Pennsylvania TSA
A Premier Career and Technical Student Association

Dennis C. Gold
PA TSA Facilitator
What is TSA?

TSA is one of eight Career and Technical Student Organizations. It started as American Industrial Arts Student Association (AIASA) in 1978. The Technology Student Association fosters personal growth, leadership and opportunities in technology, innovation, design and engineering. Middle and high school members apply and integrate science, technology, engineering and mathematics concepts through co-curricular activities, competitive events and related programs.

“Preparing students for the challenges of a dynamic world by promoting technological literacy.”
Pennsylvania TSA A Premier CTSO

TSA is One of Eight CTSOs
Pennsylvania TSA A Premier CTSO

Why Join TSA? Opportunity!

• NAEP technology and engineering literacy (TEL) assessment
• Premier STEM and Career and Technical Student Organization
• High growth rate of STEM and non-traditional occupations
• Individual and team work promoting personal development
• Improves students’ career options with new occupations everyday
• Develop leadership skills while receiving awards and recognition
Why Join TSA?  Opportunity!

• Enhance technological literacy with leadership skills being a priority
• Regional, state and national conferences with 50 events to excel
• Students gain enthusiasm and inspiration while applying knowledge
• TSA’s honor society, scholarships and achievement programs
• Network with students, teachers, and business leaders
• Opportunity, Success & Excitement being part of 200,000 students
Middle School Events | # of Events | % of Total
---|---|---
Events with 1-3 | 7 | 22%
Events with 4-10 | 10 | 31%
Events with none | 12 | 38%
Events with 1-3 and 4-10 | 4 | 13%
Total | 32 | 100%
An award 67% of the events available

High School Events | # of Events | % of Total
---|---|---
Events with 1-3 | 4 | 11%
Events with 4-10 | 16 | 46%
Events with none | 7 | 20%
Events with 1-3 and 4-10 | 8 | 23%
Total | 35 | 100%
An award 80% of the events available
Pennsylvania TSA Is Growing

- 4th Largest TSA State Membership – Chapters
  54 middle and 105 high schools = 159 chapters
- 3rd Largest TSA School State Membership – 30,353
- 159 Chapters - up from 92 in 2005 – 72.8% increase
- Pennsylvania received three national TSA membership awards

As of 4/18/2014
President: Sanjay Koduvalli, Iowa
Vice-President: Sri Nimmagadda, Washington
Secretary: Elizabeth (E.B.) Bollendonk, Colorado
Treasurer: Sai Nimmagadda, Washington
Reporter: Hughston May, Alabama
Sergeant-at-Arms: Melissa Haslebacher, West Virginia
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Pennsylvania TSA 2013-14 Officers
# Pennsylvania TSA 2014-15 Officers

<table>
<thead>
<tr>
<th>First</th>
<th>Last</th>
<th>Title</th>
<th>School</th>
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</thead>
<tbody>
<tr>
<td>Ben</td>
<td>Cutler</td>
<td>President</td>
<td>Conestoga Valley High School</td>
</tr>
<tr>
<td>Luke</td>
<td>Artzt</td>
<td>Vice-President</td>
<td>Stroudsburg High School</td>
</tr>
<tr>
<td>Lisa</td>
<td>Gardner</td>
<td>Secretary</td>
<td>Lower Merion High School</td>
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<tr>
<td>Mathi</td>
<td>Tamilmani</td>
<td>Treasurer</td>
<td>Downingtown STEM Academy</td>
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<tr>
<td>Morgan</td>
<td>Lepre</td>
<td>Reporter</td>
<td>Boyertown Area Senior High School</td>
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<td>Bethany</td>
<td>Barbis</td>
<td>Sergeant-at-Arms</td>
<td>Conemaugh Valley High School</td>
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<tr>
<td>Chirag</td>
<td>Agarwal</td>
<td>Parliamentarian</td>
<td>Plymouth Whitemarsh High School</td>
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<tr>
<td>Daphne</td>
<td>Wiess</td>
<td>Historian</td>
<td>South Western High School</td>
</tr>
<tr>
<td>Mr. and Mrs. Clint</td>
<td>Rickert</td>
<td>Advisors</td>
<td>Plymouth Whitemarsh School District</td>
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</table>
Recent National TSA Initiatives

- Tests of Engineering Aptitude, Mathematics and Science (TEAMS)
- Junior Solar Sprint (JSS)
- A four to six week pre-collegiate summer program (UNITE)
- Army Educational Outreach Program (AEOP)
- Engineering Alliance (AE) with Project Lead the Way (PLTW)
- Verizon Innovative Application Challenge Partnership
A CTSO and TSA Benefits Students

- CTSO positively affected grades, academic engagement, and academic/job skills.
- CTSO program students aspire more often to two year colleges, compared to the general comparison group of students who aspire more often to four year colleges.
- CTSO students were more involved in extra-curricular activities.
- CTSO students work more hours than other students.
- CTSO students have higher certainty of job choice.
- College aspirations may be more realistic and adaptive to a technical career.
- Helps with variables to keep students in school and focus on a future.
National TSA Assists

In the growth and development of its state delegations by promoting and managing these items/activities:

• Curriculum-based programs
• A national conference and a competitive events program
• The “School Scene” newsletter and other publications
• Award and recognition programs
• Scholarship and achievement programs
• National officer program
• online access to member resources on TSA’s website
• Assistance to state delegations and local chapters
• National service project: American Cancer Society
Pennsylvania TSA Assists

- In the growth and development of its regions and chapters with its student officers, TSA facilitator, and board of directors
  - Partnerships with community and business
  - Regional and state conferences
  - The “PA Post” student newsletter
  - Awards, recognition, scholarships, and achievement programs
  - Regional and state officer programs
  - Pennsylvania TSA internet site: www.patsa.org
  - Alumni chapter
  - Technology Education and Engineering Association of PA
  - Assistant to chapters
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TSA Competition Samples

Engineering Design

Transportation Challenge

Structural Engineering

F1 in Schools Challenge
Pennsylvania TSA Green

Mission Statement

The PA-TSA Green Initiative promotes environmental awareness and activism within the PA-TSA organization and aspires to expand efforts to TSA members state wide, nationally, and internationally.

http://patsa.org/programs/green-initiative
National Competitive Events For Students in High School

Animatronics
Architectural Renovation
Biotechnology Design
Career Preparation
Chapter Team
Computer-Aided Design (CAD)
  2D, Architecture
Computer-Aided Design (CAD)
  2D, Architecture
  3D, Engineering
Computer Numerical Control (CNC) Production
Debating Technological Issues
Desktop Publishing
Digital Video Production
Dragster Design
Engineering Design
Essays on Technology
Extemporaneous Presentation
Fashion Design
Flight Endurance
Future Technology Teacher
Manufacturing Prototype
Music Production
On Demand Video
Open Source Software Development
Photographic Technology
Prepared Presentation
Promotional Graphics
SciVis
Structural Engineering
System Control Technology
Technical Sketching and Application Technology Bowl
Technology Problem Solving
Transportation Modeling
Video Game Design
Webmaster
National Qualifying Events

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National Competitive Events For Students In Middle School

Agriculture and Biotechnology Issues
Career Prep
Challenging Technology Issues
Chapter Team
Communication Challenge
Community Service Video
Construction Renovation
Digital Photography
Dragster
Electrical Applications
Energy Sources *
Environmental Focus
Essays on Technology
F1 in Schools (independent event)
Flight
Geospatial Technology *
Go Green Manufacturing

Inventions and Innovations
Jr. Solar Sprint *
Leadership Strategies
Medical Technology Issues
Multimedia Production
Prepared Speech
Problem Solving
Promotional Design
Structural Engineering
System Control Technology
Technology Bowl
Technical Design
Technical Design
Transportation Systems
Video Game Design
Water Infrastructure
Website Design

© National Qualifying Events
* New

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Events From Pennsylvania TSA

Bio-Medical Career Essay – MS/HS
Calculator-Controlled Robots – MS
Computer-Aided Drafting/Design – MS
Computer System and Troubleshooting – HS
Delta Dart Glider – MS
Digital Video Challenge B/W – MS
Electronic Research and Experimentation – HS
Logo Design – MS/HS
Material Processes – MS/HS
Mechanical Challenge – MS
PA-TSA R/C Drag Racing – MS/HS
Robotics – MS/HS
Safety Illustration Computer Graphics – MS/HS
Snapshot – MS
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<tr>
<th>Regions</th>
<th>Dates</th>
<th>Locations</th>
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<tbody>
<tr>
<td>Regions 1/6</td>
<td>January 14, 2015 H/S</td>
<td>Pittsburgh Technical Institute, Oakdale, PA</td>
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<tr>
<td>Regions 1/6</td>
<td>January 15, 2015 M/S</td>
<td>Pittsburgh Technical Institute, Oakdale, PA</td>
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<td>Region 2</td>
<td>February 7, 2015</td>
<td>Conestoga Middle School, Lancaster, PA</td>
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<td>Region 3</td>
<td>February 14, 2015</td>
<td>Boiling Springs High School, Boiling Springs, PA</td>
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<td>Regions 5/9</td>
<td>TBD</td>
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<td>Region 7</td>
<td>February 28, 2015</td>
<td>Jersey Shore Area High School, Jersey Shore, PA</td>
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<td>Region 8</td>
<td>January 31, 2015</td>
<td>Park Forest Middle School, State College, PA</td>
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<tr>
<td>EVENTS</td>
<td>DATES</td>
<td>LOCATIONS</td>
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<td>ITEEA Conference</td>
<td>March 26-28, 2015</td>
<td>Milwaukee, WI</td>
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<td>PA TSA State Conference</td>
<td>April 15 - 18, 2015</td>
<td>Seven Springs Resort</td>
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<tr>
<td>National TSA Conference</td>
<td>June 22- July 2, 2015</td>
<td>Grapevine, TX</td>
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<td>Summer Leadership Conference</td>
<td>July 7 -8, 2014</td>
<td>Bucknell University, PA</td>
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<tr>
<td>Integrated Learning Conference</td>
<td>November 6 - 7, 2014</td>
<td>Radisson Hotel, Camp Hill, PA</td>
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<tr>
<td>Integrated Learning Conference</td>
<td>November 5 – 7, 2014</td>
<td>Penn Stater, State College, PA</td>
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National TSA Membership Levels

Red Chapter Affiliation Program (Red CAP) A chapter affiliates up to ten members by paying a flat fee (additional members may be added during the year for a fee). The membership fee for Red CAP is $90 at the national level plus $6 each for state dues. Advisor membership is $10.

White Chapter Affiliation Program (White CAP) A chapter affiliates eleven or more members by paying a per member White CAP fee for state and national dues. The membership fee for White CAP is $9 per member at the national level plus $6 each for state dues. Advisor membership is $10.

Blue Chapter Affiliation Program (Blue CAP) A chapter affiliates an unlimited number of members in a school for a flat fee (typically effective when there are more than 25 members). This option is popular in chapters where students rotate through a STEM class for a portion of the year to enable all students to be members. The membership fee for Blue CAP is $350 at the national level plus $100 state dues. Advisor membership is $10.
PA AND NATIONAL CONFERENCES

2015 Pennsylvania TSA State Conference  April 15 – April 18, 2015
Seven Springs Mountain Resort
777 Waterwheel Drive, Seven Springs, PA 15622 | 800-452-2223

2015 National TSA Conference  June 28 - July 2, 2015
Gaylord Texan Resort & Convention Center
Grapevine, TX

Conference Theme: "Designing Your Dreams"

• Competitive Events
• Business Meetings
• Delegate Assemblies
• Leadership Training Sessions
• Special Interest Sessions
• Social Activities

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TSA In Schools

Organizing a local chapter of TSA in a technology education program at your school involves many factors.

- An alert and vigorous membership
- An interested instructor/advisor
- A good working team of chapter officers
- The cooperation of the school administration

The most important factors to success are the teamwork and interest of the members and their determination to make their chapter a success.
Suggested Chapter Activities

Scholastic/Educational Activities

• Explore topics in technology as part of a working group
• Attend and compete in state and national conferences
• Visit technology firms
• Sponsor guest speakers, films, exhibits, etc.
• Recognize outstanding faculty
• Practice parliamentary procedure

Professional Leadership

• Hold regular chapter meetings
• Elect/serve as chapter officers
• Produce chapter newsletter
• Participate in official ceremonies
• Arrange assembly programs

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Suggested Chapter Activities

Civic and Community
- Visit state government
- Participate in community fund drives, safety campaigns, clean-up campaigns, etc.
- Assist other school groups and work on school improvement projects

Social
- Welcome new members
- Plan cookouts, dances, hayrides, picnics, etc.
- Sponsor athletic activities
- Plan a talent night, skating party, scavenger hunt, etc.
Suggested Activities

Winter
• Register and attend regional conferences
• Raise funds
• Keep parents and administration informed
• Work on trip forms and transportation
• Collect dues
• Complete events
• Share information with parents
• Continue to hold meetings
• Assist students with their events
• Have guest speakers
• Order TSA items for conferences
Suggested Activities

Early Fall

• Elect and train officers
• Calendar of Events
• Discuss funding issues
• Work on trip forms
• Collect and pay dues
• Assign competitive events
• Share information with parents and administration
• Determine goals for year
• Promote safety
• Have a TSA speaker
• Establish committees
• Integrate events with other courses
• Procure official TSA clothing
Suggested Activities

**Spring**

- Prepare and attend state TSA conference
- Prepare for National TSA conference
- Discuss funding issues
- Work on trip forms
- Assign competitive events
- Share information with parents
- Determine goals for next year
- Promote safety
- Have a TSA speaker
- Prepare for a end of year event
- Recognize outstanding students
- Thank administration and parents
Suggested Activities

**Summer**
- Register for summer conferences
- Keep parents and administration informed
- Work with new officers
- Collect dues
- Prepare curriculum
- Brain storm with students and administration for improvement
NATIONAL STANDARDS IN EVENTS

SCIENCE
TECHNOLOGY
ENGINEERING
MATHEMATICS
LEADERSHIP SKILLS STANDARDS

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

Creative Thinking  Critical Thinking
Communication       Decision Making
Ethical (Ethics)   Evaluation
Organization       Problem Solving
Self Esteem        Teamwork
COMPETITIVE EVENTS CONTENT

OVERVIEW
ELIGIBILITY
ATTIRE
REGULATIONS
NOTES
LEADERSHIP SKILLS
JUDGES
RESPONSIBILITIES

PURPOSE
TIME LIMITS
PROCEDURE
EVALUATION
STEM INTEGRATION
CAREERS RELATED TO EVENT
MATERIALS
EVALUATION RUBRIC
Pennsylvania TSA Partners

Allegheny Educational Systems
American Cancer Society
Autodesk
Chief Architect
G-W Publishers
Hi-tech, Inc.
International Technology and Engineering Educators Association
Pennsylvania STEM
Pennsylvania Society for Biomedical Research
Pittsburgh Technology Council
Technology and Engineering Education Association of PA (TEEAP)
Technology Council of Central Pennsylvania
The Clark Associates Companies
US Army
Pennsylvania TSA Partners

Bradford School
California University
Douglas Education Center/Thaddeus Stevens College
Dubois Business College
DeVry University
Harrisburg University
Johnson and Wales University
Millersville University
Pittsburgh Technical Institute
York Technical Institute
For additional information, please contact Dennis Gold or National TSA

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Bureau of Career and Technical Education
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Katherine Simchock, Division Manager

Tom Corbett
Governor

Carolyn C. Dumaresq
Acting Secretary of Education

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