Colorado TSA Sponsor Levels

Benefits	Diamond $5000+	Platinum $2000+	Gold $1000+	Silver $500+	Bronze $100+
Logo on conference program, TSA Website, and newsletter	✓	✓	✓	✓	✓
Pre-conference social media post	✓	✓	✓	✓	✓
Corporate item in registration bag	✓	✓	✓	✓	✓
Logo on back of State Conference t-shirt	✓	✓	✓	✓	
Exhibit table at conference	✓	✓	✓		
Speak or play a company video at our general session	✓	✓			
Sponsor a specific event (for 2 years): - Event is named after company (ex: "Event Name Sponsored by Company Name") - Your company judges the event to provide student feedback - Your company awards the winner of the event	✓				

Colorado TSA Engineering Events

Architectural Design
Participants develop architectural plans and related materials for and construct a physical, as well as a computer-generated model, to accurately depict their design.

Assistive Technology Design
For this contest, participants will research, design, and build an assistive technology device/product for a special population within your local community.

CAD Architecture
Participants develop representations of architectural subjects, such as foundation/floor plans, elevation drawings, etc.

CAD Engineering
Participants develop three-dimensional representations of engineering subjects such as a machine part, tool, device, or manufactured product.

CAD Foundations
Participants demonstrate their understanding of CAD fundamentals as they create a two-dimensional (2D) graphic representation of an engineering part or object.

Catapult Design
Participants design and produce a working catapult that is adjustable and propels practice golf balls at a scoring target between 15' and 25' away.

Colorado TSA Engineering Events

Computer Integrated Manufacturing
Participants design, fabricate, and use CIM to create a promotional product based on that years theme.

Dragster Design
Participants design, produce a working drawing for, and build a CO2-powered dragster which will compete in time trials.

Construction Challenge
Participants submit a scale model with a portfolio that documents the use of their leadership and technical skills to fulfill an identified community need related to construction.

Electrical Applications
Participants take a written test on basic electrical and electronic theory. Semifinalists assemble a specific circuit from a schematic diagram using their own kit.

Crash Test
Middle school participants work with elementary students to design and build a “crash test car” that will be tested in multiple head-on and rear-end collisions.

Engineering Design
Participants develop a solution to a National Academy of Engineering Grand Challenge and provide extensive research into the problem along with appropriate models.

Colorado TSA Engineering Events

Flight Endurance
Participants analyze flight principles to create a rubber band-powered model aircraft. Model aircrafts are evaluated on their ability to maintain flight for an extended period of time.

Fore!
High school students work closely with elementary school students to design and develop one hole for a miniature golf course.

Global Logistics
Participants design, manufacture and package a marketable product through a collaborative effort with two other TSA chapters.

Inventions and Innovations
Participants investigate and determine the need for an invention or innovation of a device, system, or process, and prototype ideas for a possible solution.

Mass Production
Participants manufacture a marketable product. The team submits a documentation of the activities involved and three identical products made during the manufacturing process.

Mechanical Engineering
Participants design and build a mechanical device to solve the given problem. Teams identify and research an engineering process and construct a mechanical system that can be used to address the problem.

Colorado TSA Engineering Events

Microcontroller Design
Through a product demonstration and documentation, the team demonstrates knowledge of microcontroller programming, simple circuitry, product design and marketing.

Mousetrap Tractor Pull
Participants design and construct a vehicle powered only by a standard mousetrap spring, to pull as much weight as possible.

Off the Grid
Participants conduct research on a sustainable architectural design and document their findings in a display and a model. The model can be of the home designed by the team, or of a specific aspect of their design.

Rat Trap Drag Race
To allow students to demonstrate their ability to design and construct a vehicle powered only by a rat trap spring, to travel a specified distance as fast as possible.

Rubber Band Powered Cars
To allow students to demonstrate their ability to design and construct a vehicle powered only by a rubber band and a bladed-propeller.

Technical Design
Participants demonstrate their ability to use the technical design process to solve an engineering design problem onsite and present the team's solution in a portfolio at the conference.

Transportation Modeling
Participants research, design, and produce a scale model of a vehicle that fits the annual design problem.

Colorado TSA Computer Science Events

Coding

Participants respond to an annual coding-related design challenge by developing a software program that will accurately address an onsite problem in a specified, limited amount of time.

Cybersecurity

Participantsrespond to a cybersecurity challenge by identifying a breach in computer security via "Capture the Flag" games. Participants will solve onsite challenges in a specified, limited amount of time.

Software Development

Participants use knowledge of cutting-edge technologies, algorithm design, problem-solving principles, effective communication, and collaborative teamwork to design, implement, test, and document a software development project of educational or social value.

System Control Technology

Teams analyze a problem on-site, build a computer-controlled mechanical model, program the model, explain the program and mechanical features of the model-solution, and write instructions for evaluators to operate the device.

Webmaster

Participants design, build, and launch a website that features the school's career and technology/engineering program, TSA chapter, and the chapter's ability to research and present a given topic pertaining to technology.

Website Design

Participants design, build, and launch a website that features the team's ability to incorporate the elements of website design, graphic layout, and proper coding techniques.

Colorado TSA Digital Arts Events

3D Animation
Participants demonstrate their knowledge of 3D animation technology and design skills to creatively solve the challenge posted on Themes and Problems.

Board Game Design
Participants develop, build, and package a board game that focuses on the subject of their choice. Each team will have to design the packaging, instructions, pieces, and cards associated with creating and piloting a new board game.

Children's Stories
Participants create an illustrated children's story of high artistic, instructional, and social value. The narrative may be written in prose or poetry and take the form of a fable, adventure story, or other structure. The story must have a STEM focus.

Comic Book Design
Participants will design and produce a comic book based on a given theme and produce a design portfolio containing thumbnails, pencil drawings, inks, and color, plus cover art work as well as a final, complete comic book.

Community Service Video
Participants create and submit a video that depicts the local TSA chapter's involvement with a community service project (e.g., American Cancer Society) of their choice.

Digital Photography/Photographic Technology
Participants produce a digital photography portfolio addressing an annual theme.

Colorado TSA
Digital Arts Events

Digital Video Production
Participants develop a digital video (with sound) that reflects the theme for the year.

On Demand Video
Participants write, shoot, and edit a 60–second video onsite during the conference based on a given theme and required props.

Fashion Design
Participants research, design, and create a portfolio and wearable prototype that reflect the theme for the year. All teams also participate in a fashion show.

Promotional Design/Marketing
Participants use computerized graphic communications layout and design skills in the production of a promotional resource for TSA.

Music Production
Participants produce an original musical piece that is designed to be played during the National TSA Conference opening or closing general sessions.

Scientific Visualization
Participants use either 2D or 3D computer graphics tools and design processes to communicate, inform, analyze, and/or illustrate a STEM topic, idea, subject, or concept.

Colorado TSA Digital Arts Events

Silent Movie
Participants use video production skills to script, direct, film and produce a silent movie and then create a musical score to accompany the film.

Theatrical Set Design
Participants develop a set of architectural plans and related materials for an annual theatrical set design challenge and construct a physical, as well as a computer-generated model, to accurately depict their design.

STEM Animation
Participants use computer graphics tools and design processes (i.e., animation) to communicate, inform, analyze, and/or illustrate a topic, idea, subject, or concept that focuses on STEM topics. Sound may accompany graphic images.

Video Game Design
Participants develop a game that reflects the theme for the year, which can be found on Themes and Problems. The game must have high artistic, educational, and social value and be interesting, exciting, visually appealing, and intellectually challenging.

Colorado TSA Leadership Events

Career Prep
Participants conduct research on a selected technology-related career and use this knowledge to prepare a letter of introduction and a chronological skills resume.

Chapter Team
Participants take a written parliamentary procedures test in order to qualify for the semifinals, in which they complete a business meeting within a specified time period.

Challenging Technology Issues
Participants work together to prepare and deliver a debate-style presentation with participants explaining opposing views of a current technology issue.

Debating Technological Issues
Participants work together to prepare for a debate against a team from another chapter. The teams will be instructed to take either the pro or con side of a selected subtopic.

Essays on Technology
Participants write a research-based essay (using two or more sources provided onsite) that makes insightful connections about a current technological topic.

Extemporaneous Speech
Participants verbally communicate their knowledge of technology or TSA subjects by giving a speech after drawing a card on which a technology or TSA topic is written.

Colorado TSA Leadership Events

Future Technology Teacher
Participants investigate technology education preparation programs in higher education and test their potential as a future technology educator.

Prepared Speech
Participants deliver a speech that reflects the theme of the current year's National TSA Conference.

Leadership Strategies
Participants demonstrate leadership and team skills by preparing a presentation based on a selected challenge the officers of a TSA chapter might encounter.

Problem Solving
Participants use problem solving skills to develop a finite solution to a problem provided onsite.

Tech Bowl
Participants demonstrate their knowledge of TSA and concepts addressed in the technology content standards by completing a written objective test. Semifinalist teams participate in a question/response, head-to-head competition.

Colorado TSA
Natural Science Events

Biotechnology

Participants conduct research on a contemporary biotechnology issue of their choosing, document their research, and create a display. The information gathered may be student-performed research or a re-creation or simulation of research performed by the scientific community. If appropriate, a model or prototype depicting some aspect of the issue may be included in the display.

Forensic Science

Participants take a written test of basic forensic science theory to qualify as semifinalists. Semifinalist teams will examine a mock crime scene and demonstrate their knowledge of forensic science and crime scene analysis. Students will be expected to survey the scene and use proper techniques to collect evidence from the mock crime scene. Students then will collect their data and perform a detailed written analysis of the crime scene.

Medical Technology

Participants conduct research on a contemporary medical technology issue of their choosing, document their research within a display, and design a prototype depicting a medical technology solution.

Colorado TSA Robotic Events

Robotic Design

Participants will design, build and test a remote controlled robot to carry out a specific challenge (ex: building collapse).

SeaPerch

Participants design and build an underwater remotely operated vehicle (ROV) that must maneuver through an obstacle course.

Animatronics

Participants demonstrate knowledge of mechanical and control systems by designing, fabricating, and controlling an animatronics device that will communicate, entertain, inform, demonstrate and/or illustrate a topic, idea, subject, or concept. Sound, lights, and a surrounding environment must accompany the device.