

TSA

National Technology Standards

Standard 1: Students will develop an understanding of the characteristics and scope of technology.

Standard 2: Students will develop an understanding of the core concepts of technology.

Standard 3: Students will develop an understanding of the relationships among technologies and the connections between technologies and other fields of study.

Standard 4: Students will develop an understanding of the cultural, social, economic, and political aspects of technology.

Standard 5: Students will develop an understanding of the effects of technology on the environment.

Standard 6: Students will develop an understanding of the role of society in the development and use of technology.

Standard 7: Students will develop an understanding of the influence of technology on history.

Standard 8: Students will develop an understanding of the attributes of design.

Standard 9: Students will develop an understanding of the engineering design.

Standard 10: Students will develop an understanding of the role of troubleshooting, research and development, invention and innovation, and experimentation in problem solving.

Standard 11: Students will develop the abilities to apply the design process.

Standard 12: Students will develop the abilities to use and maintain technological products and systems.

Standard 13: Students will develop the abilities to assess the impact of products and systems.

Standard 14: Students will develop an understanding of and be able to select and use medical technologies.

Standard 15: Students will develop an understanding of and be able to select and use agricultural and related biotechnologies.

Standard 16: Students will develop an understanding of and be able to select and use energy and power technologies.

Standard 17: Students will develop an understanding of and be able to select and use information and communication technologies.

Standard 18: Students will develop an understanding of and be able to select and use transportation technologies.

Standard 19: Students will develop an understanding of and be able to select and use manufacturing technologies.

Standard 20: Students will develop an understanding of and be able to select and use construction technologies.

In ITEEA's Standards for Technological Literacy publication, each standard above is further defined by "benchmarks . . . that detail the particular knowledge and abilities that students must attain in order to meet the standard." The table that follows measures TSA's competitive events against each standard and its benchmarks, providing insight into how the events might be used to complement curriculum.





TSA

National Science Standards

A. Science as inquiry

1. Identify questions and concepts that guide scientific investigations
2. Design and conduct scientific investigations
3. Use technology and mathematics to improve investigations and communications
4. Formulate and revise scientific explanations and models using logic and evidence
5. Recognize and analyze alternative explanations and models
6. Communicate and defend a scientific argument

B. Physical science

1. Structure of atoms
2. Structure and properties of matter
3. Chemical reactions
4. Motions and forces
5. Conservation of energy and the increase in disorder
6. Interactions of energy and matter

C. Life science

1. The cell
2. The molecular basis of heredity
3. Biological evolution
4. The interdependence of organisms
5. Matter, energy, and organization in living systems
6. The behavior of organisms

D. Earth and space science

1. Energy in the earth system
2. Geochemical cycles
3. The origin and evolution of the earth system
4. The origin and evolution of the universe

E. Science and technology

1. Abilities of technological design
2. Understandings about science and technology
3. Implement a proposed solution
4. Evaluate the solution and its consequences
5. Communicate the problem, process and solution

F. Science in personal and social perspective

1. Personal and community health
2. Population growth
3. Natural resources
4. Environmental quality
5. Natural and human-induced hazards
6. Science and technology (local, national and global)

G. History and nature of science

1. Science as a human endeavor
2. Nature of scientific knowledge
3. Historical perspectives





TSA

Leadership Skills Standards

The following leadership skills are derived from the Technology Content Standards of the International Technology Education Association (ITEA) publication: ITEA Standards for Technological Literacy, Content for the Study of Technology, 2000.

Creative Thinking
Communication
Ethical (Ethics)
Organization
Self Esteem

Critical Thinking
Decision Making
Evaluation
Problem Solving
Teamwork





TSA EVENTS

Information Provided

OVERVIEW

ELIGIBILITY

ATTIRE

REGULATIONS

NOTES

LEADERSHIP SKILLS

JUDGES

RESPONSIBILITIES

PURPOSE

TIME LIMITS

PROCEDURE

EVALUATION

STEM INTEGRATION

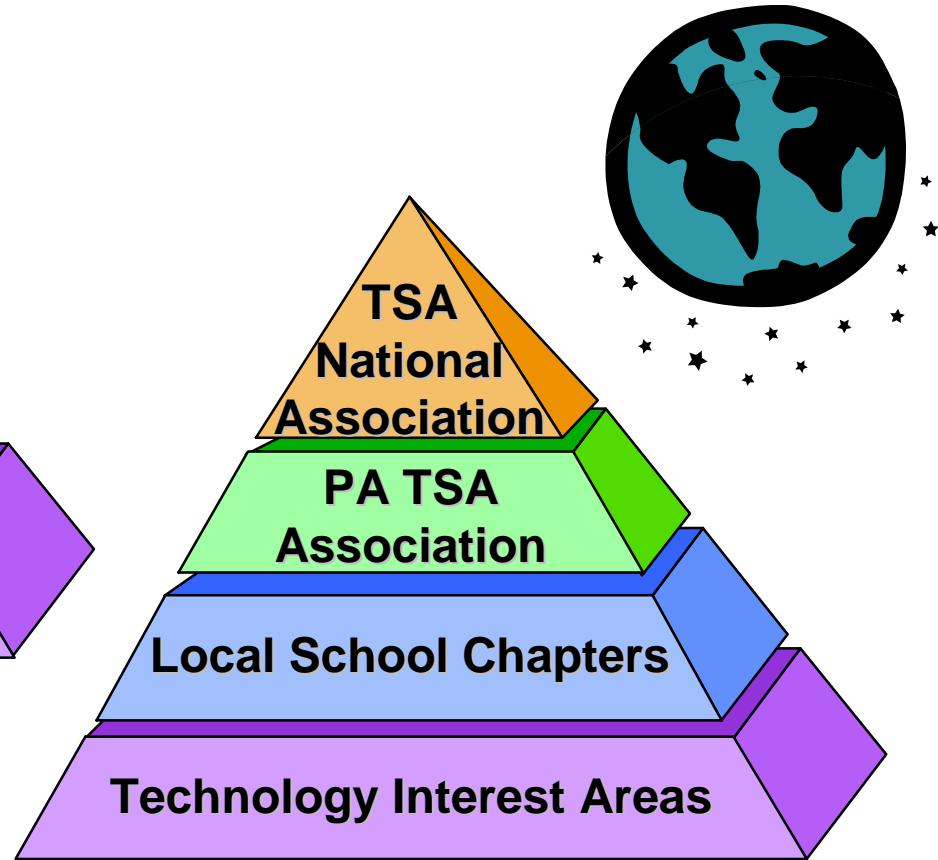
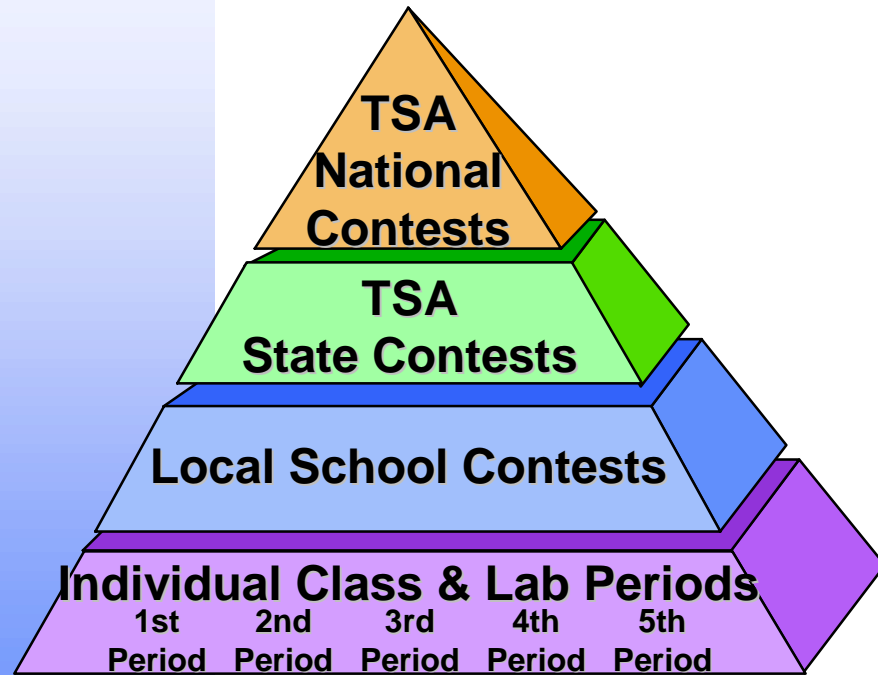
CAREERS RELATED TO EVENT

MATERIALS

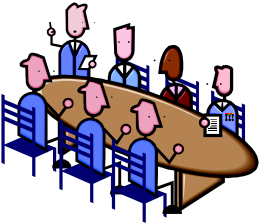
EVALUATION RUBRIC



Integrating TSA Into the Technology Education Program




Calendar of Activities

AUGUST	SEPTEMBER	OCTOBER
 <p data-bbox="719 767 954 804">Plan Activities</p> <p data-bbox="674 858 987 895">Train New Officers</p>	<p data-bbox="1093 499 1451 580">Organize Management System</p> <p data-bbox="1133 635 1411 716">Conduct First Chapter Meeting</p> <p data-bbox="1093 770 1451 807">Establish Committees</p>	<p data-bbox="1552 459 1888 580">Promote Safety and Efficiency with Tools and Materials</p> <p data-bbox="1581 639 1859 721">Attend Fall Leadership Rally</p> <p data-bbox="1541 775 1899 857">Promote Membership and Involvement</p>
NOVEMBER	DECEMBER	JANUARY
<p data-bbox="651 1161 987 1283">Produce Product or Service of Economic Value</p>	<p data-bbox="1160 1161 1391 1283">Market Manufactured Products</p>	<p data-bbox="1570 1161 1899 1283">Invite Speakers and Arrange Tours of Technology</p>



Calendar of Activities

FEBRUARY	MARCH	APRIL
<p>Prepare for Regional Contests on Campus</p> <p>Coordinate School or Community Service Project</p>	 <p>Prepare for Regional Contests on Campus</p> <p>Explore Career and Education Program Opportunities</p>	<p>Sponsor Open House During Science and Technology Week</p> <p>PA TSA State Conference and Competition at Seven Springs</p> <p>National TSA Week</p>
MAY	JUNE	JULY
<p>Arrange Election of Officers for Next Year</p>	<p>Recognize Students for Achievements</p> <p>Participate in National Conference</p>	<p>PA Student Leadership Conference</p> <p>Promote Technology Education at Fairs and Malls</p>



National TSA Business Partners



Chief Architect



National TSA Business Partners (Continued)



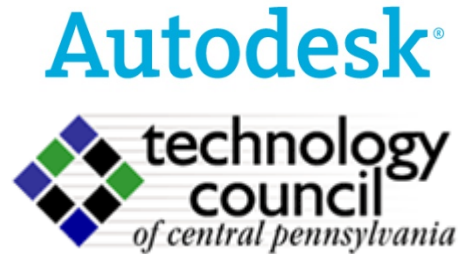
LEMELSON-MIT PROGRAM



PITSCO
LEADERS IN EDUCATION



Pennsylvania TSA Partners



Douglas Education Center



Thaddeus Stevens College of Technology

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***Get on
track***



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PENNSYLVANIA



TECHNOLOGY STUDENT ASSOCIATION

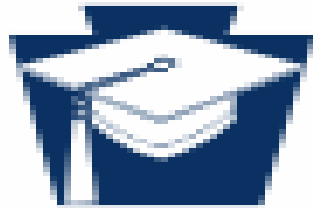
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- PA Bureau of Career and Technical Education
- Anyone I missed that helped with today's presentation



PENNSYLVANIA CTSOs





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Office of Elementary and Secondary Education

Amy Morton, Deputy Secretary

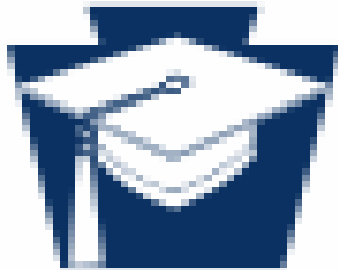
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**Division of Professional Development and
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