To: Potential Judges/Coordinators
From: Kathy Gillman
Date: January09, 2012
Re: Judging for 2012 WV Technology Student Association Conference

It's time to start recruiting judges for the West Virginia Technology Student Association 34th Annual Conference on March 22 – 24, 2012, at the Cedar Lakes Conference Center in Ripley. For the past 33 years, one of the highlights of this event has been the opportunity for our students to participate in competitive events. After winning the state competition, many of our students continue and place in the top ten at the national level.

I would like to ask you to serve as a judge and/or coordinator for one or more of our competition(s). Please choose several that you feel most qualified to judge from the attached overview of high school and middle school events. The contests will be held Thursday, Friday and Saturday, so let me know when you can be available and I will match you up with an event.

If you can participate in our conference, please return the attached, 2012 Judges Agreement Form, to me either by mail, FAX, or e-mail no later than February 29, 2012. Please include your current address, telephone number, and email address so that conference details can be sent to you with confirmation of the contests you are scheduled to judge. Lunch will be provided for those attending on Friday, and meals and lodging are available for those of you judging on multiple days. Please complete all information regarding meals and lodging so that I can submit correct totals to the Cedar Lakes staff.

I appreciate your willingness to help make this conference a successful learning experience for our members. If you know of other individuals in your organization that would be interested in judging a competition, I would appreciate it if you would pass along the enclosed forms. I can always use qualified judges! Please contact me if I can provide you with additional information.

I have attached the Middle and High School event overviews and a 2012 Judges Agreement form for your convenience.

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2012 WV TSA Judges Agreement Form

Identifying Information	
Name	
Company	
Address	
Telephone	
Email	

Availability: **If you are not available the entire allotment of time, please note.**

Date	Time	Yes-Available entire time	Yes-Available during these times only
Thursday, March 22	2:00 pm – 10:00 pm		
Friday, March 23	8:00 am – 4:30 pm		
Saturday, March 24	8:00 am – 12:00 noon		

Contest(s) I will judge/coordinate:

1.
2.
3.
4.

Meals/Lodging: **Please check required meals and lodging.**

Date	Meals/Lodging	Check all that Apply
Thursday, March 22	Dinner	
	Lodging	
Friday, March 23	Breakfast	
	Lunch	
	Dinner	
	Lodging	
Saturday, March 24	Breakfast	
	Lunch	

Please return information by mail, Fax or e-mail no later than February 29, 2012 to:

Kathy Gillman
1900 Kanawha Blvd.
Bldg. 6 Room 243 B
Charleston, WV 25305-0330
Phone 304-558-2194
FAX: 304-558-1055
E-mail: kgillman@access.k12.wv.us

Overview Middle School Events

The following information provides only a basic description of each event. Please consult *2012 & 2013 Middle School Technology Activities, National TSA Conference Competitive Events Guide* (on CD) for detailed specifications and rules regarding each event.

Agriculture and Biotechnology Design Participants (three teams per state) 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 (one individual per chapter) 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 (three teams of two members per state) 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 (one team of six members per chapter) demonstrate their understanding of parliamentary procedure relative to business meetings. Participants must successfully complete a written parliamentary procedures test in order to proceed to the semifinals, where they perform an opening ceremony, dispose of three items of business, and perform a closing ceremony within a specified time period.

Communication Challenge Participants (one individual per chapter, one entry per individual) design and produce 1) a trifold brochure that promotes the chapter, 2) an effective sponsor support request on chapter letterhead, and 3) an 8 ½ x 11 inch glossy, two-sided postcard promoting TSA's current national service project. Semifinalists work creatively under constraints to design a solution to an on-site problem.

Community Service Video Participants [one team per chapter (entries may be submitted by an individual or group)] create and submit a finished video that highlights their chapter's involvement with the American Cancer Society, national TSA's service partner.

Construction Challenge Participants (one team per chapter) submit a display that documents the use of their leadership and technical skills to fulfill a community need related to construction. Semifinalists discuss their projects in a presentation and an interview.

Digital Photography Participants (three individuals per state) produce an album of color or black and white digital photographs that represent or relate to a chosen theme and place the album on a storage device for submission. Semifinalists produce a series of digital photographs taken at the conference site that have been edited appropriately for the on-site task.

Dragster Participants (two individuals per chapter, one entry per individual) design, produce working drawings for, and build a CO2-powered dragster according to stated specifications and using only certain specified materials.

Electrical Applications Participants (two individuals per chapter) demonstrate knowledge of basic electrical and electronic theory 1) in a written test and 2) through the use of a multimeter. Semifinalists assemble a specific circuit from a schematic diagram (using a kit provided), make required electrical measurements and explain their solution during an interview.

Environmental Focus Participants (one team per chapter) identify and research a specific environmental problem or issue that has been influenced by advancements in technology. Students present their findings in the form of a multimedia presentation.

Essays on Technology Participants (three individuals per state) conduct research on specified subtopics of a broader technological area and, using the knowledge and resources gained through that research, write a comprehensive essay on the one subtopic that is designated on site.

Flight Participants (two individuals per chapter, one entry each) study the principles of flight and design in order to fabricate (using materials provided) and test-fly gliders. Gliders must be designed to be launched from a catapult that is provided on site. Flight duration of the gliders and documentation of the design process are the primary elements of the evaluation.

Global Manufacturing Participants [one team (of no more than six students) formed from the three TSA chapters involved] design, manufacture and package a marketable mass-produced product through a collaborative effort. Two completed products will be included in the display for this event.

Go Green Manufacturing Participants (one team of at least three individuals per chapter, one entry per team) design and manufacture a product using recycled or reused materials. The chapter submits documentation of chapter activities and two product samples made during the manufacturing experience.

Inventions and Innovations Participants [one team (with a minimum of three individuals) per chapter, one entry per team] investigate and determine the need for an invention or innovation of a device, system or process. Team members will 1) create a prototype or model, 2) develop a standalone multimedia presentation and 3) document work completed as they prepare to promote and demonstrate their idea for the invention or innovation. Semifinalists make an oral presentation to a panel of judges who will act as a group of venture capitalists interested in providing funding for the development of the idea.

Leadership Strategies Participants (one team of three individuals per chapter) work in teams to develop a plan of action that addresses a specific challenging situation provided on site. Under time constraints, semifinalists develop a plan for a second situation and then make a team presentation.

Medical Technology Issues Participants [three teams per state (two or more participants per team), one entry per team] conduct research on a contemporary medical technology issue of their choosing, document their research and create a display. The information gathered may include 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.

Multimedia Production Participants (one individual per chapter, one entry per individual) use their creative skills to develop an animation that promotes the theme for the current year.

Prepared Speech Participants (one individual per chapter) develop and deliver an oral presentation that reflects the theme of the current year's national conference.

Problem Solving Participants (one team of two individuals per chapter) use problem solving skills to develop a finite solution to a stated problem given on site. Participants work as a team to provide the best solution, which is measured objectively.

Promotional Design Participants (two individuals per chapter, one entry per individual) create and produce a color pin design that is appropriate for trading at the national TSA conference.

Structural Engineering Participants (one team of two members per chapter) work to determine superior engineering as they conduct research and then model and test a structure that is designed to hold the greatest weight. Teams submit their models for destructive testing.

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

Tech Bowl Participants (one team of three individuals per chapter) 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 Design Participants (two individuals per chapter) demonstrate the ability to use the technical design process to solve an engineering design problem.

Techno Talk Participants (two teams of two members each per state) demonstrate the ability to work together in teams of randomly paired students in order to build and replicate a structure using limited communication.

Transportation Systems Participants (two individuals per chapter, one entry per individual) apply and document the engineering design process and mathematical principles and scientific concepts used in the research, design, construction, testing and evaluation of a rubber band-powered boat. Performance ratings of the boat will be based on a combination of speed and payload capability measurements.

Video Game Design Participants [one team (of at least two participants) per chapter, one entry per team] develop an E-rated game that focuses on the subject of their choice. The game should be interesting, exciting, visually appealing and intellectually challenging. A working, interactive game is submitted for evaluation.

Website Design Participants (one team of three to five members per chapter, one entry per team) are required to design, build and launch a World Wide Web site that features the team's research about a science, technology, engineering or mathematics (STEM)-related topic. Pre-conference semifinalists participate in an on-site interview to demonstrate the knowledge and expertise gained during the development of the website.

State Level Contests Only:

Creed Recital
Demonstrate the ability to write and recite from memory the TSA Creed.

Mousetrap Vehicle
Design, engineer, and fabricate a vehicle powered only by a mousetrap, capable of traveling the longest distance.

Safety Illustration
Research safety needs in the technology lab, then design and create a poster that effectively communicates a safety message in visual form.

High School Competitive Events Overview

The following information provides only a basic description of each event. Please consult 2011 & 2012 High School Technology Activities, National TSA Conference Competitive Events Guide (on CD) for detailed specifications and rules regarding each event.

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.

Biotechnology Design Participants (three teams per state) 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.
The biotechnology area of focus for 2012 is Pharmaceutical/Agricultural Chemicals.

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) 2D, Architecture 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) 3D, **Engineering** 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 Renovation Participants (three teams per state) develop a set of presentation boards to include plans, illustrations and finishes for a specified space. The solution must include all applicable construction systems.

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.

Digital Video Production Participants (three teams per state, one entry per team) develop a digital video/film that focuses on the given year's theme. Sound may accompany the film.
The theme for 2011 is Drama. The theme for 2012 is Suspense.

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

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.

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

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.

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.

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.

Photographic Technology Students (one individual per chapter, one entry per individual) 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.
The theme for 2012 is Perspectives.

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.

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.

Scientific and Technical Visualization (SciVis) 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 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 into consideration.

Video Game Design Participants (three teams per state) 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.

Webmaster Participants (one team of three to five members per chapter) 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.

State Level Contests Only:

Creed Recital
Demonstrate the ability to write and recite from memory the TSA Creed.

Mousetrap Vehicle
Design, engineer, and fabricate a vehicle powered only by a mousetrap, capable of traveling the longest distance.