

AN ADDENDUM TO
THE
NATIONAL TSA

2010-2011
MIDDLE SCHOOL
COMPETITIVE
EVENTS GUIDE
&
2011-2012
HIGH SCHOOL
COMPETITIVE
EVENTS GUIDE

FOR USE AT THE
2011 VIRGINIA TSA
REGIONAL FAIRS &
TECHNOSPHERE

VIRGINIA

Competitive
Events
Addendum

TSA

2010-2011 EDITION
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(Revised)



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The Virginia TSA Addendum to the Curricular Resources Guides reflects provisions made for Technology Education Regional Fairs and Technosphere recognition programs in Virginia. This addendum will assist Virginia TSA advisors and TSA members to plan for leadership and competitive events during the 2010- 2011 school year.

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PURPOSE AND GOALS FOR COMPETITIVE EVENTS AND RECOGNITION PROGRAMS

Virginia TSA's annual program of leadership development and competitive events provide students opportunities beyond the traditional classroom/laboratory setting which add to their increased knowledge and understanding of an ever-changing technical world.

Five goals form the foundation of Virginia TSA's Annual Program of Activities. Consistent with their aptitudes, interests, and educational needs, all technology education students in Virginia will:

1. Gain contact with industrial and business personnel, and resources to acquire technological understanding, consumer knowledge, and competencies that lead to responsible citizenship and a more productive society.
2. Acquire democratic understanding and practice through leadership and team/group activities.
3. Plan, organize, and carry out worthy activities and projects that contribute to an improvement or service to the community.
4. Through the free enterprise system, become aware of employment or self-employment opportunities and those educational requirements for use in making career choices.
5. Become recognized for technological awareness, scholarship, and leadership ability.

COMPETITIVE EVENTS REFLECT A KNOWLEDGE AND UNDERSTANDING OF TECHNOLOGY

Competitive events should be used as learning activities for students in technology education classes. Three outcomes are related to the study of technology.

Understand the Technical World

Students' knowledge and understanding of technical content can be increased by...

- speaking or writing about technology
- drawing, constructing, or manufacturing technological inventions or products
- identifying tools, machines, materials and processes.
- graphically representing impacts of technology
- describing technological systems
- solving technological problems

Develop Technical Adaptive Skills

Students use their knowledge and technical competence to create solutions to problems facing people by . . .

- drawing and modeling architectural solutions
- designing and assembling electronic devices
- creating graphic illustrations and information sources
- constructing quality products for comfort and use
- manufacturing or modeling products
- solving problems using technology

Appreciation for High Standards of Work and Safety

Students exhibit pride in work well done by . . .

- informing the public, parents, and fellow students about the value of technology education
- displaying their projects, drawings, and other learning activities
- demonstrating technological literacy
- attracting attention through good design and aesthetic arrangement
- promoting careers in technology

MOTIVATING STUDENTS THROUGH COMPETITIVE EVENTS

The Competitive Events Guide should be made available to students. Some competitive events have criteria that relate specifically to course content, while others can be entered by any student. Competition can be used to motivate student work both in classes and chapters. Competitive events relate to most courses and can be used as co-curricular learning activities by any student. Certain events test students' understanding of basic technological concepts and processes, while others challenge students to apply their technical skills in problem solving.

The following steps will help teachers to motivate students through competitive events:

1. Introduce competitive events to each class early in the school year.
2. Select competitive events related to course content.
3. Use competitive events as co-curricular learning activities.
4. Evaluate students' progress through competition and other experiences.
5. Involve class members, parents, and school staff in judging local chapter activities.
6. Register students in regional, state, and national conferences.
7. Recognize students who compete through news media, awards programs, and school assemblies.

COMPETITION LEVELS

INDIVIDUAL EVENTS

Student members shall participate in individual events according to their official grade classification level in school:

Middle -	Grades 6 - 8 (Previously Level I)
High -	Grades 9 - 12 (Previously Level II)

TEAM EVENTS

Teams shall participate according to the official school classification level as identified in the school name:

Middle -	Middle, Intermediate, or Junior High Schools
High -	High Schools

RECOGNITION PROGRAMS

Chapters shall participate according to the official school classification level as identified in the school name where the chapter is affiliated:

Elementary -	Elementary programs, grades K-5 *
Middle -	Middle, Intermediate, or Junior High Schools
High -	High Schools

SPECIAL PROGRAM EVENTS

Schools shall participate according to the official school classification level as identified in the school name:

Elementary -	Elementary Schools, grades K-5 *
Middle -	Middle, Intermediate, or Junior High Schools
High -	High Schools

* The 2011 Virginia Children's Engineering Convention will be held on February 24-25, 2011, Holiday Inn Kroger Center, Richmond, Virginia. Detailed information about the Children's Engineering Convention can be obtained at the following website:
<http://www.ChildrensEngineering.org>.

ELIGIBLE PARTICIPANTS

STUDENTS

Regional Fair and Technosphere participation is available to Virginia TSA members who are:

1. Enrolled for the current school year in grades K-12.
2. Officially registered for participation.
3. Abide by the behavior code adopted by Virginia TSA.

CHAPTERS

Chapter participation is available to affiliated Virginia TSA chapters in good standing as of February 11 and registered for the activity.

SCHOOLS

Participation is available to all K-12 Virginia schools, both public and private, which offer officially recognized technology education programs; or which enroll students from feeder schools that have officially recognized technology education programs, and which have an affiliated chapter.

VIRGINIA TSA STUDENTS COMPETING AT NATIONAL TSA COMPETITION

If a student places 1st, 2nd, or 3rd in a Technosphere competitive event that requires the state to select the national representative(s) for the same competitive event, the chapter advisor of the respective Technosphere winner(s) must notify the Virginia TSA State Advisor via email or fax by May 3, 2011, if they plan to register and compete in the same competitive event at the National TSA Conference. If the Virginia TSA State Advisor does not receive notice and confirmation from the respective chapter advisor that their student will compete in the respective contest by May 4, the State Advisor will proceed to contact the 4th, 5th, or 6th place winners, and so forth, until Virginia TSA can confirm a state representative for the respective competitive event. NOTE: Once this process starts, the Technosphere 1st, 2nd, or 3rd place winners, and so forth, shall forfeit their eligibility to compete in the same competitive event at the National TSA Conference.

Note to the Teacher: All students are encouraged to prepare early for leadership development activities and competitive events.

ADVISOR RESPONSIBILITIES

The advisor shall:

1. Notify students and parents of the need for accident insurance coverage.
2. Obtain the signature of both student and parent on the Delegate Conduct Agreement, medical release, and other required forms.
3. File the list of students who have completed the Delegate Conduct Agreement form, medical release form and student liability form with the school principal's office.
4. Notify Virginia TSA of any special needs for students with disabilities.
5. Read and enforce the Delegate Conduct Agreement and assume all obligations required by this Code.
6. Mail registration forms and papers according to deadline printed in the Registration Packet for each competitive event or activity. (Examples: Hotel Reservation, competitive events and recognition programs, etc.)
7. Monitor all Technology Education students in attendance at regional and state activities.
8. Assume full responsibility for his/her students at all Regional, State, or National Conferences.
9. Encourage students early to prepare high quality products resultant of exceptional planning, design, and implementation.
10. Enter students or projects in local and/or regional competition to select students for participation at the state level. Students or projects entered illegally in a contest will be disqualified from competition.
11. Ensure that no explosives, combustible materials, useable weapons, or any type of inappropriate or unsafe items are entered or exhibited.
12. Know and understand criteria for competitive events entered and clarify rules for students using the correct documents.
13. Recognize students through news media, awards programs, and school assemblies.
14. Provide supervision for a maximum of ten (10) students per advisor and/or chaperone.
15. Proper conduct and dress is expected of all participants throughout any Virginia TSA sponsored event. Participants violating or ignoring conduct rules risk unseating their entire delegation and disqualifying their chapter's competitive event entries. Individual participants may be sent home at their own expense. Curfews will be enforced and students must be in assigned rooms by the announced time.

GENERAL COMPETITIVE EVENT GUIDELINES

I. The 2010-2011 Virginia TSA official competitive events are:

MIDDLE SCHOOL PROGRAM

Agriculture and Biotechnology Issues
Career Prep
Challenging Technology Issues
Chapter Team
Communication Challenge
Construction Challenge
Digital Photography
Dragster
Electronic Gaming
Engineering Structures
Environmental Focus
Flight
Geospatial Technology (Virginia Only)
Global Manufacturing
Go Green Manufacturing
Graphic Design
Inventions and Innovations
Leadership Strategies
Lights, Camera, Action
Medical Technology Issues
Multimedia Production
Prepared Speech
Problem Solving
Robot TOBOR
System Control Technology
Tech Bowl (Written & Oral)
Technical Drawing
Transportation Challenge
TSA Cup: Marine Design
Website Design
Write Now! Technical Writing
ZAP IT! Electrical Applications

HIGH SCHOOL PROGRAM

Animatronics
Architectural Model
Biotechnology Design
Career Comparisons
CADD – 2D, Architectural
CADD – 3D, Engineering
Chapter Team
Construction Renovation
Debating Technological Issues
Desktop Publishing
Digital Video Production
Dragster Design
Engineering Design
Essays on Technology
Extemporaneous Speech
Fashion Design
Flight Endurance
Future Technology Teacher
Geospatial Technology (Virginia Only)
Manufacturing Prototype
Music Production
On Demand Video
Photographic Technology
Prepared Presentation
Principles of Technology (Virginia Only)
Promotional Graphics
SciVis
Structural Engineering
System Control Technology
Technical Sketching & Application
Technology Bowl (Written & Oral)
Technology Problem Solving
Transportation Modeling
Video Game Design
Webmaster

Virginia Special Awards and Recognition Programs

Advisor of the Year - Middle and High School
Century Award - Middle and High School
Chapter Excellence - Middle and High School
Commendation Award - School Division

Community Service Award - Middle and High School
Member of the Year - Middle and High School
Silver Achievement Award

GENERAL COMPETITIVE EVENT GUIDELINES

II. Levels of Competition

- A. Chapter members and advisors shall enter competitive events according to chapter level.
- B. The following breakdown of grades is used as categories for competitive event entries: Middle School - Grades 6 – 8; & High School - Grades 9 – 12.
- C. Concerning team and individual entries, students in grades 6 through 8 who are members of a High School chapter must compete as High School Level members in team events, but may compete as Middle School Level members in individual events. **Students in grade 9 must compete as High School Level participants.**
- D. The term “team” is defined as two or more students. Therefore, if a contest does not specify the number of students that comprise the team, the minimum number of students shall be two (2).
- E. A combined school (i.e., grades 6-12) may elect to affiliate a Middle School Level chapter and High School Level chapter.

III. Participation in Competitive Events

- A. In the event a question or a problem arises that has not been covered in the "General Rules" or the individual competitive event guidelines; the standards review committee will render a decision for the conference.
- B. Should a conflict develop that prevents a member from participating in more than one event, the participant will decide which event entry will be eliminated.
- C. It will be the individual responsibility of all participants to obtain all rules and guidelines for his/her events. Lack of knowledge or understanding about a particular event will not be the reason or excuse for individual change or adjustment consideration.
- D. Competitive event concerns or requests to review the results of a competition during Regional Fairs or Technosphere must be submitted in writing to the Regional Fair Chair or Technosphere Chair prior to the end of the Regional Fair or Technosphere.
- E. TSA members, advisors, and chapters must be in good standing with TSA by February 11 in order to enter any competitive event.
- F. Students and advisors must be registered and in attendance in order to enter and become finalists in competition.
- G. TSA membership rights extend through the year of graduation.
- H. Advisors will be entered in the same level as their chapter is entered.

GENERAL COMPETITIVE EVENT GUIDELINES

- I. Participants may enter a maximum of five (5) competitive events at the regional fairs and six (6) at Technosphere unless noted otherwise in this document.
 - J. If a contestant violates the competitive event rules, the decision to deduct 20 points or disqualify the entry will be made based on competitive event rules.
 - K. Participants in Technosphere competitive events that were offered at the Regional Fairs must have been among the top three winners at their respective Regional Fair in order to enter the same event at Technosphere. If a regional fair winner cannot attend Technosphere, substitutions shall not be permitted in individual events; however, if a member of a team event is unable to attend Technosphere, substitutions are allowed as long as at least one of the original team members is still a participant on the team.
 - L. Participants in Virginia TSA Regional Fairs and Technosphere must be members of the same local chapter in order to compete in competitive events.
- IV. Restrictions on Individual, Group, and Team Entries
- A. **Chapters may have five (5) entries per competitive event at the Regional Fair in each event unless specified differently on page 14-17.**
 - B. Events which must be postmarked or emailed in by the Technosphere registration deadline are:
 - 1. Advisor of the Year
 - 2. Century Award
 - 3. Chapter Excellence
 - 4. Commendation Award
 - 5. Community Service Award
 - 6. Member of the Year
 - 7. Silver Achievement Award
 - 8. Website Design (email)
 - 9. Webmaster (email)
 - * Plaques will not be presented at Technosphere if the correct forms, in addition to online submission, are not mailed to Virginia TSA by the registration deadline.
 - C. Chapters must register all students for team competitions.
- V. Awards
- A. Awards will be presented to the winning entries in each competitive event at the awards presentation ceremony. First, second, and third place awards will be presented for each competitive event as listed under Section I of the General Competitive Events Guidelines.
 - B. The top 10 finalists in each event at Technosphere will receive a finalist pin. Also, the top 10 finalists at Technosphere in each event will be posted on the Virginia TSA website.
 - C. First, second, and third place awards are included in the number of finalists.

GENERAL COMPETITIVE EVENT GUIDELINES

- VI. Pre-conference mail-in events
- A. Each entry must be postmarked by entry deadlines as posted in Regional Fair and/or Technosphere Registration packet.

- VII. **Recording devices:** No recording devices will be allowed in certain competitive events. Signs will be posted outside event locations where recording will not be permitted.

- VIII. Regional Fairs and Technosphere Attire

During all general sessions, students and advisors must wear official TSA attire or business-like attire. Refer to the competitive events guide for required competition attire.

- A. Official TSA attire:
- | | |
|------------------|--|
| Blazer: | navy blue with official Virginia TSA patch |
| Tie or Scarf: | scarlet red imprinted with TSA logo (male and female) |
| Shirt or Blouse: | white, button-up with turn down collar |
| Pants or Skirt: | light gray |
| Shoes: | black dress shoes (athletic shoes, army boots, work boots, or combat boots are not acceptable) |
| Socks/Hosiery: | black socks (male), or skin tone hosiery (female) |
- B. Business/Professional attire:
- | | |
|-------------------|---|
| Suit Coat: | business style or Sports Jacket |
| Tie or Scarf: | business style |
| Shirt or Blouse: | collared shirt/blouse (no t-shirts or polo/golf shirts) |
| Slacks or Skirt: | dress pants or skirt (absolutely no jeans) |
| Socks or Hosiery: | business style |
| Shoes: | business style (no athletic shoes, army boots, work boots, or combat boots) |
- C. Casual attire:
- Casual attire must comply with the participants' local school division dress code policy. Casual attire shall not be worn during general sessions.
- D. **Conference identification badges must be worn at all times.**

- IX. Event Items

- A. Projects/products/displays must be entered in the same year in which the work on the item started.
- B. Students and advisors are solely responsible for picking-up their event items during the event pick-up time. Virginia TSA will not pick-up or store any items after a Regional Fair or Technosphere.
- X. Virginia TSA will not be responsible for any personal property, equipment or materials brought to a Regional Fair or Technosphere for use by participants.

GENERAL COMPETITIVE EVENT GUIDELINES

- XI. All competitive events will be judged in accordance with the stated criteria for each event as shown in the Competitive Events Guide with the exception of any state requirements outlined in the Virginia TSA Competitive Events Addendum. All judges' rating sheets are the property of Virginia TSA. The information on the rating sheets is confidential and will not be disseminated without a written request.

- XII. Advisors should carefully review their registration selection(s) for each competitive event prior to online submission. Registration errors are the responsibility of the chapter advisor to correct and ensure accuracy in accordance with the procedures and deadlines established by Virginia TSA. **On-site changes and/or additions shall not be permitted.**

Code	Event	Notes
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MIDDLE SCHOOL PROGRAM

A-2	Career Prep	Five individual entries per chapter	Choose one (1) of the following technology related careers: Engineering & technology teacher, Bio-fuel Analyst, Physicist, Crime scene investigator, or Web page designer. (No finalist portion at Regional Fair.)
A-3	Challenging Technology Issues	Three teams of two members per chapter	Prepare and deliver an extemporaneous, debate style presentation with team members. Procedures E & F in the national TSA competitive events guide will not be done. Students must provide own pencil.
A-5	Communication Challenge	Five individual entries per chapter	Participants design and produce a newsletter that promotes the chapter's activities, an effective sponsor support request on chapter letterhead, and a business card. (No finalist portion at Regional Fair.)
A-7	Digital Photography	Five individual entries per chapter	Participants produce an album and an 8" x 10" collage of digital photographs consisting of color or black and white digital photographs that present a theme in journalistic style. The theme for 2011 is The TSA Creed . (No finalist portion at Regional Fair.)
A-8	Dragster Design	Five individual entries per chapter	Design and produce a fast CO2 powered dragster according to stated specifications and using only certain specific materials. (No wind tunnel test at Regional Fair.)
A-9	Electronic Gaming	One team per chapter	Participants develop an E rated game that focuses on the subject of their choice. (No finalist component at Regional Fair.)
A-12	Flight	Five individual entries per chapter	Participants create a glider that stays in flight for the greatest elapsed time. Students must provide own safety glasses. Students bring documentation notebook with all components and assembled glider for testing at Regional Fair.
A-15	Go Green Manufacturing	One team of three or more per chapter. One entry per team.	Participants design and manufacture a product using recycled material that has been donated from business or industry.
A-16	Graphic Design	Five individual entries per chapter	Participants plan and lay out a graphic design that includes the theme for the next year's conference and that could be used in national TSA conference publications. In 2011, participants must include the theme for the 2012 conference, which is The Road to Success .
A-19	Lights, Camera, Action	Three individuals or teams per chapter	Participants develop and generate a detailed storyboard, production plan, and finished video. The theme for 2011 is Learning to Live in a Technical World . Video footage must be submitted on a DVD.
A-21	Multimedia Production	Five individual entries per chapter	Participants use their creative skills to produce a multimedia presentation that promotes or details an aspect of TSA. The theme for 2011 is TSA Membership Recruitment . Entry must be self contained; presentation software must be included with entry. Student must provide own equipment (No finalist portion at Regional Fair.)

Virginia TSA 2010 - 2011 Regional Fair Events and Codes

11/01/10

Code	Event	Notes	
A-22	Prepared Speech	Five individual entries per chapter	Participants deliver an oral presentation that reflects the theme of the current conference. The theme for the 2011 conference is Snapshot of Innovation . Procedures E, F & G in the national TSA competitive events guide will not be done.
A-25	System Control Technology	One team of three members per chapter	Participants use a team approach to develop a computer controlled model solution to a given problem, typically one from an industrial setting. Teams must provide all equipment, including 50 foot extension cord and power strip if needed.
A-28	Transportation Challenge	Five individual entries per chapter	Participants design, engineer and fabricate an all terrain hover craft that covers an obstacle course in the shortest amount of time.
A-29	TSA Cup: Marine Design	One team per chapter	Participants develop a model of a propeller driven race boat (which has an affiliation with a country) that is tested and is raced in a water tank. The theme for 2011 is Catamaran racing boat .
A-31	Write Now! Technical Writing	Five individual entries per chapter	Participants conduct research in two (2) or three (3) specified subtopics of a broader technological area and using the knowledge and resources gained, write a comprehensive report. The topic for the 2011 conference is Go Green with the following subtopics: Recycling, Hybrid vehicles, and Alternative energy. Students must provide their own pencils.

Code	Event	Notes
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HIGH SCHOOL PROGRAM

B-4	Career Comparison	Five individual entries per chapter	Choose one (1) of technology related career areas and research three (3) careers within that area. (No finalist portion at Regional Fair.)
B-5	CAD- Architecture 2D	Five individual entries per chapter	Students must provide all equipment and supplies. Students must be available during judging. Entries will be judged from the computer screen. The event time limit will be two (2) hours.
B-6	CAD- Engineering 3D	Five individual entries per chapter	Students must provide all equipment and supplies. Students must be available during judging. Entries will be judged from the computer screen. The event time limit will be two (2) hours.
B-9	Debating Technological Issues	Three teams of two per chapter	Teams will be instructed to take the Pro or Con side of the selected subtopic. The 2011 topic is Medical Technology . Quick debate may be held. Procedures U, V, & W in the national TSA competitive events guide will not be done.
B-10	Desktop Publishing	Five individual entries per chapter	Student must provide all equipment and supplies including computer system and printer. The theme for 2011 is A Whole New World .
B-11	Digital Video Production	Three team entries per chapter	Participants develop a digital video/film that focuses on the given year's theme. The 2011 theme is Drama .
B-12	Dragster Design	Five individual entries per chapter	2011 is " Flashback " year featuring external wheel dragsters ONLY. (No wind tunnel test at Regional Fair.)
B-14	Essays on Technology	Five individual entries per chapter	The topic for 2011 is " The Effects of the Decline of Housing Development ". Students provide their own pencil and paper.
B-15	Extemporaneous Presentation	Five individual entries per chapter	Participants give a three to five (3-5) minute speech.
B-17	Flight Endurance	Five individuals per chapter	Participants analyze flight principles with a rubber band powered model aircraft. Student's models must be built and test flown before the Regional Fair. Students must provide documentation notebook and model.
B-20	Manufacturing Prototype	Three team entries per chapter	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 & block .
B-21	Music Production	Three teams of 2 or more per chapter	Participants produce an original musical piece that is designed to be played during the national TSA conference opening or closing general session. (No finalist portion at Regional Fair.)
B-23	Photographic Technology	Five individual entries per chapter	Participants capture images and process photographic and digital prints that depict the current year's theme. The 2011 theme is Doors . (No finalist portion at Regional Fair.)

Virginia TSA 2010 - 2011 Regional Fair Events and Codes

11/01/10

Code	Event	Notes	
B-24	Prepared Presentation	Five individual entries per chapter	Participants deliver an oral presentation that includes audio and/or visual enhancements based on the theme for the current year's conference. The 2011 theme is Snapshot of Innovation . Procedures E, F & G in the national TSA competitive events guide will not be done. Students must provide own equipment.
B-26	Promotional Graphics	Five individual entries per chapter	Participants develop and present a graphic design that can be used to promote participation in TSA competitive events. Participants will choose one (1) of the three (3) competitions. For 2011, the options are: Dragster Design; CAD 2D, Architecture; OR Promotional Graphics.
B-29	System Control Technology	One team of three members per chapter	Participants work as part of a team on site to develop a computer controlled model solution to a problem. Teams must provide all equipment and supplies, including a 50 foot extension cord and power strip if needed.
B-33	Transportation Modeling	Five individual entries per chapter	Participants use engineering skills to design and fabricate a Co2 powered scale model. The theme for 2011 is a custom golf cart.
B-34	Video Game Design	Three teams per chapter	Participants develop an E rated game that focuses on the subject of their choice. (No finalist portion at Regional Fair.)

Virginia TSA Technosphere 2010 - 2011 Events and Codes

MIDDLE SCHOOL PROGRAM

11/01/10

Code	Event	Notes	
A-1	Agriculture & Biotechnology	One team per chapter	Participants conduct research on a contemporary agriculture or biotechnology issue of their choosing.
A-2 *	Career Prep		Choose one (1) of the following technology related career: Engineering & technology teacher, Bio-fuel Analyst, Physicist, Crime scene investigator, or Web page designer.
A-3 *	Challenging Technology Issues		Prepare and deliver an extemporaneous, debate style presentation with team members. Procedures E & F in the national TSA competitive events guide will not be done. Students must provide own pencil.
A-4	Chapter Team	One team of six per chapter	Participants demonstrate an understanding of parliamentary procedure relative to business meetings. Participants provide their own pencil.
A-5 *	Communication Challenge		Participants design and produce a newsletter that promotes the chapter's activities, an effective sponsor support request on chapter letterhead, and a business card.
A-6	Construction Challenge	One team per chapter	Participants submit a display that documents the use of their leadership and technical skills to fulfill a community need related to construction. A/C electricity may not be used.
A-7 *	Digital Photography		Participants produce an album and an 8" x 10" collage of digital photographs consisting of color or black and white digital photographs that present a theme in journalistic style. The theme for 2011 is The TSA Creed .
A-8 *	Dragster Design		Design and produce a fast CO2 powered dragster according to stated specifications and using only certain specific materials. Judging will include a wind tunnel test.
A-9 *	Electronic Gaming		Participants develop an E rated game that focuses on the subject of their choice.
A-10	Engineering Structure	One team of two members per chapter	Participants use basic engineering techniques to evaluate designs they have modeled and tested. Students must provide their own tools, supplies, and safety glasses, which must fit in a single box, as specified.
A-11	Environmental Focus	One team per chapter	Participants are to identify and research a specific environmental problem or issue that has been influenced by advancements in technology.

NOTE (*): Only those students and/or teams finishing in the top three places at each Regional Fair may enter the same specific events at Technosphere. Students who place among the top three finishers in Regional competition must register their entries for Technosphere. Substitutions will not be permitted for individual competitive event winners, however, if a member of a team event is unable to attend Technosphere, substitutions are allowed as long as at least one of the original team members is still a participant on the team. Such requests for substitutions must be submitted by the Technosphere registration deadline.

Virginia TSA Technosphere 2010 - 2011 Events and Codes

MIDDLE SCHOOL PROGRAM

11/01/10

Code	Event	Notes	
A-12 *	Flight		Participants create a glider that stays in flight for the greatest elapsed time. Students must provide own tools, safety glasses, and drawing. Materials will be provided to construct gliders onsite. Students must provide their own pencil.
A-13	Geospatial Technology (Virginia Only)	Three teams per chapter. Maximum of 5 members per team.	Participants develop a pre conference electronic portfolio, profiling an assigned geographic area. Rules provided on page 27.
A-14	Global Manufacturing	One team from the TSA chapters involved, with 2-6 students maximum on the team. All 3 teams must be middle school chapters, from the Commonwealth of Virginia, and may be from different Virginia school divisions.	A TSA chapter, working with at least two (2) other TSA chapters, designs, manufactures, and packages a product.
A-15 *	Go Green Manufacturing		Participants design and manufacture a product using recycled material that has been donated from business or industry.
A-16*	Graphic Design		Participants plan and lay out a graphic design that includes the theme for the next year's conference and that could be used in national TSA conference publications. In 2011, participants must include the theme for the 2012 conference, which is The Road to Success .
A-17	Inventions & Innovations	One team per chapter. Minimum of three members.	Participants investigate and determine the need for an invention or innovation of a device, system, or process. The entry must be self contained: the presentation software must be included with the entry. Student must provide own equipment.
A-18	Leadership Strategies	One team of three per chapter	Participant work in teams to develop a plan of action that addresses a specific challenging situation provided on site. Participants provide their own pencil.
A-19 *	Lights, Camera, Action		Participants develop and generate a detailed storyboard, production plan, and finished video. The theme for 2011 is Learning to Live in a Technical World . Video footage must be submitted on a DVD.

NOTE (*): Only those students and/or teams finishing in the top three places at each Regional Fair may enter the same specific events at Technosphere. Students who place among the top three finishers in Regional competition must register their entries for Technosphere. Substitutions will not be permitted for individual competitive event winners, however, if a member of a team event is unable to attend Technosphere, substitutions are allowed as long as at least one of the original team members is still a participant on the team. Such requests for substitutions must be submitted by the Technosphere registration deadline.

Virginia TSA Technosphere 2010 - 2011 Events and Codes

MIDDLE SCHOOL PROGRAM

11/01/10

Code	Event	Notes	
A-20	Medical Technology Issues	One team per chapter	Participants conduct research on a contemporary medical technology issue of their choosing, document the research, and create a display.
A-21 *	Multimedia Production		Participants use their creative skills to produce a multimedia presentation that promotes or details an aspect of TSA. The theme for 2011 is TSA Membership Recruitment . Entry must be self contained; presentation software must be included with entry. Student must provide own equipment.
A-22 *	Prepared Speech		Participants deliver an oral presentation that reflects the theme of the current conference. The theme for the 2011 conference is Snapshot of Innovation . Procedures E, F & G in the national TSA competitive events guide will not be done.
A-23	Problem Solving	One team of two per chapter	Participants use their skills in problem solving to develop a finite solution to a stated problem provided on site. Students must provide their own tool box containing the required resources.
A-24	Robot Tobor	One individual per chapter	Participants design, fabricate, test, record the design, and work efforts, and demonstrate the use of a remote controlled robot that can complete a course and perform a designated task. The course of the robot in 2011 is stated on page 217 of the national TSA competitive events guide.
A-25 *	System Control Technology		Participants use a team approach to develop a computer controlled model solution to a given problem, typically one from an industrial setting. Teams must provide all equipment, including 50 foot extension cord and power strip if needed.
A-26	Technology Bowl	One team of three per chapter	Each team member must take the written test. Members must provide their own pencil.

NOTE (*): Only those students and/or teams finishing in the top three places at each Regional Fair may enter the same specific events at Technosphere. Students who place among the top three finishers in Regional competition must register their entries for Technosphere. Substitutions will not be permitted for individual competitive event winners, however, if a member of a team event is unable to attend Technosphere, substitutions are allowed as long as at least one of the original team members is still a participant on the team. Such requests for substitutions must be submitted by the Technosphere registration deadline.

Virginia TSA Technosphere 2010 - 2011 Events and Codes

MIDDLE SCHOOL PROGRAM

11/01/10

Code	Event	Notes	
A-27	Technical Drawing	Two individuals per chapter	Participants demonstrate an ability to read and interpret technical sketches and drawings, and to use materials in completing a technical drawing and illustration test. Students must provide their own pencil and supplies.
A-28 *	Transportation Challenge		Participants design, engineer and fabricate an all terrain hover craft that covers an obstacle course in the shortest amount of time.
A-29 *	TS Cup: Marine Design		Participants develop a model of a propeller driven race boat (which has an affiliation with a country) that is tested and is raced in a water tank. The theme for 2011 is Catamaran racing boat .
A-30	Website Design	One team of 3 to 5 members per chapter	Participants design a website that features the team's research about a cutting edge science, technology, engineering, or mathematics related topic. The URL for the chapter's entry MUST be emailed to TSA@VATSA.ORG by midnight March 25 . The subject line of the email must be: Website Design.
A-31 *	Write Now! Technical Writing		Participants conduct research in two or three specified subtopics of a broader technological area and using the knowledge and resources gained, write a comprehensive report. The topic for the 2011 conference is Go Green with the following subtopics: Recycling, Hybrid vehicles, and Alternative energy . Students must provide their own pencils.
A-32	Zap It! Electrical Applications	Two individuals per chapter	Participants demonstrate knowledge of basic electrical and electronic theory, as well as the use of a multimeter. Students must provide their own pencil.

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Virginia TSA Technosphere 2010 - 2011 Events and Codes

MIDDLE SCHOOL PROGRAM

11/01/10

Code	Event	Notes
Special Awards and Recognition Programs		
C-1	Chapter Excellence (Middle)	Chapters may not receive this award two years in a row.
C-3	Community Service Award (Middle)	Virginia Only. One entry per chapter.
C-5	Member of the Year (Middle)	Virginia Only: One individual per chapter.
C-7	Advisor of the Year (Middle)	Advisors may not receive this award two years in a row.
C-9	Century Award Virginia Only.	Chapters affiliating CAP, or 100+ members.
C-11	Commendation Award Virginia Only.	All schools in division affiliated.

Note: **Individuals, chapters and/or school divisions applying for recognition awards must submit the required paperwork on or before the postmark deadline for Technosphere registration.**

NOTE (*): Only those students and/or teams finishing in the top three places at each Regional Fair may enter the same specific events at Technosphere. Students who place among the top three finishers in Regional competition must register their entries for Technosphere. Substitutions will not be permitted for individual competitive event winners, however, if a member of a team event is unable to attend Technosphere, substitutions are allowed as long as at least one of the original team members is still a participant on the team. Such requests for substitutions must be submitted by the Technosphere registration deadline.

**Virginia TSA Technosphere 2010 - 2011 Events and Codes
HIGH SCHOOL PROGRAM**

11/01/10

Code Event

Notes

Code	Event	Notes
B-1	Animatronics	One team per chapter Participants will produce an animatronics device complete with an appropriate display.
B-2	Architectural Model	One individual or team per chapter For 2011, design a museum for manual arts, industrial arts, & technology education.
B-3	Biotechnology Design	One team per chapter Participants select a contemporary biotechnology problem that relates to the current year's published area of focus. The 2011 area of focus is Genetic Engineering .
B-4 *	Career Comparison	Choose one (1) of the following technology related career areas and research three (3) careers within that area.
B-5 *	CAD- Architecture 2D	Students must provide all equipment and supplies. Students must be available during judging. Entries will be judged from the computer screen. The event time limit will be three (3) hours.
B-6 *	CAD- Engineering 3 D	Students must provide all equipment and supplies. Students must be available during judging. Entries will be judged from the computer screen. The event time limit will be three (3) hours.
B-7	Chapter Team	One team of six per chapter Participants demonstrate an understanding of parliamentary procedure relative to business meetings. Participants provide their own pencil.
B-8	Construction Renovation	One team of two to five members per chapter Participants develop a set of presentation boards to include plans, illustrations, and finishers for a specified space. The solution must include all applicable construction systems. <u>A specific design problem will be provided each year on the TSA website.</u>
B-9 *	Debating Technological Issues	Teams will be instructed to take the Pro or Con side of the selected subtopic. The 2011 topic is Medical Technology .
B-10 *	Desktop Publishing	Student must provide all equipment and supplies including computer system and printer. The theme for 2011 is A Whole New World .
B-11 *	Digital Video Production	Participants develop a digital video/film that focuses on the given year's theme. The 2011 theme is Drama .

**Virginia TSA Technosphere 2010 - 2011 Events and Codes
HIGH SCHOOL PROGRAM**

11/01/10

Code	Event	Notes	
B-12 *	Dragster Design		2011 is "Flashback" year featuring external wheel dragsters ONLY. Judging will include a wind tunnel test. The wind tunnel will be provided by Virginia TSA.
B-13	Engineering Design	One team of 3 to 5 students per chapter	Participants work as part of a team to solve a design problem.
B-14 *	Essays on Technology		The topic for 2011 is "The Effects of the Decline of Housing Development" . Students provide their own pencil.
B-15 *	Extemporaneous Presentation		Participants give a three to five minute speech. Procedures H, I, & J in the national TSA competitive events guide will not be done.
B-16	Fashion Design	One team of 2 to 4 members per chapter	The theme challenge for 2011 is to design two (2) costumes for a current Broadway play of the team's choice.
B-17 *	Flight Endurance		Participants analyze flight principles with a rubber band powered model aircraft. Students build and test their aircraft before the event date.
B-18	Future Technology Teacher	Three individuals per chapter	Participants research and select three accredited colleges or universities that offer technology education/engineering technology teacher preparation as a major.
B-19	Geospatial Technology (Virginia Only)	Three teams per chapter. Maximum of 5 members per team.	Participants develop a pre conference electronic portfolio, profiling an assigned geographic area. Rules provided on page 27.
B-20 *	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 & block.
B-21 *	Music Production		Participants produce an original musical piece that is designed to be played during the national TSA conference opening or closing general session.
B-22	On Demand Video	One team of 2 or more per chapter	Participants write, shoot, and edit a sixty (60) second video during the conference. Participants have 24 hours to complete the entire video.

Virginia TSA Technosphere 2010 - 2011 Events and Codes
HIGH SCHOOL PROGRAM

11/01/10

Code	Event	Notes	
B-23 *	Photographic Technology		Participants capture images and process photographic and digital prints that depict the current year's theme. The 2011 theme is Doors .
B-24 *	Prepared Presentation		Participants deliver an oral presentation that includes audio and/or visual enhancements based on the theme for the current year's conference. Students provide their own audio/visual support materials. The 2011 theme is Snapshot of Innovation . Procedures E, F & G in the national TSA competitive events guide will not be done.
B-25	Principals of Technology (Virginia Only)	One team of 2 to 5 per chapter	Teams that register by the Technosphere deadline will receive detailed information about the type of resources to bring to the competition. Rules provided on page 34.
B-26 *	Promotional Graphics		Participants develop and present a graphic design that can be used to promote participation in TSA competitive events. Participants will choose one (1) of the three (3) competitions. For 2011, the options are: Dragster Design; CAD 2D, Architecture; OR Promotional Graphics .
B-27	SciVis	One team per chapter	Participants develop a visualization focusing on a subject or topic from one (1) or more of the following areas: science, technology, engineering, or mathematics. Participants must provide their own equipment.
B-28	Structural Engineering	One team of two per chapter	Participants work as part of a team on site with supplied materials to build a model of a structure. Participants must provide own tools including safety glasses.
B-29 *	System Control Technology		Participants work as part of a team on site to develop a computer controlled model solution to a problem. Teams must provide all equipment and supplies, including a 50 foot extension cord and power strip if needed.
B-30	Technical Sketching & Application	Two individuals per chapter	Participants complete a written test and semifinalist competes in an on-site problem. Students provide their own standard sketching tools.
B-31	Technology Bowl	One team of three per chapter	Each team member must take the written test. Members must provide their own pencil.

**Virginia TSA Technosphere 2010 - 2011 Events and Codes
HIGH SCHOOL PROGRAM**

11/01/10

Code	Event	Notes	
B-32	Technology Problem Solving	One team of two per chapter	Participants work together to develop and create a solution to a problem using limited materials. Teams must provide their own tools.
B-33 *	Transportation Modeling		Participants use engineering skills to design and fabricate a Co2 powered scale model. The theme for 2011 is a custom golf cart .
B-34*	Video Game Design	Three teams per chapter	Participants develop an E rated game that focuses on the subject of their choice.
B-35	Webmaster	One entry per chapter	Participants design a website that features the following components: school's career and technology education program, the TSA chapter, and the chapter's research about a technological topic. The URL for the chapter's entry MUST be emailed to TSA@VATSA.ORG by midnight March 25 . The subject line of the email must be: Webmaster.

Special Awards and Recognition Programs

C-2	Chapter Excellence (High)	Chapters may not receive this award two years in a row.
C-4	Community Service Award (High)	Virginia Only: One entry per chapter
C-6	Member of the Year (High)	Virginia Only. One individual per chapter.
C-8	Advisor of the Year (High)	Advisors may not receive this award two years in a row.
C-10	Century Award Virginia Only.	Chapters affiliating CAP, or 100+ members.
C-12	Commendation Award Virginia Only.	All schools in division affiliated.

Note: Individuals, chapters and/or school divisions applying for recognition awards must submit the required paperwork on or before the postmark deadline for Technosphere registration.

Middle School & High School 2010-2011 Geospatial Technology Contest TSA Design Brief (PRE-CONFERENCE)

Virginia's Tourism Industry

Virginia's tourism industry is diverse and geographically distributed. This is a reflection of Virginia's rich natural, cultural, and historical assets that appeal to an array of travelers. Virginia's tourism is associated with traditional forms of tourism assets, including national, state, and local parks, designated wilderness areas, designated scenic areas, and designated recreation areas. In addition, cultural centers may include music and festival venues, traditional arts and craft studios, agri-tourism, eco-tourism, and adventure tourism opportunities. Virginia's historic landscapes and related tourism assets are unrivaled by any other state.

Through this year's TSA, you will develop an atlas of tourism assets of your county. Your assignment as a GIS team is to collect data and generate maps concentrating on the existing and potential tourism resources (assets) of your respective county. Maps, data and documents need to be collected abiding by the categories listed below. All material should be written to a CD or DVD and presented at the time of arrival at Technosphere 2011. There should be representative maps, data and documents for each of the following categories:

A. The Existing tourism infrastructure

You will first need to identify the existing tourism infrastructure in your county. These may include:

1. Locational map (Map #1)- The location of your county in relationship to Virginia. Explain the geographic position of your county from a broader context as it relates to tourism (are there major roads / population centers / other major tourist destinations nearby that your county could draw tourists from, etc.) in the map summary document (Section C.2.b).
2. Cultural tourism asset inventory (Map #2)- Cultural resources include buildings, structures, sites, landscapes, festivals, or venues associated with human culture and valued for their social and/or historic significance. These resources may include, but are not limited to: historic landscapes (battlefields), architecturally significant structures, historic structures or buildings, artist studios, events, or centers, music venues or festivals, fairs, etc. In addition, cultural tourism is associated with industries that support these activities (including agri-tourism operations [u-pick berry farms, vineyards, Christmas tree farms, etc.], guide and interpretive services, art galleries, etc.). Explain and summarize the cultural tourism asset inventory in the map summary document (Section C.2.b).
3. Recreational tourism asset inventory (Map #3) - assets include, but are not limited to: rail trails, scenic bikeways, hiking trails, canoeing/rafting waters, fishing waters, public pools or swimming holes, golf courses, horseback riding trails. In addition, recreational tourism is also associated with the industries that support these activities (fishing charters, kayak guides and provisions, etc.). Explain and summarize the recreational tourism asset inventory in the map summary document (Section C.2.b).

4. Natural / environmental asset inventory (Map #4)- these resources are associated with the environmental capital of the area that are of interest to assets may include, but are not limited to: birding trails, scenic rivers, green ways, wild and scenic areas, local
5. Economic & infrastructure asset inventory (Map #5) – these assets are associated with the infrastructure required to support tourism, and may include: roads (as well as airports, train stations, major roads, etc.) and other locally owned facilities (locally owned bed and breakfasts, hotels and other resources), and demographic information required to support tourism in the county or the region. Summarize the economic and infrastructure asset inventory in the map summary document, and explain how these resources may impact your county’s tourism assets (Section C.2.b).

Note that all maps must be symbolized so that the features (assets) in each map can be differentiated (hiking trails should be symbolized differently from horseback riding trails, etc.) from one another. Map numbers (Map #1, Map #2, etc.) should be labeled in the upper right hand corner. Feel free to develop additional maps for each category if needed, just label these extra maps as Map# 3a, Map # 3b, etc.

Note that some features (assets) may belong to more than one of the categories listed above. Just be sure to include why a particular asset was included in one category and not another category in the “map analysis” document associated with each map (the map analysis document is described in further detail below).

B. Tourism Assessment

After you have developed a comprehensive inventory of the existing tourism infrastructure, identify tourism concentration areas, or “hot spots” in your county, to help identify issues, successes, or challenges associated with tourism development in your locality. For example, you may want to:

1. Implement some spatial analytical tools (buffer, overlay, or other spatial analysis tools) to help the audience to visualize these tourism resource concentration areas in your county (Map # 6). Explain your findings in the map summary document (Section C.2.b)
2. Create a map that illustrates which regions in your county support higher concentrations of tourism assets. Identify and illustrate regions in your county that do not support higher concentrations of tourism assets (you can show both of these on a single map if you wish). (Map # 7) Explain your findings in the map summary document (Section C.2.b)
3. Create a map that explains whether the *economic & infrastructure asset inventory* (Section A.5) appears to be adequately developed enough to support the existing tourism assets of the county; (Map # 8). Explain your findings in the map summary document (Section C.2.b)

Note that the use of spatial analytical tools, such as buffer, overlay, etc. is required. Simply superimposing data layers on top of each other may not fulfill the analytical requirement.

C. Parameters for the Contest

1. Data collection– GIS data must be collected for each of the categories listed under “Tourism Assets” (Section A, 1-5). These data should be available from your GIS

software package, available for free via the Internet, available from your local county GIS department. Feel free to access the state’s geospatial metadata clearinghouse (<http://gisdata.virginia.gov>), or contact organizations by phone or email (shape files, geodatabases, imagery, elevation data are examples of data that may be collected). Data may also be collected with a GPS receiver, however, this is optional.

2. Supporting Documents –

- a. A *Data dictionary* for the above GIS files is required. The data dictionary should be an excel spreadsheet that includes the following information:

data layer name	Accuracy of the data	Is metadata available? (Y or N)
data layer source	Scale of the data	Metadata URL
	Date the data layer was developed	How data was acquired

- b. *Map summary document* – A document should accompany each map with an explanation of the map, and methods used to create the map.
- c. The *Project Journal* - a daily written record of activities and sequential events leading to the final portfolio product is to be kept.

- 3. Maps – Maps can either be exported as JPEG or PDF (and if exporting as a PDF, make sure that the fonts are embedded with the document, so that they will display properly on a different computer). You can also provide the maps as ArcGIS map document files (mxd) from the GIS software, however, the file structure should be setup so that the judges can open the project. Maps must be student generated with all of the necessary components of a map layout (legend, scale bar, north arrow, title, source, etc).

E. CD/DVD File Structure.

- 1. A folder for each category
- 2. Subfolders for data, Supporting documents, and Maps

F. Notebook

- 1. The notebook is a standard three (3)-ring binder in which the items are contained in clear sheet protectors. Items may be removed and examined by evaluators. Other items may not be included.
- 2. The notebook is identified using only the participant's conference identification number.
- 3. Include a copy of the backup CD in the binder in an additional plastic sleeve.

GEOSPATIAL TECHNOLOGY EVENT COORDINATOR INSTRUCTIONS

PERSONNEL

- A. Event coordinator
- B. Evaluators for displays, three (3)
- C. Evaluators for on-site activity, three (3)
- D. Computer coordinator, one (1)

MATERIALS

- A. Coordinator's box, containing:
 - 1. Event guidelines, five (5) copies
 - 2. Official rating forms
 - 3. List of entries with finalist report
 - 4. List of evaluators/assistants
 - 5. Pens for evaluators
 - 6. Results envelope
- B. Tables for computer systems (2' x 4' minimum each), one (1) per participant
- C. Chairs, one (1) per participant

PROCEDURE

- A. Upon arrival at the conference, report to the CRC room and check the contents of the coordinator's box. Review the event guidelines and check to see that enough evaluators/assistants have been scheduled.
- B. 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.
- C. Check in the entries at the time stated in the conference program. Anyone reporting who is not on the entry list may check in only after official notification is received from the CRC chairperson. Late entries are considered on a case-by-case basis and only when the lateness is caused by events beyond the participant's control. Requirements for attire do NOT apply during check in.
- D. Place an entry number in the lower right-hand corner of the electronic portfolio. Position electronic portfolios for evaluation and viewing. Secure the entries in the designated area.
- E. Meet with your evaluators/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. Evaluators independently review each entry and complete the official rating form.
- G. 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.
- H. Meet with your evaluators for the on-site activity to review time limits, procedures, and regulations. If questions arise that cannot be answered, speak to the event manager before the event begins.
- I. Begin the event at the scheduled time by closing the doors and checking the entry list. All participants and evaluators should be in the room at this time. Participants not present may be disqualified. In order to compete, participants must be on the entry list or must have approval of the CRC chairperson.
- J. Evaluators monitor the participants during the on-site activity, independently review each entry, and complete the official rating form.
- K. For participants who violate the rules, the decision either to deduct twenty points (20) or to disqualify the entry must be discussed and verified with the evaluators, event coordinator, and a CRC manager. Secure the initials of the coordinator and manager on the rating form.
- L. Evaluators total the scores from the electronic portfolio and the on-site problem for each participant, and then take the average of their three (3) scores to determine the ten (10) finalists. Evaluators discuss and break any ties for the top ten (10) placements.
- M. Complete and submit the finalist report, which includes a ranking of the ten (10) finalists, and all related forms in the results envelope to the CRC room.
- N. If necessary, manage security and the removal of materials from the area.

GEOSPATIAL TECHNOLOGY

2010-2011 OFFICIAL RATING FORM

MIDDLE SCHOOL (A-13)

ENTRANT'S ID #																			
EVALUATIVE CRITERIA																			
Pre-conference Portfolio (50 pts.) Maps 20 pts. Documents: <ul style="list-style-type: none"> • Data Dictionary 5 pts. • Analysis Documents 5 pts. • Project Journal 5 pts. CD Structure 5 pts. Originality 10 pts.																			
On-site Challenge (50 pts.) Innovation & Originality 20 pts. Solution to On-site Problem 20 pts. Metadata Information Updated 5 pts. Final Product Burned on CD 5 pts.																			
SUBTOTAL 100 pts.																			
Rules violation (must be initialed by event coordinator and manager) minus 20 pts.																			
TOTAL 100 pts.																			
Evaluator's comments/notes:																			
I certify these results to be true and accurate to the best of my knowledge.																			
Evaluator's signature _____																			

GEOSPATIAL TECHNOLOGY

2010-2011 OFFICIAL RATING FORM

HIGH SCHOOL (B-19)

ENTRANT'S ID #																				
EVALUATIVE CRITERIA																				
Pre-conference Portfolio (50 pts.) Maps 20 pts. Documents: <ul style="list-style-type: none"> • Data Dictionary 5 pts. • Analysis Documents 5 pts. • Project Journal 5 pts. CD Structure 5 pts. Originality 10 pts.																				
On-site Challenge (50 pts.) Innovation & Originality 20 pts. Solution to On-site Problem 20 pts. Metadata Information Updated 5 pts. Final Product Burned on CD 5 pts.																				
SUBTOTAL 100 pts.																				
Rules violation (must be initialed by event coordinator and manager) minus 20 pts.																				
TOTAL 100 pts.																				
Evaluator's comments/notes:																				
I certify these results to be true and accurate to the best of my knowledge.																				
Evaluator's signature _____																				

Principles of Technology Challenge High School Event

Overview: The Principles of Technology Challenge is a team event in which students 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.

Purpose: The purpose of the contest is to recognize high school students who have studied the Principles of Technology courses and are able to apply their knowledge to real world mechanical, electrical, thermal and fluidics problems.

Eligibility: Entries are limited to one (1) team per TSA chapter. The team must consist of two (2) to five (5) chapter members.

Time Limits: Each team will have two (2) hours to complete the event.

Procedure:

- A) Participants must register for the event in accordance with procedures established for Technosphere.
- B) Participants must check in at the time specified in the conference program.
- C) The team members take the written test together and provide one answer sheet.
- D) After completing the written test, each team will be given a series of problems to solve.

Equipment: Each team must provide the following items of equipment for the onsite problem:

1. Hand held calculator with no programs installed (may be 4 function scientific or graphing)
2. Spring scales
3. Protractors
4. Principles of Technology student resource guide or any locally approved high school physics textbook
5. Weight sets
6. Resistors
7. Lead sets
8. Power supplies
9. Digital multimeter
10. Thermal cups
11. Specific heat unknown samples
12. Thermometers
13. Graduated cylinders

Regulations: Each team will work independently without assistance from evaluators, teachers, or observers.

- A) Each team will be assigned a work station prior to the event.
- B) Participants will not be permitted to leave the event room during the event.

Evaluation: Each team's written test score and score for the solution of the problem will be averaged to determine the final score.

Virginia TSA provides recognition for Middle and High School competition in the following events. Applications for these awards can be found on the Virginia TSA website under Forms & Publications.

C - 1 and C - 2

Chapter Excellence: Virginia TSA uses the national criteria and recognizes three outstanding Middle School Level TSA Chapters and three outstanding High School Level TSA Chapters at Technosphere each year. Chapters may not receive this award two (2) years in a row.

C - 3 and C - 4

Community Service: Virginia TSA recognizes three Middle School Level TSA Chapters and three High School Level TSA Chapters at Technosphere each year.

C - 5 and C - 6

Member of the Year: Virginia TSA recognizes three outstanding Middle School Level TSA students and three outstanding High School Level TSA students at Technosphere each year. State officers are not eligible for this award.

C - 7 and C - 8

Advisor of the Year: Virginia TSA uses the national criteria and recognizes three advisors from Middle School Level and High School Level TSA Chapters at Technosphere each year. Advisors may not receive this award two (2) years in a row.

C - 9 and C - 10

Century Award: Virginia TSA recognizes outstanding Middle School Level TSA Chapters and High School Level TSA Chapters that affiliate 100 or more students.

C - 11 and C - 12

Commendation Award: Virginia TSA recognizes outstanding school divisions that affiliate all secondary schools technology education programs with Technology Student Association at Technosphere each year.

Virginia TSA Chapter Excellence Award Application

(All applications must be postmarked by the Technosphere Registration Deadline)

School Name: _____

School Address: _____

School Phone Number: _____

TSA Advisor: _____

TSA Advisor's E-mail Address: _____

General Information

Number of members in chapter: _____

Number of students in technology education courses: _____

Number of years the chapter has been affiliated with TSA: _____

Please type all answers to the following questions on a separate sheet and attach to application.

Chapter Involvement

1. How often does your chapter meet?
2. How are your chapters scholastic and educational activities incorporated into daily technology education curriculum?
3. Please list the number of students that attended the National TSA Conference the last 3 years, including the competitive events entered and awards and recognition earned.
4. List your chapter's activities that deal with inter-chapter participation.

Chapter Fund Raising Projects

1. List your chapters fund raising projects and note the purpose for raising the money. If chapter is not allowed to participate in fund raising, please list how monies are raised.

Leadership Activities

1. If your chapter has been involved in leadership activities not previously mentioned, discuss each activity.
2. What is your chapters' involvement with TSA alumni?

Chapter President's Signature

Chapter Advisor's Signature

C - 1 or C - 2

CHAPTER EXCELLENCE

JUDGE'S OFFICIAL RATING SHEET

Middle School/LEVEL I or High School/Level II (Circle one)

ENTRANT'S ID																				
JUDGING CRITERIA																				
Involvements40 points max.																				
Fund-Raising20 points max.																				
Leadership Activities10 points max.																				
Resume30 points max. Organization of facts in an orderly manner (16 points) Neatness (8 points) Appropriate information (6 points)																				
Total100 points max.																				

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

Judge's Signature

Virginia TSA Community Service Award Application

(All applications must be postmarked by the Technosphere Registration Deadline)

School Name: _____

School Address: _____

School Phone Number: _____

TSA Advisor: _____

TSA Advisor's E-mail Address: _____

List all Community Service Activities that your chapter has participated in during the current school year. Include the specific date of each event.

Event:	Date:
1) _____	_____
2) _____	_____
3) _____	_____
4) _____	_____
5) _____	_____
6) _____	_____
7) _____	_____
8) _____	_____
9) _____	_____

Total hours spent working on Community Service activities: _____

On a separate sheet of page (maximum 3 pages), provide a typed description of each Community Service activity that is list above.

Chapter President's Signature

Chapter Advisor's Signature

Virginia TSA Member of the Year Application

Applicants must be enrolled in a Technology Education course and/or have completed a middle or high school Technology Education plus be a Virginia TSA member.

(All applications must be postmarked by the Technosphere Registration Deadline)

(State officers are not eligible for this award.)

Member's Name: _____

Member's School Name: _____

School's Address: _____

School's Phone Number: _____

Current Year in School and GPA: _____

List the name of each Technology Education course & state course code number that you have been enrolled in at the middle and/or high school level:

1. _____

2. _____

3. _____

4. _____

5. _____

Number of years in TSA:

Awards won, offices held, and other accomplishments within TSA:

1. _____

2. _____

3. _____

4. _____

5. _____

Awards won, offices held, extracurricular activities, and other accomplishments outside of TSA:

1. _____

2. _____

3. _____

4. _____

5. _____

Virginia TSA Member of the Year Application

Applicants must be enrolled in a Technology Education course and/or have completed a middle or high school Technology Education plus be a Virginia TSA member.

(All applications must be postmarked by the Technosphere Registration Deadline)

(State officers are not eligible for this award.)

In a brief type written essay (maximum 2 pages), please explain why this student deserves the award.

.....

Nominator Information:

Member must be nominated by a Virginia TSA chapter advisor. State officers are not eligible for this award.

Nominated by: _____

School Name: _____

School Address: _____

Nominator's Email Address: _____

Nominator's Phone number: _____

Signature of Nominator: _____

1. Cover sheets and additional materials are not accepted.
2. The Nominated Advisor must be nominated by two (2) chapter Advisors.
3. Only one (1) application is needed but it must be signed by the two (2) nominating chapter Advisors.
4. Include information from the last three (3) years only.
5. Advisors may not receive this award two (2) years in a row.

Nominating Advisors Information

Name: _____

School: _____

Principal's Name: _____

School Address: _____

City/State/Zip: _____

Phone: _____ Numbers of years teaching: _____

Name: _____

School: _____

Principal's Name: _____

School Address: _____

City/State/Zip: _____

Phone: _____ Numbers of years teaching: _____

Nominated Advisor Information

Name: _____

School: _____

Principal's Name: _____

School Address: _____

City/State/Zip: _____

Phone: _____ Numbers of years teaching: _____

Technology Education courses currently teaching:

Promoting TSA

1. When does the TSA Chapter meet?

2. Fill in the table showing the number of students the advisor has taught and advised during the past three years.

Year	Number of students enrolled in classes	Number of TSA Members

3. Indicate the number of officer candidates that the advisor has sponsored for positions beyond the chapter level.

_____ Regional _____ State _____ National

4. List the calendar years in which the advisor has attended any state or nationally sponsored conferences during the last three years.

State			
National			

5. List any publicity, such as radio, television, and newspaper coverage, that the chapter has received.

Chapter Accomplishments

1. List any major chapter projects that the chapter has completed over the last three years.

Facilitation Skills

1. Describe how students are introduced to the Technology Student Association in the technology program.

2. List forms of recognition offered to chapter members.

Leadership Skills

1. Describe the advisors participation in TSA at the regional level.

2. Describe the advisors participation in TSA at the state level.

3. Describe the advisors participation in TSA at the national level.

4. List other organizations and activities in which the advisor is involved.

I certify that the claim and information reported on behalf of the advisor are true and accurate.

Nominating Advisor _____ Date _____

2nd Nominating Advisor _____ Date _____

ADVISOR OF THE YEAR

JUDGE'S OFFICIAL RATING SHEET
Middle School/LEVEL I or High School/Level II (Circle one)

ENTRANT'S ID																				
JUDGING CRITERIA																				
Promoting TSA..... 15 point max.																				
Number of officer candidates advisor has sponsored (5 point)																				
Number of years advisor has attended state/national conference (5 point)																				
Publicity that the chapter has received (5 point)																				
Chapter Accomplishments.....20 point max.																				
Major chapter projects completed (10 points)																				
Facilitation Skills..... 10 point max.																				
How is TSA introduced to your class (5 points)																				
How do TSA members receive recognition (5 points)																				
Leadership Skills..... 30 point max.																				
Participation in TSA at local/regional level (15 points)																				
Participation in TSA at state/national level (15 points)																				
Professional & Civic Organizations..10 point max.																				
Neatness 5 point max.																				
Spelling & Grammar 10 point max.																				
Total..... 100 points max.																				

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

Judge's Signature

VIRGINIA TSA
CENTURY AWARD APPLICATION

(All applications must be postmarked by the Technosphere Registration Deadline)

Those schools that affiliate under the Chapter Affiliation Plan, affiliate 100 or more students individually or the total technology education program enrollment are eligible to apply for and receive recognition. Applicants must apply by the deadline listed in the Technosphere registration packet.

Name of School: _____

Address: _____

School Division: _____

Advisor Name: _____

School Phone: _____-_____-_____

Level: (Circle one) Middle – High

Date: _____

This is to certify that _____ school has affiliated
_____ students with the Technology Student Association. We believe that we are eligible to receive the
Century Award for affiliating 100% (or 100 members) with the Technology Student Association.

Chapter President

Chapter Vice President

Chapter Advisor

School Principal

VIRGINIA TSA

COMMENDATION AWARD

(All applications must be postmarked by the Technosphere Registration Deadline)

School divisions that affiliate all secondary school technology education programs with the Technology Student Association are eligible to apply for the Commendation Award. The Commendation Award provides recognition to those school divisions that actively support the establishment and maintaining of TSA chapters.

School Division Name: _____

Mailing Address: _____

CTE Director: _____

Technology Supervisor: _____

Telephone Number: _____-_____-_____

Number of High Schools in Division: _____

Number of Middle Schools in Division: _____

This is to verify that all schools in the _____ school division have organized and affiliated with the Technology Student Association for the current school year. This represents all of the middle and school schools within the division. A list of the schools and chapter advisors names are attached for your review. A school division representative will attend the Technosphere awards program to receive the school division award.

Local Technology Education Coordinator

Local Career and Technical Education Director