member and one (1) copy for each judge.

G. Event time line and presentation schedule

H. One (1) laptop to judge the semifinalist portfolio after submission and prior to interview.

RESPONSIBILITIES

PRE-CONFERENCE

A. National TSA will collect entries until 11:59pm ET on a designated date in mid-May. The results are shared with the CRC manager, event coordinator, and assigned judges.

B. Review entries as they are submitted to the designated online storage utility.

C. Manage communication and Pre-conference evaluation (at least two [2] or more judges should be recruited earlier in the year). Coordinate with National TSA and/or the Judge Manager.

AT THE CONFERENCE

A. Attend the mandatory coordinator's meeting at the designated time and location.

B. Report to the CRC room and obtain the coordinator's packet; check the contents.

C. Review the event guidelines and check to see that enough judges/assistants have been scheduled.

D. Inspect the area(s) in which the event is being held for appropriate set-up, including room size, chairs, tables, outlets, etc. Notify the event manager of any potential problems.

E. One (1) hour before the semifinal event is to begin, meet with evaluators to review time limits, procedures, regulations, evaluation, and all other details related to the event. If questions arise that cannot be answered, speak to the event manager before the event begins.

F. Ensure the judges have access to the online judging system.

PRELIMINARY ROUND

A. On the first full day of the conference, post a list of the twelve (12) semifinalists in random order.

B. Create and post a semifinalist sign-up sheet.

SEMIFINAL ROUND

A. Meet the semifinalist at the time and location in the conference program. Distribute the semifinalist challenge.

B. At least one (1) hour before the event is scheduled to begin, meet with judges and review the time limits, procedures, regulations, evaluation, and all other details related to the event. Determine the procedure for breaking ties before the on-site competition begins.

C. Semifinalist teams report to the event area at the assigned time and place with their completed USB drive containing the semifinalist portfolio.

D. Collect USB flash drives. Ensure that each is properly marked with the participant's identification number. Inform the contestants that the USB flash drives become the property of TSA and will not be returned.

E. Decisions about rules violations must be discussed and verified with the judges, event coordinator, and CRC manager to determine either:

1. To deduct 20% of the total possible points or

2. To disqualify the entry

The event coordinator, judges, and CRC manager must initial either of these actions on the rating form.

F. If necessary, manage security and the removal of materials from the area.

Technology Student Association (TSA) High School Competitive Events Guide for the 2025 and 2026 National TSA Conferences

PREPARED PRESENTATION

OVERVIEW

Applying leadership and 21st century skills, participants prepare to deliver an oral presentation, using a digital slide deck. The theme for Prepared Presentation will reflect contemporary topics from the fields of science, technology, engineering, and mathematics. The annual theme can be located on the TSA website under *Themes & Problems*.

ELIGIBILITY

Three (3) individuals per state may participate.

TIME LIMITS

A. Each presentation must be no less than three (3) minutes and no more than five (5) minutes.

B. A maximum of one (1) minute is allowed for set-up.

C. At the conclusion of the presentation, participants must remove all equipment and exit the room.

D. A time deduction as noted in the rubric will be incurred for not adhering to any time designations/restrictions.

ATTIRE

TSA competition attire is required for this event.

PROCEDURE

PRE-CONFERENCE

A. Participants review the TSA Honor Statement for Competitive Events found in the General Rules and listed in the individual competitive event rules.

PRELIMINARY ROUND

A. Participants report at the time and place stated in the conference program to sign up for an assigned presentation time.

B. Participants will report to the holding area, as stated in the conference program, fifteen (15) minutes prior to their individual assigned time.

C. The event coordinator introduces each participant by number and in order of scheduled times. The schedule allows time for set-up and removal of materials.

D. Judges independently assess each participant's speech.

E. A list of twelve (12) semifinalists (in random order) is posted.

SEMIFINAL ROUND

A. Semifinalists report to the event area at the time and place stated in the conference program to receive an assigned presentation time.

B. Semifinalist presentations follow the same procedure as in the preliminary round.

C. Ten (10) finalists will be announced during the conference awards ceremony.

REGULATIONS AND REQUIREMENTS

Students will work to develop their leadership and 21st century skills in the process of preparing and participating in this TSA competitive event. The development and application of those skills must be evident in the submission, demonstration, and/or communication pertaining to the entry.

PRELIMINARY ROUND

A. Each presentation must be the result of the participant's own efforts.

B. The topic for the Prepared Presentation event highlights a current topic in a STEM field. Participants demonstrate their knowledge of the subject material by delivering a thoughtful response to the annual prompt. Information about technology and TSA is appropriate as long as it relates to the published topic.

C. The speech must include the use of a digital slide deck with a minimum of five (5) slides. The participant must not include any identifying information in the slide deck except for the participant's ID number.

D. Participants are not allowed to hear other participants' speeches.

E. It is the participants responsibility to provide one (1) laptop needed for the presentation. The laptop must be battery powered, charged, and will be placed on the judges table. The judges will view the screen during the presentation. No projection equipment is allowed.

Technology Student Association (TSA) High School Competitive Events Guide for the 2025 and 2026 National TSA Conferences

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F. Participant scores are penalized one (1) point per ten (10) second interval for speaking over or under the allotted time.

   1. The same penalty is used for set-up.

   2. Set-up time begins when the participant is called into the room and ends when the participant is ready to deliver the presentation.

   3. The speech time will commence when the speech begins.

G. A podium will be available in the room, but the laptop will be on the table with the judges.

H. A time-keeper will hold up a card with "one minute remaining" when the presentation has reached the four minutes mark.

I. No observers are allowed in the event or preparation rooms during the preliminary round.

SEMIFINAL ROUND

A. All regulations from the preliminary round apply to the semifinal round.

B. Observers may be allowed to sit in the audience during the semifinals if space is available and the coordinator provides permission.

C. Observers may not enter or leave during a speech.

D. No audio or visual recording devices (including cell phones, digital cameras, etc.) by the observers are permitted.

EVALUATION

A. Tthe quality of the presentation and the appropriate use and content of the slides in the slide deck as it relates to the national TSA conference theme.

Refer to the official rating form for more information.

TSA HONOR STATEMENT

All work must be created and completed by individual competitors or teams. Plagiarism, the use of Generative Artificial Intelligence (GenAI) software, copyright violation, cheating, and falsification of information are prohibited. Participants may NOT use any generative artificial intelligence (GenAI) tools (e.g. ChatGPT, Google Gemini, GitHub Copilot, etc.). Any attempt to gain an unfair advantage will not be tolerated. Competitors at any level of TSA competition understand and agree to abide by the TSA Honor Statement.

If it is determined that a student violated the TSA Honor Statement, a rules violation of twenty percent (20%) will be incurred.

STEM INTEGRATION

This event aligns with the STEM (Science, Technology, Engineering, and Mathematics) educational standards.

LEADERSHIP AND 21ST CENTURY SKILLS

This event provides opportunity for students to build and develop leadership and 21st century skills including but not limited to – Communication, Collaboration/Social Skills, Initiative, Problem Solving/Risk Taking, Critical Thinking, Perseverance/Grit, Creativity, Relationship Building/Teamwork, Dependability/Integrity, and Flexibility/Adaptability

CAREERS RELATED TO THIS EVENT

This competition has connections to one (1) or more of the careers below:

- Broadcast media specialist
- Lawyer
- Management consultant
- Motivational speaker
- Public relations executive

PREPARED PRESENTATION

2025 & 2026 OFFICIAL RATING FORM

HIGH SCHOOL

Judges: Using minimal (1-4 points), adequate (5-8 points), or exemplary (9-10 points) performance levels as a guideline in the rating form, record the scores earned for the event criteria in the column spaces to the right. The X1 or X2 notation in the criteria column is a multiplier factor for determining the points earned. (Example: an "adequate" score of 7 for an X1 criterion = 7 points; an "adequate" score of 7 for an X2 criterion = 14 points.) A score of zero (0) is acceptable if the minimal performance for any criterion is not met.

Go/No Go Specifications

- Before judging the entry, ensure that the items below are present; indicate presence with a check mark in the box.
- If an item is missing, leave the box next to the item blank and place a check mark in the box labeled ENTRY NOT EVALUATED.
- If a check mark is placed in the ENTRY NOT EVALUATED box, the entry is not to be judged.

☐ A slide deck is present
☐ Laptop is present
☐ ENTRY NOT EVALUATED

PRESENTATION (30 points)				Record scores in the column spaces below.
CRITERIA	**Minimal performance** 1-4 points	**Adequate performance** 5-8 points	**Exemplary performance** 9-10 points	
Introduction (X1)	The introduction is weak, with little effort made to highlight and/or generate interest and enthusiasm for the topic.	The introduction is adequate and creates a general level of interest.	The introduction is effective, stimulating and inspires observers.	
Body (X1)	The body of the presentation is poorly organized; the content does not properly cover or represent the topic theme.	The body of the presentation is somewhat clear and effective and creates an interesting premise.	The body of the presentation is clear, effective and delivered in an exceptionally interesting manner; the speech is memorable.	
Conclusion (X1)	The conclusion fails to summarize or clarify the information presented in the presentation.	The conclusion does not adequately summarize the content and theme of the presentation topic.	The conclusion is effective, interesting, and memorable; it fully brings finality to the presentation.	
			PRESENTATION SUBTOTAL (30 points)	

PREPARED PRESENTATION

STAGE PRESENCE (30 points)

CRITERIA	Minimal performance	Adequate performance	Exemplary performance	
	1-4 points	5-8 points	9-10 points	
Appearance (X1)	Participant's appearance is unprofessional, sloppy, and inappropriate.	Participant's appearance is adequate, appropriate, and somewhat professional.	Participant's appearance is exceptional, appropriate, and professional.	
Confidence (X1)	Participant appears nervous during presentation; poor posture, poor eye contact, and lack of confidence are evident.	Participant is generally poised, displays eye contact, and is confident, with some signs of nervousness.	Participant "commands" the room, and is exceptionally poised, confident, and positive.	
Articulation (X1)	Participant conveys an inconsistent use of proper grammar, word pronunciation, and acceptable pitch and tone.	Participant generally uses proper grammar and pronunciation, and varies the use of tone and pitch.	Smooth and effective articulation, proper grammar, correct pronunciation, and varied tone and pitch are used throughout the presentation.	
			STAGE PRESENCE SUBTOTAL (30 points)	

ORGANIZATION OF THE PRESENTATION (40 points)

CRITERIA	Minimal performance	Adequate performance	Exemplary performance	
	1-4 points	5-8 points	9-10 points	
Effectiveness and Quality of Presentation (X1)	The presentation is poorly prepared, not interesting, and not representative of the stated theme; leadership and/or 21st century skills are not evident.	The presentation is adequate, and the observer generally understands the theme; leadership and/or 21st century skills are somewhat evident.	The presentation is exceptional and memorable; the observer easily understands and relates to the theme; leadership and/or 21st century skills are clearly evident.	
Organization (X1)	The presentation is difficult to follow or understand.	The presentation is adequately organized and delivered.	The presentation is organized and easy to follow; the delivery is exceptional.	
Quality of the Slide Deck (X1)	The slide deck is of minimal quality; slides are unprofessional and/or inappropriate and do not enhance the content of the speech; the participant does not have the minimum number of slides required.	The slide deck is adequate; the slides generally relate to the theme of the speech; the participant has used the minimum number of slides required.	The slide deck is exceptional and enhances the theme and the content of the speech without distracting the observers from the overall content of the presentation; the participant exceeds the minimum number of slides required.	
Use of the Slide Deck (X1)	The participant reads from the slide deck; the use of the slide deck detracts from the overall presentation; the participant struggles with transitions between slides while delivering the presentation.	The participant tends to rely on the slide deck for much of the presentation; the participant adequately handles transitions between slides while delivering the presentation.	The participant effectively uses the slide deck to enhance the overall presentation; transitions between slides are smooth, effective and well-timed.	
			ORGANIZATION OF THE PRESENTATION SUBTOTAL (40 points)	

Rules violations (a deduction of 20% of the total possible points for the above sections) must be initialed by the judge, coordinator, and manager of the event. Record the deduction in the space to the right. Indicate the rule violated: _____	

TIME DEDUCTIONS

One (1) point per ten-second (10) interval is to be deducted for speaking under the three (3) minutes or over the five (5) minutes allotted for the presentation. The same one (1) point per ten-second (10) interval penalty applies to more than four (4) minutes for set up. Presentation time commences when the presenter begins speaking.

Total time for presentation		Presentation deduction	
Total time for set-up		Set-up deduction	
		TOTAL TIME DEDUCTIONS	

SUBTOTAL (100 points)	

To arrive at the TOTAL score, add any subtotals and subtract rules violation points, as necessary. **TOTAL (100 points)**	

Comments:

_____

I certify these results to be true and accurate to the best of my knowledge.

JUDGE

Printed name: _____   Signature: _____

PREPARED PRESENTATION EVENT COORDINATOR INSTRUCTIONS

PERSONNEL

A. Event coordinator

B. Judges for the initial round of presentations, two (2) or more per event room

C. Judges for the semifinalist round of presentations, preferably some who did NOT judge the initial round, two (2) or more

D. Timekeeper, one (1) per event room and one (1) for the semifinalist round

MATERIALS

A. Coordinator's packet, containing:

1. Event guidelines, one (1) copy for the coordinator and one(1) for each judge

2. TSA Event Coordinator Report

B. Marking pens or pencils for each judge

C. One (1) stopwatch for each event room

D. One (1) note card per heat room and semifinal room that has "one minute remaining."

E. Podium for participant use

F. Tables and chairs for two (2) judges and one (1) timekeeper per heat/event room

G. Prepared sign-up list indicating ten (10) – minute intervals for each heat to accommodate all registered participants.

RESPONSIBILITIES

AT THE CONFERENCE

A. Attend the mandatory coordinator's meeting at the designated time and location.

B. Report to the CRC room and check the contents of the coordinator's packet.

C. Review the event guidelines and check to see that enough personnel have been scheduled.

D. Inspect the area/room(s) in which the event is to be held for appropriate set-up, including room size, chairs, and tables, etc. Notify the event manager of any potential problems.

E. At least one (1) hour before the event is scheduled to begin, meet with judges/assistants to review time limits, procedures, regulations, evaluations, and all other details related to the event. If questions arise that cannot be answered, speak to the event manager before the event begins.

F. Ensure the judges have access to the online judging system.

EVENT CHECK-IN

A. Begin the check-in and sign-up presentation time at the time and location provided in the conference program.

B. Late entries are considered on a case-by-case basis and only when the delay is caused by events beyond participant control.

C. If check-in is on the first day of the conference, requirements for attire do NOT apply during check-in.

PRELIMINARY ROUND

A. Participants report at the assigned time to the place stated (holding room) in the conference program for the speech.

B. At the scheduled time, take the first participant to the event room and allow one (1) minute for set-up.

C. The event coordinator or assistant introduces each participant by entry number only. No nametags that give any indication of the hometown, school, or chapter of the participant should be visible to the judges while in the competition room.

D. Time keeper will hold up a card to indicate one (1) minute remaining for the full five (5) minute speech.

E. Approximately every ten (10) minutes, the coordinator or designated assistant sends a participant into the event room.

SEMIFINAL ROUND

A. Using the same official rating form for the semifinalist, judges asses the semifinalist presentation and determine the ten (10) finalists.

B. Discuss rule violations (e.g. 20% deduction, disqualification) and have all relevant parties initial the rating form.

C. If necessary, manage security and the removal of materials from the area.

PROMOTIONAL DESIGN

OVERVIEW

Applying leadership and 21st century skills, participants use computerized graphic communications layout and design skills in the production of a promotional resource.

The resource is based on the annual theme posted on the TSA website under *Themes & Problems*. Semifinalists demonstrate competency through participation in an on-site technical design challenge.

ELIGIBILITY

Three (3) individuals per state may participate.

TIME LIMITS

A. Thirty (30)-minute set-up time before the on-site semifinal challenge.

B. Two (2) hours to complete the on-site problem.

ATTIRE

TSA competition attire is required for this event.

PROCEDURE

PRE-CONFERENCE

A. Participants review the TSA Honor Statement for Competitive Events found in the General Rules and listed in the individual competitive event rules.

B. Participants review the annual theme posted on the TSA website under *Themes & Problems*.

C. Participants prepare the promotional folder while observing the regulations.

PRELIMINARY ROUND

A. Participants report at the time and place stated in the conference program to check in the standard 10" x 13" envelope containing the entry and related documentation.

B. Entries are independently reviewed by the judges with neither students nor advisors present.

C. A list of twelve (12) semifinalists (in random order) is posted.

SEMIFINAL ROUND

A. Participants report to the event area at the time and place stated in the conference program for the on-site component of the event.

B. Participants are provided with an on-site publishing problem.

C. Participants will alert the coordinator when they are finished and submit their solution on a USB thumb drive in PDF format.

D. Judges independently assess the entries.

E. The top ten (10) finalists are announced during the awards ceremony.

REGULATIONS AND REQUIREMENTS

Students will work to develop their leadership and 21st century skills in the process of preparing for and participating in this TSA competitive event. The development and application of those skills must be evident in their submission, demonstration, and/or communication pertaining to the entry.

PRELIMINARY ROUND

A. Each entry must include a student-designed standard two-pocket folder which:

1. may be produced by the participant or purchased from an office supply store.

2. must be made of cardstock with a cover image (either printed directly to the cover or printed on a separate sheet of paper, then glued to it to simulate the look of the final project).

3. must include two pockets. Business card slits are permitted, but not required.

4. must include four (4) printed promotional publication items (chosen by the designer). The folder is not included as one of these four (4) items, but must also contain design elements that unify the entry.

5. is identified using only the participant's identification number. Entries should not include any other identifying information.

B. The entry, including the Promotional Folder with its contents as well as the accompanying documents, must be contained and submitted in a standard 10" x 13" envelope.

C. The printed items contained in the folder must follow the below guidelines:

1. The printed items must be designed on 8½" x 11" paper (maximum size).

2. Preprinted or designed paper may not be used.

3. Clip art may be used, however, no templates may be used. Any clip art used in the designs must be documented in the Reference section of the portfolio.

4. If it is determined that the product submitted is a template, the entry will be disqualified.

5. Items that may be considered for the four (4) Promotional Folder items might include, but are not limited to: a pamphlet, post card, letter, or business card.

6. The content of all items must be appropriate for viewing at the National TSA Conference. Any entry that includes images depicting sex, drugs, tobacco, alcohol, gangs, cults, etc., will be disqualified.

7. The complete packet should demonstrate a unity of design that repeats throughout the portfolio.

8. No permission is needed for the use of the TSA logo by affiliated chapters. Refer to the TSA Branding Guide on the TSA website.

D. Documentation Portfolio (placed in the mailing envelope with Promotional Folder)

1. Documentation materials (comprising "a portfolio") are required and must be secured in a clear front report cover with the following single-sided, 8½" x 11" pages, in this order:

   a. Title page with the event title, the team identification number, the conference city and state, and the year; one (1) page

   b. Table of contents; pages as needed

   c. Interpretation of Theme; one (1) page

d. Description of the items included (this should include item type, screenshot(s) and/or pictures of item, intended audience and purpose, and procedure for creating the item); maximum of four (4) pages

e. Hardware and Software used; one (1) page

f. References (Both information and clip art must be documented); one (1) page

g. Student Copyright Checklist (see Forms Appendix); one (1) page

h. Photo/Film/Video Consent and Release Forms – if images involving individuals are used and minors require parental permission (see Photo/Film/Video Consent and Release Forms in Forms Appendix); pages as needed

E. All entries become the property of TSA and will not be returned after judging.

SEMIFINAL ROUND

A. Semifinalists supply their own computer hardware with USB port and software for the on-site portion of the event.

1. A laptop computer is recommended. The laptop must be fully charged with enough battery for the duration of the semifinal round. A portable power bank (if desired) may be used.

2. Any semifinalist who does not provide these items will not be allowed to compete in the on-site event.

B. Semifinalists must enter any necessary verification or authentication passwords prior to entering the competitive event area. National TSA will not provide Internet access or guarantee that a hot spot will work properly.

C. Clip art may be used.

D. No templates may be used.

E. All on-site work is developed, saved as a PDF file on a USB flash drive that is provided by the member, and submitted using only the participant's identification number.

F. Semifinalists leave the event room only with permission from the event coordinator.

G. The on-site entry should be saved and submitted when the work is completed and/or when time elapses.

H. All entries become the property of TSA and will not be returned after judging.

EVALUATION

PRELIMINARY ROUND

A. The promotional folder cover and contents

B. The documentation portfolio

SEMIFINAL ROUND

A. The semifinalist problem

Refer to the official rating form for more information.

TSA HONOR STATEMENT

All work must be created and completed by individual competitors or teams. Plagiarism, the use of Generative Artificial Intelligence (GenAI) software, copyright violation, cheating, and falsification of information are prohibited. Participants may NOT use any generative artificial intelligence (GenAI) tools (e.g. ChatGPT, Google Gemini, GitHub Copilot, etc.). Any attempt to gain an unfair advantage will not be tolerated. Competitors at any level of TSA competition understand and agree to abide by the TSA Honor Statement.

If it is determined that a student violated the TSA Honor Statement, a rules violation of twenty percent (20%) will be incurred.

STEM INTEGRATION

This event aligns with the STEM (Science, Technology, Engineering, and Mathematics) educational standards.

LEADERSHIP AND 21ST CENTURY SKILLS

This event provides opportunity for students to build and develop leadership and 21st century skills including but not limited to – Communication, Collaboration/Social Skills, Initiative, Problem Solving/Risk Taking, Critical Thinking, Perseverance/Grit, Creativity, Relationship Building/Teamwork, Dependability/Integrity, and Flexibility/Adaptability

CAREERS RELATED TO THIS EVENT

This competition has connections to one (1) or more of the careers below:

- Advertising executive
- Graphic designer
- Marketing manager
- Printer
- Public relations manager

PROMOTIONAL DESIGN

2025 & 2026 OFFICIAL RATING FORM

HIGH SCHOOL

Judges: Using minimal (1-4 points), adequate (5-8 points), or exemplary (9-10 points) performance levels as a guideline in the rating form, record the scores earned for the event criteria in the column spaces to the right. The X1 or X2 notation in the criteria column is a multiplier factor for determining the points earned. (Example: an "adequate" score of 7 for an X1 criterion = 7 points; an "adequate" score of 7 for an X2 criterion = 14 points.) A score of zero (0) is acceptable if the minimal performance for any criterion is not met.

Go/No Go Specifications

- Before judging the entry, ensure that the items below are present; indicate presence with a check mark in the box.
- If an item is missing, leave the box next to the item blank and place a check mark in the box labeled ENTRY NOT EVALUATED.
- If a check mark is placed in the ENTRY NOT EVALUATED box, the entry is not to be judged.

☐ Entry is submitted in a standard 10" x 13" envelope
☐ Promotional Folder Cover with four (4) printed items is submitted in the envelope
☐ Documentation Portfolio is submitted in the envelope
☐ No obvious templates are present in the entry
☐ ENTRY NOT EVALUATED

PRELIMINARY PROMOTIONAL FOLDER COVER (Cover Graphic) (30 points)

CRITERIA	Minimal performance	Adequate performance	Exemplary performance	Record scores in the column spaces below.
	1-4 points	5-8 points	9-10 points	
First Impressions (sharp, clean edges of graphics and fonts; entry is clear of smudges, smears, pencil or other extraneous marks) (X1)	The design is messy and/or damaged and leaves an unfavorable impression; the design has little connection in conveying the design challenge	The design has a general connection to the challenge; the design is neat with adequate attention to detail.	The design is eye-catching and compelling and effectively addresses the theme.	
Use of Color (X1)	The graphic has less than three (3) colors; colors used clash or distract from the graphic.	The graphic has three (3) colors, and they generally work well together.	The effective choice of colors creates an appealing graphic.	
Fonts (readable, have eye appeal, appropriate dimension and placement) (X1)	Font choice, size, and placement are ineffective in creating an aesthetically pleasing design.	Font choice and size are appropriate and incorporated somewhat effectively in the design.	Font choice and size are appropriate, and the location of text is effectively incorporated in the aesthetics of the design.	
PRELIMINARY PROMOTIONAL FOLDER COVER SUBTOTAL (30 points)				

PRELIMINARY PROMOTIONAL FOLDER CONTENTS (50 points)

CRITERIA	Minimal performance	Adequate performance	Exemplary performance	
	1-4 points	5-8 points	9-10 points	
Unity of Design (X1)	The complete packet has little obvious unity of design throughout the included items.	The complete packet demonstrates a general sense of unity of design throughout the included items.	The complete packet demonstrates an obvious unity of design that repeats throughout the included items.	
Incorporation of Graphic Design Principles (alignment, contrast, unity, white space, balance, and proportion) (X1)	Graphic products incorporate or embody few, if any, of the design principles.	Graphic products are somewhat pleasing but may be missing one (1) or two (2) design principles; the products have a layout that is generally aesthetically pleasing.	Graphic products are clearly unique and aesthetically pleasing, with all graphic design principles incorporated in the overall design and layout.	
Graphic Images (X1)	Images have little connection to the essence of the challenge; logo(s) are poorly placed or of poor quality.	Images have general connections to the challenge; logo(s) are present.	Images are appropriate and effectively address the challenge; logo(s) are present and appropriately placed.	
Use of Color (X1)	Graphic has less than three (3) colors; colors used clash or distract from the graphic.	Graphic has three (3) colors, and they generally work well together.	The effective choice of colors creates an appealing graphic.	
Fonts (readable, have eye appeal, appropriate dimension and placement) (X1)	Font choice, text size, and placement are ineffective in creating an aesthetically pleasing design.	Font choice is appropriate and incorporated somewhat effectively in the design.	Font choice and size are appropriate, and the location of text is effectively incorporated in the aesthetics of the design.	
PRELIMINARY PROMOTIONAL FOLDER CONTENTS SUBTOTAL (50 points)				

Record scores in the column spaces below.

PRELIMINARY DOCUMENTATION PORTFOLIO (40 points)

CRITERIA	Minimal performance	Adequate performance	Exemplary performance	
	1-4 points	5-8 points	9-10 points	
Portfolio Components (X1)	Portfolio is unorganized and/or is missing three (3) or more components.	Portfolio has most components and is generally organized per the order of the event guide listing; it has sufficient content.	All components are included in the portfolio; content and organization per the order of the event guide listing are excellent.	
Demonstration of Theme (X1)	Documentation does not show a clearly defined interpretation of the given theme	Documentation demonstrates an average interpretation of the given theme.	Documentation demonstrates an exceptional interpretation of the theme.	
Appropriateness of Graphic Products (X1)	Graphic products have little connection to the intent of the folder's target audience.	Graphic products are appropriate to the intended audience and have generally useful content.	Graphic products clearly connect with the intention of the promotional packet and its intended audience, providing useful, related content	
Grammar/Spelling (X1)	Many misspelled words are present, and grammar is poor.	Spelling and grammar are mostly correct.	Proper grammar and spelling are evident.	
PRELIMINARY DOCUMENTATION PORTFOLIO SUBTOTAL (40 points)				

Record scores in the column spaces below.

Rules violations (a deduction of 20% of the total possible points for the above sections) must be initialed by the judge, coordinator, and manager of the event. Record the deduction in the space to the right.

Indicate the rule violated: _____

PRELIMINARY SUBTOTAL (120 points)	

SEMIFINAL PROBLEM (40 points)

CRITERIA	Minimal performance	Adequate performance	Exemplary performance	
	1-4 points	5-8 points	9-10 points	
Layout and Design (X1)	The design inadequately incorporates the design principles of alignment, consistency, contrast, unity, or white space.	The design incorporates most design principles; overall layout is generally aesthetically pleasing.	An aesthetically pleasing design is provided, with all design principles incorporated in the layout and design.	
Solution to Project (X1)	Three (3) or more attributes of the solution's criteria are missing; leadership and/or 21st century skills are not evident.	Most attributes of the solution's criteria are included; leadership and/or 21st century skills are somewhat evident.	All attributes of the solution's criteria are evident; leadership and/or 21st century skills are clearly evident.	
Effectiveness (X1)	The solution inadequately conveys the intended message, and/or it contains unrelated text/graphics.	The solution conveys the intended message appropriately, and it uses text and/or graphics generally well.	The solution's message is easily understood and interpreted, with exceptional use of related graphics and text.	
Originality (X1)	The finished product is ordinary, plain, and unimaginative in design.	The finished product shows some effort to be imaginative and original.	The final product is truly unique and shows creativity.	
SEMIFINAL PROBLEM SUBTOTAL (40 points)				

Record scores in the column spaces below.

Rules violations (a deduction of 20% of the total possible points for the above sections) must be initialed by the judge, coordinator, and manager of the event. Record the deduction in the space to the right.

Indicate the rule violated: _____

SEMIFINAL SUBTOTAL (40 points)	

To arrive at the TOTAL score, add any subtotals and subtract rules violation points, as necessary. **TOTAL (160 points)**	

Comments:

_____

I certify these results to be true and accurate to the best of my knowledge.

JUDGE

Printed name: _____   Signature: _____

PROMOTIONAL DESIGN
EVENT COORDINATOR INSTRUCTIONS

PERSONNEL

A. Event coordinator

B. Judges:

1. Preliminary round, two (2) or more

2. Semifinal round, two (2) or more

MATERIALS

A. Coordinator's packet, containing:

1. Event guidelines, one (1) copy for the coordinator and for each judge

2. TSA Event Coordinator Report

3. Stick-on labels for entries, as needed

B. One (1) copy on an on-site problem for each member and one (1) copy for each judge

C. Stopwatch

D. One (1) laptop to judge the semifinalists submissions on a USB. Laptop must be capable of opening and viewing a PDF from a USB.

RESPONSIBILITIES

AT THE CONFERENCE

A. Attend the mandatory coordinator's meeting at the designated time and location.

B. Report to the CRC room and check the contents of the coordinator's packet.

C. Review the event guidelines and check to see that enough judges/assistants have been scheduled.

D. Inspect the area or room in which the event is to be held for appropriate set-up, including room size, chairs, tables, outlets, etc. Notify the event manager of any potential problems.

E. At least one (1) hour before the event is to begin, meet with judges and assistants to review time limits, procedures, regulations, evaluation, and all other details related to the event. If questions arise that cannot be answered, speak to the event manager before the event begins.

F. Ensure the judges have access to the online judging system.

EVENT CHECK-IN

A. Check in the entries at the time and place stated in the conference program.

B. Participants check in a standard 10" x 13" envelope containing the entry and required forms. Contents are not removed from the envelope at check-in.

C. Late entries are considered on a case-by-case basis and only when the delay is caused by events beyond participant control.

D. In order to compete, participants must be on the entry list or must have CRC approval.

E. If check-in is on the first day of the conference, requirements for attire do NOT apply during check-in.

F. Place an entry number in the upper right-hand corner of the portfolio.

G. Secure the entries in the designated area.

PRELIMINARY ROUND

A. Judges independently evaluate each entry.

B. Decisions about rules violations must be discussed and verified with the judges, event coordinator, and CRC manager to determine either:

1. To deduct twenty percent (20%) of the total possible points in this round or

2. To disqualify the entry

The event coordinator, judges, and CRC manager must initial either of these actions on the rating form.

SEMIFINAL ROUND

A. Inspect the area(s) in which the on-site activity is being held for appropriate set-up, including room size, chairs, tables, outlets, etc. Notify the event manager of any potential problems.

B. At least one (1) hour before the event is to begin, meet with your judges for the on-site activity to review time limits, procedures, regulations, evaluation, and all other details related to the event. If questions arise that cannot be answered, speak to the event manager before the event begins.

C. Semifinalists report for the on-site problem.

D. Begin the event at the scheduled time by closing the doors and checking the entry list.

    1. All semifinalists and judges should be in the room at this time.

    2. Semifinalists not present may be disqualified.

E. Judges monitor the participants during the on-site activity.

F. Monitor the judges as they individually judge the semifinal solutions.

G. Discuss rule violations (e.g. 20% deduction, disqualification) and have all relevant parties initial the rating form.

H. If necessary, manage security and the removal of materials from the event area.

ROBOTICS

OVERVIEW

Applying leadership and 21st century skills, participants design, build, assemble, document, and test an open-source vehicle according to stated specifications and to meet the challenge of the yearly theme/problem. The annual theme will be posted on the TSA website under *Themes & Problems*.

ELIGIBILITY

Three (3) teams of two to six (2-6) members per state may participate.

TIME LIMITS

A. Ten (10) minutes prior to assigned times teams can set up their assigned pit area.

B. Thirty (30) minutes session to test and correct any problems. During this time judges will also perform a safety check.

C. Ten (10) minutes running clock to complete the challenge.

D. Ten (10) minutes for semifinalist interview

ATTIRE

TSA competition attire is required for this event

PROCEDURE

PRE-CONFERENCE

A. Participants review the TSA Honor Statement for Competitive Events found in the General Rules and listed in the individual competitive event rules.

B. Participants access the annual theme on the TSA website under *Themes & Problems*.

C. Participants prepare their design, build, and test their robots.

PRELIMINARY ROUND

A. Participants will sign up for a setup and testing time at the time and place stated in the conference program and submit their portfolios.

B. Students will arrive at the assigned place and time to:
1. Set up their pit areas
2. Set up their robot

C. Entries are reviewed by judges to determine safety.

D. Safe robots will be given an opportunity to test.

E. Top sixteen (16) scores on robot testing will have a semifinalist interview

F. A list of sixteen (16) semifinalists (in random order) is posted.

SEMINFINAL ROUND

A. Participants report at the time and place stated in the conference program to sign up for an interview time.

B. Participants report at the assigned time and place for the ten (10) minutes interview.

C. Challenge, and interviews scores are combined with testing points to determine the final standings.

D. The top ten (10) finalists are announced at the awards ceremony.

REGULATIONS AND REQUIREMENTS

Students will work to develop their leadership and 21st century skills in the process of preparing for and participating in this TSA competitive event. The development and application of those skills must be evident in their submission, demonstration, and/or communication pertaining to the entry.

PRELIMINARY ROUND

A. Participants must check for the current year's design challenge specifications on the TSA website under *Themes & Problems*.

Robotics Pit and Safety Procedures

A. Pit Area Assignment. The Event Coordinator will provide a designated area for robotics teams to work on and prepare their robots for the challenge.
1. Teams are required to bring two welding blankets (4' x 6' minimum) to cover the table and floor in their pit area.
2. Teams bring to pit area, for inspection, robot, radio controller(s), chargers, batteries, tools box, power strip, 3-prong electrical extension cord, replacement parts, spare parts, and tools.
3. All necessary computers and associated software for the competition.

4. All equipment, tools, chargers, and computers are to be arranged for inspection and safety check. The use of tools with combustible fuel sources is prohibited.

5. In the pit area, battery chargers and batteries, as they are being charged, must be placed on the fireproof welding blanket in the pit charging area.

B. When the Robot is out of the competition area, all batteries must be removed. NO EXCEPTIONS.

C. When a team member enters the competition tent field, only at the direction of the event coordinator may the team members attach the battery cable and turn on their robot. When a robot is outside of the competition tent area, all batteries must be unplugged. NO EXCEPTIONS.

D. The judge will inspect the robot to ensure safe operation.

E. When the competition is taking place and when a practice session is under way with a robot in the competition area, all robots in the pit area or outside the pit area must be POWERED OFF. This is an automatic ten (10) point deduction if this occurs.

F. All batteries will be inspected prior to practice and the competition.

G. All robots must be driven ONLY in the Competition field.

Robot Specifications

A. The robot must be assembled from open-sourced parts. The robot can be purchased as a kit that can be built, reconfigured, changed, and modified with different components.

B. The robot structure can be made from plastic, wood, 3D printed materials (carbon fiber, PLA plastic, ABS plastic, resin, metal combined plastic or resin). Parts can be purchased commercially and modified.

C. Battery packs must only be commercially available lithium-ion or lithium-ion polymer batteries that are purchased from open-sourced 3rd parties (i.e., Amazon, hobby shops, etc.).

D. The robot will have to navigate through a level course. Depending on the location the surface may change so designs must take that into consideration. Teams may choose to use legs, tracks, wheels, or other methods developed by the team.

E. At the start of the challenge robots must fit in a 16" x 16" x 16" cube. Once the challenge has begun the robot can exceed that size.

F. Robots must have removable part/coverings for internal inspection.

G. A camera may be incorporated into the design if needed to help complete the assigned task.

EVALUATION

PRELIMINARY ROUND

A. Robot Testing

SEMINFINAL ROUND

A. The interview

Refer to the official rating form for more information.

TSA HONOR STATEMENT

All work must be created and completed by individual competitors or teams. Plagiarism, the use of Generative Artificial Intelligence (GenAI) software, copyright violation, cheating, and falsification of information are prohibited. Participants may NOT use any generative artificial intelligence (GenAI) tools (e.g. ChatGPT, Google Gemini, GitHub Copilot, etc.). Any attempt to gain an unfair advantage will not be tolerated. Competitors at any level of TSA competition understand and agree to abide by the TSA Honor Statement.

If it is determined that a student violated the TSA Honor Statement, a rules violation of twenty percent (20%) will be incurred.

STEM INTEGRATION

This event aligns with the STEM (Science, Technology, Engineering, and Mathematics) educational standards.

LEADERSHIP AND 21ST CENTURY SKILLS

This event provides opportunity for students to build and develop leadership and 21st century skills including but not limited to – Communication, Collaboration/Social Skills, Initiative, Problem Solving/Risk Taking, Critical Thinking, Perseverance/Grit, Creativity, Relationship Building/Teamwork, Dependability/Integrity, and Flexibility/Adaptability.

ROBOTICS
2025 & 2026 OFFICIAL RATING FORM
HIGH SCHOOL

Judges: Using minimal (1-4 points), adequate (5-8 points), or exemplary (9-10 points) performance levels as a guideline in the rating form, record the scores earned for the event criteria in the column spaces to the right. The X1 or X2 notation in the criteria column is a multiplier factor for determining the points earned. (Example: an "adequate" score of 7 for an X1 criterion = 7 points; an "adequate" score of 7 for an X2 criterion = 14 points.) A score of zero (0) is acceptable if the minimal performance for any criterion is not met.

Go/No Go Specifications

- Before judging the entry, ensure that the items below are present; indicate presence with a check mark in the box.
- If an item is missing, leave the box next to the item blank and place a check mark in the box labeled ENTRY NOT EVALUATED.
- If a check mark is placed in the ENTRY NOT EVALUATED box, the entry is not to be judged.

☐ Robot
☐ Welding Blankets
☐ ENTRY NOT EVALUATED

PRELIMINARY TESTING OF ROBOT (60 points)

Evaluation: A finite unit of measure, such as elapsed time, linear distance, and/or strength, etc., is used to determine ranking.

1st: 60 Points	**2nd:** 55 Points	**3rd:** 50 Points	**4th:** 45 Points	**5th:** 40 Points	**6th:** 35 Points
7th: 30 Points	**8th:** 25 Points	**9th:** 20 Points	**10th:** 15 Points	**11th:** 10 Points	**12th-16th:** 5 Points

PRELIMINARY TESTING OF ROBOT SUBTOTAL (60 points)

Rules violations (a deduction of 20% of the total possible points in the semifinalist section) must be initialed by the evaluator, coordinator, and manager of the event. Record the deduction in the space to the right.

Indicate the rule violated: _____

PRELIMINARY SUBTOTAL (60 points)

SEMIFINAL INTERVIEW (40 points)				Record scores in the column spaces below.
CRITERIA	Minimal performance	Adequate performance	Exemplary performance	
	1-4 points	5-8 points	9-10 points	
Knowledge (X2)	Participants seem to have little understanding of the concepts in their project; answers to questions may be vague.	Participants exhibit a general understanding of the concepts in their project.	Participants show clear evidence of a thorough understanding of the concepts in their project.	
Articulation (X1)	Communication of the project is unclear, unorganized, and or illogical; leadership and/or 21st century skills are not evident.	Communication of the project is somewhat logical and clear; leadership and/or 21st century skills are somewhat evident.	Communication of the project is clear, concise, and logical; leadership and/or 21st century skills are clearly evident.	
Team Participation (X1)	The majority of the delivery is made by one (1) member of the team; the partners may be disengaged from the Interview.	Team members are generally engaged in the process, though one member may take on more responsibility than the others.	Team members are actively involved in the Interview and responses to interview questions; there is shared responsibility on the part of team members.	
			SEMIFINAL INTERVIEW SUBTOTAL (40 points)	

Rules violations (a deduction of 20% of the total possible points in the semifinalist section) must be initialed by the evaluator, coordinator, and manager of the event. Record the deduction in the space to the right.

Indicate the rule violated: _____

SEMIFINAL SUBTOTAL (40 points)	

To arrive at the TOTAL score, add any subtotals and subtract rules violation points, as necessary. **TOTAL (100 points)**	

Comments:

_____

I certify these results to be true and accurate to the best of my knowledge.

JUDGE

Printed name: _____ Signature: _____

ROBOTICS
EVENT COORDINATOR INSTRUCTIONS

PERSONNEL

A. Event coordinator

B. Judges, two (2) or more

C. Pit Area Judge/Inspector (1)

D. Assistants, two (2)

MATERIALS

A. Coordinator's packet and box, containing:

1. Event guidelines, one (1) copy for the coordinator and for each judge

2. TSA Event Coordinator Report

3. Stick-on labels for entries, as needed

B. Time trial record sheet

C. Qualifier interview time slot sheet

D. Interview questions

E. Testing Arena- 1" PVC pipe setup to the year's theme

F. Course materials based on theme

G. Table with power for the Pit Area for the competitors

H. Table for inspection and tabulation

I. 2-Step ladder with platform for judging

J. Stations or caution tape to separate spectators and participants

K. Safety glasses and vests for judges and coordinators

L. Blue and red tamper proof tape for indicating frequency of controllers

M. Fire extinguisher

RESPONSIBILITIES

AT THE CONFERENCE

A. Attend the mandatory coordinator's meeting at the designated time and location.

B. Report to the CRC room and check the contents of the coordinator's packet.

C. Review the event guidelines and check to see that enough personnel have been scheduled.

D. Inspect the area(s) in which the event is to be held for appropriate set-up, including room size, tables, chairs, etc. Notify the event manager of any potential problems.

E. At least one (1) hour before the event is to begin, meet with judges and assistants to review time limits, procedures, regulations, evaluation, and all other details related to the event. If questions arise that cannot be answered, speak to the event manager before the event begins.

F. Ensure the judges have access to the online judging system.

EVENT CHECK-IN

A. Participants report to the time and place stated in the conference program and check in and sign up for setup/testing time

B. Late entries are considered on a case-by-case basis and only when the lateness is caused by events beyond the participant's control.

C. In order to compete, participants must be on the entry list or must have approval of the CRC.

D. If check-in is on the first day of the conference, requirements for attire do NOT apply during check-in.

E. Secure the entries in the designated area.

PRELIMINARY ROUND

A. Assist judges with the check in/setup of pit area.

B. Assist judges with the Robot of the event.

C. Decisions about rules violations must be discussed and verified with the judges, event coordinator, and CRC manager to determine either:

1. To deduct twenty percent (20%) of the total possible points in this round

2. To disqualify the entry

The event coordinator, judges, and CRC manager must initial either of these actions on the rating form.

D. Begin the time trials at the scheduled time.

    1. Every Robot that is compliant with rules should have the opportunity to be tested.

    2. Public viewing is allowed.

    3. Announce at starting time: The challenges must be completed in the allotted ten (10)-minute window. If necessary, repairs or adjustments to the robot or its components can be made, but the clock will not stop and no additional time will be awarded to complete the challenges.

E. Position a judge on either side of the testing area to view the trial.

F. If a time is not properly recorded, a rerun may be ordered at the discretion of the event coordinator.

G. Record preliminary times on a time trial record sheet.

H. The testing of the robot times will determine the top sixteen (16) results.

I. Create the semifinalist sign-up sheet.

SEMIFINAL ROUND

A. Post the top sixteen (16) teams with interviews times.

B. Robot builders report to the designated area posted time for a ten (10)-minute Robot Team interview.

C. Conduct interviews with the qualifying top sixteen (16) Robot Teams.

D. Begin the semifinals at the scheduled time.

E. Discuss rule violations (e.g. 20% deduction, disqualification) and have all relevant parties initial the rating form.

F. If necessary, manage the security and removal of materials from the event area.

SENIOR SOLAR SPRINT

OVERVIEW

Senior Solar Sprint (SSS) provides a hands-on opportunity for students in grades 9-12 to apply science, technology, engineering, and mathematics (STEM) concepts, along with leadership and 21st century skills such as creativity, teamwork, and problem-solving skills, as they design, construct, and race a solar-powered car.

A wealth of resources for teachers to implement the SSS program can be found on the AEOP JSS website.

ELIGIBILITY

One (1) team of two to four (2-4) individuals per chapter may participate; one (1) entry per team.

Participants must be:

A. Part of a registered Technology Student Association chapter, or

B. Part of a group that competes at an approved Army host site

TIME LIMITS

A. All models meeting safety and performance criteria are given up to two (2) time trails.

B. Five (5) minutes are allowed for the semifinal car builder interview.

ATTIRE

Participants may choose to wear either the TSA approved SSS T-shirt or the official TSA competition attire at the SSS time trials and semifinal event. T-shirts are distributed to each participating team member in the SSS event.

PROCEDURE

PRE-CONFERENCE

A. Participants review the TSA Honor Statement for Competitive Events found in the General Rules and listed in the individual competitive event rules.

B. Participants design and create their solar-powered car while working within the required specifications.

C. Participants record their design processes in a documentation portfolio.

D. Participants prepare a display to showcase only:

1. The solar-powered model car

   a. An 18" x 34" display area will be available for the cars during static judging

2. A decorated shoebox

3. The documentation portfolio

PRELIMINARY ROUND

A. Participants report to the time and place stated in the conference program and check in:

1. A solar-powered model car

2. The decorated shoebox, which must not exceed 6' x 10" x 16"

3. The documentation portfolio

B. Entries are reviewed by judges to determine specification adherence and safety on the track.

C. All models meeting safety and performance criteria will be given up to two (2) time trials.

1. The fastest time of these time trials will determine the sixteen (16) top semifinalist cars to be raced.

2. Cars that are disqualified for any reason will not be permitted to participate in the semifinalist races.

D. Four (4) evaluated areas will be used to determine final standings (see criteria for assessment and racing performance on the official rating form).

E. A list of sixteen (16) semifinalists will be posted.

SEMIFINAL ROUND

A. A semifinalist team representative reports at the time and location listed in the conference program to receive an interview time.

B. The semifinalist interview must include a minimum of two (2) team members.

C. Five (5) minutes are allowed for the semifinalist interview.

D. The top sixteen (16) fastest cars from the time trials compete in a single or double elimination racing process. The process will be determined by the event coordinator.

E. The top ten (10) finalists are announced at the awards ceremony.

REGULATIONS AND REQUIREMENTS

Students will work to develop their leadership and 21st century skills in the process of preparing for and participating in this TSA competitive event. The development and application of those skills must be evident in their submission, demonstration, and/or communication pertaining to the entry.

PRE-CONFERENCE

A. Documentation Portfolio:

1. Documentation portfolio is required and must be secured in a clear front report cover with the following single-sided, 8½" x 11" pages, in this order:

   a. Title page with the event title, conference city and state, the year, and the team/chapter ID number; one (1) page

   b. Table of contents; pages as needed

   c. Project Log (see the Competition Project Log attached to this event) that indicates preparation for the competition, as noted by date, task, time involved, obstacles/issues encountered, modifications made, team member responsible, and any comments; pages as needed

   d. Design drawings; pages as needed

      i. Must show the model with a minimum of two (2) views

      ii. The drawings must be developed using standard engineering practices and procedures (including measurements/dimensions)

      iii. The drawings may be produced using traditional drafting methods or CAD

      iv. Rough sketches should be included

   e. Design details of the model, including model size, wheel size, gear ratio, specifications of the motor and solar panel used, etc; one (1) page

   f. Supplied Components List (see the Supplied Components worksheet included in this event); one (1) page

   g. Design process description, including pre-testing notes of various configurations of the model and revision notes about the model design throughout the process; pages as needed

2. Sections of the portfolio may be organized by dividers

B. Display:

1. must include the model, decorated shoebox and portfolio only.

2. A decorated shoebox will be used as the display stand for the model car:

   a. The shoebox must be decorated and reflect creativity.

   b. The shoebox must have a label with a team ID.

3. The portfolio must be placed with the model car.

C. Solar-Powered Model Car:

1. The model must accurately reflect the design process outlined in the online resources found on the AEOP JSS website.

2. The materials used to construct the model car must cost less than $50. The $50 does not include the cost of the panel. For example, Pitsco's Ray Catcher Sprint Deluxe Solar Vehicle costs $52.95. The Ray Catcher panel costs $38.25. Therefore, the cost of just the materials in the kit would be the difference between the two costs, $14.70.

3. Original receipts for all materials purchased must be recorded in the Supplied Components List.

4. If using recycled materials, documentation must show how these items were obtained.

5. Recycled materials are not included in the $50 maximum.

6. Model cars that exceed the $50 construction cost limit will be disqualified from the competition.

7. The vehicle must be structurally sound without the solar panel attached.

D. Solar Paneling:

1. One (1) solar panel (limited to a maximum output of 3.2 W), and one (1) motor (limited to a maximum 3.0 VDC) are allowed per car

2. The Ray Catcher Sprint Kit sold by Pitsco (www. pitsco.com/Ray-Catcher-Sprint-Kit) or the SSS Solar Panel sold by Solar Made (solarmade.com/ products/jss-p) are the only panels that can be used in the competition.

3. Solar panels cannot be shaved, drilled, or delaminated.

4. The solar panel must be attached to a student designed mount which can be adjusted in such a way as to align the panel to face the sun.

   a. The position of the mount must be adjusted before the vehicle is attached to the guidewire.

5. The vehicle must carry two standard ping-pong balls as its payload.

   a. The vehicle must include a student designed container or method to secure the ping-pong balls during the race.

   b. The ping-pong balls must be easily removable.

   c. The ping-pong balls must not be damaged, deformed or altered in any way.

   d. The vehicle must carry the ping-pong balls for the entire length of the race track.

   e. If the ping-pong balls fall off the vehicle the vehicle will be declared DNF (did not finish) for that race.

   f. If the ping-pong balls which fall from a vehicle interferes with another vehicle which is racing, the offended vehicle will have an opportunity to race again.

6. Only the motor supplied in the kit can be used.

7. Motors cannot be re-wound or disassembled.

8. If an evaluation group convened by the event coordinator determines that the solar panel and/or motor have been modified, the car and team will be disqualified from the competition.

9. The solar panel cannot be used as the chassis, or body, of the car.

10. The axles and wheels cannot be directly attached to the solar panel.

11. Reflectors, supports, and power leads can be added to these components as needed, but they must fit within the required dimensions.

12. The model car must, with the solar panel attached, not exceed the following dimensions:

    a. 60 cm (23 ⅝ inches) length

    b. 30 cm (11 ¹³⁄₁₆ inches) width

    c. 30 cm (11 ¹³⁄₁₆ inches) height (as measured from the surface the car is resting upon to the highest point of the car, with all its components attached)

SSS Wiring Diagram
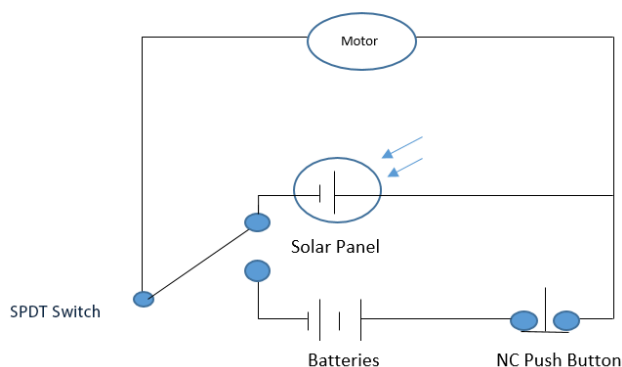
13. Each vehicle must include a mounted battery holder that is capable of holding two AA batteries. The battery holder must be connected to a SPDT (Single Pole Double Throw) switch. This is used to change the vehicle power source from solar power to battery power. The switch can be a slide or toggle type and the switch needs to be a normally closed (NC) push button, as shown in the diagram above. This is to be used at the starting line as follows.

    a. on the "READY" command the button is depressed and held, this opens the circuit.

    b. on the "SET" command the switch is flipped, to connect the batteries to the motor.

    c. on the "GO" command the button is released, thereby closing the circuit, sending power to the motor, causing the vehicle to move.

14. The team is encouraged to decorate the body of the car, but a clearly visible 3 cm square space must be available on the car to display the team ID#.

15. If it is determined that the vehicles will be raced using solar power, the sun's light is the only energy source that can be used to power the vehicle. Batteries, capacitors, flywheels, or any other energy storage devices are prohibited.

16. If the sun's energy is judged insufficient by the event coordinator, two (2) AA 1.5 V batteries will be furnished for each team

    a. Only the provided batteries are permitted to power the model.

E. A pair (front and back) of student-designed attachment devices must be part of the car to accommodate the easy attachment and removal from a guide wire for steering. A purchased screw eye or eye bolt is not considered a student designed attachment device. Students are strongly encouraged to place their attachment devices so that they extend out past the edge of the chassis. This facilitates quick connection of the vehicle to the guidewire. Positioning one near the front and the other near the rear helps the vehicle run straight.

1. A guide wire, such as fishing line, will be no more than 1.5 cm (⅝") from the surface of the track.

2. The wire will go through the attachment device on the car and serve as a steering mechanism to keep the car in its lane. This must be done without disconnecting the guide wire.

3. Both ends of the guide wire will be fixed to the track. This is the only allowable method of steering the car.

4. No radio control is permitted in the car.

5. Lane changing or lane crossing will result in a Did Not Finish (DNF) standing.

6. A car's race that is impacted by an out-of-control vehicle will be allowed an opportunity to run the race again.

7. A car that lacks steering control and interferes with other cars in other lanes will not be allowed to race again.

F. If a car is deemed unsafe, it will not be allowed to run in the time trials or the semifinalist races.

G. If the model is safe, but does not meet the required specifications, it will be allowed to run in the time trials but not the semifinalist races.

H. The remainder of the vehicle can be innovative in design and materials.

PRELIMINARY ROUND

Time Trials

A. The race lane must be 60cm wide and 20m long.

B. The track will be a hard flat surface, such as a tennis court or a smooth-surfaced running track.

C. The time trial/race specifications are as follows:

1. Tables will be set up for teams to make adjustments and minor repairs to cars prior to each time trial and the semifinalist heats.

    a. Teams that are "next up" to be timed or raced are given priority to use the tables.

    b. Teams must supply their own tools.

2. Time trials and semifinalist races will not be delayed to permit adjustments or repairs to cars. If a repair is needed during time trials, a three (3)-minute time limit for repairs will be permitted.

3. Prior to semifinals, teams will have an opportunity to perform up to two (2) trial races during a practice run session.

4. At race time, each car will be placed with the most forward part of the vehicle set even with the starting line and all of its wheels in contact with the ground.

    a. Each solar car's panel will be covered completely by a rigid opaque sheet covering that does not touch the solar panel.

    b. The rigid opaque sheet will be removed at the start of the race, allowing the vehicle to collect solar power and start driving.

5. No more than two (2) team representatives will be allowed in the race area; one at the starting line, one to catch.

6. All cars will be started when the official signal is given.

    a. Each car will have up to two (2) time trials, unless otherwise determined by the event coordinator.

    b. The fastest time recorded will determine the sixteen (16) cars to race in the semifinal portion of the event.

    c. If, for any reason, a car is not able to participate in the time trials, or race at its scheduled time, it may be disqualified.

7. The judges will note the official time for each time trial.

    a. At the time designated, if a car does not start the time trial, OR if during the time trial it does not finish, it will be noted as a Did Not Finish (DNF).

    b. If a car has a false start, the entry will be given one (1) more opportunity to race.

8. One (1) team member must wait at the finish line to catch the vehicle for each timed trial. Team members are responsible for finding a student to catch their vehicle if another team member is unavailable.

9. After each timed trial or race, the vehicle and team member must remain at the finish line until the time is recorded for the vehicle.

10. No one, including team members and spectators, may accompany or touch the vehicle on the track during a timed trial or semifinalist race.

    a. Vehicles stalled on the track can be retrieved after the end of the trial or the race has been declared by the lead judge.

    b. A violation of this rule will result in disqualification of the offending team.

11. Challenges must be made before the next timed trial or race begins.

    a. Any challenges must come from team members who are actively competing, not the coach/advisor, parent, or coordinator.

    b. Any challenges need to be directed to the lead judge.

    c. The decisions of the judges regarding challenges are final.

12. Only competing students and race officials may be in the race area.

    a. Spectators, including coaches/advisors, parents, coordinators, and non-competing students, must remain in the designated spectator area throughout the duration of races.

    b. Teams will be disqualified if a spectator, including a coach/advisor or parent, interferes with a race. This includes a coach/advisor or parent helping team members get their car on/off the guide wire.

13. Judges may inspect cars at any time before, during, and after timed trials or semifinalist races.

14. Any additional rules, regulations, or guidelines established by the event coordinator must be followed.

SEMIFINAL ROUND

Semifinalist Racing

A. Regulations and procedures outlined in the preliminary round time trials are repeated for semifinalist racing.

EVALUATION

PRELIMINARY ROUND

A. The documentation portfolio

B. The artisanship and engineering of the model solar car

C. Creativity in the decoration of the shoebox

D. Semifinalist interview

E. Head-to-head race results

SEMIFINAL ROUND

A. The semifinalist interview, which includes a minimum of two (2) team members

B. Five (5) minutes are allowed for the semifinalist interview.

C. The time trials regulations in the preliminary round also apply to the semifinal races. Semifinalist racing of the top sixteen (16) time trial winners, which will be conducted using a double elimination bracket. Teams will be ranked based on their fastest recorded time from time trials. Semifinal races will not be timed, however, the winner will be determined by the car that crosses the finish line first, barring any penalties.

Refer to the official rating form for more information.

TSA HONOR STATEMENT

All work must be created and completed by individual competitors or teams. Plagiarism, the use of Generative Artificial Intelligence (GenAI) software, copyright violation, cheating, and falsification of information are prohibited. Participants may NOT use any generative artificial intelligence (GenAI) tools (e.g. ChatGPT, Google Gemini, GitHub Copilot, etc.). Any attempt to gain an unfair advantage will not be tolerated. Competitors at any level of TSA competition understand and agree to abide by the TSA Honor Statement.

If it is determined that a student violated the TSA Honor Statement, a rules violation of twenty percent (20%) will be incurred.

NOTES

A. Senior Solar Sprint (SSS) is an Army Educational Outreach Program (AEOP) competition. Information about AEOP opportunities can be found at www.usaeop.com.

B. An array of support materials, such as correlations to STEM standards, a glossary of terms, course outlines, and lesson plans can be found at www.usaeop.com/program/jss once registered.

STEM INTEGRATION

This event has connections to the STEM areas of Science, Technology, Engineering, and Mathematics.

LEADERSHIP AND 21ST CENTURY SKILLS

This event provides opportunity for students to build and develop leadership and 21st century skills including but not limited to – Communication, Collaboration/Social Skills, Initiative, Problem Solving/Risk Taking, Critical Thinking, Perseverance/Grit, Creativity, Relationship Building/Teamwork, Dependability/Integrity, and Flexibility/Adaptability

CAREERS RELATED TO THIS EVENT

This competition has connections to one (1) or more of the careers below:

- Energy efficiency technician
- Mechanical engineer
- Solar engineer
- Solar panel installer
- Solar sales consultant

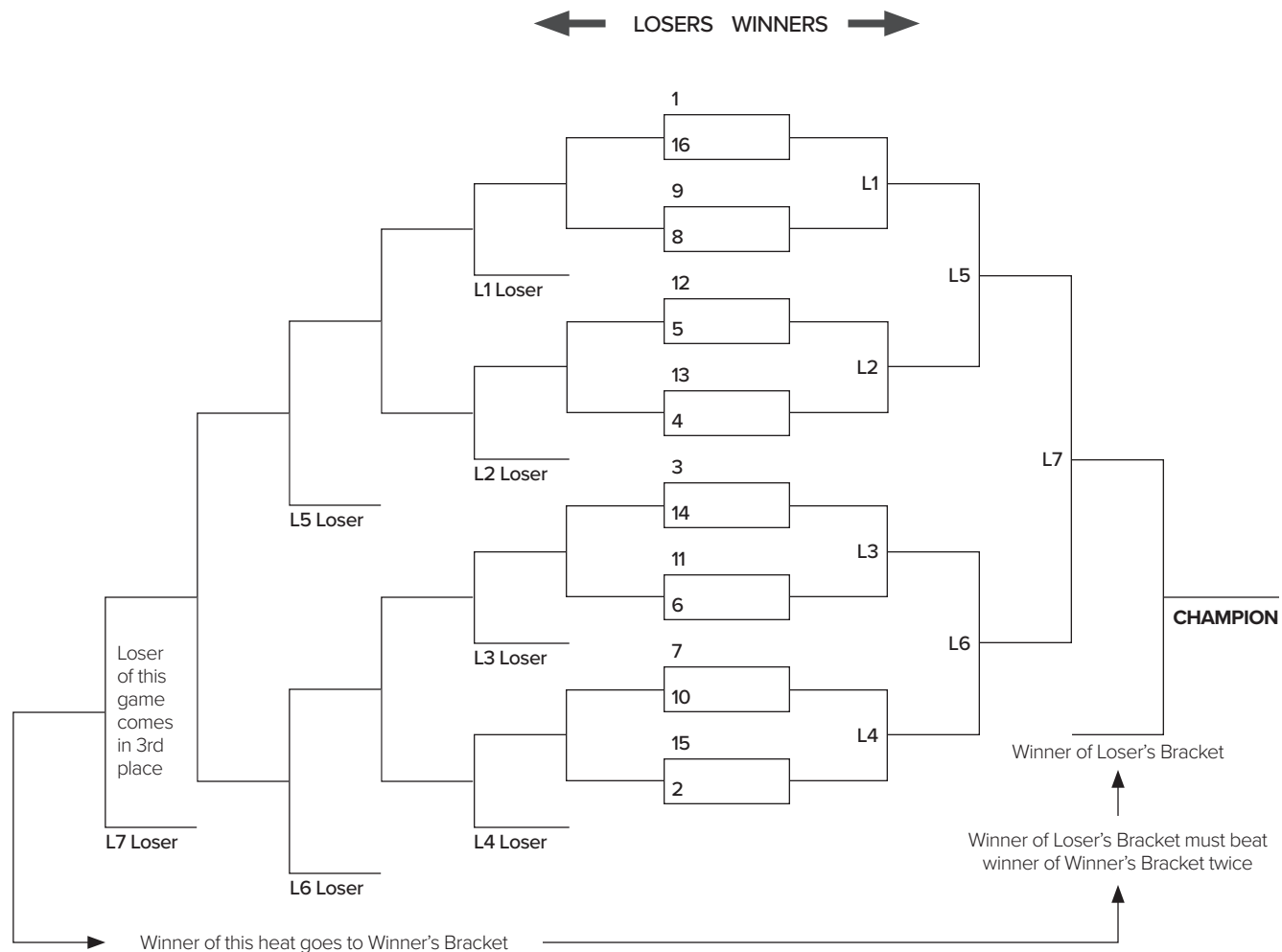# COMPETITION PROJECT LOG

SENIOR SOLAR SPRINT COMPETITION

	Date	Task	Time involved	Team member responsible	Obstacles encountered	Modifications made	Comments
1.							
2.							
3.							
4.							
5.							
6.							
7.							

SUPPLIED COMPONENTS LIST

Part	Description	Purchased Recycled	Cost
		TOTAL	

RACE BRACKET FOR 16-CAR DOUBLE ELIMINATION

Double Elimination Tournament Chart Seeded 16 player Field

LOSERS   WINNERS

1
16
9
8
L1
L1 Loser
12
5
L2
13
4
L2 Loser
L5
L5 Loser
3
14
L3
11
6
L3 Loser
7
10
L4
15
2
L4 Loser
L6 Loser
L6
L7
L7 Loser
CHAMPION

Loser of this game comes in 3rd place

Winner of Loser's Bracket

Winner of Loser's Bracket must beat winner of Winner's Bracket twice

Winner of this heat goes to Winner's Bracket

SENIOR SOLAR SPRINT
2025 & 2026 OFFICIAL RATING FORM
HIGH SCHOOL

Judges: Using minimal (1-4 points), adequate (5-8 points), or exemplary (9-10 points) performance levels as a guideline in the rating form, record the scores earned for the event criteria in the column spaces to the right. The X1 or X2 notation in the criteria column is a multiplier factor for determining the points earned. (Example: an "adequate" score of 7 for an X1 criterion = 7 points; an "adequate" score of 7 for an X2 criterion = 14 points.) A score of zero (0) is acceptable if the minimal performance for any criterion is not met.

Go/No Go Specifications

- Before judging the entry, ensure that the items below are present; indicate presence with a check mark in the box.
- If an item is missing, leave the box next to the item blank and place a check mark in the box labeled ENTRY NOT EVALUATED.
- If a check mark is placed in the ENTRY NOT EVALUATED box, the entry is not to be judged.

☐ Documentation portfolio is present
☐ Model car with solar panel is present
☐ A decorated shoebox
☐ The model is safe to participate in the time trials and, if deemed appropriate, the semifinalist races
☐ The model meets all required specifications
☐ ENTRY NOT EVALUATED

PRELIMINARY DOCUMENTATION PORTFOLIO (50 points)

Record scores in the column spaces below.

CRITERIA	Minimal performance 1-4 points	Adequate performance 5-8 points	Exemplary performance 9-10 points	
Portfolio Components (X1)	Portfolio is unorganized and/or is missing three (3) or more components.	Portfolio has most components and is generally organized per the order of the event guide listing; it has sufficient content.	All components are included in the portfolio; content and organization per the order of the event guide listing are excellent.	
Project Log (X1)	The Project Log is lacking significant portions; it is messy and demonstrates lack of effort.	The Project Log is acceptable, with most information included.	The Project Log is complete and accurate; the presentation is neat and orderly; a great deal of effort is evident.	
Design Drawings (X1)	Some drawings are missing and/or drawings are of poor quality.	Drawings are acceptable; all required views are shown.	Drawings are accurate and complete; all required views are present; rough sketches are included.	
Design Details/ Components List (X1)	Several details of the model, such as model size, wheel size, and gear ratio are missing and/or are poor; the components list is very limited.	Most details of the model, such as model size, wheel size, and gear ratio are included; most components are included.	All details of the model, such as model size, wheel size, and gear ratio are present; all components are included.	
Design Process Description (X1)	The design process description lacks detail and is poorly documented.	Most of the design process description is present.	All parts of the design process description are present.	
PRELIMINARY DOCUMENTATION PORTFOLIO SUBTOTAL (50 points)				

Record scores in the column spaces below.

PRELIMINARY DISPLAY AND MODEL (80 points)

CRITERIA	Minimal performance 1-4 points	Adequate performance 5-8 points	Exemplary performance 9-10 points	
Display/Decorated Shoebox (X2)	The quality of the display is extremely poor and/or exceeds size requirements; the shoebox is not decorated and there is no creativity.	The display is adequately created and meets the size specifications; the shoebox is decorated and creative.	The display is exemplary, includes eye-catching details, and meets the size specifications; the shoebox is creatively decorated and shows exceptional originality.	
Model Design (X2)	The design of the solar model is poor and shows little effort.	The design of the solar model is adequate but not of exceptional quality.	The design of the solar model exhibits exceptional quality.	
Model Creativity/ Originality (X2)	The solar model car design lacks creativity and originality; little effort is apparent; car is an exact, or nearly an exact replica of purchased kit.	The solar model car design demonstrates an adequate level of creativity and originality; at least one (1) modification has been made to the car.	The solar model car design shows exceptional creativity, originality, artisanship, and engineering.	
Model Construction (X2)	The solar model car lacks quality of construction and does not meet many of the requirements as explained in the guidelines.	The solar model car demonstrates adequate quality of construction and does not meet some of the requirements as explained in the guidelines.	The solar model car demonstrates exceptional quality of construction and meets all or nearly all of the requirements as explained in the guidelines.	
PRELIMINARY DISPLAY AND MODEL SUBTOTAL (80 points)				

Rules violations (a deduction of 20% of the total possible points for the above sections) must be initialed by the judge, coordinator, and manager of the event. Record the deduction in the space to the right. Indicate the rule violated: _____	

PRELIMINARY TOTAL (130 points)	

PRELIMINARY SENIOR SOLAR SPRINT TIME TRIAL / POST RACE INSPECTION	YES
Qualified Top 16 in Time Trial Speed to proceed to Interview and Final Race. If marked YES, place an "X" in the final box. If not in the Top 16, please leave blank.	

SENIOR SOLAR SPRINT

SEMIFINAL CAR BUILDER INTERVIEW (40 points)

CRITERIA	Minimal performance	Adequate performance	Exemplary performance	
	1-4 points	5-8 points	9-10 points	
Car Builder Interview (X2)	The team shows very limited knowledge of (and has difficulty articulating) how the car was produced or decisions made during the production; the student exhibits a basic understanding of design elements and functionality, and the rationale is inconsistent or absent.	The team demonstrates some knowledge of the vehicle production and has adequate knowledge of some processes or reasoning behind the vehicle design.	The team shows competence and knowledge related to the design and production of the vehicle; the student is able to articulate "reasoning" behind the decisions made including being able to explain the benefit of making the panel angle adjustable.	
Articulation (X2)	Communication of the design process is unclear, unorganized, and or illogical; leadership and/or 21st century skills are not evident.	Communication of the design process is somewhat logical and clear; leadership and/or 21st century skills are somewhat evident.	Communication of the design process is clear, concise, and logical; leadership and/or 21st century skills are clearly evident.	
			SEMIFINAL CAR BUILDER INTERVIEW SUBTOTAL (40 points)	

SEMIFINAL RACE (60 points)

Fastest 16 vehicles based on time trials race in double elimination races to determine these points.

1st	2nd	3rd	4th	5th & 6th	7th & 8th	9th – 12th	13th – 16th
60 Points	55 Points	50 Points	45 Points	40 Points	35 Points	30 Points	25 Points

	SEMIFINAL RACE SUBTOTAL (60 points)	

Rules violations (a deduction of 20% of the total possible points for the above sections) must be initialed by the judge, coordinator, and manager of the event. Record the deduction in the space to the right.

Indicate the rule violated: _____

SEMIFINAL TOTAL (100 points)	

To arrive at the FINAL TOTAL score, subtract rules violation points, as necessary. **TOTAL (230 points)**	

Comments:

_____

I certify these results to be true and accurate to the best of my knowledge.

JUDGE

Printed name: _____   Signature: _____

SENIOR SOLAR SPRINT
EVENT COORDINATOR INSTRUCTIONS

PERSONNEL

A. Event coordinator

B. Judges, six (6) or more

C. Assistants, six (6) or more

MATERIALS

A. Coordinator's packet containing:
1. Event guidelines, one (1) copy for the coordinator and for each judge
2. TSA Event Coordinator Report
3. Stick-on labels for identifying entries

B. Race bracket form

C. Batteries (AA 1.5 V) (in the event that the sun provides insufficient energy), two (2) per entry plus spares on-site

D. Braided fishing line for the track:
1. Four (4) pre-tied
2. Two (2) on track

E. Race track set, including a starting gate and finish gate with digital timer

F. Spare stopwatches for back-ups

G. Padding for the finish gate

H. Tables for the display and evaluation of entries (cars and portfolios)

I. Lane Assignment Board to be used for a display of semifinals racing

J. Tables and chairs for event coordinator, judges, and official assistants

K. A large display for the final 16 bracket

L. A gauge to measure line height at the beginning and end of the line

RESPONSIBILITIES

AT THE CONFERENCE

A. Attend the mandatory event coordinator's meeting at the designated time and location.

B. If check-in is on the first day of the conference, requirements for attire do NOT apply during check-in.

C. Report to the CRC room and check the contents of the coordinator's packet.

D. Review the event guidelines and check to see that enough personnel have been scheduled.

E. Inspect the area(s) in which the event will be held for appropriate set-up, including location for displays and the evaluation of portfolios, racing site, chairs, tables, outlets, etc.

F. At least one (1) hour before the event is to begin, meet with judges and assistants to review time limits, procedures, regulations, evaluation, and all other details related to the event. If questions arise that cannot be answered, speak to the event manager before the event begins.

G. Ensure the judges have access to the online judging system.

PRELIMINARY ROUND

A. Participants report to the time and place stated in the conference program and check in:
1. The solar-powered model car and decorated shoebox
2. The documentation portfolio

B. Secure the entries in the designated area.

C. Late participants and/or entries are considered on a case-by-case basis and only when lateness is caused by events beyond the participant's control.

D. In order to compete, participants must be on the entry list or must have approval of the CRC.

E. Position the Senior Solar Sprint portfolios and models for viewing by the judges, and assist them as necessary during judging.

F. Set up the race track prior to the time trials. Make necessary adjustments.

G. Permit all vehicles (that can be safely operated) to participate in time trials.

H. Vehicles that are disqualified will NOT be permitted to participate in the semifinalist races.

I. Decisions about rules violations must be discussed and verified with the judges, event coordinator, and the CRC manager to determine either:

    1. To deduct twenty percent (20%) of the total possible points in this round

    2. To disqualify the entry

    The event coordinator, judges, and CRC manager must initial either of these actions on the rating form.

J. Judges determine the sixteen (16) semifinalists.

K. Create semifinalist sign-up sheet for the semifinal interviews.

SEMIFINAL ROUND

A. Semifinalists report at the time and place stated in the conference program to sign up for an interview time.

B. Post the top sixteen (16) cars with interviews times.

C. Car builders will report to the designated area with their vehicle at the posted time for a five (5)-minute car builder interview.

D. Conduct interviews with the qualifying top sixteen (16) car builders.

E. Begin the semifinals at the scheduled time.

F. Run the semifinalist race. A sample double-elimination bracket follows.

G. Only the sixteen (16) qualifying cars are raced.

H. Public viewing is allowed.

I. Discuss rule violations (e.g., 20% deduction, disqualification) and have all relevant parties initial the rating form.

J. If necessary, manage the security and removal of materials from the event area.

SOFTWARE DEVELOPMENT

OVERVIEW

Using leadership and 21st century skills, participants apply knowledge of cutting-edge technologies and algorithms to design, implement, test, and document a software development project. The project should have educational or social value. The theme of the current year's software development project will be posted on the TSA website under *Themes & Problems*.

ELIGIBILITY

One (1) team per chapter may participate. The presentation/interview is limited to three (3) members.

TIME LIMITS

A. A copy of the solution's code for the chapter's entry (URL or PDF) must be finished, submitted, and accessible via the Internet by 11:59pm ET on a designated date mid-May.

B. Up to seven (7) minutes for the presentation, and an additional three (3) minutes to respond to questions (i.e., interview).

ATTIRE

TSA competition attire is required for this event.

PROCEDURE

PRE-CONFERENCE

A. Participants review the TSA Honor Statement for Competitive Events found in the General Rules and listed in the individual competitive event rules.

B. Participants identify a societal need based on the yearly theme and design a tool (e.g., graphical user interface, dashboard, predictive model, etc.) using software of choice that addresses this need.

C. Participants prepare for a live presentation/interview on-site.

PRELIMINARY ROUND

A. Participants report to the event area at the time and place stated in the conference program to sign up for a presentation/interview time.

B. Participants report at the assigned time and place for their presentation/interview.

C. Participants give a live presentation of the functionality of their project, describe the design process, and discuss the value of the project.

D. Judges will ask at least one question about the project code that participants will need to answer.

E. Participants remove their project and equipment from the area at the completion of the presentation/interview.

F. Judges evaluate the presentation and interview.

G. A list of twelve (12) semifinalist teams (in random order) is posted.

SEMIFINAL ROUND

A. Semifinalists report to the event area at the time and place stated in the conference program to receive an assigned presentation/interview time.

B. Semifinalist presentation/interviews follow the same procedure as in the preliminary round.

C. Ten (10) finalists will be announced during the conference awards ceremony.

REGULATIONS AND REQUIREMENTS

Students will work to develop their leadership and 21st century skills in the process of preparing for and participating in this TSA competitive event. The development and application of those skills must be evident in their submission, demonstration, and/or communication pertaining to the entry.

PRE-CONFERENCE

A. Participants must submit their executable raw code online by 11:59pm ET on a designated date mid-May.

B. The code must be submitted as a URL leading the judges to either an online repository (i.e. GitHub) or a link to a PDF of all of their code.

PRELIMINARY ROUND

A. Participants report at the time and place stated in the conference program to sign up for a presentation/interview time.

B. Participants report at the assigned time and place for the presentation/interview.

C. Participants must provide all necessary hardware to demonstrate their project during the presentation.

1. This may include a laptop computer (operating solely on battery power) with a computer mouse (if desired) or mobile device(s).

2. The set-up should not exceed 2' x 2' x 2'.

D. National TSA will NOT provide wireless Internet. Students may provide internet access using a hotspot from a mobile device, however, students should have an alternate presentation plan in case access is unavailable.

E. A list of twelve (12) semifinalists (in random order) is posted.

SEMIFINAL ROUND

A. Participants report at the time and place stated in the conference program to sign up for a presentation/ interview time.

B. Participants report at the assigned time and place for the presentation/interview.

C. The semifinal round will follow all rules and guidelines of the preliminary round.

D. Judges evaluate the presentation/interview.

E. The top ten (10) finalists are announced at the awards ceremony.

EVALUATION

PRELIMINARY ROUND

A. The quality of work

B. The overall benefit of the work

C. The technical skill exhibited in the project

D. The ability to demonstrate and describe the team's software design process

E. How well the problem identified is solved by the tool demonstration and relates to the theme

F. The ability to explain portion of their code in the project questioned by the judges.

G. Teams are judged on the functionality and originality of their project. At a minimum, presentations should include:

1. the design process

2. end-user applications

3. a demonstration

4. information on the design

Refer to the official rating form for more information.

TSA HONOR STATEMENT

All work must be created and completed by individual competitors or teams. Plagiarism, the use of Generative Artificial Intelligence (GenAI) software, copyright violation, cheating, and falsification of information are prohibited. Participants may NOT use any generative artificial intelligence (GenAI) tools (e.g. ChatGPT, Google Gemini, GitHub Copilot, etc.). Any attempt to gain an unfair advantage will not be tolerated. Competitors at any level of TSA competition understand and agree to abide by the TSA Honor Statement.

If it is determined that a student violated the TSA Honor Statement, a rules violation of twenty percent (20%) will be incurred.

STEM INTEGRATION

This event aligns with the STEM (Science, Technology, Engineering, and Mathematics) educational standards.

LEADERSHIP AND 21ST CENTURY SKILLS

This event provides opportunity for students to build and develop leadership and 21st century skills including but not limited to – Communication, Collaboration/Social Skills, Initiative, Problem Solving/Risk Taking, Critical Thinking, Perseverance/Grit, Creativity, Relationship Building/Teamwork, Dependability/Integrity, and Flexibility/Adaptability

CAREERS RELATED TO THIS EVENT

This competition has connections to one (1) or more of the careers below:

- Graphic designer
- Software engineer

SOFTWARE DEVELOPMENT

2025 & 2026 OFFICIAL RATING FORM

HIGH SCHOOL

Judges: Using minimal (1-4 points), adequate (5-8 points), or exemplary (9-10 points) performance levels as a guideline in the rating form, record the scores earned for the event criteria in the column spaces to the right. The X1 or X2 notation in the criteria column is a multiplier factor for determining the points earned. (Example: an "adequate" score of 7 for an X1 criterion = 7 points; an "adequate" score of 7 for an X2 criterion = 14 points.) A score of zero (0) is acceptable if the minimal performance for any criterion is not met.

Go/No Go Specifications

- Before judging the entry, ensure that the items below are present; indicate presence with a check mark in the box.
- If an item is missing, leave the box next to the item blank and place a check mark in the box labeled ENTRY NOT EVALUATED.
- If a check mark is placed in the ENTRY NOT EVALUATED box, the entry is not to be judged.

☐ Computer hardware is present
☐ ENTRY NOT EVALUATED

PROJECT SOLUTION (70 points)

Record scores in the column spaces below.

CRITERIA	Minimal performance	Adequate performance	Exemplary performance	
	1-4 points	5-8 points	9-10 points	
Creativity (X2)	The project lacks creativity surrounding the current yearly theme with little original thought in developing the project.	Some elements of the project express creativity surrounding the current yearly theme and/or the solution is somewhat original.	The project exudes creativity and originality surround the current yearly theme.	
Software Coding Practices (X2)	The project is inadequately developed in terms of general software coding practices (requirements, design, implementation, and testing).	The project is developed following most general software coding practices (requirements, design, implementation, and testing).	The project is extremely well developed and follows general software coding practices (requirements, design, implementation and testing).	
Complexity (X2)	The software design exhibits little complexity.	The software design exhibits some degree of complexity.	The software design is complex, resulting in a highly functional product.	
Technical Skill (X1)	Little technical skill is exhibited in the software; the levels of software development are not fluid and/or are illogical.	Average technical skill is exhibited in the software's design and construction; the software flows somewhat effectively from level to level.	The software exhibits mastery of software design skill that few at this level possess; the software flow is constant and logical.	
PROJECT SOLUTION SUBTOTAL (70 points)				

SOFTWARE DEVELOPMENT

PRESENTATION/INTERVIEW (60 points)

CRITERIA	Minimal performance 1-4 points	Adequate performance 5-8 points	Exemplary performance 9-10 points	
Organization and Knowledge (X1)	The team seems unprepared and unorganized for the presentation and questions from judges; team members have very little understanding of the concepts in their project, and provide vague answers to judges' questions.	The team is preparedfor the presentation and answers questions adequately; all team members have a general understanding of the concepts discussed and answer questions adequately.	The team's presentation is logical, organized, and effective; the team answers questions logically, thoughtfully, and with confidence; there is clear evidence that all team members have a thorough understanding of the concepts presented in their project.	
Articulation (X1)	Communication of the solution is unclear, unorganized, and or illogical; leadership and/or 21st century skills are not evident.	Communication of the solution is somewhat logical and clear; leadership and/or 21st century skills are somewhat evident.	The demonstration provides a clear, concise, and easy-to-follow analysis of the solution; leadership and/or 21st century skills are clearly evident.	
Team Participation (X1)	Only one (1) team member communicates with judges; there is no participation from other team members.	Team members participate generally equally and adequately understand the concepts of the project.	All team members fully understand the concepts of the project and share an equal role in answering judges' questions.	
Coding Explanation (X3)	The team barely or does not answer or explain the purpose and construction of the code the judges chose from the code submitted.	The team partially answers and/or partially explains the purpose and construction of the coding section that the judges chose from the code submitted.	The team answers and explains the purpose and construction of the coding section that the judges chose from the code submitted.	
PRESENTATION/INTERVIEW SUBTOTAL (60 points)				

Rules violations (a deduction of 20% of the total possible points for the above sections) must be initialed by the judge, coordinator, and manager of the event. Record the deduction in the space to the right. Indicate the rule violated: _____	

To arrive at the TOTAL score, subtract rules violation points, as necessary.　　　　　**TOTAL (130 points)**	

Comments:

_____

I certify these results to be true and accurate to the best of my knowledge.

JUDGE

Printed name: _____　　Signature: _____

SOFTWARE DEVELOPMENT EVENT COORDINATOR INSTRUCTIONS

PERSONNEL

A. Event coordinator

B. Judges:
1. Preliminary round, two (2) or more
2. Semifinal round, two (2) or more

MATERIALS

A. Coordinator's packet, containing:
1. Event guidelines, one (1) copy for the coordinator and for each judge
2. TSA Event Coordinator Report

B. Chairs, as needed for judging

C. Stopwatch for timing presentation/interviews

D. Measuring tape

RESPONSIBILITIES

AT THE CONFERENCE

A. Attend the mandatory coordinator's meeting at the designated time and location.

B. Report to the CRC room and check the contents of the coordinator's packet.

C. Review the event guidelines and check to see that enough personnel have been scheduled.

D. Inspect the area(s) in which the event is being held for appropriate set-up, including room size, chairs, tables, outlets, etc. Notify the event manager of any potential problems.

E. At least one (1) hour before the event is scheduled to begin, meet with judges/assistants to review time limits, procedures, regulations, evaluation, and all other details related to the event. If questions arise that cannot be answered, speak to the event manager before the event begins.

F. Ensure the judges have access to the online judging system.

PRELIMINARY ROUND

A. Participants report at the time and place stated in the conference program to sign up for a presentation time.

B. If check-in is on the first day of the conference, requirements for attire do NOT apply during check-in.

C. No more than three (3) participants report at the assigned time and place for the presentation.

D. Late entries are considered on a case-by-case basis and only when the delay is caused by events beyond participant control.

E. In order to compete, participants must be on the entry list or must have approval of the CRC.

F. Judges assess the presentations and may ask questions.

G. Decisions about rules violations must be discussed and verified with the judges, event coordinator, and CRC manager to determine either:
1. To deduct twenty (20%) of the total possible points in this round or
2. To disqualify the entry

   The event coordinator, judges, and CRC manager must initial either of these actions on the rating form.

H. Judges independently evaluate the presentation/interview.

SEMIFINAL ROUND

A. Using the same official rating form for the semifinalist, judges asses the semifinalist presentation and determine the ten (10) finalists.

B. Discuss rule violations (e.g. 20% deduction, disqualification) and have all relevant parties initial the rating form.

C. If necessary, manage security and the removal of materials from the area.

STEM MASS MEDIA

OVERVIEW

Applying leadership and 21st century skills, participants utilize written and verbal communication skills designed for a mass audience to convey a news story revolving around a designated theme in both a video broadcast (preliminary) and a digital written format (semifinals). Participants must demonstrate a strong understanding of journalism etiquette and common practices of the field. The theme posted on the TSA website under *Themes & Problems*.

ELIGIBILITY

One (1) team of two to three (2-3) members per chapter may participate.

TIME LIMITS

PRE-CONFERENCE

A. All components of the chapter's entry (digital video URL and documentation PDF) must be finished, submitted, and accessible via the Internet by 11:59pm ET on a designated date mid-May.

B. Participants will have a maximum of four (4) minutes to present an informative news broadcast on a scientific headline chosen each year.

C. Submissions that are over four (4) minutes will be disqualified.

SEMIFINAL ROUND

A. Participants will be given ten (10) minutes to read over a provided briefing of the selected individual that describes the work of a selected business or industry professional and plan interview questions for the individual.

B. Following the briefing, participants will be given the opportunity to engage in a press conference with the chosen individual.

C. Participants are then given twenty-four (24) hours to produce an original digital news article. View examples of appropriate news stories.

ATTIRE

TSA competition attire is required.

PROCEDURE

PRE-CONFERENCE

A. Participants review the TSA Honor Statement for Competitive Events found in the General Rules and listed in the individual competitive event rules.

B. Participants access the annual theme posted on the TSA website under *Themes & Problems*.

PRELIMINARY ROUND

A. Participants prepare a news broadcast that presents the information from the annual theme in an informative and creative manner while abiding to the time constraints.

B. Participants submit a URL to the video file by 11:59pm ET on a designated date in mid-May.

C. Submission information will be provided on the TSA website under *Competition Updates*.

PRELIMINARY ROUND

A. Judges independently assess the entries to determine the top twelve (12) semifinalists.

B. A list of the twelve (12) semifinalists (in random order) will be posted on the first full day of the conference.

SEMIFINAL ROUND

A. Semifinalist teams report at the time and place stated in the conference program.

B. Semifinalist teams may be represented by two (2) to three (3) members.

C. Semifinalists are given ten (10) minutes to read over a provided written brief on the topic for the digital journalism challenge and to prepare interview questions.

D. Following the briefing, all semifinalist teams will enter a press conference room and will be given thirty (30) minutes to interview a selected business or industry professional.

E. Semifinalist teams are given twenty-four (24) hours to produce a digital news story detailing the information provided in the briefing and gathered in the interview.

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F. Teams are responsible for submitting the PDF using the submission procedures provided by the event coordinator.

G. Judges independently assess the news stories.

H. The top ten (10) finalists are announced at the awards ceremony.

REGULATIONS AND REQUIREMENTS

Students will work to develop their leadership and 21st century skills in the process of preparing for and participating in this TSA competitive event. The development and application of those skills must be evident in their submission, demonstration, and/or communication pertaining to the entry.

PRELIMINARY ROUND

A. Video News Story

1. The news broadcast must present the annually chosen headline, summarize key information, and present it in an original manner. The video must:

   a. Include an introduction of the headline.

   b. Sufficiently summarize content from the news story.

   c. Explain possible future implications of the headline.

   d. Not exceed four (4) minutes in length.

   e. Include audio and visual produced solely by the team.

      i. Royalty free images, video, and music may be used so long as they are properly cited and included in the Student Copyright Checklist.

2. References and Resources should be cited in proper Modern Language Association (MLA) style.

   a. Sources other than the news story are allowed, but participants must cite them appropriately.

B. Documentation Portfolio:

1. Documentation materials (comprising a "portfolio") are required and must be submitted as a multi-page PDF document with pages in this order:

   a. Title page with the event title, Chapter ID, the conference city and state, and the year; one (1) page

   b. Table of contents; pages as needed

   c. Student Copyright Checklist (see Forms Appendix).; one (1) page

   d. References and Resources; pages as needed

   e. Photo/Film/Video Consent and Release Forms – required for all identifiable participants and minors require parental permission (see Photo/Film/Video Consent and Release in Forms Appendix); pages as needed

C. The URL must point directly to the participant's entry. Entries that require a software download or a request that access be granted will not be judged.

SEMIFINAL ROUND

A. Briefing and Interview

1. Participants arrive at the event area at their designated time.

2. Participants are given ten (10) minutes to be briefed on the interview topic and create questions.

3. Participants have thirty (30) minutes to interview the professional during the press conference

   a. Team members may choose to use an audio recording device.

   b. Only audio is permitted to be collected and used by participants.

   c. No video recording is permitted.

   d. Participants must respect that anything "off the record" may not be included in the final news story.

B. Digital News Story Format

1. Written articles should be the original work of participants and should not exceed five-hundred (500) words in length and be saved in PDF format.

   a. If the entry exceeds five-hundred (500) words in length, a rules violation of 20% will be applied.

2. Participants may use any font style or size, but should maintain professionalism.

3. Participants may use any software to design their digital news articles.

4. Students must complete a new Student Copyright Checklist (see Forms Appendix) and save it as a PDF.

5. When applicable, all ideas, text, images, and sounds from other sources must be cited. Copyrighted materials may NOT be used. If including a references and resources page, the page must be save in PDF format.

6. References and Resources should be cited in proper Modern Language Association (MLA) style; one (1) page.

   a. Participants may use outside resources to supplement their article, but they must be cited appropriately.

7. Combine the digital news story, Student Copyright Checklist, and References and Resources PDFs into one (1) single PDF for submission. Save the PDF with the team ID as the name.

EVALUATION

PRELIMINARY ROUND

A. The news broadcast

SEMIFINAL ROUND

A. The interview and digital news story

Refer to the official rating form for more information.

TSA HONOR STATEMENT

All work must be created and completed by individual competitors or teams. Plagiarism, the use of Generative Artificial Intelligence (GenAI) software, copyright violation, cheating, and falsification of information are prohibited. Participants may NOT use any generative artificial intelligence (GenAI) tools (e.g. ChatGPT, Google Gemini, GitHub Copilot, etc.). Any attempt to gain an unfair advantage will not be tolerated. Competitors at any level of TSA competition understand and agree to abide by the TSA Honor Statement.

If it is determined that a student violated the TSA Honor Statement, a rules violation of twenty percent (20%) will be incurred.

STEM INTEGRATION

This event aligns with the STEM (Science, Technology, Engineering, and Mathematics) educational standards.

LEADERSHIP AND 21ST CENTURY SKILLS

This event provides opportunity for students to build and develop leadership and 21st century skills including but not limited to – Communication, Collaboration/Social Skills, Initiative, Problem Solving/Risk Taking, Critical Thinking, Perseverance/Grit, Creativity, Relationship Building/Teamwork, Dependability/Integrity, and Flexibility/Adaptability.

CAREERS RELATED TO THIS EVENT

This competition has connections to one (1) or more of the careers below:

- News anchor
- Scientific journalist
- Researcher/corresponding author
- Field reporter

STEM MASS MEDIA
2025 & 2026 OFFICIAL RATING FORM
HIGH SCHOOL

Judges: Using minimal (1-4 points), adequate (5-8 points), or exemplary (9-10 points) performance levels as a guideline in the rating form, record the scores earned for the event criteria in the column spaces to the right. The X1 or X2 notation in the criteria column is a multiplier factor for determining the points earned. (Example: an "adequate" score of 7 for an X1 criterion = 7 points; an "adequate" score of 7 for an X2 criterion = 14 points.) A score of zero (0) is acceptable if the minimal performance for any criterion is not met.

Go/No Go Specifications

- Before judging the entry, ensure that the items below are present; indicate presence with a check mark in the box.
- If an item is missing, leave the box next to the item blank and place a check mark in the box labeled ENTRY NOT EVALUATED.
- If a check mark is placed in the ENTRY NOT EVALUATED box, the entry is not to be judged.

☐ Digital Video URL submitted
☐ Documentation Portfolio PDF submitted
☐ ENTRY NOT EVALUATED

PRELIMINARY NEWS BROADCAST (110 points)

CRITERIA	Minimal performance 1-4 points	Adequate performance 5-8 points	Exemplary performance 9-10 points	Record scores in the column spaces below.
Video Quality (X1)	The broadcast shots have obvious problems with focus, steadiness, and framing. The entry conveys a lack of understanding of video equipment.	The broadcast shots are somewhat focused and framed. The team demonstrates an adequate use of video equipment.	The broadcast is enhanced by steady and creative shots. The team demonstrates exemplary use of video equipment.	
Audio (X1)	The audio quality is poor, a result of primary use of the on-camera microphone for recording.	The audio quality is clear and reflects an appropriate use of microphones and audio techniques.	The audio quality is excellent, with use of additional audio clips/cues that enhance the video production.	
Lighting (X1)	The video reflects poor ambient lighting choices and/or the use of heavy backlighting.	The video reflects adequate lighting on subjects and the proper use of lighting techniques.	The video reflects and excellent use of lighting, which contributes to the effectiveness of the broadcast.	
Continuity and Pacing (X1)	The sequencing of the broadcast is confusing or incomprehensible; transitions are distracting from the flow of the broadcast.	The pace and timing are generally structured; there is a good use of transitions, allowing for an adequate flow of the broadcast.	The pace and timing are exceptional. Transitions provide a seamless flow for the broadcast and give directionality to the work.	
Creativity and Originality (X1)	There is little original thought or creativity in the design and production of the broadcast.	The broadcast demonstrates some original thought and creativity.	Originality and creativity are at the forefront of the broadcast, both in content and style.	
Delivery (X1)	Delivery detracts from the broadcast; eye contact may be limited; presented may tend to look away from the camera, mumble, speak inaudibly, fidget, or read excessively from notes; gestures may be jerky or excessive.	Delivery generally seems effective; however, use of volume, eye contact, vocal control, etc., may not be consistent; some hesitancy may be observed; vocal tone, facial expressions, and/or nonverbal expressions do not detract from the message.	Delivery is extemporaneous, natural, confident, and enhances the message.; posture, eye contact, smooth gestures, facial expressions, volume, pace, etc., indicate confidence, a commitment to the topic, and a willingness to communicate.	
Voice and Language (X2)	Language choices may be limited, peppered with slang or jargon, too complex, or too dull; language is questionable or inappropriate for the audience.	Language used is mostly appropriate and effective at communicating the message. Word choices are adequate.	Language is familiar to the audience, appropriate for the setting, and free of bias; word choices are vivid and precise.	

PRELIMINARY NEWS BROADCAST (110 points) – continued

Professionalism (X1)	The presenter's appearance is unprofessional, sloppy, and inappropriate.	The presenter's appearance is adequate, appropriate, and somewhat professional.	The presenter's appearance is appropriate, professional, and polished.	
Video Effectiveness (X2)	The work does not meet the project goals, has an unclear message, and reflects sloppy work.	The topic is presented with some insight, and the broadcast meets most project goals.	The broadcast is focused, with a clear message and a rich variety of supporting material.	
			PRELIMINARY NEWS BROADCAST SUBTOTAL (110 points)	

Rules violations (a deduction of 20% of the total possible points in the semifinalist section) must be initialed by the evaluator, coordinator, and manager of the event. Record the deduction in the space to the right. Indicate the rule violated: _____	

PRELIMINARY SUBTOTAL (110 points)	

SEMIFINAL DIGITAL NEWS STORY (90 points)

CRITERIA	Minimal performance	Adequate performance	Exemplary performance	
	1-4 points	5-8 points	9-10 points	
Organization (X2)	There is no discernible organization; transitions are not present.	A logical progression of ideas is evident; transitions are present throughout the news story.	The news story conveys a logical progression of ideas, with a clear structure that enhances the purpose; transitions are mature and graceful.	
Style (X2)	The style is confusing and hard to follow; it contains fragments and/or run-on sentences; word choice is simple, ordinary, and/or uncompelling.	The style is clear, sentences are somewhat expressive, and word choice is appropriate.	The style is smooth, skillful, and coherent; sentences are strong and expressive, with varied structure; word choice is appropriate and mature.	
Mechanics (X2)	The news story contains distracting errors in punctuation, grammar, and spelling.	Punctuation, grammar, and spelling are generally correct, with few errors.	Punctuation, grammar, and spelling are correct with no errors evident.	
Integration of Theme (X3)	The news story lacks adequate supporting details from the briefing and interview; a relevant message is haphazardly conveyed, if at all.	The news story demonstrates a satisfactory understanding of the subject material; some supporting details obtained from the briefing and interview are used to enhance the writing.	The news story uses supporting details obtained from the briefing and interview often, which thoroughly enhances the writing. The information presented demonstrates factual accuracy exemplary creativity.	
			SEMIFINAL DIGITAL NEWS STORY SUBTOTAL (90 points)	

Rules violations (a deduction of 20% of the total possible points in the semifinalist section) must be initialed by the evaluator, coordinator, and manager of the event. Record the deduction in the space to the right. Indicate the rule violated: _____	

STEM MASS MEDIA

SEMIFINAL SUBTOTAL (90 points)	

To arrive at the TOTAL score, add any subtotals and subtract rules violation points, as necessary.　　**TOTAL (200 points)**	

Comments:

_____

I certify these results to be true and accurate to the best of my knowledge.

JUDGE

Printed name: _____　　Signature: _____

STEM MASS MEDIA
EVENT COORDINATOR INSTRUCTIONS

PERSONNEL

A. Event coordinator

B. Press Conference Moderator

C. Judges:

1. Preliminary round, two (2) or more (online)

2. Semifinal round, two (2) or more

MATERIALS

A. Coordinator's packet, containing:

1. Event guidelines, one (1) copy for the coordinator and for each judge

2. TSA Event Coordinator Report

B. Media Briefs, one (1) copy for each semifinalist team

C. A person to serve as an scientist/industry professional

D. A person to serve as the press conference moderator

E. Tables and chairs for semifinalist teams

F. Table and chairs for the press conference room

RESPONSIBILITIES

PRE-CONFERENCE/PRELIMINARY ROUND

A. National TSA will collect entries until 11:59 p.m. ET on a designated date in mid-May. The submissions are shared with the CRC manager, event coordinator, and assigned judges.

B. Review entries as they are submitted to the designated online storage utility.

C. Manage communication and Pre-conference evaluation (at least two [2] or more judges should be recruited earlier in the year). Coordinate with National TSA and/or the Judge Manager.

AT THE CONFERENCE

A. Attend the mandatory coordinator's meeting at the designated time and location.

B. Report to the CRC room and check the contents of the coordinator's packet.

C. Review the event guidelines and check to see that enough personnel have been scheduled.

D. Inspect the area(s) in which the event is being held for appropriate set-up, including room size, chairs, tables, outlets, etc. Notify the event manager of any potential problems.

E. At least one (1) hour before the event is set to begin, meet with judges/assistants to review time limits, procedures, regulations, evaluation, and all other details related to the event. If questions arise that cannot be answered, speak to the event manager before the event begins.

F. Ensure the judges have access to the online judging system.

PRELIMINARY ROUND

A. On the first full day of competition, post a list of the twelve (12) semifinalists in random order.

SEMIFINAL ROUND

A. Semifinalists report at the time and place stated in the conference program for the press conference.

B. Manage the press conference.

C. Discuss rule violations (e.g. 20% deduction, disqualification) and have all relevant parties initial the rating form.

D. Semifinalist teams have twenty-four (24) hours to digitally submit news story.

E. Ensure judges have access to semifinalist submissions for evaluation following the turn-in deadline.

F. If necessary, manage security and the removal of materials from the event area.

STRUCTURAL DESIGN AND ENGINEERING

OVERVIEW

Applying leadership and 21st century skills, team members collaborate to build a designated structure. Teams apply the principles of structural design and engineering through research, design, construction, destructive testing, and assessment to determine the design efficiency of the structure.

The problem statement will be posted on the TSA website under *Themes & Problems*. The on-site semifinalist problem is a variation of the pre-conference problem posted on the TSA website.

ELIGIBILITY

One (1) team of two (2) individuals per chapter is allowed to participate.

SAFETY EYEWEAR

A. Participants are required to wear safety-approved eyewear during the on-site phase of this event.

B. Prescription eyewear needs to have side shields to be considered safety eyewear.

C. Should a team member remove the eyewear and fail to replace it, s/he will be reminded once.

D. If there is a second infraction, the team will be asked to leave the competition.

E. Sunglasses are not suitable.

TIME LIMITS

A. On-site structures must be started, completed, and checked in during the three (3) hours allowed for design and construction.

B. Semifinalist participants with time conflicts must present a written explanation of the conflict to the event coordinator at least one (1) hour before the construction time noted in the conference schedule. Work must begin during the time scheduled for the event.

ATTIRE

TSA competition attire is required for this event.

PROCEDURE

PRE-CONFERENCE

A. Participants review the TSA Honor Statement for Competitive Events found in the General Rules and listed in the individual competitive event rules.

B. Teams review the problem statement on the TSA website under *Themes & Problems*.

C. Participants conduct research and apply principles of structural design and engineering to their current structure while considering the theme.

D. Pre-built structures must be started and completed during the current school year.

E. All work must be completed by the team members only and verified by the team's chapter advisor using the Team Verification form on the TSA website under *Themes & Problems*.

F. Teams must provide either a Full-Size or Scaled drawing. The drawing must be a three (3)-view drawing incorporating a Front, Top & Right End views (hand or computer-generated). If a Scale drawing is provided, the scale must be included in the title block of the drawing.

G. Teams shall indicate on the drawing where the judges shall place the test block for evaluation of the structure.

PRELIMINARY ROUND

On-site Destructive Testing of Pre-Built Structures

A. Participants check in the following at the time and place stated in the conference program:

1. Pre-built structure and any related required materials

2. Documentation portfolio materials

B. Structures are assessed and undergo destructive testing.

C. Destructive testing of pre-built structures is not open for public viewing.

D. Destructive testing is completed using structural testing equipment, as designated by TSA.

E. When the destructive testing is completed, a list of twenty (20) semifinalist teams are posted.

SEMIFINAL ROUND

On-site Construction

A. The twenty (20) semifinalist teams take part in the on-site problem, which features the construction and destructive testing of a designated structure to determine the ten (10) finalist teams.

B. Twenty (20) semifinalist teams report to the event area at the time and place stated in the conference program.

C. Teams are seated by a monitor.

D. The on-site semifinalist problem, planning and fabrication supplies, and building materials are provided to the semifinalist teams.

E. Teams have a three (3) hour window when drawing begins and building stops, typically allotted as:

   1. Thirty (30) minutes to review the problem and create a sketch/drawing of their solution.

   2. Two and one-half (2 ½) hours to review the problem and construct a solution.

F. During the building of the team's structure, construction regulations must be observed.

G. All work stops at the coordinator's signal. Teams that fail to comply with coordinator or monitor directions, after one (1) warning, will be issued a penalty of 20% of the team's on-site structure and subjective criteria score.

H. Participants may leave early, but they must first complete check-out as directed.

I. Teams return all supplied items, as directed, and clean and clear their work stations. Failure to do so will result in a 20% penalty deduction.

J. Teams must identify their structure with only their team ID number, using the label provided.

K. Structures are allowed to dry in a secure area until destructive testing time.

Destructive Testing

A. Structures are checked for rules violations and weighed before testing.

B. Destructive testing is completed by evaluators and is open for spectator viewing.

C. When all testing is completed, the greatest failure weight of all tested structures is recorded on the rating form, the efficiency rating of individual structures is calculated, and ranking is determined.

D. Subjective criteria is scored only after all the destructive testing is completed.

E. The top ten (10) finalist teams are announced at the conference awards ceremony.

REGULATIONS AND REQUIREMENTS

Students will work to develop their leadership and 21st century skills in the process of preparing for and participating in this TSA competitive event. The development and application of those skills must be evident in their submission, demonstration, and/or communication pertaining to the entry.

PRE-CONFERENCE

A. Documentation Portfolio:

   1. Documentation materials (comprising "a portfolio") are required and must be secured in a clear front report cover with the following single-sided, 8½" x 11" pages, in this order:

      a. Title page with the event title, the conference city and state, the year, and the team/chapter ID number; one (1) page

      b. Team Verification Form (See the TSA website under *Themes & Problems*).

      c. Participants must provide a full-size, three (3)-view (front, top, and right end) drawing (hand or computer-generated) of their structure.

PRELIMINARY ROUND

A. The drawing, Team Verification Form, and the pre-built structure must be completed prior to check-in.

B. The testing of pre-built structures is not open to spectators.

SEMIFINAL ROUND

A. Participants are required to wear safety approved eyewear (refer to the Safety Eyewear section of this guide) at all times during the semifinal round.

B. Participants are required to provide their own tool box (with identification [school name, address, and advisor cell phone number]), which should not exceed twenty (20) inches (508 mm) length x ten (10) inches (254 mm) width x ten (10) inches (254 mm) height. The box must contain all items needed to fabricate the solution. The following is a suggested list (note that some items are required):

   1. The following is a *suggested* list:

      a. Cutting devices; NONE may be electric

      b. Adhesives

         i. Aerosol and electric applicators are not allowed

         ii. A bottle of Uncure or Debonder is recommended

      c. Temporary fastening devices

         i. Straight pins

         ii. Clamps

         iii. Tape

      d. A cutting surface that prevents table-top marring (required)

      e. Rulers, straightedges, and/or measuring scales

      f. Abrasives sheets, sanding sponges, emery boards

      g. Marking devices (pens, pencils, etc.) and sharpener

      h. Sheet of wax paper, as large as is needed for the competition (required)

      i. Safety glasses and side shields, as required

      j. Jigs and fixtures to assist with assembly and construction.

C. Planning and fabrication supplies are provided by TSA (these materials may not be a part of the structure submitted for testing):

   1. 11" x 17" paper with ¼" grids for sketching the structure

   2. 1' x 2' Pin board

   3. A sheet of wax paper

D. A packet of construction materials are provided by TSA (such as a specific type of wood) to be used for fabrication of the on-site designed structure.

E. A structure label will be provided by TSA and it must be placed on the on-site solution with only the team ID number on the structure label.

F. Teams that fail to comply with the coordinator or monitor directions, after one (1) warning, will be issued a penalty of 20% of the team's on-site structure and subjective criteria score.

G. Filming and taking of photographs is prohibited during the viewing of the structure, judging, and testing.

H. Subjective criteria is scored only after all destructive testing is completed.

EVALUATION

A. All structures are weighed before testing and the weight is recorded on the scoring rubric.

B. A designated structural testing device is used for testing each structure.

C. A specific testing block or attachment may be necessary, depending on the nature of the on-site problem. Any special or unusual configurations for the attachment are posted with the problem statement on the TSA website under *Themes & Problems*.

D. An increasing load is applied to the structure via the test block or attachment until the structure fails.

E. The failure weight is recorded on the evaluation rubric. (The failure weight is the greatest weight recorded during testing before the failure of the structure.)

F. The efficiency is determined by the failure weight x 4.54, divided by the weight of the structure in grams.

G. The efficiency is rounded off to three (3) decimal places and recorded on the evaluation rubric.

H. Each team's assessment form is reviewed.

I. The highest numeric efficiency determines the winner. In case of an efficiency tie, the greatest weight held by the tied entries determines the winner.

J. Failure to comply: If a structure fails to comply with any regulation, a penalty reduction of 20% of the greatest weight held in the competition is subtracted from the team's failure weight. (This penalty factor will not be determined until all structures have been tested.)

Refer to the official rating form for more information.

TSA HONOR STATEMENT

All work must be created and completed by individual competitors or teams. Plagiarism, the use of Generative Artificial Intelligence (GenAI) software, copyright violation, cheating, and falsification of information are prohibited. Participants may NOT use any generative artificial intelligence (GenAI) tools (e.g. ChatGPT, Google Gemini, GitHub Copilot, etc.). Any attempt to gain an unfair advantage will not be tolerated. Competitors at any level of TSA competition understand and agree to abide by the TSA Honor Statement.

If it is determined that a student violated the TSA Honor Statement, a rules violation of twenty percent (20%) will be incurred.

STEM INTEGRATION

This event aligns with the STEM (Science, Technology, Engineering, and Mathematics) educational standards.

LEADERSHIP AND 21ST CENTURY SKILLS

This event provides opportunity for students to build and develop leadership and 21st century skills including but not limited to – Communication, Collaboration/Social Skills, Initiative, Problem Solving/Risk Taking, Critical Thinking, Perseverance/Grit, Creativity, Relationship Building/Teamwork, Dependability/Integrity, and Flexibility/Adaptability

CAREERS RELATED TO THIS EVENT

This competition has connections to one (1) or more of the careers below:

- Architect
- Civil engineer
- Engineering technician
- Mathematician
- Structural engineer
- Structural iron and steel work technician

Participant/Team ID# _____

STRUCTURAL DESIGN AND ENGINEERING

2025 & 2026 OFFICIAL RATING FORM

HIGH SCHOOL

Judges: Using minimal (1-4 points), adequate (5-8 points), or exemplary (9-10 points) performance levels as a guideline in the rating form, record the scores earned for the event criteria in the column spaces to the right. The X1 or X2 notation in the criteria column is a multiplier factor for determining the points earned. (Example: an "adequate" score of 7 for an X1 criterion = 7 points; an "adequate" score of 7 for an X2 criterion = 14 points.) A score of zero (0) is acceptable if the minimal performance for any criterion is not met.

Go/No Go Specifications

- Before judging the entry, ensure that the items below are present; indicate presence with a check mark in the box.
- If an item is missing, leave the box next to the item blank and place a check mark in the box labeled ENTRY NOT EVALUATED.
- If a check mark is placed in the ENTRY NOT EVALUATED box, the entry is not to be judged.

- ☐ Team of two is present
- ☐ The structure is present and identified
- ☐ Documentation portfolio is present
- ☐ ENTRY NOT EVALUATED

PRE-BUILT STRUCTURE (Construction)

Indicate N for noncompliant or C for compliant, for each regulation in the Construction section. One noncompliant mark will result in a 20% deduction; two noncompliant marks will result in disqualification.

Regulation	Noncompliant		Compliant	
Length of Structure	The length of the structure is greater or less than the designated tolerance of the assigned construction length.		The length of the structure is within the designated tolerance of the assigned construction length.	
Width of Structure	The width of the structure is greater or less than the designated tolerance of the assigned construction width.		The width of the structure is within the designated tolerance of the assigned construction width.	
Height of Structure	The height of the structure is greater or less than the designated tolerance of the assigned construction height.		The height of the structure is within the designated tolerance of the assigned construction height.	
Placement on Abutment	The structure cannot be appropriately placed on the abutment.		The structure can be appropriately placed on the abutment.	
Internal Clearance	The testing apparatus and rod cannot be placed and passed through the center of the structure to allow for testing.		The testing apparatus and rod pass freely through the center of the structure to allow for testing.	
Other Construction/ Rule Regulation				
Other Construction/ Rule Regulation				
DISQUALIFIED				
PRE-BUILT STRUCTURE APPROVED FOR TESTING				

PRE-BUILT STRUCTURE (Construction) – continued

Record the mass (weight) of the structure (in grams) prior to testing.	
Record the failure weight in pounds.	
Record the maximum failure rate for all tested structures.	
If only one construction regulation is noncompliant, record a deduction of 20% of the maximum failure weight.	
Adjusted failure weight	
Determine the efficiency (shown to three decimal places) by multiplying the failure weight (or adjusted failure weight, as applicable) by 4.54 and then dividing by the mass (weight) of the structure.	

Rules violations (a deduction of 20% of the total possible points for the above sections) must be initialed by the judge, coordinator, and manager of the event. Record the deduction in the space to the right. Indicate the rule violated: _____	

PRELIMINARY SUBTOTAL	

ON-SITE STRUCTURE (Qualification)

For the On-site STRUCTURE: Indicate N for noncompliant or C for compliant, in the Qualification and Construction sections below. In the Qualification section, one noncompliant mark will result in disqualification. In the Construction section, one noncompliant mark will result in a 20% deduction; two noncompliant marks will result in disqualification.

Regulation	Noncompliant		Compliant	
Team of Two	Only one team member is present.		Both team members are present.	
Safety Eyewear	Warnings about eyewear are issued.		No warnings about eyewear are issued.	
Structure Identification	The identification sticker is not attached.		The identification sticker is attached.	
Tools and Fabrication Supplies	Inappropriate tools or supplies are brought to the event.		Appropriate tools and supplies are brought to the event.	
Laminations	Unapproved laminations are present.		Laminations, if included, are approved laminations.	
Placement on Abutment	The structure cannot be appropriately placed on the abutment.		The structure can be appropriately placed on the abutment.	
Internal Clearance	The testing apparatus and rod cannot be placed and passed through the center of the structure to allow for testing.		The testing apparatus and rod pass freely through the center of the structure to allow for testing.	
Construction Pins	Pins are still in place when the structure is submitted.		All pins have been removed from the structure.	
Other Construction/ Rule Regulation				
Other Construction/ Rule Regulation				
TOTAL			**TOTAL**	

ON-SITE STRUCTURE (Construction)

Regulation	Noncompliant		Compliant	
Length of Structure	The length of the structure is greater or less than the designated tolerance of the assigned construction length.		The length of the structure is within the designated tolerance of the assigned construction length.	
Width of Structure	The width of the structure is greater or less than the designated tolerance of the assigned construction width.		The width of the structure is within the designated tolerance of the assigned construction width.	
Height of Structure	The height of the structure is greater or less than the designated tolerance of the assigned construction height.		The height of the structure is within the designated tolerance of the assigned construction height.	
DISQUALIFIED				
On-site structure approved for testing				
Record the mass (weight) of the structure (in grams) prior to testing.				
Record the failure weight in pounds.				
Record the maximum failure rate for all tested structures.				
If only one construction regulation is noncompliant, record a deduction of 20% of the maximum failure weight.				
Adjusted failure weight				
Determine the efficiency (shown to three decimal places) by multiplying the failure weight (or adjusted failure weight, as applicable) by 4.54 and then dividing by the mass (weight) of the structure.				

ON-SITE STRUCTURE TOTAL POINTS	

SUBJECTIVE CRITERIA (30 points)

Record scores in the column spaces below.

CRITERIA	Minimal performance	Adequate performance	Exemplary performance	
	1-4 points	5-8 points	9-10 points	
Team Participation On-site (X1)	The majority of the construction is done by one (1) member of the team; the partner may be disengaged.	Both team members generally are engaged in the process, though one (1) member may take on more responsibility than the other.	Both team members are actively involved in the construction; there is shared responsibility between team members.	
Pre-Built Drawing (X1)	The submitted drawing was incomplete, not accurate, of proper quality, or was not to scale; a complete parts list was not included.	The submitted drawing was complete but lacked clarity, accuracy, or was of poor quality; the parts diagram was not complete or was incorrect.	The submitted drawing was complete, accurate, and to scale; the parts list was complete and accurate.	
Portfolio (X1)	Portfolio is unorganized and/or missing three (3) or more components; leadership and/or 21st century skills are not evident.	Portfolio includes most components and is generally organized; leadership and/or 21st century skills are somewhat evident.	All components of the portfolio are included, and content and organization are clearly evident; leadership and/or 21st century skills are clearly evident.	
SUBJECTIVE CRITERIA SUBTOTAL (30 points)				

STRUCTURAL DESIGN AND ENGINEERING

Rules violations (a deduction of 20% of the total possible points for the above sections) must be initialed by the judge, coordinator, and manager of the event. Record the deduction in the space to the right.

Indicate the rule violated: _____

SEMIFINAL SUBTOTAL (30 points)

To arrive at the TOTAL score, add any subtotals and subtract rules violation points, as necessary.   **TOTAL**

Comments:

_____

I certify these results to be true and accurate to the best of my knowledge.

JUDGE

Printed name: _____   Signature: _____

STRUCTURAL DESIGN AND ENGINEERING EVENT COORDINATOR INSTRUCTIONS

PERSONNEL

A. Event coordinator

B. Judges

1. Preliminary round to evaluate pre-built structures, two (2) or more

2. Semifinal round, to qualify structures after construction, two (2) or more

3. Semifinal round, destructive test judges, two (2) or more

   a. One (1) to weigh the structure, record structure weight, and record failure weight

   b. One (1) to bring the structure to the testing location, position the structure on the testing device, operate the tester, and then remove and store the structure following testing

C. Construction monitor, one (1) per twenty teams

D. Timekeeper, one (1)

MATERIALS

A. Coordinator's packet, containing:

1. Event guidelines, one (1) copy for the coordinator and for each judge

2. TSA Event Coordinator Report

3. Stick on labels for identifying entries

B. Testing equipment, provided by TSA

C. Sample structures for both testing sessions that can be used to demonstrate the testing procedure and to determine that the testing equipment is working properly.

D. Evaluation and recording equipment

1. Gram scale (3-decimal place calculation)

2. Tape measure or 2' rule

3. Evaluation gauges (rulers)

E. Site requirements

1. Construction session

   a. Tables and chairs suitable for cutting and gluing

   b. Work area, at least 2' x 3' for each team (suggested space is two (2) teams per 6' x 2' or 8' x 2' area)

   c. One (1) chair per participant

   d. Tables for equipment check-out and check-in

   e. Tables and chairs for evaluators

   f. Secured area for drying entries and storing supplies

2. Testing session

   a. Tables for storage of structures

   b. Table for weighing

   c. Table for testing

   d. Table for recording

   e. Tables for storage of failed structures

   f. Chairs for spectators

   g. Barricade to separate testing area from spectators

3. Semifinalist team packets provided by TSA containing construction materials and instructions.

   a. Construction tools per team, to be used and returned to the event coordinator or helpers after construction:

      i. Pin board as supplied, but generally a one-foot by two-foot (1' x 2') piece of fiber or foam board

      ii. Grid paper, ¼" x ¼" grid on 11" x 17" paper for structure sketch (to remain with the completed structure when turned in)

      iii. Wax paper to cover the pin board (to remain with the completed structure when turned in)

      iv. Label for structure

   b. Construction materials – check with the event manager for the specific wood type needed for each team

   c. Instructions

RESPONSIBILITIES

AT THE CONFERENCE

A. Attend the mandatory coordinator's meeting at the designated time and location.

B. Report to the CRC room and check the contents of the coordinator's packet.

C. Review the event guidelines and check to see that enough personnel have been scheduled.

D. Inspect the area(s) in which the event is to be held for appropriate set-up, including room size, tables, chairs, etc. Notify the event manager of any potential problems.

E. Check to see that all event equipment and materials have been secured.

F. At least one (1) hour before the event is to begin, meet with judges and assistants to review time limits, procedures, regulations, evaluation, and all other details related to the event. If questions arise that cannot be answered, speak to the event manager before the event begins.

G. Ensure the judges have access to the online judging system.

EVENT CHECK-IN

A. Check in participants at the time and place stated in the conference program.

B. If check-in is on the first day of the conference, requirements for attire do NOT apply during check-in.

C. Participants check in:
   1. The pre-built structures
   2. The documentation portfolio

D. Anyone reporting who is not on the entry list may check in only after official notification is received from the CRC.

E. Late entries are considered on a case-by-case basis and only when the delay is caused by events beyond participant control.

PRELIMINARY ROUND

Pre-built structures

A. Coordinate and manage the on-site testing of pre-built structures, the recording of results, and the determination of the twenty (20) semifinalist teams.

B. Decisions about rules violations must be discussed and verified with the judges, event coordinator, and CRC manager to determine either:
   1. To deduct 20% of the total possible points or
   2. To disqualify the entry

   The event coordinator, judges, and CRC manager must initial either of these actions on the rating form.

C. Assemble semifinalist packets of construction materials and directions for the twenty (20) on-site semifinalist teams.

SEMIFINAL ROUND

Team Check-in for On-site Construction

A. No individuals other than participants and event personnel are allowed in the construction area.

B. Check-in begins at the time stated in the conference program and continues until all teams arriving on time have been checked in and seated. The event begins at the posted time.

C. Both members of a team must be present during check-in.

D. No team is allowed to begin late unless its members have complied with the following: Participants with time conflicts must present a written explanation of the conflict to the event coordinator at least one (1) hour before the construction time stated in the conference program.

E. Work must begin during the time frame scheduled for the event.

On-site Construction

A. Assign team construction locations.

B. When all teams are seated, distribute and review instructions, as well as any details for the assigned structure.

C. Teams are allowed a maximum of three (3) hours to complete their structure:
   1. Thirty (30) minutes of this time is allotted for completing the design drawing.
   2. Two and one-half (2 ½) hours is allotted for actual construction.

D. No additional supplies are provided during the event.

E. Call time at the end of the allotted three (3) hour time frame. All teams must stop working at this point.

F. All work stops at the coordinator's signal. Failure to comply with instructions will result in a penalty of 20% to the team's total score.

Team Check-out

A. Establish the procedure for check-in and recording of finished structures.

B. Designate an area for storage, and allow for the return of construction materials.

C. Coordinate the return and removal of all supplied items and ensure that teams clean and clear their work stations. Deduct a 20% penalty for teams that do not comply.

D. Teams check-in excess supplies as directed by the monitors.

E. Ensure that teams identify their structure with only their team ID number, using the label provided.

F. Teams place their structures in the storage area with the sketch as directed by the monitor.

G. Once check-out is complete, all participants leave the competition area. Participants may leave early, but they must complete check-out as directed.

H. The structures are secured by the monitor and allowed to dry for a minimum of twelve (12) hours.

Destructive Testing

A. After the structures have dried, judges report to the event area at the time and place stated in the conference program.

B. Judges test each structure and score the results.

C. Judges score the Subjective Criteria for semifinalists after destructive testing has taken place.

EVALUATION

A. Check all structures for regulations compliance. Structures that are in compliance are tested without penalty.

1. Weigh all structures before testing and record the weight on the evaluation rubric.

2. Use the testing device, designated by TSA, to test each structure. (A specific testing block or attachment for the structure may be necessary for the on-site problem.)

3. Apply an increasing load to the structure, via the test block or attachment, until the structure fails.

4. Record the greatest failure weight on the rubric. This weight is the greatest weight recorded (of all the tested structures) during testing before failure of the structure.

5. Determine each structure's efficiency by the greatest failure weight x 4.54, divided by the weight of the structure in grams; round off the efficiency to three (3) decimal places and record it on the rubric.

6. The highest numeric efficiency determines the winner. In the case of an efficiency tie, the greatest weight held by the tied entries determines the winner.

B. Structures are not be tested if:

1. Two noncompliant construction regulation violations were determined before testing.

2. The structure cannot be placed on the tester.

3. The testing attachment cannot be properly placed within or on the structure.

4. Straight pins are left in the structure.

5. There is a failure of a participant to wear safety eyewear and/or to follow safe practices.

6. Laminations fail to comply with the guidelines as specified in the current year's challenge.

7. Failure to use each of the materials specified in the current year's challenge.

C. Structures with one (1) construction regulation non-compliance mark is tested, but a 20% penalty will be noted on the rating form. (The penalty, a 20% reduction of the greatest weight held in the competition, is subtracted from the team's failure weight. This penalty factor will not be determined until all structures have been tested.)

D. Manage, with assistance from evaluators, the destructive testing of all structures that were not officially tested due to non-compliance.

E. Discuss rule violations (e.g. 20% deduction, disqualification) and have all relevant parties initial the rating form.

F. If necessary, manage the security and removal of materials from the event area.

G. Semifinalist teams may pick up their structures at a time designated by the event coordinator.

Technology Student Association (TSA) High School Competitive Events Guide for the 2025 and 2026 National TSA Conferences

SYSTEM CONTROL TECHNOLOGY

OVERVIEW

Applying leadership and 21st century skills, participants collaborate to develop a computer-controlled model-solution to a problem, typically one from an industrial setting. Teams analyze the problem, build a computer-controlled mechanical model, program the model, explain the program and mechanical features of the model-solution, and leave instructions for judges to operate the device.

ELIGIBILITY

Two (2) teams of three (3) individuals per state may participate.

TIME LIMITS

A. The competition consists of three (3) phases.

    1. Phase 1: The team's captain is given thirty (30) minutes to set up the team's equipment.

    2. Phase 2: Following the set-up time, teams are given up to fifteen (15) minutes for problem analysis.

    3. Phase 3: Following the problem analysis time, teams are provided two (2) hours for model development and programming.

B. All students participate in a five (5)-minute interview at the conclusion of their programming.

ATTIRE

TSA competition attire is required for this event.

PROCEDURE

A. Participants review the TSA Honor Statement for Competitive Events found in the General Rules and listed in the individual competitive event rules.

B. Each team selects a team captain prior to the orientation meeting.

C. The team orientation meeting takes place at the beginning of the event at the conference.

D. The captain checks in the team within the set-up time by submitting his/her participant identification number and the team's identification number for the written and model portions of the event.

E. The problem and the inventor's log are presented to teams at the beginning of the fifteen (15)-minute problem analysis session prior to model-building.

F. Teams must complete their description or interpretation of the problem during this time. Teams may conclude their problem analysis before the end of the fifteen (15)-minute period.

G. Each team is given a maximum of two (2) hours to:

    1. Construct a model that simulates realistic industrial processes

    2. Program the model

    3. Test the solution

    4. Describe the program and mechanical features of the model-solution

    5. Complete directions

H. When finished, teams save their programs and leave them on-screen in operable form with the ability to be reset.

    1. Before leaving the event room, teams demonstrate the operation of the model with judges present.

    2. The five (5)-minute interview takes place directly after the demonstration. Judges may ask questions pertaining to the team's design and logical processes.

    3. After judges have observed the operation of a team's model, the team leaves the room.

    4. The coordinator determines the amount of time permitted for the team's demonstration based on the number of teams and the complexity of the problem.

    5. Evaluation of the solutions takes place without the teams present.

I. Judges independently assess the entries, including each team's interview responses.

J. The top ten (10) finalists are announced during the conference awards ceremony.

REGULATIONS AND REQUIREMENTS

Students will work to develop their leadership and 21st century skills in the process of preparing for and participating in this TSA competitive event. The development and application of those skills must be evident in their submission, demonstration, and/or communication pertaining to the entry.

A. No reference materials or building cards are allowed.

B. Participants provide their own laptop computer with hardware and software systems. All equipment must be labeled with the team's identification number, advisor name, and advisor contact information.

C. Each team provides pencils and scrap paper along with its own materials kit, which must be appropriate to build a system that can identify, secure, and move objects and that has light and/or sound outputs.

D. Teams design a solution to a problem based on the assumption that every materials kit contains at least:

1. Two (2) optical sensors

2. Two (2) touch sensors

3. Two (2) motors

4. Two (2) audio and two (2) light outputs

5. Gears, wheels, and axles appropriate to build a motorized vehicle and/or conveyor belt

6. Balls, blocks, and pegs that can be used as objects to be moved and manipulated

7. Velcro, tape, clamps, and other materials to secure or move the above objects (balls, blocks, and pegs)

8. No cutting devices may be used during the on-site challenge; materials must retain the original form in which they were brought to the competition.

9. Power tools may not be used.

E. The following definitions are an integral part of the event regulations:

1. Repeatability—the device is programmed to reset automatically.

2. Functional control—the device/model must accomplish the task in an efficient manner and be user friendly.

3. Model-solution—the physical device must simulate the realistic processes used in industry.

4. Conservation of materials—the model reflects the best use of materials to solve the problem, without being overbuilt.

F. Programs must be written completely on-site.

G. Use or modification of any programs written prior to the competition will result in disqualification.

H. An example of a problem for this event is provided below to help students understand and interpret a typical issue common to industry that might be used at a national conference.

A manufacturing company has asked your engineering firm to design an important component in its manufacturing process. The company specializes in the production of cylindrical items. Its manufacturing line is getting "jammed" because multiple cylindrical items are making their way to stations that can handle only one item at a time. Your design must include a "hopper" that will store items as they wait to make their way to a station. When a station is empty, a light should turn on; this will indicate to an operator to press a button that will send one cylinder into the station. After ten (10) seconds, the item will need to be moved to the next hopper, leaving the station empty and signaling the operator to send in another cylinder.

Example Requirements

• A minimum of three (3) cylindrical items of consistent size and shape must be included.

• A hopper must store these items until a button is pushed.

• Only one item can advance when the button is pushed.

• Ten (10) seconds must pass with the item at a station before it is moved to the next hopper.

• A light must signal the operator when the station is empty.

• No additional cylinder can be sent to a station if a cylinder already is in place.

EVALUATION

A. The written work

B. The model function

C. The programming structure and efficiency

D. The interview

Refer to the official rating form for more information.

TSA HONOR STATEMENT

All work must be created and completed by individual competitors or teams. Plagiarism, the use of Generative Artificial Intelligence (GenAI) software, copyright violation, cheating, and falsification of information are prohibited. Participants may NOT use any generative artificial intelligence (GenAI) tools (e.g. ChatGPT, Google Gemini, GitHub Copilot, etc.). Any attempt to gain an unfair advantage will not be tolerated. Competitors at any level of TSA competition understand and agree to abide by the TSA Honor Statement.

If it is determined that a student violated the TSA Honor Statement, a rules violation of twenty percent (20%) will be incurred.

STEM INTEGRATION

This event aligns with the STEM (Science, Technology, Engineering, and Mathematics) educational standards.

LEADERSHIP AND 21ST CENTURY SKILLS

This event provides opportunity for students to build and develop leadership and 21st century skills including but not limited to – Communication, Collaboration/Social Skills, Initiative, Problem Solving/Risk Taking, Critical Thinking, Perseverance/Grit, Creativity, Relationship Building/Teamwork, Dependability/Integrity, and Flexibility/Adaptability

CAREERS RELATED TO THIS EVENT

This competition has connections to one (1) or more of the careers below:

- CNC programmer
- Computer programmer
- Robotics engineer

SYSTEM CONTROL TECHNOLOGY INVENTOR'S LOG

TEAM CAPTAIN ID #

Use only the space provided. The description/interpretation of the problem must be completed DURING the problem analysis session.

Description or interpretation of the given problem:

The two (2) parts below are to be completed AFTER the problem analysis session.

Description of the team solution (explain the unique features of the program and model):

Directions to evaluators to start the system:

SYSTEM CONTROL TECHNOLOGY

2025 & 2026 OFFICIAL RATING FORM

HIGH SCHOOL

Judges: Using minimal (1-4 points), adequate (5-8 points), or exemplary (9-10 points) performance levels as a guideline in the rating form, record the scores earned for the event criteria in the column spaces to the right. The X1 or X2 notation in the criteria column is a multiplier factor for determining the points earned. (Example: an "adequate" score of 7 for an X1 criterion = 7 points; an "adequate" score of 7 for an X2 criterion = 14 points.) A score of zero (0) is acceptable if the minimal performance for any criterion is not met.

Go/No Go Specifications

- Before judging the entry, ensure that the items below are present; indicate presence with a check mark in the box.
- If an item is missing, leave the box next to the item blank and place a check mark in the box labeled ENTRY NOT EVALUATED.
- If a check mark is placed in the ENTRY NOT EVALUATED box, the entry is not to be judged.

☐ Computer hardware is present
☐ Materials kit is present
☐ ENTRY NOT EVALUATED

INVENTOR'S LOG (20 points)

Record scores in the column spaces below.

CRITERIA	Minimal performance	Adequate performance	Exemplary performance	
	1-4 points	5-8 points	9-10 points	
Description of Problem (X1)	The description is incomplete, and/or it is illogical and unorganized; the description is simply a restatement of the problem's guidelines.	The description includes a logical, but only general, understanding of the problem's guidelines; it restates the guidelines with an overall understanding of the problem.	An organized, logical, and concise description of the problem is provided; it includes all major aspects of the problem's guidelines, as well as original thoughts.	
Description of Solution and Activation Instructions (X1)	The team's solution has little correlation with the final system creation; the solution is illogical in terms of the problem's guidelines; the directions to activate the solution are included, but they are incomplete.	The team's solution correlates generally with the final system creation; adequate directions to activate the solution are included.	A strong correlation between the team's written solution and final system creation is provided; the description of the solution is written clearly and concisely; instructions for the solution are included and written concisely.	
INVENTOR'S LOG SUBTOTAL (20 points)				

SOLUTION TO PROBLEM (60 points)

Record scores in the column spaces below.

CRITERIA	Minimal performance	Adequate performance	Exemplary performance	
	1-4 points	5-8 points	9-10 points	
Realistic Simulation (X1)	The simulation is not realistic; it has an abstract design that would be largely ineffective in its intended environment.	The simulation is somewhat realistic and logically designed; it may be adequately effective in its intended environment.	The simulation is realistic and is similar to a system that would be effective in its intended environment.	
Dependability of Solution (X1)	The solution is not constructed with dependability in mind; when the system is operated, construction pieces fall off, etc.	Most of the parts of the solution are well constructed and dependable.	Every component of the solution is well constructed and dependable; practical construction techniques have been used.	

SOLUTION TO PROBLEM (60 points) – continued

Conservation of Materials (X1)	An inefficient use of construction materials is obvious; too many unnecessary materials are incorporated into the design.	Most of the components of the solution are designed with conservation in mind; the construction is generally adequate.	All components of the solution are designed and assembled with conservation of materials in mind; the construction is elegant and not overbuilt.	
Solution to Problem (X2)	The solution is missing three (3) or more attributes/criteria, and several do not function as intended.	The solution includes most attributes/criteria, and they function adequately.	The solution includes all attributes/criteria listed in the design details, and all attributes function appropriately and correctly.	
Ingenuity and Creativity (X1)	The solution and design are unauthentic, complex, and/or do not function as a system.	The solution has some original ideas in its design, and its construction is adequate.	The solution is truly unique and authentic; its construction is concise and designed with simplicity.	
			SOLUTION TO PROBLEM SUBTOTAL (60 points)	

PROGRAMMING STRUCTURE (20 points)

CRITERIA	Minimal performance	Adequate performance	Exemplary performance	
	1-4 points	5-8 points	9-10 points	
Programming Efficiency (X1)	The software used to program the system is overly complex and inefficient; advanced programming techniques, which would have simplified programming specific tasks, are not included.	The programming software is efficient, with some advanced features that simplify the solution's criteria and/or attributes.	A concise and logical programming application is used that incorporates advanced features to simplify the solution's criteria and/or attributes.	
Program Structure (X1)	The programming structure is illogical, unorganized, or overly complicated and/or complex; the program does not reset.	There is evidence of an organized programming structure and adequate use of sub-routines; the program resets.	The programming structure is concise and predictable; there is appropriate use of sub-routines where needed; the program resets.	
			PROGRAMMING STRUCTURE SUBTOTAL (20 points)	

Record scores in the column spaces below.

DEMONSTRATION/INTERVIEW (10 points)

CRITERIA	Minimal performance	Adequate performance	Exemplary performance	
	1-4 points	5-8 points	9-10 points	
Articulation (X1)	Communication of the design process is unclear, unorganized, and or illogical; leadership and/or 21st century skills are not evident.	Communication of the design process is somewhat logical and clear; leadership and/or 21st century skills are somewhat evident.	Communication of the design process is clear, concise, and logical; leadership and/or 21st century skills are clearly evident.	
			DEMONSTRATION/INTERVIEW SUBTOTAL (10 points)	

Record scores in the column spaces below.

Rules violations (a deduction of 20% of the total possible points for the above sections) must be initialed by the judge, coordinator, and manager of the event. Record the deduction in the space to the right.

Indicate the rule violated: _____

To arrive at the TOTAL score, add any subtotals and subtract rules violation points, as necessary.	**TOTAL (110 points)**	

Comments:

_____

I certify these results to be true and accurate to the best of my knowledge.

JUDGE

Printed name: _____   Signature: _____

Technology Student Association (TSA) High School Competitive Events Guide for the 2025 and 2026 National TSA Conferences

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SYSTEM CONTROL TECHNOLOGY EVENT COORDINATOR INSTRUCTIONS

PERSONNEL

A. Event coordinator

B. Judges, two (2) or more

C. Assistants, two (2)

MATERIALS

A. Coordinator's packet, containing:

1. Event guidelines, one (1) copy for the coordinator and for each judge

2. TSA Event Coordinator Report

B. Stopwatch, one (1)

C. Written problem, one (1) copy per team and judge

D. Inventor's Log, one (1) copy per team

E. Power strips with surge protectors, and extension cords, as needed

F. Large room to accommodate a first place team from every state and affiliated country

G. One (1) table and three (3) chairs per team

RESPONSIBILITIES

AT THE CONFERENCE

A. Attend the mandatory coordinator's meeting at the designated time and location.

B. Report to the CRC room and check the contents of the coordinator's packet.

C. Review the event guidelines and check to see that enough personnel have been scheduled.

D. Inspect the area(s) in which the event is being held for appropriate set-up, including room size, chairs, tables, outlets, etc. Notify the event manager of any potential problems.

E. At least one (1) hour before the event is scheduled to begin, meet with judges/assistants to distribute materials and to review time limits, procedures, regulations, evaluation, and all other details related to the event. If questions arise that cannot be answered, speak to the event manager before the event begins.

F. Ensure the judges have access to the online judging system.

EVENT CHECK-IN

A. Begin the event at the scheduled time by closing the doors.

B. All participants and judges should be in the room at this time.

C. Late entries are considered on a case-by-case basis and only when the delay is caused by events beyond participant control.

D. In order to compete, participants must be on the entry list or have approval of the CRC.

E. Secure participants' equipment in the area designated.

PRELIMINARY ROUND

A. At the orientation meeting obtain the team/chapter identification numbers from each team captain.

1. Judges must be present at the orientation meeting.

2. Review the time limits, procedure, and regulations with team captains.

B. Distribute the problem and Inventor's Log to teams at the beginning of the event.

C. Teams have fifteen (15) minutes to complete their interpretation of the problem in the Inventor's Log.

D. Each team is given two and one-half (2½) hours to complete the remaining portions of the event.

E. Teams must demonstrate that their device/model is operable and has the ability to reset prior to leaving.

1. Judges must observe this portion and shall ask a few questions.

2. Judges may take notes, but evaluation occurs only after all teams have left the event room.

F. Decisions about rules violations must be discussed and verified with the judges, event coordinator, and CRC manager to determine either:

1. To deduct 20% of the total possible points or

2. To disqualify the entry

The event coordinator, judges, and CRC manager must initial either of these actions on the rating form.

G. If necessary, manage security and the removal of materials from the event area.

TECHNOLOGY BOWL

OVERVIEW

Applying leadership and 21st century skills, participants demonstrate their knowledge of TSA and concepts addressed in the technology content standards by completing an objective test. Semifinalist teams demonstrate leadership and twenty first century skills through participating in a question/response, head-to-head team competition.

ELIGIBILITY

One (1) team of three (3) individuals per chapter may participate.

Teams that take the test and advance to the semifinalist portion of the event must be comprised of the same three (3) members.

TIME LIMITS

PRELIMINARY ROUND

A. The one (1)-hour test is administered to all members of the team at the same time.

SEMIFINAL ROUND

A. Teams selected as semifinalists must be available as scheduled for oral competition.

ATTIRE

TSA competition attire is required for this event.

PROCEDURE

PRE-CONFERENCE

A. Participants review the TSA Honor Statement for Competitive Events found in the General Rules and listed in the individual competitive event rules.

PRELIMINARY ROUND

A. Participants report to the event area at the time and place stated in the conference program for the test.

B. Participants follow the specific regulations and adhere to the directions provided on-site by the event coordinator.

C. All team members take the test individually.

D. The sixteen (16) top-scoring teams qualify as semifinalists.

E. The preliminary round score will be the average test score for the three (3) members. The sixteen (16) top scoring teams qualify for the semifinal round as semifinalists.

F. A semifinalist list (in random order) is posted.

SEMIFINAL ROUND

A. Semifinalist team members report to the oral event area holding room at the time and place stated in the conference program.

B. After a short briefing, advisors leave and the teams remain in the holding room until they are called for competition.

C. When instructed to do so, two (2) teams enter the event area and are seated according to instructions.

D. Teams are paired using the semifinalist teams' bracket.

E. Questions are drawn from a bank of questions pre-conference.

F. If equipment malfunctions, a question that is being considered at that time automatically is eliminated. If equipment malfunctions three (3) times, time is called by the event coordinator to set up back-up equipment. After equipment has been set up and tested, the event continues from the point where it stopped.

G. Once a team is eliminated, it is out of the oral competition except for the round in which the third and fourth positions are determined.

H. The top ten (10) finalist teams are announced during the conference awards ceremony.

REGULATIONS AND REQUIREMENTS

Students will work to develop their leadership and 21st century skills in the process of preparing for and participating in this TSA competitive event. The development and application of those skills must be evident in their submission, demonstration, and/or communication pertaining to the entry.

PRELIMINARY ROUND

A. Team members take the test individually.

B. Tests may be administered online or via a scan-type answer sheet. Please review the *Competition Updates* page on the TSA website.

C. Scan-type forms are furnished by the event coordinator, if applicable.

D. Participants are responsible for bringing two (2) sharpened No.2 pencils to the test site.

E. Participant identification numbers must be entered on the scan form in the space indicated.

F. Failure to follow instructions will result in the score sheet not being scored.

G. Participants must stop work immediately when time is called.

H. Should a participant complete the test before the time allocated is over, the participant will submit the test and scantron form to the coordinator without any form of communication with any other member. Failure to do so results in disqualification of the participant.

I. All tests must be turned in before leaving the test area.

J. The average of the scores of all three (3) team members determines team ranking.

SEMIFINAL ROUND/ORAL COMPETITION

A. Sixteen (16) teams, based upon the test results, are selected as semifinalists.

B. All three (3) members of a semifinalist team must be available to participate at the scheduled time for the oral competition portion of the event.

C. If a team or member is late for participation, that team forfeits and is eliminated from competition.

D. No transmitting or recording devices are permitted to assist in answering a question in the event area.

E. No prompting is permitted.

F. Teams that leave the holding room before being called for competition are eliminated.

G. Teams may visit with other teams in the holding room.

H. No advisors or visitors may enter the holding room once the semifinal round begins.

I. Team members may not enter the oral event area as spectators until after their team has been entirely eliminated from competition.

J. Questions, to include the bonus question, may not be discussed by teams. Team members may only discuss the additional question.

K. Ten (10) teams are announced as finalists during the awards ceremony. The highest test scores of the teams that were eliminated in the initial round will receive 9th and 10th place. The highest test scores of the teams that were eliminated in the second round will be used to determine 5th-8th place.

L. The procedures for reading questions and "buzzing in" are as follows:

1. The team member who buzzes in to answer a question has five (5) seconds to answer the question without discussion.

2. After a full question is read, competing teams have ten (10) seconds to answer without discussion. If neither team buzzes in, the reader moves to the next question.

3. If a team member buzzes in before a question is finished being read, the reader ceases reading and the team member must give the exact answer as printed with the question without discussion. If the answer is incorrect, the reader reads the entire question for the opposing team.

M. A team's score is derived from the total number of correct answers to the questions asked:

1. Twelve (12) questions and an additional question are asked per round; no questions are repeated in another round.

2. For questions 1-11, a correct answer gives the team ten (10) points, and an incorrect answer results in a loss of five (5) points.

3. The 12th question is the bonus question and is worth fifteen (15) points; there is no penalty for an incorrect answer.

4. If the bonus question is not answered correctly, participants are not given an additional question.

5. If a team answers the bonus question correctly, the team is given an additional question to answer. There is no penalty for an incorrect answer. The team may discuss this question. A correct answer for the additional question is worth five (5) points.

6. In case of a tie, three (3) additional questions are asked. This procedure continues until the tie is broken.

EVALUATION

PRELIMINARY ROUND

A. Averaged test scores are used to determine the sixteen (16) semifinalist teams.

SEMIFINAL ROUND

A. Performance during the oral competition

Refer to the official rating form for more information.

TSA HONOR STATEMENT

All work must be created and completed by individual competitors or teams. Plagiarism, the use of Generative Artificial Intelligence (GenAI) software, copyright violation, cheating, and falsification of information are prohibited. Participants may NOT use any generative artificial intelligence (GenAI) tools (e.g. ChatGPT, Google Gemini, GitHub Copilot, etc.). Any attempt to gain an unfair advantage will not be tolerated. Competitors at any level of TSA competition understand and agree to abide by the TSA Honor Statement.

If it is determined that a student violated the TSA Honor Statement, a rules violation of twenty percent (20%) will be incurred.

STEM INTEGRATION

This event aligns with the STEM (Science, Technology, Engineering, and Mathematics) educational standards.

LEADERSHIP AND 21ST CENTURY SKILLS

This event provides opportunity for students to build and develop leadership and 21st century skills including but not limited to – Communication, Collaboration/Social Skills, Initiative, Problem Solving/Risk Taking, Critical Thinking, Perseverance/Grit, Creativity, Relationship Building/Teamwork, Dependability/Integrity, and Flexibility/Adaptability

TECHNOLOGY BOWL

2025 & 2026 OFFICIAL SCORE SHEET

HIGH SCHOOL

Competition Round ID# _____

Team #_____(A) Team #_____(B)

Scorekeeper's Signature _____

SEMIFINAL ROUND – ORAL COMPETITION		TEAM A	TEAM B
Mark an X in the box beside the team that gives the correct response to the question and an O beside the team that gives an incorrect response. Record the scores for each response in the column to the right.			
Question #	**Points**		
1.	+10 for correct, -5 for incorrect response		
2.	+10 for correct, -5 for incorrect response		
3.	+10 for correct, -5 for incorrect response		
4.	+10 for correct, -5 for incorrect response		
5.	+10 for correct, -5 for incorrect response		
6.	+10 for correct, -5 for incorrect response		
7.	+10 for correct, -5 for incorrect response		
8.	+10 for correct, -5 for incorrect response		
9.	+10 for correct, -5 for incorrect response		
10.	+10 for correct, -5 for incorrect response		
11.	+10 for correct, -5 for incorrect response		
12. Bonus question	+15 for answering the bonus question correctly; no penalty for answering the bonus question incorrectly		
Additional question	+5 for answering the additional question correctly; no penalty for answering the additional question incorrectly		
	ORAL COMPETITION SUBTOTAL (130 points)		

Tie Breaker Questions			
1.	+10 for correct, -5 for incorrect response		
2.	+10 for correct, -5 for incorrect response		
3.	+10 for correct, -5 for incorrect response		
	TIE BREAKER QUESTIONS SUBTOTAL (30 points)		

Rules violations (a deduction of 20% of the total possible points for the above sections) must be initialed by the judge, coordinator, and manager of the event. Record the deduction in the space to the right.

Indicate the rule violated: _____

SEMIFINAL SUBTOTAL (160 points)

To arrive at the TOTAL score, subtract rules violation points, as necessary.   **TOTAL (160 points)**
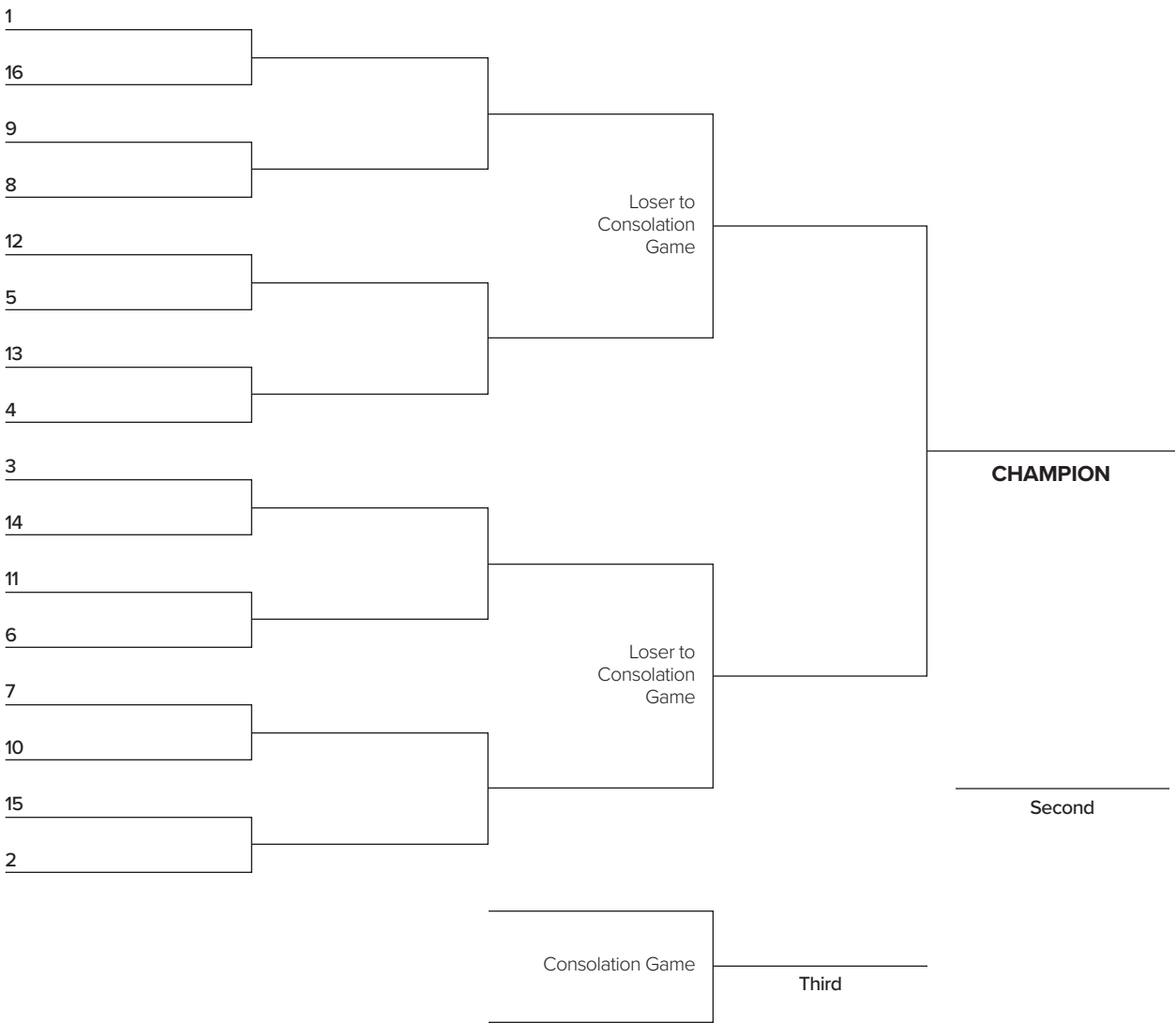
Comments:

_____

I certify these results to be true and accurate to the best of my knowledge.

JUDGE

Printed name: _____   Signature: _____

SINGLE ELIMINATION TOURNAMENT CHART – SEEDED 16 PLAYER FIELD

1

16

9

8

12

5

13

4

3

14

11

6

7

10

15

2

Loser to Consolation Game

Loser to Consolation Game

CHAMPION

Second

Consolation Game

Third

Note to evaluators: This is a single elimination format (semifinalist teams ONLY). Seed is determined by team ranking on written test.			
Seed 1	Team #	**Seed 9**	Team #
Seed 2	Team #	**Seed 10**	Team #
Seed 3	Team #	**Seed 11**	Team #
Seed 4	Team #	**Seed 12**	Team #
Seed 5	Team #	**Seed 13**	Team #
Seed 6	Team #	**Seed 14**	Team #
Seed 7	Team #	**Seed 15**	Team #
Seed 8	Team #	**Seed 16**	Team #

TECHNOLOGY BOWL
EVENT COORDINATOR INSTRUCTIONS

PERSONNEL

A. Event coordinator

B. Timer for test, one (1)

C. Proctors for test, four (4)

D. Timekeeper for oral competition, one (1)

E. Scorekeeper for oral competition, one (1)

F. Moderator for oral competition, one (1)

G. Judges, for semifinal oral competition, two (2)

H. Assistants for oral competition, two (2)

MATERIALS

A. Coordinator's packet, containing:

1. Event guidelines, one (1) copy for the coordinator and for each judge

2. TSA Event Coordinator Report

B. Test

1. If hard copies of the test are being used, have one (1) for each participant (these tests must be returned immediately following the event)

2. Scantron answer sheets; one (1) for each participant

3. Stopwatch for timekeeper

4. Tables and chairs or tablet armchairs to accommodate all participants

5. Scantron instruction forms

6. Coordinators are responsible for creating the test to be administered at the National TSA Conference; copies are provided by the national TSA office

C. Oral competition

1. Table and chairs for the event judges and moderator

2. Two (2) tables and six (6) chairs for the event team, facing the moderator and audience

3. Tech Bowl bracket

4. List of chapters for the event

5. Buzzer system and controls

6. A large printed sign (to be placed outside the oral competition room) stating that no filming, taking of photos, or use of any electronic recording devices will be allowed in the competition room

7. Stopwatch for timekeeper

8. 5" x 8" question cards selected from the technology bowl test bank, with questions and the acceptable answer(s) clearly typed

RESPONSIBILITIES

AT THE CONFERENCE

A. Attend the mandatory coordinator's meeting at the designated time and location.

B. Report to the CRC room and check the contents of the coordinator's packet.

C. Review the event guidelines and check to see that enough personnel have been scheduled.

D. Inspect the area(s) in which the event is to be held for appropriate set-up, including room size, chairs, tables, outlets, etc. Notify the event manager of any potential problems.

E. At least one (1) hour before the event is scheduled to begin, meet with judges/assistants to review time limits, procedures, regulations, evaluation, and all other details related to the event. If questions arise that cannot be answered, speak to the event manager before the event begins.

F. Ensure the judges have access to the online judging system.

PRELIMINARY ROUND

A. Begin the event at the scheduled time by closing the doors and checking the entry list.

B. All participants and event judges should be in the room at this time.

C. Late participants and/or entries are considered on a case-by-case basis and only when lateness is caused by events beyond the participant's control.

D. In order to compete, participants must be on the entry list or must have approval of the CRC.

E. Distribute the scantron forms to the participants, if applicable.

1. Direct participants to fill in their participant identification number and test code letter in the appropriate spaces.

2. Provide an opportunity for any questions about the scan form.

F. Ensure the following testing procedure is applied with the help of the proctors.

1. If the test is administered as hard copies, instruct the participants to keep the tests face down until they are directed to turn them over and begin.

2. If tests are administered electronically, instruct participants not to begin until the scheduled time.

G. Acting as the timer and with proctors positioned around the event room, direct the participants to turn their test over, place their code number and the code letter found on the test on their scan form, and begin.

H. Exactly one (1) hour from the time that the participants begin the test, call time.

1. Direct students to check out with a test proctor once they are finished with their test.

2. Proctors should collect all tests and then students should immediately leave the testing room.

3. If a line forms students must remain completely silent. Any talking will result in a zero score for the test of the person(s) talking.

4. Decisions about rules violations must be discussed and verified with the judges, event coordinator, and CRC manager to determine either:

   a. To deduct twenty percent (20%) of the total possible points in this round or

   b. To disqualify the entry

   The event coordinator, judges, and CRC manager must initial either of these actions on the rating form.

I. Determine the sixteen (16) semifinalist teams based on team members' averaged score on the test.

SEMIFINAL ROUND

A. Run the oral component of the event as described in the Procedure section.

B. Discuss rule violations (e.g. 20% deduction. disqualification) and have all relevant parties initial the rating form.

C. Determine the ten (10) finalists. The highest test scores of the teams that were eliminated in the initial round will receive 9th and 10th place. The highest test scores of the teams that were eliminated in the second round will be used to determine 5th-8th place.

D. If necessary, manage security and the removal of materials from the event area.

TECHNOLOGY PROBLEM SOLVING

OVERVIEW

Applying leadership and 21st century skills, participants in problem solving to develop a finite solution to the stated problem provided on-site. Participants work as a team to provide the best solution, which is measured objectively.

ELIGIBILITY

One (1) team of two (2) individuals per chapter may participate.

TIME LIMITS

Ninety (90) minutes for the design and construction of the solution are permitted.

ATTIRE

TSA competition attire is required for this event.

PROCEDURE

PRE-CONFERENCE

A. Participants review the TSA Honor Statement for Competitive Events found in the General Rules and listed in the individual competitive event rules.

ON-SITE CHALLENGE

B. Participants report to the event area at the time and place stated in the conference program.

C. The problem, evaluation criteria, and materials are distributed.

D. Teams will be given a ninety (90) minute window to begin construction of a solution.

E. Teams are allowed ninety (90) minutes for the construction of a solution; time will begin upon arriving to the event area.

F. Each solution is tested as soon as possible after the construction phase is completed. (Some problems may require teams to be present for testing.)

G. The top ten (10) finalists are announced at the awards ceremony.

REGULATIONS AND REQUIREMENTS

Students will work to develop their leadership and 21st century skills in the process of preparing for and participating in this TSA competitive event. The development and application of those skills must be evident in their submission, demonstration, and/or communication pertaining to the entry.

A. All work must be completed in the event area during the time specified for the event.

B. Specific materials related to the on-site problem are provided by TSA. Only the materials issued to each team by the event coordinator may be used in the development of the solution. Note: Exceptions are Adhesives (glue) and masking tape from each team's tool box.

C. Participants are required to provide their own tool box/container, which must:

1. Include identification (school name, address, and advisor cell phone number)

2. Not exceed twenty (20) inches (508 mm) length x ten (10) inches (254 mm) width x ten (10) inches (254 mm) height.

3. Contain all items needed to fabricate the solution/entry. The following is a suggested list:

   a. Cutting devices; NONE may be electric

   b. Adhesives

      i. aerosol and electric applicators are not allowed

      ii. a bottle of Uncure or Debonder is recommended

   c. Temporary fastening devices

      i. straight pins

      ii. clamps

      iii. tape (only masking tape may be used as construction material)

   d. A cutting surface that prevents table top marring (required)

   e. Rulers, straightedges, and/or measuring scales

   f. Marking devices (pens, pencils, etc.) and sharpener

     g. Sheet of wax paper, as large as is needed for the competition

     h. Safety glasses (required)

4. Participants are required to provide and wear safety-approved eyewear for this event.

     a. Safety eyewear shall be worn by participants at event check-in and remain on until leaving the event venue.

     b. Prescription eyewear needs to have side shields to be considered safety eyewear.

     c. Should a team member remove his/her eyewear, s/he will be reminded once to replace it.

     d. If there is a second infraction, the team will be asked to leave the competition.

     e. Sunglasses are not suitable eyewear.

D. Participants without a tool container are not allowed to compete.

E. As teams enter the competition area, each will be given a copy of the Verifications Sheet. The Verifications Sheet is a list of tool box contents as listed in Rules and Regulations C-1 through C-3.

    1. Another team will be asked to check the box of the entering team.

    2. If another team is not readily available to complete the Verification Sheet, a judge will come over to complete the check and form.

F. Sharing tools between teams is not permitted.

EVALUATION

A. Each team's solution is evaluated objectively.

B. A finite measure, such as elapsed time, horizontal or vertical distance, and/or strength, is used to determine the best solution.

C. Ties shall be broken using another quantative measure that is applicable to the given problem – time of completion, weight, etc.

Refer to the official rating form for more information.

TSA HONOR STATEMENT

All work must be created and completed by individual competitors or teams. Plagiarism, the use of Generative Artificial Intelligence (GenAI) software, copyright violation, cheating, and falsification of information are prohibited. Participants may NOT use any generative artificial intelligence (GenAI) tools (e.g. ChatGPT, Google Gemini, GitHub Copilot, etc.). Any attempt to gain an unfair advantage will not be tolerated. Competitors at any level of TSA competition understand and agree to abide by the TSA Honor Statement.

If it is determined that a student violated the TSA Honor Statement, a rules violation of twenty percent (20%) will be incurred.

STEM INTEGRATION

This event aligns with the STEM (Science, Technology, Engineering, and Mathematics) educational standards.

LEADERSHIP AND 21ST CENTURY SKILLS

This event provides opportunity for students to build and develop leadership and 21st century skills including but not limited to – Communication, Collaboration/Social Skills, Initiative, Problem Solving/Risk Taking, Critical Thinking, Perseverance/Grit, Creativity, Relationship Building/Teamwork, Dependability/Integrity, and Flexibility/Adaptability

CAREERS RELATED TO THIS EVENT

This competition has connections to one (1) or more of the careers below:

- Computer software engineer
- Mathematician
- Criminal investigator
- Air traffic controller

Participant/Team ID# _____

TECHNOLOGY PROBLEM SOLVING
2025 & 2026 OFFICIAL RATING FORM
HIGH SCHOOL

Judges: Using minimal (1-4 points), adequate (5-8 points), or exemplary (9-10 points) performance levels as a guideline in the rating form, record the scores earned for the event criteria in the column spaces to the right. The X1 or X2 notation in the criteria column is a multiplier factor for determining the points earned. (Example: an "adequate" score of 7 for an X1 criterion = 7 points; an "adequate" score of 7 for an X2 criterion = 14 points.) A score of zero (0) is acceptable if the minimal performance for any criterion is not met.

Go/No Go Specifications

- Before judging the entry, ensure that the items below are present; indicate presence with a check mark in the box.
- If an item is missing, leave the box next to the item blank and place a check mark in the box labeled ENTRY NOT EVALUATED.
- If a check mark is placed in the ENTRY NOT EVALUATED box, the entry is not to be judged.

- ☐ Safety eyewear is present and worn at all times by participants
- ☐ The tool box is present
- ☐ ENTRY NOT EVALUATED

TESTING OF SOLUTION (60 points)

Evaluation: A finite unit of measure, such as elapsed time, linear distance, and/or strength, etc., is used to determine ranking.

1st: 60 Points	**2nd:** 55 Points	**3rd:** 50 Points	**4th:** 45 Points	**5th:** 40 Points	**6th:** 35 Points
7th: 30 Points	**8th:** 25 Points	**9th:** 20 Points	**10th:** 15 Points	**11th:** 10 Points	**12th:** 5 Points

Rules violations (a deduction of 20% of the total possible points for the above sections) must be initialed by the judge, coordinator, and manager of the event. Record the deduction in the space to the right.

Indicate the rule violated: _____

TESTING OF SOLUTIONS SUBTOTAL (60 points)

To arrive at the TOTAL score, add any subtotals and subtract rules violation points, as necessary. **TOTAL (60 points)**

Comments:

I certify these results to be true and accurate to the best of my knowledge.

JUDGE

Printed name: _____   Signature: _____

TECHNOLOGY PROBLEM SOLVING EVENT COORDINATOR INSTRUCTIONS

PERSONNEL

A. Event coordinator

B. Assistants for set-up, monitoring, and clean-up of on-site activity, two (2) or more per 100 teams

   1. Depending on the problem, one of the assistants may need to serve as timekeeper.

   2. Not all assistants are needed for set-up and clean-up, but all are needed while the on-site activity is being held.

C. Judges, two (2) or more

MATERIALS

A. Coordinator's packet, containing:

   1. Event guidelines, one (1) copy for the coordinator and for each judge

   2. TSA Event Coordinator Report

   3. Identification tags or stick-on labels to identify entries

B. Stopwatch, rules, measuring tapes up to 50', depending on the problem

C. Tables and chairs for participants

D. Tables and chairs for judges, to be used for tools/materials distribution and evaluation

E. Well-written, technologically appropriate problem that can be objectively measured; one (1) copy per team and judge

F. Adequate conditions, tools, materials, monitoring, and testing devices for the problem

G. Tool Box Verification Sheet, one (1) copy per team

RESPONSIBILITIES

AT THE CONFERENCE

A. Attend the mandatory coordinator's meeting at the designated time and location.

B. Report to the CRC room and check the contents of the coordinator's packet.

C. Review the event guidelines and check to see that enough personnel have been scheduled.

D. Inspect the area or room in which the event is to be held for appropriate set-up, including room size, chairs, tables, outlets, etc. Notify the event manager of any potential problems.

E. At least one (1) hour before the event is scheduled to begin, meet with judges/assistants to review time limits, procedures, regulations, evaluation, and all other details related to the event. If questions arise that cannot be answered, speak to the event manager before the event begins.

F. Ensure the judges have access to the online judging system.

ON-SITE CHALLENGE

A. Distribute materials as appropriate, prior to the start of the event.

B. Begin the event at the scheduled time by closing the doors and checking the entry list.

C. All participants and judges should be in the room within the same three-and-one-half (3.5) hour window.

D. In order to compete, participants must be on the entry list or must have approval of the CRC.

E. Each team submits their toolbox to the coordinator and judges for size verification.

F. Once teams are seated (checked against the entry list) and general announcements have been made, the event problem is distributed, reviewed, and time is started.

G. Judges and monitors observe the entire construction phase, with judges measuring solutions as soon as appropriate.

H. Judges evaluate the solutions in an available location using the procedure and process presented in the general announcements or problem.

I. Decisions about rules violations must be discussed and verified with the judges, event coordinator, and CRC manager to determine either:

　　1. To deduct twenty percent (20%) of the total possible points in this round or

　　2. To disqualify the entry

　　The event coordinator, judges, and CRC manager must initial either of these actions on the rating form.

J. Judges determine the ten (10) finalists and discuss and break any ties.

K. Submit the finalist results and all related forms in the results envelope to the CRC room.

L. If necessary, manage security and the removal of materials from the event area.

TRANSPORTATION MODELING

OVERVIEW

Using only designated materials and following required specifications, participants apply leadership and 21st century skills in the research, design, and production of a scale model of a vehicle that fits the annual design problem, which will be posted on the TSA website under *Themes & Problems*. The entry must take appearance and realism into consideration.

ELIGIBILITY

One (1) individual per chapter may participate.

TIME LIMITS

Semifinalists participate in an on-site interview that lasts up to five (5) minutes.

ATTIRE

TSA competition attire is required for this event.

PROCEDURE

PRE-CONFERENCE

A. Participants review the TSA Honor Statement for Competitive Events found in the General Rules and listed in the individual competitive event rules.

B. Participants produce a scale model of a vehicle and supporting display to contain it, focusing on the year's current theme, while observing the outlined regulations.

C. Participants prepare the documentation portfolio and display according to the regulations for this event.

PRELIMINARY ROUND

A. Participants check in the following at the time and place stated in the conference program:
1. the scale model
2. the display
3. the documentation portfolio

B. Entries are evaluated by the judges with neither students nor advisors present based on the following criteria:

1. Judges score the Model and Display criteria to determine the top twenty-four (24) preliminary contestants, which will not be posted.

2. Judges score the Documentation Portfolio criteria of those top twenty-four contestants to determine the top twelve (12) semifinalist teams.

C. A list of twelve (12) semifinalists (in random order) is posted.

SEMIFINAL ROUND

A. Participants report at the time and place stated in the conference program to sign up for an interview time.

B. Judges ask questions pertaining to the research, production of the model, and the design process.

C. The top ten (10) finalists are announced during the awards ceremony.

REGULATIONS AND REQUIREMENTS

Students will work to develop their leadership and 21st century skills in the process of preparing for and participating in this TSA competitive event. The development and application of those skills must be evident in their submission, demonstration, and/or communication pertaining to the entry.

PRELIMINARY ROUND

A. Entries must include a scale model, a display, and documentatio portfolio.

B. The model, display and documentation must meet the following specifications:

Model

1. The scale model must accurately reflect the annual design problem.

2. The model must be designed and produced as original work by the student during the current school year.

3. The model may be made from wood, urethane modeling foam, or it may be 3D-printed.

4. Using commercially produced (store-bought) model vehicle body parts (including hoods, fenders, wings, propellers, frames, etc.) is prohibited.

5. It is permissible to use pre-manufactured parts such as body strengtheners, tires and wheels, plastic canopy, exhausts, mirrors, head and tail lights, windshields, and antennae.

   a. These parts may be attached to or enclosed within the vehicle and may be constructed from materials other than wood, excluding glass or liquids. These parts must be fastened securely.

   b. It is also permissible to use CNC production and 3D printers in the production of the parts of this model.

6. The finished vehicle must fit inside the display space of 16" x 16" x 16".

7. The themed vehicle model must have an actual length that measures at least six inches (6").

8. The designer must choose a scale for the vehicle so that it meets regulations and must be specified in the portfolio.

9. Wheels: Dimensions should be consistent with the scale of the body.

Display

1. The model must be presented for evaluation on a display not to exceed 16" tall x 16" deep x 16" long (including the model).

2. The portfolio is not considered part of the display but is placed with it at its side.

3. No electrical access will be provided by TSA for displays.

4. Use of dry cell batteries is permissible, but they must be contained within the stated display space.

Documentation Portfolio

1. Documentation materials (comprising a "portfolio") are required and must be secured in a clear front report cover.

2. In addition to the 11" x 17" pages noted below, the report cover must include the following single-sided, 8½" x 11" pages, in this order:

   a. Title page with the event title, the conference city and state, and the year; a picture of the vehicle may be included as well; one (1) page

   b. Table of contents; pages as needed

   c. Description of designer's vehicle, making note of the scale used, inspiration for the choice and design of the vehicle, research about the history and evolution of the original vehicle, and design elements that set the vehicle apart from others (e.g. fuel used, unique features); one (1) page

   d. Photo examples of current or past vehicles that are similar to the current year's theme or that inspired the entry; one (1) page

   e. Concept drawings/detailed sketches or 3D CAD modeling – must be on 11" x 17" paper; maximum of two (2) pages

   f. Photos of the clay, foam, wax, or 3D-printed mock-up; one (1) page

   g. Final technical illustrations (orthographic) must be on 11" x 17" paper; maximum of two (2) pages

   h. Photos of the production of the model; one (1) page

3. Documentation for this event must not include the name of the student name, chapter, or state.

4. All ideas, text, or images from sources other than the designer must be cited.

5. Cited works should be in MLA format.

6. Pages that are 11" x 17" in size should be folded to fit in the notebook.

EVALUATION

PRELIMINARY ROUND

<u>Tier 1</u>

A. The model and display

<u>Tier 2</u>

B. The documentation portfolio

SEMIFINAL ROUND

A. The interview

Refer to the official rating form for more information.

TSA HONOR STATEMENT

All work must be created and completed by individual competitors or teams. Plagiarism, the use of Generative Artificial Intelligence (GenAI) software, copyright violation, cheating, and falsification of information are prohibited. Participants may NOT use any generative artificial intelligence (GenAI) tools (e.g. ChatGPT, Google Gemini, GitHub Copilot, etc.). Any attempt to gain an unfair advantage will not be tolerated. Competitors at any level of TSA competition understand and agree to abide by the TSA Honor Statement.

If it is determined that a student violated the TSA Honor Statement, a rules violation of twenty percent (20%) will be incurred.

STEM INTEGRATION

This event aligns with the STEM (Science, Technology, Engineering, and Mathematics) educational standards.

LEADERSHIP AND 21ST CENTURY SKILLS

This event provides opportunity for students to build and develop leadership and 21st century skills including but not limited to – Communication, Collaboration/Social Skills, Initiative, Problem Solving/Risk Taking, Critical Thinking, Perseverance/Grit, Creativity, Relationship Building/Teamwork, Dependability/Integrity, and Flexibility/Adaptability

CAREERS RELATED TO THIS EVENT

This competition has connections to one (1) or more of the careers below:

- Automotive designer
- Automotive engineer
- Digital modeling technician
- Industrial designer
- Industrial engineer

TRANSPORTATION MODELING

2025 & 2026 OFFICIAL RATING FORM

HIGH SCHOOL

Judges: Using minimal (1-4 points), adequate (5-8 points), or exemplary (9-10 points) performance levels as a guideline in the rating form, record the scores earned for the event criteria in the column spaces to the right. The X1 or X2 notation in the criteria column is a multiplier factor for determining the points earned. (Example: an "adequate" score of 7 for an X1 criterion = 7 points; an "adequate" score of 7 for an X2 criterion = 14 points.) A score of zero (0) is acceptable if the minimal performance for any criterion is not met.

Go/No Go Specifications

- Before judging the entry, ensure that the items below are present; indicate presence with a check mark in the box.
- If an item is missing, leave the box next to the item blank and place a check mark in the box labeled ENTRY NOT EVALUATED.
- If a check mark is placed in the ENTRY NOT EVALUATED box, the entry is not to be judged.

☐ TIER 1 – Model and Display
☐ TIER 2 – Documentation Portfolio
☐ ENTRY NOT EVALUATED

Record scores in the column spaces below.

TIER 1 – MODEL AND DISPLAY (50 points)				
CRITERIA	Minimal performance	Adequate performance	Exemplary performance	
	1-4 points	5-8 points	9-10 points	
Production Quality (X1)	The model exhibits poor production quality; the surface is rough; there is little or no attention to detail.	There is some evidence of proper production techniques; the model appearance is adequate.	The model demonstrates excellent production techniques with obvious effort and attention to detail.	
Paint and Finish (X1)	Surface imperfections are evident; the model is sticky, and/or the painting quality is low.	The quality of the painted surface is acceptable, with some imperfections visible.	The painted surface is exceptional, with little or no visible imperfections.	
Appropriate to Designated Problem (X1)	The model does not relate to the stated annual design theme.	The model generally relates to the stated annual design theme.	The model effectively represents and portrays the stated annual design theme.	
Details (X1)	There is a very weak and limited attempt to include identifying characteristics and/or additional parts to help create a realistic appearance.	The model includes some identifying characteristics and/or additional parts that give it a sense of realism.	The model displays exemplary effort to include identifying characteristics and/or additional parts that give it a realistic appearance.	
Display (X1)	The quality of the display is poor, and/or it exceeds the size requirements.	The display is adequately created and meets the size specifications.	The display is exemplary, includes eye-catching details, and meets the size specifications.	
		TIER 1 – MODEL AND DISPLAY SUBTOTAL (50 points)		

Rules violations (a deduction of 20% of the total possible points in the above sections) must be initialed by the judge, coordinator, and manager of the event. Record the deduction in the space to the right. Indicate the rule violated: _____	

TIER 1 – SUBTOTAL (50 points)	

TIER 2 – DOCUMENTATION PORTFOLIO (70 points)

CRITERIA	Minimal performance	Adequate performance	Exemplary performance	
	1-4 points	5-8 points	9-10 points	
Portfolio Components (X1)	Portfolio is unorganized and/or is missing three (3) or more components.	Portfolio has most components and is generally organized per the order of the event guide listing; it has sufficient content.	All components are included in the portfolio; content and organization per the order of the event guide listing are excellent.	
Vehicle Description (X1)	The description is inadequate; research references are lacking; the scale is incomplete.	The description is adequate, research is evident with some documentation, and the scale is stated and accurate.	An excellent description is included, with necessary research referenced to support the model solution; the scale is stated and accurate.	
Concept Drawings, Detailed Sketches, or 3D CAD Modeling (X1)	The drawings are not to scale, and/or the the quality is poor, and/or there are missing parts and dimensions; the drawings are not on 11" x 17" paper.	The drawings are acceptable, true to scale, and representative of the vehicle, with some details/dimensions included; the drawings are produced on 11" x 17" paper.	The drawings are accurate and complete; they include all necessary details/dimensions and are drawn on 11" x 17" paper.	
Photo Examples of Current/Past Similar Vehicles (X1)	There is only one (1) photo example of current or past similar vehicles.	There are two or three (2-3) photo examples of current or past similar vehicles.	There are a number of photo examples of current or past similar vehicles, showing that in-depth research was done.	
Photos of Clay, Foam, Wax, or 3D-Printed Model (X1)	There is only one (1) photograph of the clay/foam or wax model included.	Two or three (2-3) photographs of the clay/foam or wax model are included, but more are needed to adequately document the model.	There are a number of photographs included that effectively document the preliminary clay/foam/wax model.	
Final Technical Illustrations (orthographic plans) (X1)	Orthographic plans are poorly executed, and/or the plans are not on 11" x 17" paper.	Adequate orthographic plans are included; the plans are on 11" x 17" paper.	Complete orthographic plans are included; they are of excellent quality on 11" x 17" paper.	
Photos of Production of the Model (X1)	Only one (1) photograph of the model production is included.	Two or three (2-3) photographs of the model production are included, but they are not enough to provide full documentation.	The photographs included fully and effectively document and describe the model production process.	
TIER 2 – DOCUMENTATION PORTFOLIO SUBTOTAL (70 points)				

Rules violations (a deduction of 20% of the total possible points in the above sections) must be initialed by the judge, coordinator, and manager of the event. Record the deduction in the space to the right. Indicate the rule violated: _____	

PRELIMINARY SUBTOTAL (120 points)	

TRANSPORTATION MODELING

SEMIFINAL INTERVIEW (30 points)

CRITERIA	Minimal performance	Adequate performance	Exemplary performance	
	1-4 points	5-8 points	9-10 points	
Articulation (X1)	Communication of the design process is unclear, unorganized, and or illogical; leadership and/or 21st century skills are not evident.	Communication of the design process is somewhat logical and clear; leadership and/or 21st century skills are somewhat evident.	Communication of the design process is clear, concise, and logical; leadership and/or 21st century skills are clearly evident.	
Knowledge (X1)	Participant seems to have little understanding of the development and concepts in the project; vague interview answers are provided.	Participants have a generalized understanding of the dvelopment and concepts discussed and answer questions adequately.	Evidence is clear that the participant has a thorough understanding of the development and concepts discussed; questions are answered thoroughly.	
Organization (X1)	Participant is unprepared and unorganized for the interview, with an illogical explanation of the project.	Participant is prepared for the interview and is somewhat organized in his/her explanation to judges; the answers are, for the most part, logical and/or clear.	Participants responses are concise and logical, with a clear explanation of the development of the project.	
SEMIFINAL INTERVIEW SUBTOTAL (30 points)				

Rules violations (a deduction of 20% of the total possible points in the semifinalist sections above) must be initialed by the evaluator, coordinator, and manager of the event. Record the deduction in the space to the right. Indicate the rule violated: _____	

SEMIFINAL SUBTOTAL (30 points)	

To arrive at the TOTAL score, add any subtotals and subtract rules violation points, as necessary.　**TOTAL (150 points)**	

Comments:

_____

I certify these results to be true and accurate to the best of my knowledge.

JUDGE

Printed name: _____　Signature: _____

TRANSPORTATION MODELING
EVENT COORDINATOR INSTRUCTIONS

PERSONNEL

A. Event coordinator

B. Assistants, two (2)

C. Judges:

    1. Preliminary round, two (2) or more

    2. Semifinal round, two (2) or more

MATERIALS

A. Coordinator's packet containing:

    1. Event guidelines, one (1) copy for the coordinator and for each judge

    2. TSA Event Coordinator Report

    3. Stick-on labels for entries

B. Stopwatch

C. Measuring tape

D. Interview questions

RESPONSIBILITIES

AT THE CONFERENCE

A. Attend the mandatory coordinator's meeting at the designated time and location.

B. Report to the CRC room and check the contents of the coordinator's packet.

C. Review the event guidelines and check to see that enough personnel have been scheduled.

D. Inspect the area(s) in which the event is being held for appropriate set-up, including room size, chairs, tables, outlets, etc. Notify the event manager of any potential problems.

E. At least one (1) hour before the event is to begin, meet with judges and assistants to review time limits, procedures, regulations, evaluation, and all other details related to the event. If questions arise that cannot be answered, speak to the event manager before the event begins.

F. Ensure the judges have access to the online judging system.

EVENT CHECK-IN

A. Check in the entries at the time and place stated in the conference program.

B. If check-in is on the first day of the conference, requirements for attire do NOT apply during check-in.

C. Participants check in:

    1. the scale model

    2. the documentation portfolio

    3. the display

D. Late entries are considered on a case-by-case basis and only when the delay is caused by events beyond participant control.

E. In order to compete, participants must be on the entry list or must have CRC approval.

F. Each entry must include the identification number in the upper right-hand corner of the entry.

G. Instruct the participants to position the displays for viewing.

H. Secure the entries in the designated area.

PRELIMINARY ROUND

A. When it is necessary to move models, only judges and official personnel should handle the models. Extreme care should be taken to avoid damage to the entries.

B. Judges independently assess the entries based on the following:

    1. Judges review and score the Model and Display criteria to determine the top twenty-four (24) preliminary contestants, which will not be posted.

    2. Judges score the Documentation Portfolio criteria of those top twenty-four contestants to determine the top twelve (12) semifinalist teams.

C. Decisions about rules violations must be discussed and verified with the judges, event coordinator, and CRC manager to determine either:

    1. To deduct 20% of the total possible points or

    2. To disqualify the entry

The event coordinator, judges, and CRC manager must initial either of these actions on the rating form.

D. Judges determine the twelve (12) semifinalists.

E. Create a sign-up sheet for the semifinal interviews.

SEMIFINAL ROUND

A. Semifinalists report at the time and place stated in the conference program to sign up for an interview time.

B. Manage completion of the on-site interviews.

C. Discuss rule violations (e.g. 20% deduction, disqualification) and have all relevant parties initial the rating form.

D. At the designated time, return models, displays, and portfolios to student owners after verifying official conference identification.

VIDEO GAME DESIGN

OVERVIEW

Applying leadership and 21st century skills, participants develop a video game that focuses on the annual theme. The game must be interesting, exciting, visually appealing, and intellectually challenging. The game must have high artistic, educational, and social value. The rating of the game must meet the ESRB rating of E for Everyone.

The game and all required documentation must be submitted online pre-conference. Semifinalist teams participate in an on-site interview to demonstrate the knowledge and expertise they gained during the development of the game.

The theme of the current year's game will be posted on the TSA website under *Themes & Problems*.

ELIGIBILITY

Five (5) teams per state may participate.

TIME LIMITS

PRE-CONFERENCE

A. Participants review the TSA Honor Statement for Competitive Events found in the General Rules and listed in the individual competitive event rules.

B. All components of the chapter's entry (video game URL, video game demonstration video URL, and documentation PDF) must be finished, submitted, and accessible via the Internet by 11:59pm ET on a designated date mid-May.

C. The game submitted for evaluation must be greater than three (3) minutes in length of play and must be interactive.

D. A deduction of five (5) points total will be incurred for a game that completes under the three (3)-minute time minimum.

E. The timing of the game segment starts with the first image or sound presented.

F. Games must be playable from the deadline until the end of the National TSA Conference.

G. Video game demonstration video must be less than five (minutes). A deduction of five (5) points total will be incurred for a video that goes over the five (5) minute time maximum. The timing of the video starts with the first image or sound presented. The timing of the video ends with the last image or sound.

SEMIFINAL ROUND

A. Ten (10) minutes are allowed for the on-site interview.

ATTIRE

TSA competition attire is required for this event.

PROCEDURE

PRE-CONFERENCE

A. Teams design an online video game.

B. Teams design the game based on the annual theme posted on the TSA website under *Themes & Problems*.

C. The video game URL, video game demonstration video URL, and documentation portfolio PDF must be submitted by 11:59pm ET on a designated date in mid-May.

D. The submission information and deadline will be provided in January on the TSA website under *Competition Updates*.

PRELIMINARY ROUND

A. A list of the twelve (12) semifinalists (in random order) will be posted on the first full day of the conference.

SEMIFINAL ROUND

A. Two (2) representatives from each semifinalist team report at the time and place stated in the conference program to sign up for an interview time.

B. No more than two (2) semifinalist team members report to the assigned time and place to respond to questions about their documentation, game, the game's purpose, value, design, and rules.

C. The top ten (10) finalists are announced during the awards ceremony.

REGULATIONS AND REQUIREMENTS

Students will work to develop their leadership and 21st century skills in the process of preparing for and participating in this TSA competitive event. The development and application of those skills must be evident in their submission, demonstration, and/or communication pertaining to the entry.

PRE-CONFERENCE/PRELIMINARY ROUND

A. All online game submissions must be a hyperlink to the online game and be accessible for evaluation by the deadline posted on the TSA website under *Competition Updates*. Participants may choose the hosting site, but the hyperlink must point directly to the entry. Entries that request access be granted will not be judged.

B. Entries received, or changes made to submitted entries after this deadline will not be judged.

C. The URL must point to the team's entry. Entries or demonstration videos that require a software download, running an executable file (.exe), or a request that access be granted will not be judged.

D. Participants may NOT use any generative artificial intelligence (AI) tools (e.g. ChatGPT, Google Gemini, GitHub Copilot, etc.) in the development of the entry.

E. Video Game:

1. Must be a hyperlink to the online game.

2. Must be the original work of the team.

3. Games must be playable from all computers and browsers.

4. When creating the game, the game must be free of any weapons or violence as stated in the general rules.

5. Work that is not created by the team must have proper documentation, showing copyright permissions and/or license for usage in the game segment.

6. Game instructions must be clear and understandable.

7. Judges must be able to play the game to the third (3rd) level.

8. The game submitted for evaluation must be greater than three (3) minutes in length of play and must be interactive.

9. A deduction of five (5) points total will be incurred for a game that completes under the three (3)-minute time minimum.

10. The timing of the game segment starts with the first image or sound presented.

11. Games must be playable from the submission deadline until the end of the National TSA Conference.

12. Bonus points may be awarded for exceptional game features or content.

F. Video Game Demonstration Video

1. The demonstration video must include the following components:

   a. A tutorial for how to play the game.

   b. The video game being played for at least one (1) level.

   c. Show the code, scripts, files, and game engine used to create the game.

2. The video must not exceed five (5) minutes.

3. The video must not include any identifying information other than the team's identification number.

4. The video needs to be submitted using a URL.

G. Documentation Portfolio:

1. The portfolio must include the following pages in a multi-page PDF document in this order:

   a. Title page with the event title, the title of the video, the conference city and state, and the year, and the team's identification number; one (1) page

   b. Purpose and description of the game, the target audience, and a detailed explanation of how to play the game, including a list of control functions; maximum of two (2) pages

   c. A hand-drawn storyboard, which depicts the design concept of the video game; pages as needed

    d. Student Copyright Checklist (see Forms Appendix); one (1) page

    e. Permission letters for the use of copyrighted material; pages as needed (if applicable).

    f. Work Log (see Forms Appendix); pages as needed

H. Bonus points may be awarded for exceptional game features or content.

I. Teams will submit the URL to the video game, the URL to the video game demonstration video, and the PDF of the documentation portfolio.

EVALUATION

PRELIMINARY ROUND

A. The first three (3) levels of the game

B. The video game demonstration video

C. The documentation portfolio

D. Up to ten (10) bonus points may be added by the judges for exceptional game features, or for content showing exemplary educational and social value.

SEMIFINAL ROUND

A. The interview

Refer to the official rating form for more information.

TSA HONOR STATEMENT

All work must be created and completed by individual competitors or teams. Plagiarism, the use of Generative Artificial Intelligence (GenAI) software, copyright violation, cheating, and falsification of information are prohibited. Participants may NOT use any generative artificial intelligence (GenAI) tools (e.g. ChatGPT, Google Gemini, GitHub Copilot, etc.). Any attempt to gain an unfair advantage will not be tolerated. Competitors at any level of TSA competition understand and agree to abide by the TSA Honor Statement.

If it is determined that a student violated the TSA Honor Statement, a rules violation of twenty percent (20%) will be incurred.

STEM INTEGRATION

This event aligns with the STEM (Science, Technology, Engineering, and Mathematics) educational standards.

LEADERSHIP AND 21ST CENTURY SKILLS

This event provides opportunity for students to build and develop leadership and 21st century skills including but not limited to – Communication, Collaboration/Social Skills, Initiative, Problem Solving/Risk Taking, Critical Thinking, Perseverance/Grit, Creativity, Relationship Building/Teamwork, Dependability/Integrity, and Flexibility/Adaptability

CAREERS RELATED TO THIS EVENT

This competition has connections to one (1) or more of the careers below:

- Animator
- Computer programmer
- Electronic game designer
- Electronic game technician
- Writer

VIDEO GAME DESIGN
2025 & 2026 OFFICIAL RATING FORM
HIGH SCHOOL

Judges: Using minimal (1-4 points), adequate (5-8 points), or exemplary (9-10 points) performance levels as a guideline in the rating form, record the scores earned for the event criteria in the column spaces to the right. The X1 or X2 notation in the criteria column is a multiplier factor for determining the points earned. (Example: an "adequate" score of 7 for an X1 criterion = 7 points; an "adequate" score of 7 for an X2 criterion = 14 points.) A score of zero (0) is acceptable if the minimal performance for any criterion is not met.

Go/No Go Specifications

- Before judging the entry, ensure that the items below are present; indicate presence with a check mark in the box.
- If an item is missing, leave the box next to the item blank and place a check mark in the box labeled ENTRY NOT EVALUATED.
- If a check mark is placed in the ENTRY NOT EVALUATED box, the entry is not to be judged.

☐ The game is playable
☐ PDF of the documentation portfolio is submitted
☐ ENTRY NOT EVALUATED

PRELIMINARY GAME DESIGN (70 points)

Record scores in the column spaces below.

CRITERIA	Minimal performance	Adequate performance	Exemplary performance	
	1-4 points	5-8 points	9-10 points	
Creativity and Artisanship (X2)	The game lacks creativity; poor artisanship and development are evident.	The game exhibits adequate creativity and artisanship.	The game is highly creative and well-crafted.	
Technical Skill (X2)	The game lacks originality and shows few technical skills.	The game is original and shows some evidence of programming skills.	The game is original, highly artistic, and shows evidence of programming skills.	
Storyline/Flow of the Game (X1)	The game follows little or no story line; there is limited logical flow to the game.	The game follows a story line and flows adequately from one (1) scene/level to another.	The game is well-organized and flows smoothly from one (1) scene/level to the next.	
Overall Appeal (X2)	Playing the game is not enjoyable; interacting in game play is a struggle, due to the game's illogical sequencing.	The game is somewhat interesting, easy, and enjoyable to play; most design concepts are incorporated.	The game is innovative and entertaining; design principles are incorporated, which make playing the game easy and enjoyable.	
PRELIMINARY GAME DESIGN SUBTOTAL (70 points)				

PRELIMINARY VIDEO DEMONSTRATION & DOCUMENTATION PORTFOLIO (50 points)

Record scores in the column spaces below.

CRITERIA	Minimal performance	Adequate performance	Exemplary performance	
	1-4 points	5-8 points	9-10 points	
Video Game Demonstration (X1)	Not all video demonstration components are included and/or video is unorganized.	Most of video demonstration components are included and organized.	Outstanding skills are evident in the presentation of the organization and demonstration of the video demonstration, which includes all required components.	
Portfolio Components (X1)	Portfolio is unorganized and/or is missing three (3) or more components.	Portfolio has most components and is generally organized per the order of the event guide listing; it has sufficient content.	All components are included in the portfolio; content and organization per the order of the event guide listing are excellent.	

PRELIMINARY VIDEO DEMONSTRATION & DOCUMENTATION PORTFOLIO (50 points) – continued

Game Directions and Control Function (X1)	The game explanation is difficult to follow; functions provided are illogical or incorrect.	The game directions can be followed, but at times they do not sync with overall workings of the game; most control functions are adequate.	The game explanation is easy to follow, and control functions are well-matched for the game.
Work Log (X1)	Work Log is incomplete and inaccurate.	Work Log is included and mostly addresses participation of all team members.	Work Log is complete and shows participation of all members.
Storyboard (X1)	Storyboard is sloppy, disorganized, and incomplete and/or does not follow overall flow of the game design.	Storyboard is generally organized and includes aspects and overall scenes of the game.	Storyboard is complete, concise, neat, and follows the overall flow of the game.
PRELIMINARY VIDEO DEMONSTRATION & DOCUMENTATION PORTFOLIO SUBTOTAL (50 points)			

Rules violations (a deduction of 20% of the total possible points for the above sections) must be initialed by the judge, coordinator, and manager of the event. Record the deduction in the space to the right.

Indicate the rule violated: _____

PRELIMINARY SUBTOTAL (120 points)

SEMIFINAL INTERVIEW (40 points)

CRITERIA	Minimal performance 1-4 points	Adequate performance 5-8 points	Exemplary performance 9-10 points	
Organization (X1)	Participants seem unorganized and unprepared for the interview; an illogical explanation of the game is presented.	Participants are generally prepared for the interview; explanation of the game is communicated and generally organized.	The interview is logical, well-organized, and easy to follow; the game explanation is communicated in an organized and concise manner.	
Team Participation (X1)	The majority of the delivery is made by one (1) member of the team; the partner(s) may be disengaged in the interview.	Team members generally are engaged in the interview, though one (1) member may take on more responsibility that the other(s).	All team members are actively involved in the interview and responses to the questions; there is shared responsibility among team members.	
Knowledge (X1)	Participants seem to have little understanding of the concepts in their project; answers to questions may be vague.	Participants exhibit an understanding of the concepts in the project.	Participants show clear evidence of a thorough understanding of their project.	
Articulation (X1)	Communication of the design process is unclear, unorganized, and or illogical; leadership and/or 21st century skills are not evident.	Communication of the design process is somewhat logical and clear; leadership and/or 21st century skills are somewhat evident.	Communication of the design process is clear, concise, and logical; leadership and/or 21st century skills are clearly evident.	
SEMIFINAL INTERVIEW SUBTOTAL (40 points)				

Rules violations (a deduction of 20% of the total possible points for the above sections) must be initialed by the judge, coordinator, and manager of the event. Record the deduction in the space to the right.

Indicate the rule violated: _____

VIDEO GAME DESIGN

BONUS (10 points)			
CRITERIA	Minimal performance	Adequate performance	Exemplary performance
	1-4 points	5-8 points	9-10 points
Bonus Points Unique and exceptional features (X1)	The game demonstrates some unique and exceptional features and/or exemplary educational value.	The game is very good but limited in uniqueness.	The game is outstanding and unique.

To arrive at the TOTAL score, add any subtotals and subtract rules violation points, as necessary. **TOTAL (160 points)**	

Comments:

I certify these results to be true and accurate to the best of my knowledge.

JUDGE

Printed name: _____ Signature: _____

VIDEO GAME DESIGN
EVENT COORDINATOR INSTRUCTIONS

PERSONNEL

A. Event coordinator

B. Judges:

1. Preliminary round, two (2) or more

2. Semifinal Round, two (2) or more (preferably the same judges from the preliminary round)

MATERIALS

A. Coordinator's packet, containing:

1. Event guidelines, one (1) copy for the coordinator and for each judge

2. TSA Event Coordinator Report

B. Stopwatch

C. Interview questions

D. Tables for entries

E. One (1) extension cord for the semifinalist evaluation team

F. One (1) power bar with surge protection for semifinalists, as needed

G. Laptop computer with high speed Internet capability

H. Tables and chairs for event coordinator, semifinalist judges, and participants

RESPONSIBILITIES

PRE-CONFERENCE

A. National TSA will collect entries until 11:59pm ET on a designated date in mid-May. The results are shared with the CRC manager, event coordinator, and assigned judges.

B. Review entries as they are submitted to the designated online storage utility.

C. Manage communication and Pre-conference evaluation (at least two [2] or more judges should be recruited earlier in the year). Coordinate with National TSA and/or the Judge Manager.

D. Confirm with judges that video games are not playable by using different devices and/or browsers.

AT THE CONFERENCE

A. Attend the mandatory coordinator's meeting at the designated time and location.

B. Report to the CRC room and check the contents of the coordinator's packet.

C. Review the event guidelines and check to see that enough personnel have been scheduled.

D. Inspect the area or room in which the event is to be held for appropriate set-up, including room size, chairs, tables, outlets, etc. Notify the event manager of any potential problems.

E. Ensure the judges have access to the online judging system.

PRELIMINARY ROUND

A. On the first full day of competition, post a list of the twelve (12) semifinalists in random order.

SEMIFINAL ROUND

A. At least one (1) hour before the event is scheduled to begin, meet with judges, and review time limits, procedures, regulations, evaluation, and all other details related to the event.

B. Determine the procedure for breaking ties before the on-site competition begins.

C. No more than two (2) semifinalist representatives report at the time and place stated in the conference program to sign up and participate in the on-site interview.

D. Distribute the guidelines for the interview.

E. Manage completion of the on-site interviews.

F. Decisions about rules violations must be discussed and verified with the judges, event coordinator, and CRC manager to determine either:

1. To deduct twenty percent (20%) of the total possible points in this round or

2. To disqualify the entry

The event coordinator, judges, and CRC manager must initial either of these actions on the rating form.

G. If necessary, manage security and the removal of materials from the event area.

VIRTUAL REALITY SIMULATION (VR)

OVERVIEW

Virtual Reality (VR) is the representation of complex scientific and/or technical concepts in a visual form. Applying leadership and 21st century skills, participants use video and 3D computer graphics tools and design processes to communicate, inform, analyze, and/or illustrate a given topic, idea, subject, or concept based on the theme posted on the TSA website under *Themes & Problems*.

ELIGIBILITY

One (1) team per chapter may participate; individual entries are permitted.

TIME LIMITS

PRELIMINARY ROUND

A. Recording of the simulation must be two to three (2-3) minutes in length.

B. There is a five (5)-point deduction for each fifteen (15) seconds under two (2) minutes or over three (3) minutes.

C. Video of the simulation time length is calculated from the start of the first image or sound to the end of the last image or sound.

SEMIFINAL ROUND

A. Up to four (4) minutes to setup/load of the presentation

B. Up to six (6) minutes to view the presentation – Three (3) minutes per judge.

C. Four (4) minutes are allowed for the interview.

ATTIRE

TSA competition attire is required for this event.

PROCEDURE

PRE-CONFERENCE

A. Participants review the TSA Honor Statement for Competitive Events found in the General Rules and listed in the individual competitive event rules.

B. Participants concentrate their efforts on creating video and 3D computer graphic that illustrates a given topic.

PRELIMINARY ROUND

A. Participants report at the time and place stated in the conference program to check in their entries.

B. Entries are reviewed by judges with neither students nor advisors present.

   1. Judges review and score the Video of the simulation criteria to determine the top twenty-four (24) preliminary contestants, which will not be posted.

   2. Judges score the Documentation Portfolio criteria of those top twenty-four (24) contestants to determine the top twelve (12) semifinalist teams.

C. A list of twelve (12) semifinalists (in random order) is posted.

SEMIFINAL ROUND

A. No more than two (2) semifinalist team representatives report at the time and place stated in the conference program to sign up for a presentation/interview time.

B. No more than two (2) representatives from each semifinalist team report at the assigned time and place for the presentation/interview.

C. Each semifinalist team are to present their VR presentation using a VR technology of their choice. Semifinalists are responsible to provide the hardware for the visualization.

D. Semifinalist will answers questions about their portfolio from the judges, discussing the purpose, value, research, and design process.

E. The top ten (10) finalists are announced at the awards ceremony.

REGULATIONS AND REQUIREMENTS

Students will work to develop their leadership and 21st century skills in the process of preparing for and participating in this TSA competitive event. The development and application of those skills must be evident in their submission, demonstration, and/or communication pertaining to the entry.

PRELIMINARY ROUND

A. All entries must be the original work of the participant or team.

1. Where applicable, all ideas, text, images, and sound from other sources must be cited.

2. If copyrighted material is used, proper written permission must be included.

3. Failure to follow this procedure results in disqualification.

B. All entries become the property of TSA and will not be returned after judging.

C. Documentation Portfolio:

1. Documentation materials (comprising a "portfolio") are required and must be secured in a clear front report cover with the following single-sided, 8½" x 11" pages, in this order:

    a. USB flash drive (containing the simulation) in a secure holder or sealed sleeve at the front of the portfolio.

    b. Title page with the event title, the conference city and state, and the year; one (1) page

    c. Table of contents; pages as needed

    d. Purpose of simulation, including the intended audience; one (1) page

    e. Hand-sketched storyboard that documents the flow and progression of the visualization with written notes; special effects, audio cues, dialogue, transitions, and scene duration should be incorporated into the storyboard; pages as needed

    f. List of references that includes sources for materials, copyrighted and otherwise; pages as needed. (The term "Fair Use" and similar terms are not acceptable citations when creating the list of references.)

    g. Permission letters for copyrighted material; pages as needed

    h. List of software and hardware used in the development of the visualization; one (1) page

    i. Work Log (see Forms Appendix); pages as needed

    j. Student Copyright Checklist (see Forms Appendix); one (1) page

D. Recording of the Simulation:

1. Recording of the simulations must be turned in on a USB flash drive in MPEG format suitable for viewing with a VLC Player utilizing a Microsoft Windows operating system.

2. The following are NOT permitted:

    a. PowerPoint presentation or PowerPoint slide show are not acceptable formats for this event.

    b. Absolutely no purchased content may be used in any part of the simulation. (Purchased content includes, but is not limited to, texture, models, and royalty free music.)

    c. Web applications that allow purchasing of elements (i.e.: Animaker and Powtoons) are not permitted.

    d. Live action video, including "whiteboard" style entries.

3. Suggested software includes: Flash, Maya, 3DS Max, Adobe Animate, Unity, Blender, etc.

4. Each simulation must advance automatically once it has been opened and started by the judges. A splash screen is acceptable, provided the "PLAY" command is easily visible.

5. All work must be included in the portfolio on a USB flash drive.

6. The simulation is not to be under two (2) or over three (3) minutes in length.

7. There will be a five (5)-point deduction for each fifteen (15) seconds under the minimum time or for each fifteen (15) seconds over the maximum time.

8. Sound must accompany the simulation. This sound does not include a voiceover recording describing the VR simulation.

EVALUATION

PRELIMINARY ROUND

Tier 1

A. The simulation

Tier 2

B. The portfolio

SEMIFINAL ROUND

A. Presentation of the simulation using participant provided Virtual Reality hardware

B. Interview about documentation and simulation.

Refer to the official rating form for more information

TSA HONOR STATEMENT

All work must be created and completed by individual competitors or teams. Plagiarism, the use of Generative Artificial Intelligence (GenAI) software, copyright violation, cheating, and falsification of information are prohibited. Participants may NOT use any generative artificial intelligence (GenAI) tools (e.g. ChatGPT, Google Gemini, GitHub Copilot, etc.). Any attempt to gain an unfair advantage will not be tolerated. Competitors at any level of TSA competition understand and agree to abide by the TSA Honor Statement.

If it is determined that a student violated the TSA Honor Statement, a rules violation of twenty percent (20%) will be incurred.

STEM INTEGRATION

This event aligns with the STEM (Science, Technology, Engineering, and Mathematics) educational standards.

LEADERSHIP AND 21ST CENTURY SKILLS

This event provides opportunity for students to build and develop leadership and 21st century skills including but not limited to – Communication, Collaboration/Social Skills, Initiative, Problem Solving/Risk Taking, Critical Thinking, Perseverance/Grit, Creativity, Relationship Building/Teamwork, Dependability/Integrity, and Flexibility/Adaptability

CAREERS RELATED TO THIS EVENT

This competition has connections to one (1) or more of the careers below:

- Computer animator
- Game designer
- Instructional technologist
- Software engineer

Technology Student Association (TSA) High School Competitive Events Guide for the 2025 and 2026 National TSA Conferences

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VIRTUAL REALITY SIMULATION (VR)

2025 & 2026 OFFICIAL RATING FORM

HIGH SCHOOL

Judges: Using minimal (1-4 points), adequate (5-8 points), or exemplary (9-10 points) performance levels as a guideline in the rating form, record the scores earned for the event criteria in the column spaces to the right. The X1 or X2 notation in the criteria column is a multiplier factor for determining the points earned. (Example: an "adequate" score of 7 for an X1 criterion = 7 points; an "adequate" score of 7 for an X2 criterion = 14 points.) A score of zero (0) is acceptable if the minimal performance for any criterion is not met.

Go/No Go Specifications

- Before judging the entry, ensure that the items below are present; indicate presence with a check mark in the box.
- If an item is missing, leave the box next to the item blank and place a check mark in the box labeled ENTRY NOT EVALUATED.
- If a check mark is placed in the ENTRY NOT EVALUATED box, the entry is not to be judged.

☐ TIER 1 – Simulation is playable and USB flash drive is present
☐ TIER 2 – Documentation Portfolio is present
☐ ENTRY NOT EVALUATED

TIER 1 – SIMULATION (90 points)				Record scores in the column spaces below.
CRITERIA	Minimal performance	Adequate performance	Exemplary performance	
	1-4 points	5-8 points	9-10 points	
Communication of Simulation (X1)	It is difficult to understand the concept being communicated; an illogical explanation is presented.	The concept is communicated generally adequately.	The concept is communicated in an organized, clear, and concise manner.	
Creativity (X1)	The simulation lacks creativity; no, or very few, design principles are integrated in the simulation.	Some elements of creativity are expressed, with most design principles integrated.	The simulation exudes creativity; essential design principles and elements are integrated.	
Aesthetics and Artisanship (X1)	Unorganized, sloppy work is evident; the simulation seems to be an afterthought and/or thrown together.	A largely organized presentation of layout and design principles is evident.	An exemplary use of layout and design principles to logically communicate important data is evident.	
Graphical Representations (X2)	Graphical representations do not help to clarify simulation, or they are of little significance to the project.	Graphical representations are appropriate and help supplement the simulation by providing clarity to the project.	Graphical representations are of excellent quality; and clarify abstract concepts.	
Video (X1)	Videos do not help to clarify simulation, or they are of little significance to the project.	Videos are appropriate and help supplement the simulation by providing clarity to the project.	Videos are of excellent quality and clarify abstract concepts.	
Sound Integration (X1)	Sounds do not help to clarify simulation, or they are of little significance to the project.	Sounds are appropriate and help supplement the simulation by providing clarity to the project.	Sounds are of excellent quality and enhance the project.	
Originality (X1)	The simulation lacks imagination, originality, and artistic detail.	The simulation is somewhat effective, inventive, and inspiring.	The simulation is inspiring, inventive, resourceful, and motivating.	
VR (X1)	The simulation lacks VR demonstration and any elements to be effecticve use of a VR simulation.	The simulation somewhat uses VR elements effectively and demonstration uses VR feature somewhat effectively	The simulation is compleatly uses VR Elements and the Demonstration is effective in showing the intergration of the hardware with the simulation	
TIER 1 – SIMULATION SUBTOTAL (90 points)				

Rules violations (a deduction of 20% of the total possible points for the above sections) must be initialed by the judge, coordinator, and manager of the event. Record the deduction in the space to the right.

Indicate the rule violated: _____

TIME DEDUCTIONS

There will be a five (5) point deduction for each fifteen (15) seconds under the minimum time or each fifteen (15) seconds over the maximum time allowed for the simulation.

Total time for simulation	
Simulation time deduction	
TOTAL TIME DEDUCTION	

TIER 1 – SUBTOTAL (90 points)

TIER 2 – DOCUMENTATION PORTFOLIO (50 points)

CRITERIA	Minimal performance	Adequate performance	Exemplary performance	
	1-4 points	5-8 points	9-10 points	
Portfolio Components (X1)	The portfolio is unorganized and/or missing three (3) or more components.	The portfolio has most components and is adequately organized.	All components are present, and content and organization are clearly evident.	
Purpose (X1)	The purpose of the simulation idea generation is unclear.	The purpose is explained appropriately and adequately.	The purpose of the simulation is clear and concisely written, and compelling.	
Storyboard (X2)	The storyboard is sloppy, seems to have been thrown together after the creation of the simulation, and/or it does not correlate with the simulation.	The storyboard is drawn appropriately and largely correlates with the completed simulation.	The storyboard is of exceptional aesthetic and artistic quality and clearly correlates with the simulation, including timings.	
Work Log (X1)	The Work Log lacks major elements of documentation.	The Work Log is somewhat completed and generally reflects the time and work necessary for the project.	The Work Log completely and accurately reflects the time and work necessary for the project and captures collaborative work with edits and changes noted.	
TIER 2 – DOCUMENTATION PORTFOLIO SUBTOTAL (50 points)				

Rules violations (a deduction of 20% of the total possible points for the above sections) must be initialed by the judge, coordinator, and manager of the event. Record the deduction in the space to the right.

Indicate the rule violated: _____

PRELIMINARY SUBTOTAL (140 points)

VIRTUAL REALITY SIMULATION (VR)

SEMIFINAL PRESENTATION/INTERVIEW (60 points)				
CRITERIA	Minimal performance	Adequate performance	Exemplary performance	Record scores in the column spaces below.
	1-4 points	5-8 points	9-10 points	
VR Simulation (X2)	The simulation does not use the VR hardware and simulation not presented using VR formating/features	The simulation uses the VR hardware or minimal effective use VR formating/features.	The simulation uses the VR hardware effectively and Simulation enhanced by the use of VR formating/features.	
Organization (X1)	The team/individual seems unprepared and unorganized for the interview.	The team/individual is somewhat prepared and organized in its interview.	The team is well-prepared and any questions asked by judges are answered concisely.	
Knowledge (X2)	The team/individual seems to have little understanding of its chosen topic.	The team/individual has a generalized understanding of its chosen topic.	There is clear evidence of a thorough understanding of the chosen topic.	
Delivery (X1)	The team/individual is verbose and/or uncertain in the interview; posture, gestures, and lack of eye contact diminish the delivery.	The team/individual is somewhat well-spoken and clear in the interview; posture gestures, and eye contact result in an acceptable delivery.	The team/individual is well-spoken and distinct in the interview; posture, gestures, and eye contact result in a polished, natural, and effective delivery.	
SEMIFINAL PRESENTATION/INTERVIEW SUBTOTAL (60 points)				

Time violation (a deduction of five (5) points total will be incurred for exceeding the semifinalist interview time limit). Record the deduction in the space to the right.	

SEMIFINAL SUBTOTAL (60 points)	

To arrive at the TOTAL score, add any subtotals and subtract rules violation points, as necessary. **TOTAL (200 points)**	

Comments:

_____

I certify these results to be true and accurate to the best of my knowledge.

JUDGE

Printed name: _____   Signature: _____

VIRTUAL REALITY SIMULATION (VR) EVENT COORDINATOR INSTRUCTIONS

PERSONNEL

A. Event coordinator

B. Assistant for check-in, one (1)

C. Judges:

1. Preliminary round, two (2) or more for initial review of entries. If more than 20 entries, provide 2 additional evaluators to conduct heats.

2. Semifinal round, two (2) or more for interviews

MATERIALS

A. Coordinator's packet, containing:

1. Event guidelines, one (1) copy for the coordinator and for each judge

2. TSA Event Coordinator Report

B. Laptop with USB ability to view simulations with a VLC Player utilizing a Microsoft Windows operating system

C. Stopwatch

D. Interview questions

E. Tables for entries

F. Tables and chairs for initial judges

G. Tables and chairs for semifinalist judges and participants

H. Extension cords and power-bars with protection for judges, as needed

RESPONSIBILITIES

AT THE CONFERENCE

A. Attend the mandatory coordinator's meeting at the designated time and location.

B. Report to the CRC room and check the contents of the coordinator's packet.

C. Review the event guidelines and check to see that enough personnel have been scheduled.

D. Inspect the area or room in which the event is to be held for appropriate set-up, including room size, chairs, tables, outlets, etc. Notify the event manager of any potential problems.

E. At least one (1) hour before the event is scheduled to begin, meet with judges/assistants to review time limits, procedures, regulations, evaluation, and all other details related to the event. If questions arise that cannot be answered, speak to the event manager before the event begins.

F. Check that the room has the capability for participants to connect to a hotspot if needed for their VR demonstration.

G. Ensure the judges have access to the online judging system.

EVENT CHECK-IN

A. Participants check in:

1. The entry on a USB thumb drive

2. The documentation portfolio

B. Late entries are considered on a case-by-case basis and only when the lateness is caused by events beyond the participant's control.

C. In order to compete, participants must be on the entry list or must have approval of the CRC.

D. If check-in is on the first day of the conference, requirements for attire do NOT apply during check-in.

E. Place a team identification number stick-on label in the lower right-hand corner of each portfolio.

F. Secure the entries in the designated area.

PRELIMINARY ROUND

A. The number of judges depends upon the number of entries. Heats of 20 entries may be used at the coordinator's discretion.

B. Judges independently assess the entries using the following procedure:

1. Judges review and score the Simulation criteria to determine the top twenty-four (24) preliminary contestants, which will not be published.

2. Judges score the Documentation Portfolio criteria of those top twenty-four (24) contestants to determine the top twelve (12) semifinalist teams.

C. Decisions about rules violations must be discussed and verified with the judges, event coordinator, and a CRC manager to determine either:

1. To deduct twenty percent (20%) of the total possible points in this round or

2. To disqualify the entry

The event coordinator, judges, and CRC manager must initial either of these actions on the rating form.

D. Create an interview sign-up sheet.

SEMIFINAL ROUND

A. Inspect the area in which the interviews are to take place. Ensure that there is a table and seating for the presentation/interviews.

B. At least one (1) hour before the event is scheduled to begin, meet with judges/assistants to review time limits, procedures, regulations, evaluation, and all other details related to the event. If questions arise that cannot be answered, speak to the event manager before the event begins.

C. Semifinalists report to the event area at the time and place stated in the conference program to sign up for a presentation/interview time.

D. Manage the presentation/interview process.

E. Discuss rule violations (e.g. 20% deduction, disqualification) and have all relevant parties initial the rating form.

F. Manage security and removal of all materials from the area.

WEBMASTER

OVERVIEW

Applying leadership and 21st century skills, participants are required to design, build, and launch a website and present a given topic pertaining to technology. Semifinalists participate in an on-site interview to demonstrate the knowledge and expertise gained during the development of the website — with an emphasis on web design methods and practices, as well as their research for the annual design topic. The topic for the current year will be posted on the TSA website under *Themes & Problems*.

ELIGIBILITY

One (1) team per chapter may participate.

TIME LIMITS

PRELIMINARY ROUND

A. All components of the chapter's entry (website URL) must be finished, submitted, and accessible via the Internet by 11:59pm ET on a designated date mid-May.

B. Entries received or changes made to submitted entries after this deadline will not be judged.

SEMIFINAL ROUND

A. A maximum of ten (10) minutes is allowed for the interview.

ATTIRE

TSA competition attire is required for this event.

PROCEDURE

PRE-CONFERENCE

A. Participants review the TSA Honor Statement for Competitive Events found in the General Rules and listed in the individual competitive event rules.

B. Participants obtain the high school event challenge from the TSA website under *Themes & Problems*.

C. Participants design a website while observing the theme and design requirements.

D. Participants will submit the website address (URL) prior to the conference.

PRELIMINARY ROUND

A. A list of twelve (12) semifinalists (in random order) is posted on the first full day of conference.

SEMIFINAL ROUND

A. Participants report at the time and place stated in the conference program to sign up for an interview time.

B. Up to five (5) team representatives report at the assigned time and place for the interview.

C. Judges independently assess the interviews.

D. The top ten (10) finalists are announced at the awards ceremony.

REGULATIONS AND REQUIREMENTS

Students will work to develop their leadership and 21st century skills in the process of preparing for and participating in this TSA competitive event. The development and application of those skills must be evident in their submission, demonstration, and/or communication pertaining to the entry.

PRE-CONFERENCE/PRELIMINARY ROUND

A. Participants must launch their entry on a web server that can be accessed via the internet twenty-four (24) hours a day, seven (7) days a week, fifty-two (52) weeks per year.

B. Each entry must consist of web pages that specifically display the chapter's solution to the high school event theme and problem.

C. The website address (URL) must point to the main page of the team's entry. Entries requiring that access be granted (e.g., password protected, requires login credentials, etc.) will not be judged.

D. The solution to the problem is developed as a series of web pages (with a minimum of three [3] pages and no maximum number of pages) linked under the main solution web page.

1. All web pages must be developed during the current school year.

2. One (1) web page on the site must list all sources of information used to create the website and be labeled 'Reference Page.'

3. If copyrighted material, such as text, images, or sound from other sources is used, proper written permission must be included/documented on the reference page.

4. Participants must include a completed Student Copyright Checklist (in PDF format) as a link on the website reference page. (See Forms Appendix). Failure to include a Student Copyright Checklist will result in a disqualification.

5. Participants must include a completed Work Log (in PDF format) as a link on the website reference page. (See Forms Appendix); pages as needed

E. All entries must be compatible using the latest versions of Microsoft Edge, Firefox, Chrome, etc.

F. In addition to basic HTML code, the website may contain HTML5 and other state-of-the-art web-based technologies (e.g. JavaScript, jQuery, Angular, etc.).

G. Framework systems, such as Drupal, Joomla, Wordpress, Bootstrap, or other current technologies may be used; however, pre-built templates and themes for these sites are not permissible. If a framework system is used, a statement affirming that the template or theme used on the framework was built by the team must be posted on the reference page.

EVALUATION

PRELIMINARY ROUND

A. The website

SEMIFINAL ROUND

A. The interview

Refer to the official rating form for more information.

TSA HONOR STATEMENT

All work must be created and completed by individual competitors or teams. Plagiarism, the use of Generative Artificial Intelligence (GenAI) software, copyright violation, cheating, and falsification of information are prohibited. Participants may NOT use any generative artificial intelligence (GenAI) tools (e.g. ChatGPT, Google Gemini, GitHub Copilot, etc.). Any attempt to gain an unfair advantage will not be tolerated. Competitors at any level of TSA competition understand and agree to abide by the TSA Honor Statement.

If it is determined that a student violated the TSA Honor Statement, a rules violation of twenty percent (20%) will be incurred.

STEM INTEGRATION

This event aligns with the STEM (Science, Technology, Engineering, and Mathematics) educational standards.

LEADERSHIP AND 21ST CENTURY SKILLS

This event provides opportunity for students to build and develop leadership and 21st century skills including but not limited to – Communication, Collaboration/Social Skills, Initiative, Problem Solving/Risk Taking, Critical Thinking, Perseverance/Grit, Creativity, Relationship Building/Teamwork, Dependability/Integrity, and Flexibility/Adaptability

CAREERS RELATED TO THIS EVENT

This competition has connections to one (1) or more of the careers below:

• Computer engineer
• Webmaster
• Website designer
• Web technician

Participant/Team ID# _____

WEBMASTER
2025 & 2026 OFFICIAL RATING FORM
HIGH SCHOOL

Judges: Using minimal (1-4 points), adequate (5-8 points), or exemplary (9-10 points) performance levels as a guideline in the rating form, record the scores earned for the event criteria in the column spaces to the right. The X1 or X2 notation in the criteria column is a multiplier factor for determining the points earned. (Example: an "adequate" score of 7 for an X1 criterion = 7 points; an "adequate" score of 7 for an X2 criterion = 14 points.) A score of zero (0) is acceptable if the minimal performance for any criterion is not met.

Go/No Go Specifications

- Before judging the entry, ensure that the items below are present; indicate presence with a check mark in the box.
- If an item is missing, leave the box next to the item blank and place a check mark in the box labeled ENTRY NOT EVALUATED.
- If a check mark is placed in the ENTRY NOT EVALUATED box, the entry is not to be judged.

- ☐ Website address URL that is accessible and functional.
- ☐ Student Copyright Checklist is present
- ☐ ENTRY NOT EVALUATED

PRELIMINARY WEBSITE (130 points)

Record scores in the column spaces below.

CRITERIA	Minimal performance 1-4 points	Adequate performance 5-8 points	Exemplary performance 9-10 points	
Theme (X2)	The annual theme is not addressed.	The annual theme is somewhat addressed, but the supporting pages do not adequately support or contribute to the overall design.	The annual theme is addressed and is reflected in the supporting pages.	
Challenge (X3)	The challenge is not addressed, or addressed but not in detail; it is generally ineffective, and/or missing many parts of the required research and presentation; unrelated or distracting elements are present.	The challenge solution is generally well presented; it addresses most major parts of the required research and presentation; there are few or no unrelated or distracting elements.	The design brief solution is well presented, well researched, and highly effective; all expected components are present, and additional related elements that enhance the final product are incorporated; there are no unrelated or distracting elements.	
Content (X2)	The content lacks originality and does not contribute to the overall design of the webpage; the content does not align with the purpose of the website.	Very basic information is presented; the content aligns somewhat with the purpose of the website; some pages are irrelevant.	The content aligns well with the purpose of the website and adds to its effectiveness.	
Layout and Navigation (X2)	The web pages are cluttered and confusing; it is often difficult to locate important elements; the navigation structure is unclear, unintuitive, and ineffective in getting users to relevant information.	The web pages have a reasonably usable layout, and all major elements can be found; the design is generally pleasing to view; the navigation structure is generally effective and intuitive, and provides reasonable ability to navigate the website.	The layout is exceptionally user-friendly; the relationship of elements and content are effective and attractive to the viewer; the navigation structure is highly intuitive, and provides efficient access to all pertinent information on the website.	
Graphics and Color Scheme (X2)	Graphic content is nonexistent or of low quality and questionable relation to the topic; colors are of poor contrast and detract from the user experience.	Graphic content effectively relates to the purpose of the site, provides enhancement to the user experience, and is of acceptable quality; the color scheme is effective and does not detract from the viewer's experience.	Graphics are well-used, of high quality, and clearly enhance the user experience; interactive elements effectively engage the user; the color scheme is attractive, appropriate, and clearly enhances the viewing experience.	

PRELIMINARY WEBSITE (130 points) – continued

Function and Compatibility (X1)	There are several broken links and images, and/or the website does not render properly on multiple browsers.	There are no broken images, and/or few, if any, broken links; the website renders properly on most major browsers.	There are no broken images or links; the web site renders properly on most major browsers and is usable on mobile devices.	
Spelling and Grammar (X1)	There are numerous spelling and grammatical errors.	There are only a few spelling and/or grammatical errors.	There are few, if any, spelling and grammatical errors.	
			PRELIMINARY WEBSITE SUBTOTAL (130 points)	

Rules violations (a deduction of 20% of the total possible points for the above sections) must be initialed by the judge, coordinator, and manager of the event. Record the deduction in the space to the right.

Indicate the rule violated: _____

PRELIMINARY SUBTOTAL (130 points)	

SEMIFINAL INTERVIEW (50 points)

CRITERIA	Minimal performance	Adequate performance	Exemplary performance	
	1-4 points	5-8 points	9-10 points	
Knowledge (X2)	Team members seem to have little understanding of their project; answers are vague, short, and/or incomplete.	Team members have a general understanding of their project, and adequately discuss their process and solution to the challenge.	There is clear evidence that the team members have a thorough understanding of their project and design procedure.	
Articulation (X1)	Communication of the design process is unclear, unorganized, and or illogical; leadership and/or 21st century skills are not evident.	Communication of the design process is somewhat logical and clear; leadership and/or 21st century skills are somewhat evident.	Communication of the design process is clear, concise, and logical; leadership and/or 21st century skills are clearly evident.	
Delivery (X1)	The team is verbose and/or uncertain in its interview; participants' posture, gestures, and lack of eye contact diminish the interview.	The team is somewhat well-spoken and distinct in its interview; participants' posture gestures, and eye contact are acceptable in the interview.	The team is well-spoken and distinct in its interview; participants' posture, gestures, and eye contact result in a polished, natural, and effective interview.	
Engagement and Participation (X1)	The team must be prompted to provide answers and information; a clear team leader dominates the interview, while other team members are unresponsive.	Team members generally answer questions with responses of acceptable length and depth; most team members participate adequately in the interview and engage the judges when answering questions.	All team members contribute in the interview; while there may be a clear team leader, all members provide appropriate substantive material to the conversation; the team engages the judges in the interview, which becomes less of a question and answer session and more of a conversation about the topic and solution.	
			SEMIFINAL INTERVIEW SUBTOTAL (50 points)	

Rules violations (a deduction of 20% of the total possible points for the above sections) must be initialed by the judge, coordinator, and manager of the event. Record the deduction in the space to the right.

Indicate the rule violated: _____

SEMIFINAL SUBTOTAL (50 points)

To arrive at the TOTAL score, add any subtotals and subtract rules violation points, as necessary.   **TOTAL (180 points)**

Comments:

_____

I certify these results to be true and accurate to the best of my knowledge.

JUDGE

Printed name: _____   Signature: _____

WEBMASTER
EVENT COORDINATOR INSTRUCTIONS

PERSONNEL

A. Event coordinator

B. Judges:

1. Preliminary round for Pre-conference evaluation of websites, two (2) or more

2. Semifinal round, semifinalist interviews, two (2) or more

MATERIALS

A. Coordinator's packet, containing:

1. Event guidelines, one (1) copy for the coordinator and for each judge

2. TSA Event Coordinator Report

B. Stopwatch

C. The latest version of Internet Explorer, Firefox, Chrome, etc.

D. List of questions for on-site interviews

E. Laptop computer with high speed Internet capability

RESPONSIBILITIES

PRE-CONFERENCE

A. National TSA will collect entries until 11:59pm ET on a designated date in mid-May. The results will be shared with the CRC manager, event coordinator, and assigned judges.

B. Review entries as they are submitted to the designated online storage utility.

C. Manage communication and Pre-conference evaluation (at least two [2] or more judges should be recruited earlier in the year). Coordinate with National TSA and/or the Judge Manager.

AT THE CONFERENCE

A. Attend the mandatory coordinator's meeting at the designated time and location.

B. Report to the CRC room and check the contents of the coordinator's packet.

C. Review the event guidelines and check to see that enough personnel have been scheduled.

D. Inspect the area or room in which the event is to be held for appropriate set-up, including room size, chairs, tables, outlets, etc. Notify the event manager of any potential problems.

E. Ensure the judges have access to the online judging system.

PRELIMINARY ROUND

A. On the first full day of the conference, post a list of the twelve (12) semifinalists in random order.

SEMIFINAL ROUND

A. Review the time limits, procedures, and regulations with judges and clear up any questions or misunderstandings.

B. Distribute/discuss the guidelines for the interview to the judges.

C. Semifinalist teams report at the time and place stated in the conference program to sign up for an interview time.

D. Manage completion of the on-site interviews.

E. Decisions about rules violations must be discussed and verified with the judges, event coordinator, and the CRC manager to determine either:

1. To deduct twenty percent (20%) of the total possible points in this round

2. To disqualify the entry

The event coordinator, judges, and CRC manager must initial either of these actions on the rating form.

F. If necessary, manage security and the removal of materials from the event area.

FORMS APPENDIX

Downloadable forms are available
in the TSA Membership System under
Total TSA/Competition Forms.

TECHNOLOGY STUDENT ASSOCIATION WORK LOG

	Date	Task	Time involved	Team member responsible (student initials)	Comments
1.					
2.					
3.					
4.					
5.					
6.					

STUDENT COPYRIGHT CHECKLIST *(for students to complete and advisors to verify)*

STUDENT: Answer question 1 below.

1) Does your solution to the competitive event integrate any type of music and/or sound? ☐ YES ☐ NO

   If NO, go to question 2.

   If YES, is the music and/or sound copyrighted? ☐ YES ☐ NO

   If YES, move to question 1A. If NO, move to question 1B.

   1A) Have you asked for author permission to use the music and/or sound in your solution and included that permission (letter/form) in your documentation? If YES, move to question 2. If NO, ask for permission and if permission is granted, include the permission in your documentation.

   1B) Is the music/sound royalty free, or did you create the music/sound yourself? If YES, cite the royalty free music/sound OR your original music/sound properly in your documentation.

CHAPTER ADVISOR: Sign below regarding your student's answer(s) to the use of music/sound in his/her competitive event solution. Even if your student answers "NO" to question 1, please sign below noting that you have evaluated the competitive event solution and the student answered the question(s) accurately.

I, _____ (chapter advisor), have checked my student's solution and confirm that any use of music/sound is done so with proper permission and is cited correctly in the student's documentation and/or the solution has been found to have no music/sound included.

STUDENT: Answer question 2 below.

2) Does your solution to the competitive event integrate any graphics/videos? ☐ YES ☐ NO

   If NO, go to question 3.

   If YES, is(are) the graphics/videos copyrighted, registered and/or trademarked? ☐ YES ☐ NO

   If YES, move to question 2A. If NO, move to question 2B.

   2A) Have you asked for author permission to use the graphics and/or videos in your solution and included a permission (letter/form) in your documentation for graphic/video used? If YES, move to question 3. If NO, ask for permission and if permission is granted, include the permission in your documentation.

   2B) Is(are) the graphics/videos royalty free, or did you create your own graphic? If YES, cite the royalty free graphics/videos OR your own original graphics/videos properly in your documentation.

CHAPTER ADVISOR: Sign below regarding your student's answer(s) to the use of graphics/videos in his/her competitive event solution. Even if your student answers "NO" to question 2, please sign below noting that you have evaluated the competitive event solution and the student answered the question(s) accurately.

I, _____ (chapter advisor), have checked my student's solution and confirm that the use of graphics/videos with proper permission and is cited correctly in the student's documentation and/or the solution has been found to have no graphics/videos included.

STUDENT: Answer question 3 below.

3) Does your solution to the competitive event use another's thoughts or research? ☐ YES ☐ NO

   If NO, this is the end of the checklist.

   If YES, have you properly cited other's thoughts or research in your documentation? ☐ YES ☐ NO

   CHAPTER ADVISOR: Sign below regarding your student's answer(s) to having integrated any thoughts/research of others in his/her competitive event solution. Even if your student answers "NO" to question 3, please sign below noting that you have evaluated the competitive event solution and the student answered the question(s) accurately.

   I, _____ (chapter advisor), have checked my student's solution and confirm that the use of the thoughts/research of others is done so with proper permission and is cited correctly in the student's documentation and/or the solution has been found to have all original thought with no use of other's thoughts/research.

Student Initials: _____

Chapter Advisor Signature: _____

PHOTO/FILM/VIDEO CONSENT AND RELEASE

I hereby give permission for images of my child or myself (as applicable), captured during Technology Student Association (TSA) activities through film, photo or digital camera, to be used solely for the purposes of TSA promotional materials and publications, and I waive any rights of compensation or ownership thereto.

_____

Name of Minor in Images (please print)

_____

Name of Minor's Parent/Guardian (please print)

_____

Name of Adult in Images (please print)

_____

Parent/Guardian or Adult's Signature (as applicable)

_____

Date

NEW COMPETITIVE EVENT PROPOSAL

New proposals may only be submitted by a chapter or state advisor or TSA alumni. Please attach any additional pages as necessary.

Name of Competitive Event: _____

Level: ☐ High School ☐ Middle School

Overview (description of the event and participant expectations):

Eligibility for entry (how many teams/individuals can participate):

Limitations (such as time or entry submission requirements):

Resources (i.e. are the resources a limiting factor, or are they affordable/readily available to all populations? Can this be executed at the national level?):

Specific regulations:

Required personnel:

Alignment with STEM standards (how does this align with STEM standards?):

What are the societal benefits for learning this information? How can this be applied in a real world context?

Do you know of a TSA Chapter, at the regional or state level, that executes this event at conferences? If so, which?

_____

Name   Date

_____

Email   Phone Number

How are you affiliated with TSA? ☐ Chapter Advisor ☐ Alumni ☐ Other: _____

Mail to: CRC, c/o National TSA, 1904 Association Drive, Reston, VA 20191-1540; Email to: general@tsaweb.org

EVENT REVISION SUGGESTION

As TSA expands its membership and participation in competitive events increases, competitive events may require revision. TSA consistently tracks and monitors misinterpretations and strives to revise the guide to improve clarity. TSA encourages input so that competitive events continue to improve. Use this form to note how outcomes for competitive events may be improved.

Competitive Event: _____

Level:　☐ High School　☐ Middle School

Note a reference to the exact section and page number (if applicable): _____

Specifically state the suggestion. List exactly what should be deleted, replaced, and/or added to the event rule or procedure.

Provide a rationale and list the pros and cons of this proposed update.

In your opinion, will the update to this event change the space requirements at the conference?　☐ YES ☐ NO
If yes, provide your rationale.

In your opinion, will the update to this event require additional resources?　☐ YES ☐ NO
If yes, provide your rationale.

Enter any additional comments

Print Name	Signature	Date

State Advisor's Name	Signature	Date

Contact Email	Contact Phone

Mail to: CRC, c/o National TSA, 1904 Association Drive, Reston, VA 20191-1540; Email to: general@tsaweb.org

RULES INTERPRETATION PANEL GRIEVANCE

Site of National TSA Conference _____

Advisor's Name_____

School Name _____

State_____

Competitive Event (including level)_____

Student or Team Identification Number_____

STATEMENT OF CONCERN (Please print or type.)

_____
Signature of Advisor   Date

_____
Signature of State Advisor   Date

The decisions of the Rules Interpretation Panel (RIP) at the National Conference are final.

RULES INTERPRETATION PANEL RESPONSE TO GRIEVANCE

PANEL MEMBERS

_____

Signature   Date

_____

Signature   Date

_____

Signature   Date

Site of National TSA Conference _____

Date _____

Competitive Event (including level)_____

Student or Team Identification Number_____

Advisor's Name_____

STATEMENT OF RESPONSE

The decisions of the Rules Interpretation Panel (RIP) at the National Conference are final.