Virginia TSA Competitive Events Addendum

For Use at the 2027 Virginia TSA Regional Conferences

An Addendum to the National TSA
2026-2027
Middle School Total TSA Guidelines
AND
2027-2028
High School Total TSA Guidelines

Version 1, October 5, 2026

See Virginia TSA Competitive Event Eligibility and Special Awards Guide for eligibility

CODE	EVENT		NOTES
MS	CAD Foundations	Three individual entries per chapter, one entry per individual	Using the current middle school guide, participants have the opportunity to demonstrate their understanding of CAD fundamentals as they create a two-dimensional graphic representation of an engineering part or object. Students must provide all equipment, software and supplies. **Students will report at the scheduled time and place of this event for their regional fair. A submission button will be present in the judges' system for students to upload a PDF of their work when they are finished.**
MS	Career Prep	Five individual entries per chapter, one entry per individual	Using the current middle school guide, design and produce a cover letter and a chronological or skills resume based on research. **See National Themes and Problems https://tsaweb.org/competitions/themes-and-problems for Career Clusters. No semifinalist interview portion at Regional Fair. Students will be able to upload their work to the judges system beginning at noon the day before their Regional Fair through 8 AM the morning of their Regional Fair.**
MS	Challenging Technology Issues	Three teams of 2 members per chapter, one entry per team	Using the current middle school guide, participants prepare and deliver an extemporaneous, debate style presentation with team members. **See National Themes and Problems https://tsaweb.org/competitions/themes-and-problems Students will report to the designated room for this event at their Regional Fair.**
MS	Community Service Video	Two teams per chapter, 2-6 members per team, one entry per team	Using the current middle school guide, create and submit a finished video that depicts a community service project of their choice. **No semifinalist interview portion at Regional Fair. Students will be able to upload their work to the judges system beginning at noon the day before their Regional Fair through 8 AM the morning of their Regional Fair.**
MS	Digital Photography	Five individual entries per chapter, one entry per individual	Using the current middle school guide, participants produce an album consisting of color or black and white digital photographs that represent or relate to a chosen theme. The theme for 2027 is "ROY G BIV" Members will take seven photos that fit the theme of the year. (No semifinalist portion at Regional Fair.) **Students will be able to upload their work to the judges' system beginning at noon the day before their Regional Fair through 8 AM on the day of their Fair.**
MS	Dragster	Five individual entries per chapter, one entry per individual	Using the current middle school guide, design and produce a fast CO2 powered dragster according to stated national specifications and using only certain specified materials. For this event, use the current National Total TSA Competitive Event Guide for specifications and event requirements. See the National Themes and Problems https://tsaweb.org/competitions/themes-and-problems for any changes to specifications. Dragsters that do not meet certain safety requirements will NOT be raced. Dragsters that do not meet certain design requirements will receive point deductions and will be raced. Dragsters cars will be judged based on the judging sheet provided on the addendum page of the Virginia TSA website. There is a button provided for the sheet. **No semifinalist interview at Regional Fair. Cars, drawings and parts list will be dropped off at the designated room of the Regional Fair building site**

CODE	EVENT		NOTES
			determined by that particular Regional Fair team.
MS	Flight	Five individual entries per chapter, one entry per individual	Using the current middle school guide, participants create a glider that stays in flight for the greatest elapsed time. **Gliders will be launched from a catapult that is provided onsite or brought by the student from their school. Students bring documentation portfolio with all components, and assembled glider for testing to their onsite Regional Fair location on the date and time given by their specific Region. No semifinal portion at Regional Fair.**
MS	Prepared Speech	Five individual entries per, chapter, one entry per individual	Using the current middle school guide, participants deliver an oral presentation that reflects the theme. Theme for 2027 is: **Forward to Fifty**. **Students will be able to give their speech at the designated room and time onsite determined by each individual regional fair.**
MS	Promotional Marketing	Five individual entries per chapter, one entry per individual	Using the current middle school guide, participants create a three-part **Marketing Toolkit** that must include items specified in the national Themes and Problems. https://tsaweb.org/competitions/themes-and-problems **There will be no Semi-Finalist Portion at Regional Fair. Students will be able to upload their work to the judges' system beginning at noon the day before their Regional Fair through 8 AM on the day of their Regional Fair.**
MS	STEM Animation	Five teams per chapter one entry per team, 1-6 members per team	Using the current middle school guide, participants use computer graphic tools and design processes to communicate, inform, analyze and/or illustrate a topic, idea, subject or concept of one or more of the STEM areas. (No semifinalist portion will be held at Regional Fair.) **Students will be able to upload their work to the judges' system beginning at noon the day before their Regional Fair through 8 AM on the day of their Regional Fair.**
MS	Structural Engineering	Two teams of 2 members per chapter, one entry per team	Using the current middle school guide, participants apply the principles of structural design and engineering through basic research, design, construction and destructive testing to determine the design efficiency of the structure. **Students will drop off their Pre-Built structure to an onsite location chosen by their particular Regional Fair. See National Themes and Problems for the design brief and team verification forms and other needed information. https://tsaweb.org/competitions/themes-and-problems**
MS	System Control Technology	Three teams of 3 members per chapter, one entry per team	Using the current middle school guide, 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. **Problem will be provided to the teams at the designated room for this event at their Regional Fair. This event will happen in the room designated by each particular Regional Fair. No interview portion at Regional Fair.**

It is essential that students and advisors routinely check the TSA website (www.tsaweb.org) for updated information about TSA competitive events. This information is found on the website under Competitions/Updates and Clarification, and themes and problems. When students participate in any TSA competitive event, they are responsible for knowing of updates, changes, or clarification related to that event.

Check the Virginia TSA Website for updated versions of the Addendum

CODE	EVENT		NOTES
HS	Automated Manufacturing Systems	Three teams of 2 to 3 members per chapter, one entry per team	Using the current high school guide, participants collaborate to engineer and prototype an automated manufacturing system to solve a production problem. Teams analyze a prompt, build a sensor-based mechatronic solution, program the automation logic, document the mechanical and software design, and create the instructions for the judges to operate the system. **Problem will be provided onsite. This event will happen in the room designated by their particular Regional Fair. No semifinal portion interview will take place at Regional Fair.**
HS	Board Game Design	Two teams per chapter, 2-6 members per team, one entry per team	Using the current high school guide, develop, build and package a board game that focuses on the subject of your choice. The game should be interesting, exciting, visually appealing and intellectually challenging**. No semifinals at Regional Fair. Students will drop off all documentation and the game at the onsite location provided by their Regional Fair.**
HS	CAD Architecture	Three individual entries per chapter, one entry per individual	Using the current high school guide, students must provide all equipment, software and supplies. The event time limit will be two (2) hours. **Students will report to the location provided by their Regional Fair to do this event, problem will be provided to them onsite.**
HS	CAD Engineering	Three individual entries per chapter, one entry per individual	Using the current high school guide, students must provide all equipment, software and supplies. The event time limit will be two (2) hours. **Students will report to the location provided by their Regional Fair to do this event, problem will be provided to them onsite.**
HS	Debating Technological Issues	Three teams of two members per chapter, one entry per team	Using the current high school guide, teams will be instructed to take the Pro or Con side of the selected subtopic. The theme for 2027 is Artificial Intelligence and Medicine**. See National Themes and Problems for the subtopics.** **https://tsaweb.org/competitions/themes-and-problems** **Students will report to the designated room for this event provided by their Regional Fair.**
HS	Digital Video Production	Three team entries per chapter, 2-6 members per team, one entry per team	Using the current high school guide, participants develop a digital video/film that focuses on the given year's theme. The theme for 2027 can be found on the National TSA website by **Seeing National Themes and Problems** https://tsaweb.org/competitions/themes-and-problems No Semifinalist portion will be held at Regional Fair. **Students will be able to upload their work to the judges' system beginning at noon the day before their Regional Fair through 8 AM the morning of their Regional Fair.**
HS	Dragster Design	Five individual entries per chapter, one entry per individual	Using the current high school guide, Design and produce a fast CO2 powered dragster according to stated national specifications and using only certain specified materials. For this event, use the current National Total TSA Competitive Event Guide for specifications and event requirements. See the National Themes and Problems https://tsaweb.org/competitions/themes-and-problems for any changes to specifications. Dragsters that do not meet certain safety requirements will NOT be raced. Dragsters that do not meet certain design requirements will receive point deductions and will be raced. Dragsters cars will be judged based on the judging sheet provided on the addendum page of the

CODE	EVENT		NOTES
			Virginia TSA website. There is a button provided for the sheet. **No semifinalist interview at Regional Fair. Cars and documentation portfolio will be dropped off at the designated room of the Regional Fair building site determined by that particular Regional Fair team.**
HS	Extemporaneous Speech	Four individual entries per chapter, one entry per individual	Using the current high school guide, participants give a three to five (3-5) minute speech on a topic provided. **Students will report to the designated room provided by their Regional Fair to participate in this event.**
HS	Flight Endurance	Five individuals per chapter, one entry per individual	Using the current high school guide, 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 portfolio and model. Refer to 2027-2028 Total TSA Guide. **Students bring documentation portfolio with all components, and assembled aircraft for testing to their Regional Fair location. That room will be determined by the individual Regional Fair. No semifinal portion at Regional Fair.**
HS	Manufacturing Prototype	Three teams per chapter, 2-6 members per team, one entry per team	Using the current high school guide, participants design, fabricate, and use Computer Integrated Manufacturing (CIM) to create a product that addresses the annual theme found on the TSA website under Themes and Problems. **See National Themes and Problems https://tsaweb.org/competitions/themes-and-problems for the 2027 theme. No semifinal sales pitch at Regional Fair.** Prototype and documentation will be dropped off onsite to a specific location that will be announced by each individual Regional Fair.
HS	Music Production	Three teams per chapter, 2-6 members per team, one entry per team	Using the current high school guide, participants produce an original musical piece that is designed to reflect the annual theme. See National Themes and Problems for the 2027 theme. https://tsaweb.org/competitions/themes-and-problems No semifinalist interview portion at Regional Fair. **Students will be able to upload their work to the judges' system beginning at noon the day before their Regional Fair through 8 AM the morning of their Regional Fair.**
HS	Photographic Technology	Four individual entries per chapter, one entry per individual	Using the current high school guide, participants capture images and process photographic and digital prints that convey a message. **See National Themes and Problems https://tsaweb.org/competitions/themes-and-problems** for 2027 theme. No semifinalist portion at Regional Fair. **Students will be able to upload their work to the judges' system beginning at noon the day before their Regional Fair through 8 AM the morning of their Regional Fair.**
HS	Prepared Presentation	Four individual entries per chapter, one entry per individual	Using the current high school guide, participants deliver an oral presentation, using a digital slide deck. The theme will reflect contemporary topics from fields of Science, Engineering Technology and Mathematics. **See National themes and problems https://tsaweb.org/competitions/themes-and-problems Students will report to the room determined by their Regional Fair at the scheduled time the day of the Regional Fair to do their presentation.**

Virginia TSA 2026 - 2027 Regional Fair Events **10/5/2026**

MIDDLE and HIGH SCHOOL PROGRAM

CODE	EVENT		NOTES
HS	Promotional Design	Four individual entries per chapter, one entry per individual	Using the current high school guide, participants use computerized graphic communication layout and design skills in the production of a promotional resource. **See National Themes and Problems** https://tsaweb.org/competitions/themes-and-problems No Semifinalist portion at the Regional Fair. **Students will be able to upload their work to the judges' system beginning at noon the day before their Regional Fair through 8 AM the morning of their Regional Fair.**
HS	Structural Design and Engineering	Two teams of 2 members per chapter, one entry per team	Using the current high school guide, participants apply the principles of structural design and engineering through basic research, design, construction and destructive testing to determine the design efficiency of the structure. **Students will drop off their Pre-Built structure to an onsite location chosen by their particular Regional Fair. See National Themes and Problems for the design brief and team verification forms and other needed information.** https://tsaweb.org/competitions/themes-and-problems
HS	Transportation Modeling	Four individual entries per chapter, one entry per individual	Using the current high school guide, participants use engineering skills to design and fabricate a scale model of a vehicle that fits the annual design problem. **See National Themes and Problems** https://tsaweb.org/competitions/themes-and-problems **Students will be able to turn in their model and documentation at the onsite location room and time chosen by their Regional fair.**
HS	Video Game Design	Three teams per chapter, 2-6 members per team, one entry per team	Using the current high school guide, participants develop a game that focuses on the idea of their choice based on the posted theme. The game should be interesting, exciting, visually appealing, and intellectually challenging, with high artistic, educational, and social value. The game must be appropriate for the TSA community, and in good taste. **See National Themes and Problems** https://tsaweb.org/competitions/themes-and-problems No semifinalist interview/game demonstration portion at Regional Fair. **Students will be able to upload their work to the judges' system beginning at noon the day before their Regional Fair through 8 AM the morning of their Regional Fair.**

It is essential that students and advisors routinely check the TSA website (www.tsaweb.org) for updated information about TSA competitive events. This information is found on the website under Competitions/Updates and Clarification, and themes and problems. When students participate in any TSA competitive event, they are responsible for knowing of updates, changes, or clarification related to that event.

Check the Virginia TSA Website for updated versions of the Addendum