



CHOOSING COMPETITIONS

Choosing Competitions

TSA's program of activities enhances student education through its STEM-based competitions, which promote work-based learning and hands-on experiences. Competitions can be integrated easily into the classroom curriculum, or they can be used as an additional resource for career pathway initiatives. Through TSA's competitions, student members have the opportunity to develop real-world skills, strengthen their leadership abilities, and explore career opportunities.

Middle and high school TSA competitive events naturally fall into some common technology categories, as shown below. Reasonably, an event listed in one category, also could appear in another category. For example, HS Geospatial, which falls under the **Computer Science and Information Technology** category, could be envisioned in the **Manufacturing and Transportation Technology** category, as well. As a chapter advisor who may be asked to provide guidance to members about competitions that would be a good match for student interest and skill sets, use the placement of events in the categories below as a general reference – with noted room for flexibility.

Middle School Competitions

Architecture and Construction Technology

- MS Construction Challenge
- MS Off the Grid
- MS Structural Engineering

Communications Technology

- MS Challenging Technology Issues
- MS Children's Stories
- MS Essays on Technology
- MS Prepared Speech
- MS Promotional Marketing

Computer Science and Information Technology

- MS Coding
- MS Cybersecurity
- MS Data Science and Analytics
- MS Foundations of IT
- MS Website Design

Leadership

- MS Career Prep
- MS Chapter Team
- MS Community Service Video
- MS Leadership Strategies
- MS Tech Bowl

Manufacturing and Transportation Technology

- MS Dragster
- MS Flight
- MS Junior Solar Sprint
- MS Mass Production
- MS Mechanical Engineering
- MS Microcontroller Design
- MS VEX IQ Challenge

STEM (General)

- MS CAD Foundations
- MS Electrical Applications
- MS Inventions and Innovations
- MS Problem Solving
- MS Technical Design
- MS Video Game Design

STEM and the Arts

- MS Digital Photography
- MS STEM Animation

Technology and Research

- MS Biotechnology
- MS Forensic Technology
- MS Medical Technology
- MS System Control Technology

High School Competitions

Architecture and Construction Technology

- HS Architectural Design
- HS Computer-Aided Design, Architecture
- HS Computer-Aided Design, Engineering
- HS Structural Design and Engineering

Communications Technology

- HS Children's Stories
- HS Debating Technological Issues
- HS Essays on Technology
- HS Promotional Design

Computer Science and Information Technology

- HS Coding
- HS Cybersecurity
- HS Data Science and Analytics
- HS Geospatial Technology

- HS IT Fundamentals
- HS Scientific Visualization (SciVis)
- HS Software Development
- HS Webmaster

Leadership

- HS Chapter Team
- HS Extemporaneous Speech
- HS Future Technology and Engineering Teacher
- HS Prepared Presentation
- HS Technology Bowl

Manufacturing and Transportation Technology

- HS Computer Integrated Manufacturing (CIM)
- HS Dragster Design
- HS Flight Endurance
- HS Transportation Modeling
- HS VEX Robotics

STEM (General)

- HS Engineering Design
- HS Technology Problem Solving
- HS Video Game Design

STEM and the Arts

- HS Animatronics
- HS Board Game Design
- HS Digital Video Production
- HS Fashion Design and Technology
- HS Music Production
- HS On Demand Video
- HS Photographic Technology

Technology and Research

- HS Biotechnology Design
- HS Forensic Science
- HS System Control Technology