

State Leadership Conference “Technosphere ‘10”

Judges Needed at State Leadership Conference

VIRGINIA



TECHNOLOGY STUDENT ASSOCIATION

The Virginia Association of the Technology Student Association would like to invite you and members of your organization to come and help judge at our State Leadership Conference, “Technosphere 09”. This event will be held at the Sheraton Premiere at Tyson’s Corner, Vienna, VA on April 23-25, 2010. At the state conference, more than 1,400 students from the Commonwealth of Virginia come together to compete in leadership and technology related events.

We are writing to you because of your expertise in the area of industry. We feel that you would make ideal judges given their experience in this area. Please assist us in providing valuable educational experiences for these students.

The Virginia Association of the Technology Student Association fosters personal growth, leadership, and opportunities in technology, innovation, design and engineering for its members. There are a wide variety of competitions that deal with all disciplines of technology. The competitive aspect of TSA allows students to develop leadership skills and demonstrate their understanding of technologies of interest to them.

TSA is comprised of over 9,000 members statewide who are enrolled in or have taken Technology Education courses. TSA includes educators, students, and business leaders located around the world, who are committed to making a technologically literate society.

In return for their dedication, volunteers receive:

- A gift of our appreciation
- Lunch
- Entry in a raffle

Included is a description of all the events, and a judge form. If you or others can adjust your personal schedules to help make Technosphere a success, please mail or fax back the judge form. Please indicate on the form, event(s) for which your expertise is appropriate.

Sincerely,

LaTasha Watson
Virginia TSA State Advisor

Inside this issue:

Contest Names

Pages 2, 3,4, 5

Judge Response Form

Page 6

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Middle School Competition Descriptions

Agriculture and Biotechnology Issues Participants conduct research on a contemporary agriculture or biotechnology issue of their choosing, document their research, and create a display. The information gathered may be student-performed research or a re-creation or simulation of research performed by the scientific community. If appropriate, a model or prototype depicting some aspect of the issue may be included in the display.

Career Prep Participants conduct research on a selected technology-related career and use the knowledge gained to prepare a resume and cover letter, complete a job application, and participate in a mock interview.

Challenging Technology Issues Participants prepare and deliver an extemporaneous debate style presentation, with team members explaining opposing views of a current technology issue that has been selected on site from a choice of three options.

Chapter Team Participants demonstrate their understanding of parliamentary procedure relative to business meetings.

Communication Challenge Participants 1) a newsletter that promotes the chapter's activities, 2) an effective sponsor support request on chapter letterhead, and 3) a business card.

Construction Challenge Participants submit a display that documents the use of their leadership and technical skills to fulfill a community need related to construction.

Digital Photography Participants produce and submit an album of digital photographs consisting of color or black and white digital photographs that present a theme in journalistic style.

Dragster Participants design, produce working drawings for, and build a CO₂-powered dragster.

Electronic Gaming Participants develop an E-rated game that focuses on the subject of their choice.

Engineering Structure Participants work to determine superior engineering as they conduct research and then model and test a structure that is designed to hold the greatest load.

Environmental Focus Participants identify and research a specific environmental problem or issue that has been influenced by advancements in technology.

Flight Participants study the principles of flight and design in order to fabricate (using materials provided) and test-fly gliders.

Geospatial Technology Participants develop a pre-conference electronic portfolio, profiling an assigned geographic area and solve an assigned on-site problem given a specific geographic area and the related data set. All participants then work to solve an on-site problem that demonstrates their abilities to use a suite of GIS tools and GPS technology to address a real-world problem.

Global Manufacturing Participants formed from the three TSA chapters involved] design, manufacture and package a marketable mass-produced product through a collaborative effort.

Go Green Manufacturing Participants design and manufacture a product using recycled material that has been donated from business or industry.

Graphic Design Participants create and produce a graphic design that is appropriate for national TSA conference publications and other small promotional items.

Middle School Competition Descriptions

Inventions and Innovations Participants investigate and determine the need for the invention or innovation of a device, system or process.

Leadership Strategies Participants work in teams to develop a plan of action that addresses a specific challenging situation provided on site.

Lights, Camera, Action Participants develop and submit a detailed storyboard, production plan and finished video that depicts the chapter's involvement in TSA, technology education, or community service.

Medical Technology Issues Participants [one entry per team] conduct research on a contemporary medical technology issue of their choosing, document their research, and create a display.

Multimedia Production Participants create and design a stand-alone multimedia presentation to promote TSA.

Prepared Speech Participants develop and deliver an oral presentation that reflects the theme of the current year's national conference.

Problem Solving Participants use problem solving skills to develop a finite solution to a stated problem given on site.

Robot TOBOR Participants design, fabricate, test, record the design and work efforts for, and demonstrate the use of a remote-controlled robot that can complete a course and perform a designated task.

System Control Technology Participants develop a computer-controlled model solution to a problem provided on site. Typically, the problem is a scenario of a situation in an industrial setting that requires a solution.

Tech Bowl Participants are required to complete a written objective examination to qualify for the oral question/response, head-to-head team competition phase of the event.

Technical Drawing Participants demonstrate the ability to read and interpret technical sketches, drawings, and the use of materials when they complete a technical design and illustration test.

Techno Talk Participants demonstrate the ability to work together in teams of randomly paired students in order to build and replicate a structure using limited communication.

Transportation Challenge Participants design, engineer, and fabricate a battery-powered vehicle that covers a course in the shortest amount of time.

TSA Cup: Marine Design Participants develop a model of a propeller-driven race boat (that has an affiliation with a country) that is tested and raced in a water tank.

Website Design Participants are required to design, build and launch a World Wide Web site that features the team's research about a cutting edge science, technology, engineering or mathematics-related topic. .

Write Now! Technical Writing Participants conduct research on two or three specified subtopics of a broader technological area and, using the knowledge and resources gained through that research, write a comprehensive report on the one subtopic that is designated on site.

High School Competition Descriptions

Agriculture and Biotechnology Design

Participants (three teams of two or more members per state, one entry per team) conduct research on a contemporary agriculture or biotechnology problem of their choosing, document their research, and create a display. The information gathered may be student-performed research or a re-creation or simulation of research performed by the scientific community. If appropriate, a model or prototype of the solution may be included in the display.

Animatronics Participants (one team per chapter, one entry per team) 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 a surrounding environment must accompany the device.

Architectural Model Participants (one individual or team per chapter, one entry per individual or team) develop a set of architectural plans and related materials for an annual architectural design challenge and construct an architectural model to accurately depict the design.

Career Comparisons Participants (one individual per chapter) thoroughly research various technology-related careers that are associated with one of the following technology areas: Biotechnology, Communications, Energy and Power, Engineering, Manufacturing, Medical Technology, Technology Education Teaching, Transportation, or Construction. After documenting the research, each student submits a cover letter and resume for the selected career and completes a formal job application. Semifinalists participate in an on-site mock interview.

Chapter Team (Written and Oral) Participants (one team of six members per chapter) take a written parliamentary procedures test in order to proceed to the semifinals. Semifinalist teams perform an opening ceremony, dispose of three items of business, and perform a closing ceremony within a specified time period.

Computer-Aided Design (CAD), Architecture with Animation Participants (two individuals per state) create representations, such as foundation and/or floor plans, and/or elevation drawings, and/or details of architectural ornamentation or cabinetry. Students may be expected to animate a presentation of their entry.

Computer-Aided Design (CAD), Engineering with Animation Participants (two individuals per state) create 3D computer model(s) of an engineering or machine object, such as a machine part, tool, device, or manufactured product. Students may be expected to animate a portion of their model.

Construction Systems Participants (one team of two members per chapter) complete a written test on general construction systems knowledge. Semifinalist teams demonstrate their knowledge by solving a construction systems problem that is announced on site.

Cyberspace Pursuit Participants (one team of three to five members per chapter) are required to design, build and launch a 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. Pre-conference semifinalists participate in an on-site oral examination/interview.

Debating Technological Issues Participants (three teams of two members per state) debate against a team/s from another chapter in order to advance to the semifinals. The teams are instructed on site to take either the pro or con side of a topic that is designated annually.

Desktop Publishing Participants (one individual per state, one entry per individual) develop a notebook that includes a tri-fold pamphlet, a three-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.

Dragster Design Participants (two individuals per chapter, one entry per individual) design, produce working drawings for, and build a CO₂-powered dragster.

Electronic Game Design Participants [three teams per state (a minimum of two individuals per team)] develop an E-rated game that focuses on the subject of their choice.

Electronic Research and Experimentation Participants (one team of two or more individuals per chapter, one entry per team) research, plan, design, and construct an electronic device. Entries are evaluated on quality of research, ingenuity and complexity of the device, and effectiveness of the exhibit display.

Engineering Design Participants (one team of three to five members per chapter, one entry per team) 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.

Essays on Technology Participants (three individuals per state) conduct research in an announced technological area and, using the knowledge and personal insights gained from this research, write a persuasive essay on one subtopic selected from two or three related subtopics designated on site.

Extemporaneous Presentation Participants (three individuals per state) give a three to five minute speech, fifteen minutes after having drawn a card on which a technology or TSA topic for a speech is written.

Fashion Design Participants (one team of two to four members per chapter) research, develop and create garment designs, garment mock-ups, and portfolios that reflect the current year's published theme. Semifinalists participate in an on-site event in which they present their potential garment designs to the judges on a TSA runway.

Film Participants (three teams per state) develop a film that focuses on a subject of their choice from one or more of the following areas: the arts, social studies, science, or technology. Possible subjects include, but are not limited to, social studies documentaries, nature films, advertisements, comedies, or dramas. Sound may accompany the film/video.

Flight Endurance Participants (two individuals per chapter, one entry per individual) analyze flight principles with a rubber band-powered model aircraft.

High School Competition Descriptions

Future Technology Teacher Participants (three individuals per chapter) research and select three accredited colleges or universities that offer technology education or engineering technology teacher preparation as a major. Each participant must write a one page simulated college essay about the wish to become a teacher in either major. Participants also develop and present a lesson plan.

Geospatial Technology Participants develop a pre-conference electronic portfolio, profiling an assigned geographic area and solve an assigned on-site problem given a specific geographic area and the related data set. All participants then work to solve an on-site problem that demonstrates their abilities to use a suite of GIS tools and GPS technology to address a real-world problem.

Imaging Technology Participants (one individual per chapter, one entry per individual) capture images and process photographic and digital prints for display that depict the current year's published theme. Semifinalists participate in an on-site event in which they record digital images and utilize multi-media software to prepare a storyboard/outline and media presentation of newsworthy TSA conference activities and events.

Manufacturing Prototype Participants (one team per chapter) 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.

Medical Technology Participants (three teams per state, two or more participants per team) conduct research on a contemporary medical technology problem of their choosing, document their research, and create a display. The information gathered may be student-performed research or a re-creation or simulation of research performed by the scientific community. A model or prototype of the solution must be included in the display.

Music Production Participants (three teams per state) produce a musical piece that is designed to be played during the national TSA conference opening or closing general sessions.

On Demand Video Participants (one team of two or more students per chapter, one entry per team) write, shoot, and edit a sixty second video during the conference in this on-site event.

Prepared Presentation Participants (three individuals per state) deliver an oral presentation that includes audio and/or visual enhancement based on the theme for the current year's conference.

Principals of Technology Participants demonstrate their knowledge of physics, technology and mathematics. The problems used in the competition stem from the principles and concepts embedded in Principles of Technology I and II (9811 and 9812). Each team of students will work as a group to solve a series of problems.

Promotional Graphics Participants (two individuals per chapter, one entry each) develop and present a graphic design that can be used as a TSA recruitment tool and that includes the theme for the next year's conference.

Radio Controlled Transportation Participants (one team of two members per chapter, one entry per team) design, fabricate, test, and demonstrate the use of a radio-controlled vehicle that collects and distributes a load during a five minute demonstration. Evaluation is based on performance, vehicle craftsmanship, and documentation of design efforts.

Scientific and Technical Visualization (SCIVIZ) Participants (three teams per state) develop a visualization focusing on a subject or topic from one or more of the following areas: science, technology, engineering and mathematics.

Structural Engineering Participants (one team of two members per chapter, one entry per team) 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.

System Control Technology Participants (one team of three members per state, one entry per team) 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.

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

Technology Bowl (Written and Oral) Participants (one team of three members per chapter) complete a written, objective test in order to qualify for oral question/response, head-to-head team competition.

Technology Dare Participants (one team of two members per chapter, one entry per team) design, fabricate, and demonstrate the application and control of mechanical, fluid, and electrical power by applying power and energy principles to move balls with a pneumatic flow. Evaluation is based on a demonstration of the application of mechanical, fluid and electrical energy principles, and craftsmanship.

Technology Problem Solving Participants (one team of two members per chapter) use problem solving skills and limited materials to develop a solution to a problem given on site.

Transportation Modeling Participants (one individual per chapter, one entry per individual), using only certain materials and following required specifications, design and produce a CO₂-powered scale model of a vehicle that fits the annual design problem and that takes appearance and performance

Judging Response Form

We're on the web!
VirginiaTSA.org

The Virginia Association of the Technology Student Association will be hosting its 39th Annual State Conference during April 23-25, 2010 at the Sheraton Premiere at Tyson' Corner in Vienna, VA. Please consider this your invitation to be a part of our event. Virginia TSA relies heavily on the talent and expertise of our judges. The time that you invest in our students is extremely important. We hope that you can adjust your schedule to join us and look forward to working with you.

Please complete this form and return ASAP or no later than Monday, April 12, 2010

* EMAIL :TSA@VATSA.ORG

*FAX: 804-524-6807

*CALL: 804-524-8989 X 1119

Judge's Information

Name: _____ Alumni? _____

Address: _____

City: _____ Zip: _____

phone: _____ Email: _____

Please place a 1, 2, 3 in the box of the competition that you are interested judging. Fax or mail back. Virginia TSA P O Box 9045 Petersburg, VA 23806

Middle School Competitions

Agriculture and Biotechnology Friday 6 pm Saturday 9:00 - 12 pm	Dragster Friday 6 pm Saturday 9:00 - 10:00 am	Go Green Manufacturing Friday 6 pm	Prepared Speech Saturday 1:00 - 4:00 pm	Transportation Challenge Friday 6 pm Saturday 12 - 2:00 pm
Career Prep Friday 12:00 - 1:00 pm Saturday 2:00 - 4:00 pm	Electronic Gaming Friday 6 pm Saturday 9:00 - 12 pm	Graphic Design Friday 6 pm Saturday	Problem Solving Friday 2:30 - 4:30 pm	TSA Cup: Marine Design Friday 6 pm Saturday 12 - 2:30 pm
Challenging Tech Issues Saturday 1:00 - 3:30 pm	Engineering Structure Friday 3:15 - 5:00 pm Saturday 9:00 - 11:00 am	Inventions & Innovations Friday 6 pm Saturday 9:00 - 12 pm	Robot TOBOR Saturday 2:30 - 5:30 pm	Website Design Friday 5:00 - 6:00 pm
Chapter Team Friday 2:00 - 3:00 pm Saturday 3:00 - 5:45 pm	Environmental Focus Friday 6 pm Saturday 9:00 - 12 pm	Leadership Strategies Friday 12 - 1 pm Saturday 10:00 - 1:00 pm	System Control Technology Saturday 10:00 - 1:45 pm	Write Now! Technical Writing Friday 11:00 - 12 pm
Communication Challenge Friday 6 pm Saturday 9:00 - 10 am	Flight Friday 3:00 - 4:30 pm Saturday 1:00 - 4:00 pm	Lights, Camera, Action Friday 6 pm	Tech Bowl Friday 1:00 - 2:00 pm Saturday 9:00 - 12pm	Zap IT! Electrical Applications Friday 3:00 - 4:00 pm
Construction Challenge Friday 6 pm Saturday 9:00 - 12 pm	Geospatial Technology Friday 6 pm Saturday 1:00 - 5:00 pm	Medical Technology Issues Friday 6 pm Saturday 9:00 - 12 pm	Technical Drawing Friday 11:00 - 1:00 pm	
Digital Photography Friday 6 pm Saturday 1:00 - 4:30 pm	Global Manufacturing Friday 6 pm Saturday 9:00 - 12 pm	Multimedia Production Friday 2:00-3:30 pm Holding room 2:00 - 3:30 pm	Techno Talk Friday 11:00 - 4:00 pm Holding Room 11 - 4:00 pm	

High School Competitions

Agriculture and Biotechnology Friday 6 pm Saturday 9:00 - 12 pm	Cyberspace Pursuit Friday 4:00 - 5:00 pm	Extemporaneous Presentation Friday 2:30 - 4:45 pm Holding 2:30 - 4:45 pm	Medical Technology Friday 6 pm Saturday 9:30 - 12pm	Structural Engineering Friday 3:15 - 5:00 pm Saturday 9:00 - 11:00 am
Animatronics Friday 6 pm Saturday 9:00 - 12 pm	Debating Technology Issues Friday 11-1:30 pm Saturday 10:00 - 1:00 pm	Fashion Design Friday 6 pm Saturday 9:30 - 12pm	Music Production Friday 6 pm Saturday 9:00 - 12pm	System Control Technology Saturday 11:30 - 2:30 pm
Architectural Model Friday 6 pm Saturday 9:00 - 12 pm	Desktop Publishing Friday 6 pm Saturday 9:00 - 11:30 am	Film Friday 6 pm	On Demand Video Friday 11-11:30 am Saturday 2:00 - 4:00 pm	Technical Sketching and Application Friday 1:00 - 2:00 pm
Career Comparison Friday 11 am-12 pm Saturday 9:00 - 11 am	Dragster Design Friday 6 pm Saturday 10:00 - 11:00 am	Flight Endurance Friday 6 pm Saturday 1:00 - 4:00 pm	Principals of Technology Friday 2:00-4:00 pm	Technology Bowl Friday 12 - 1:00 pm Saturday 1:30 - 4:30 pm
Chapter Team Friday 1 - 2 pm Saturday 1:00 - 3:30 pm	Electronic Game Design Friday 6 pm Saturday 9:00 - 12 pm	Future Technology Teacher Friday 6 pm Saturday 1:00 - 5:00 pm	Prepared Presentation Saturday 10:00 - 1:00 pm	Technology Dare Friday 6 pm Saturday 12 - 2:00 pm
Computer Aided Design- Architectural w Animation Friday 1-5:15 pm	Electronic Research and Experimentation Friday 6 pm Saturday 9:00 - 12 pm	Geospatial Technology Friday 6 pm Saturday 1:00 - 5:00 pm	Promotional Graphics Friday 6 pm	Technology Problem Solving Saturday 11:30 - 1:30 pm
Computer Aided Design- Engineering w Animation Friday 1-5:15 pm	Engineering Design Friday 6 pm Saturday 9:00 - 12 pm	Imaging Technology Friday 6 pm Saturday 1:00 - 4:30 pm	Radio Controlled Transportation Friday 6 pm Saturday 2:30 - 5:30 pm	Transportation Modeling Friday 6 pm Saturday 11:00 - 1:00 pm
Construction Systems Friday 5:00 - 6:00 pm Saturday 9:00 - 11 am	Essays on Technology Friday 11- 12 pm	Manufacturing Prototype Friday 6 pm	SCIVIZ Friday 6 pm Saturday 9:00 - 11:30 am	Holding Rooms Saturday 1:00 - 3:30 pm