

TSA NATIONAL EVENTS

Animatronics – Participants work as a team to demonstrate knowledge of mechanical and control systems by designing, fabricating, and controlling an animatronics device that will communicate, entertain, inform, demonstrate and/or illustrate a topic, idea, subject or concept. Sound, lights and surrounding environment are to accompany the device. **Three (3) teams of three (3) per chapter.**

Architectural Model – Participants develop a set of architectural plans and related materials for an annual architectural design challenge and construct an architectural model to accurately depict their design. In 2011, participants design a museum for manual arts, industrial arts and technology education. **Six (6) entries (individual or team) per chapter.**

** **UPDATE - Biotechnology Design** – Participants select a contemporary biotechnology problem that relates to the current year's published area of focus and demonstrate understanding of it through documented research, the development of a solution, a display, and an effective multimedia presentation. If appropriate, a model or prototype of the solution may be included in the display. Participants may choose to recreate or simulate research that previously has been performed within the scientific community. The biotechnology area of focus for 2011 is Genetic Engineering. **Three (3) teams of two (2) per chapter.**

Career Comparisons - Participants thoroughly research various technology-related careers associated with one of the technology areas listed in the national competitive events guide. After documenting the research, each participant must submit a cover letter and resume for one of the careers and complete a job application on site. Semifinalists also participate in an on-site job interview. **Six (6) students per chapter.**
Chapter Team – Parliamentary procedure competition. **One (1) team of six (6) per chapter.**

** **UPDATE - Computer Aided Design - 2D Architecture** – Students will compete on site to solve a given problem. Participants create representations, such as foundation and/or floor plans, and/or elevation drawings, and/or details of architectural ornamentation or cabinetry. *NOTE: Participants may compete in CAD 2D, Architecture or CAD 3D, Engineering, but not both.* **Four (4) students per chapter with only one (1) CAD event per student.**

** **UPDATE - Computer Aided Design - 3D Engineering** – Students will compete on site to solve a given problem. Participants create a 3D computer model(s) of an engineering or machine object, such as a machine part, tool, device, or manufactured product. *NOTE: Participants may compete in CAD 2D, Architecture or CAD 3D, Engineering, but not both.* **Four (4) students per chapter with only one (1) CAD event per student.**

** **NEW - Construction Renovation** – Participants develop a set of presentation boards to include plans, illustrations and finishes for a specified space. The solution must include all applicable construction systems. **Three (3) teams of two (2) per chapter.**

Debating Technological Issues - Team members work together to prepare for a debate against a team from another chapter. The teams will be instructed to take either the pro or con side of the designated topic published in the national competitive events guide. **Entries are limited to one (1) team of two (2) members per chapter.**

Desktop Publishing – Participants develop a notebook, a tri-fold pamphlet, a three (3)-column newsletter, and a poster. All participants (not just semifinalists) then work to solve an on-site problem that demonstrates their abilities to use the computer to design, edit, and print materials for publication. The theme for 2011 is *A Whole New World*. **Six (6) students per chapter.**

**** NEW - Digital Video Production** - Participants develop a digital video/film that focuses on the given year's theme. Sound may accompany the film. The theme for 2011 is Drama. **One (1) team per chapter.**

Dragster Design – Participants design, produce working drawings for, and build a CO₂-powered dragster. **Three (3) students per chapter.**

Engineering Design – Participants work as part of a team to solve a design problem. Through use of a model/prototype, display, and design notebook, the team explains in detail how it has solved the problem and the solution's impact on society and the environment. Semifinalists demonstrate the problem and solution in a timed presentation. **Three (3) teams of three to five (3-5) people per chapter.**

Essays on Technology – Participants conduct research in a published technological area and, using the knowledge and personal insights gained from this research, write a persuasive essay on one (1) subtopic selected from two (2) or three (3) related subtopics designated on site. **Three (3) students per chapter.**

Extemporaneous Presentation – 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 for their speech is written. **Three (3) students per chapter.**

Fashion Design - Students have the opportunity to research, develop, and create garment designs, garment mock-ups, and portfolios that reflect the current year's published theme. Twelve (12) qualifying semifinalist teams participate in an on-site event in which they present their potential garment designs to the judges on a TSA runway. The theme challenge for 2011 is to design two (2) costumes for a current Broadway play of the team's choice. **One (1) team of two to four (2-4) members per chapter.**

Flight Endurance – Build an airplane (ahead of time) to stay in the air the longest amount of time. This plane must rise off the ground (R.O.G.) on its own. **Six (6) students per chapter.**

Future Technology Teacher - Participants research and select three (3) accredited colleges or universities that offer technology education/engineering technology teacher preparation as a major. Each participant will write no more than one (1) page (simulated college essay) explaining why s/he would like to become a technology education/engineering technology teacher and what would constitute success in the field. In addition, each participant will develop and present a one (1)-class period activity (with a lesson plan) using the ITEEA standards for technological literacy. **Three (3) individual students per chapter.**

Manufacturing Prototype – Participants design and manufacture a prototype of a product and provide a description of how the product could be manufactured in a

state-of-the-art American manufacturing facility. The product for 2011 is TSA officer symbols, plus the gavel and block. **Two (2) entries per chapter.**

Music Production - Participants produce an original musical piece that is designed to be played during the national TSA conference opening or closing general sessions. The musical piece should be energizing, interesting and of a spirit consistent with the Technology Student Association. **One (1) team per chapter.**

**** UPDATE - On Demand Video** - Participants write, shoot, and edit a short video during the conference in this on-site event. Required criteria, such as props and a line of dialogue, make the competition more challenging and will be revealed at the event orientation meeting. *NOTE: Due to the length of the state conference, this event will be shortened at state to fit within the allotted time.* **One (1) team of two (2) or more students per chapter.**

**** NEW - Photographic Technology** – Students capture images and process photographic and digital prints that depict the current year's published theme. Twelve (12) qualifying semifinalists participate in an on-site event in which they capture digital images and utilize multimedia software to prepare a storyboard/outline and media presentation of newsworthy TSA conference activities and events. The theme for 2011 is Doors. **Six (6) students per chapter.**

Prepared Presentation – Participants deliver an oral presentation that includes audio and/or visual enhancement based on the theme for the current year's conference. The theme for the 2011 conference is Snapshot of Innovation. **Three (3) students per chapter.**

**** UPDATE - Promotional Graphics** – Participants develop and present a graphic design that can be used to promote participation in TSA competitive events. The design will promote competitions offered in the TSA competitive events guide. Participants will choose one (1) of the three (3) competitions listed in the national competitive events guide. **Six (6) students per chapter.**

SciVis – Participants develop a visualization focusing on a subject or topic from one (1) or more of the following areas: science, technology, engineering or mathematics. **Three (3) per chapter.**

**** UPDATE - Structural Engineering** – Participants work as part of a team on site with supplied materials to build a model of a structure that is destructively tested to determine design efficiency. **Two (2) teams of two (2) per chapter.**

System Control Technology – Participants work as part of a team on-site 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 evaluators to operate the device. **One (1) team of three (3) per chapter.**

Technical Sketching and Application – Participants complete a written test in order to qualify as semifinalists. Semifinalists then demonstrate their ability to solve on-site engineering graphics problems using standard drafting techniques. **Six (6) individuals per chapter.**

Technology Bowl – A written test followed by a knowledge bowl format like “Jeopardy” where students “buzz-in” and answer technical questions orally. **One (1) team of three (3) students per chapter.**

** *UPDATE* - **Technology Problem Solving** – Participants work together to develop and create a solution to a problem using the limited materials provided and the tools allowed. Completed solutions will be objectively measured and judged to determine the best and most effective solution for the stated problem. Participants won't know what this one is until they show up! **Two (2) teams of two (2) per chapter.**

Transportation Modeling – Participants use engineering skills to design and fabricate a CO2-powered scale model of a vehicle that meets the current year's stated design theme. The design theme for 2011 is a custom golf cart. **Three (3) students per chapter.**

** *UPDATE* - **Video Game Design** -- Participants develop an E-rated game that focuses on the subject of their choice. The game should be interesting, exciting, visually appealing and intellectually challenging. The game should have high artistic, educational, and social value. A working, interactive game will be submitted on a DVD for evaluation. **Three (3) teams of two (2) students per chapter.**

** *UPDATE* - **Webmaster** – Participants are required to design, build and launch a World Wide Web site that features the school's career and technology education program, the TSA chapter, and the chapter's ability to research topics pertaining to technology. Conference semifinalists participate in an on-site interview to demonstrate the knowledge and expertise gained during the development of the website with an emphasis on Internet and web history, web design (school, chapter and design brief pages), and research about cutting edge advances in technology. *NOTE: Early Deadline: All url's must be sent to tony.raymond.cccs.edu by Friday, January 28, 2011.* **One (1) team of three to five (3-5) members.**