

Virginia TSA Fall Virtual Competitive Events Addendum

*For Use at the 2020 Virginia TSA
Fall Virtual Competitive Events*

*An Addendum to the National TSA
2020-2021
Middle School Virtual Guidelines
AND the National TSA
2021-2022
High School Virtual Guidelines*



Virginia TSA Fall Virtual Events

The Virginia Technology Student Association is pleased to announce its competitive events plan for the fall of 2020. With COVID-19 playing havoc last spring in the cancelling of Technosphere (Virginia's state conference) and the National TSA Conference, Virginia TSA felt it needed to roll out a plan to get Virginia students engaged in TSA from the start of the new school year. Also since many schools will not be going back with in-person instruction, there was a need for virtual events to be added.

Through efforts at the National level, many of the competitive events have been converted to a virtual setting. There are 73 middle and high school traditional events that will be available with affiliation from the National office for the 2020-21 school year, and they are also glad to announce that 62 of them have been converted to be competed in virtually. This gives every school in the state of Virginia the opportunity to compete in Virginia TSA, no matter what their circumstance are with in-person, hybrid or totally virtual instruction. Since the fall is going to be mostly virtual for schools in Virginia, Virginia TSA is going to run virtual events throughout the fall to accommodate everyone in the state.

The fall events schedule will begin in late September and continue through to the holidays. The current plan has Virginia TSA putting on 22 competitive events, but still may add a couple more if there is a demand for a certain event. The list of Middle School events include: *Career Prep, Digital Photography, Dragster, Essays on Technology, Prepared Speech, Promotional Marketing, STEM Animation and Video Game Design*. The list of High School events include: *Digital Video Production, Dragster Design, Essays on Technology, Extemporaneous Speech, Future Technology and Engineering Teacher, Music Production, On Demand Video, Photographic Technology, Prepared Presentation, Promotional Design, STEM Careers (Virginia only event) and Video Game Design*. All of these event winners will qualify for Technosphere next April 30 – May 2, 2021, just like those winners in the upcoming 2021 Regional Fairs. With this, students will have two opportunities to qualify for state in these events. The schedule for these events is listed in the below addendum. The top five in each fall virtual event qualify for Technosphere.

Virginia TSA also has a new partner this fall and that partner is VDOT (Virginia Department of Transportation). This partnership means that *there will be two Structural Design competitions also* this fall for both middle and high school. This partnership also benefits advisors even more as they will be able to access Civil Engineers and Mechanical Engineers within VDOT to speak to their classes and even assist them in designing and building their structures. The two organizations feel that this partnership is a win-win for both students and teachers.

All fall events in this addendum will use the virtual middle and high school guides.

Good Luck!

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Virginia TSA feels that we have a plan that can help every CTE teacher in Virginia navigate this new school year with any setting they are faced with.

MIDDLE SCHOOL

CODE	EVENT	NOTES
A-3	Career Prep	Three individual entries per chapter, one entry per individual Design and produce a cover letter and a chronological or skills resume based on research. See National Themes and Problems (http://tsaweb.org/Themes-and-Problems) for Career Clusters. No semifinalist interview portion at Fall Virtual Competitive Event. Due November 2, 2020.
A-12	DigitalPhotography	Three individual entries per chapter, one entry per individual Participants produce an album consisting of color or black and white digital photographs that represent or relate to a chosen theme, and place the album in a pdf format that can be emailed to the location placed on the Virginia TSA website. The theme for 2021 is Nature . (No semifinalist portion will be held at the Fall Virtual Competitive Event.) Due November 9, 2020
A-15	Essays on Technology	Three individual entries per chapter, one entry per individual Participants conduct research in specified subtopics of a broader technological area, using the knowledge and resources gained through that research. Each participant turns in a comprehensive detailed outline. The subtopic will be released on November 12, 2020 at 5 PM and the outline will be due an hour later to an email address that will be posted on Virginia TSA website. The topic for the 2021 conference is located at: http://tsaweb.org/Themes-and-Problems There will be no Semi-Finalist Portion at the fall virtual competitive event.
A-28	Prepared Speech	Three individual entries per chapter, one entry per individual Participants deliver an oral presentation that reflects the theme of the current conference. The theme for 2021 is: Together, Towards Tomorrow . A video of the speech entry will be due by October 22, 2020 . There will be no Semi-Finalist Portion at the fall virtual competitive event.
A-30	Promotional Marketing	Three individual entries per chapter, one entry per individual Participants complete a marketing portfolio based on the current year's theme. The topic for the 2021 conference is located at: http://tsaweb.org/Themes-and-Problems A pdf of the three items in the marketing tool kit will be due on December 3, 2020 to an email address that will be posted on the Virginia TSA website. There will be no Semi-Finalist Portion at the fall virtual competitive event.
A-31	STEM Animation	Three teams per chapter, 1-6 members per team, one entry per team Participants use computer graphic tools and design processes to communicate, inform, analyze and/or illustrate a topic, idea, subject or concept. (No semifinalist portion will be held at the fall virtual competitive event.) Animations must be turned in like the instructions in the National virtual guide of the event to a google form that will be posted on the Virginia TSA website. Due date is December 10, 2020 .

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A-37	Video Game Design	Two teams per chapter 2-6 members per team, one entry per team	Participants develop a video game that focuses on the subject of their choice. The game should be interesting, exciting, visually appealing and intellectually challenging. The game should have high artistic, educational and social value. All components of the chapter's entry will be turned in on a google form that will be posted on the Virginia TSA website. It will be due on December 10, 2020. (No semifinalist portion will be held at the fall virtual competitive event.)
HIGH SCHOOL			
B-15	Digital Video Production	Three team entries per chapter, 2-8 members per team, one entry per team	Participants develop a digital video/film that focuses on the given year's theme. The theme for 2021 is an <i>Interview with your future self</i> . Videos will be submitted by December 10, 2020 through a google form that will be posted on the Virginia TSA website. (No semifinalist portion will be held at the Fall Virtual Competitive Event.)
B-17	Essays on Technology	Three individual entries per chapter, one entry per individual	Participants will write a synthesis essay to make insightful connections based on a current technological topic. Participants will be provided with a prompt and a series of two (2) or more articles on a current technological topic. The prompt will be provided on November 5, 2020 at 5 PM via the Virginia TSA website with the essays being due to an email address that will be provided on the Virginia TSA website at 7 PM of the same day.
B-18	Extemporaneous Speech	Three individual entries per chapter, one entry per individual	Participants give a three to five (3-5) minute speech on a topic provided. Signups for this event will begin on October 1, 2020. Students will then be given a time where they will report to a zoom link where they will be given the 15 minutes to prepare and then give their speech to the judges. The entrant will have to be able to be seen by the judges throughout the process. Another platform can be used if a school system has problems with zoom. Please contact the state advisor at bscott@vsu.edu if this is necessary.
B-22	Future Technology Teacher	Three individuals entries per chapter, one entry per individual	Participants research and select three accredited colleges or universities that offer technology education/engineering technology teacher preparation as a major. Participants will upload their work through a Google form that will be posted on the Virginia TSA website on December 3, 2020 . (No semifinalist portion will be held at the Fall Virtual Competitive Event.)
B-25	Music Production	Three teams per chapter, 2-8 members per team, one entry per team	Participants produce an original musical piece that is designed to be played during the national TSA conference opening or closing general session. Turn in to a Google form that will be on the Virginia TSA website by December 10, 2020. No semifinalist interview portion at Fall Virtual Competitive event. Copyright and documentation should be turned in with the format listed on the National guide under documentation portfolio.
B-26	On Demand Video	Two teams of 2-8 members per chapter, one entry per team	Participants write, shoot, and edit a sixty (60) second video during the fall. Participants have 36 hours to complete the entire video. The design problem will be made available on

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		October 24, 2020 at 8AM and will be due on October 25, 2020 at 8 PM. Entries will submitted via a Google Form that will posted on the Virginia TSA website. There will be no Semi-Finalist Portion at the fall virtual competitive event.
B-27	Photo-graphic Technology	Three individual entries per chapter, one entry per individual Participants capture images and process photographic and digital prints that depict the current year's theme. The theme for 2021 is Nature. No semifinalist portion at fall virtual competitive event. Submissions, in PDF format, for this event will be emailed to an email address that will be posted on the Virginia TSA website. Submissions are due November 9, 2020.
B-28	Prepared Presentation	Three individual entries per chapter, one entry per individual Participants deliver an oral presentation, using a digital slide deck, on a topic that will be emailed to the chapter advisor approximately 24 hours before the student will present. Signups for this event will begin on October 15, 2020. Students will present through a zoom link. The entrant will have to be able to be seen by the judges throughout the process. Another platform can be used if a school system has problems with zoom. Please contact the state advisor at bscott@vsu.edu if this is necessary.
B-30	Promotional Design	Three individual entries per chapter, one entry per individual Participants use computerized graphic communication layout and design skills in the production of a promotional resource for TSA. The multipage PDF will be emailed to an email address that will be posted on the Virginia TSA website. No Semifinalist portion at fall virtual event. Event will be due December 3, 2020.
B-40	Video Game Design	Three teams per chapter, 2-8 members per team, one entry per team Participants develop a video 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 (http://tsaweb.org/Themes-and-Problems). The game and its documentation will be submitted by December 10, 2020 to a Google form that will be placed on the Virginia TSA website. No semifinalist interview/game demonstration portion at fall virtual events.
Middle School AND High School Dragster		
A-13	Dragster	Three individual entries per chapter, one entry per individual Design and produce a fast CO ² powered dragster according to stated specifications and using only certain specific materials. For this event, use the regular competitive event guide for specifications. See National Themes and Problems (http://tsaweb.org/Themes-and-Problems) for any changes to specifications. Dragsters not meeting building tolerances specified in the Total TSA Guide shall be disqualified and will NOT be raced. No semifinalist interview at Fall Virtual competitive events. Cars will be mailed to a specific location

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		<p>that will posted on the Virginia TSA website. After the cars are quarantined for 14 days to meet CDC guidelines, they will be raced. The actual running of the cars will be shown via livestream so that students can see their cars run. Cars should be postmarked no later than November 18, 2020, with a planned race day of December 5, 2020. Any changes to these dates due to changes in the current COVID-19 situation will be posted on the Virginia TSA website. This line is on this event since there will be people having to come together to race the cars.</p>
B-15	<p>Dragster Design</p> <p>Three individual entries per chapter, one entry per individual</p>	<p>Design, produce working drawings for, and build a CO₂- powered dragster. For this event, use the regular competitive event guide for specifications. Dragsters not meeting building tolerances specified in the Total TSA guide shall be disqualified and will NOT be raced. No semifinalist interview at Fall Virtual competitive events. Cars and drawings will be mailed to a specific location that will posted on the Virginia TSA website. After the cars are quarantined for 14 days to meet CDC guidelines, they will be raced. The actual running of the cars will be shown via livestream so that students can see their cars run. Cars should be postmarked no later than November 18, 2020 with a planned race day of December 5, 2020. Any changes to these dates due to changes in the current COVID-19 situation will be posted on the Virginia TSA website. This line is on this event since there will be people having to come together to race the cars.</p>

These three (3) other events will be offered during the fall:

STEM Careers High School:

In this event, a student will complete a thorough investigation of the many types of engineering and what an internship would look like in that particular career. The student will then take that particular career in a specific field of engineering, and research and document that. They will then make a video describing their documentation, making reference to STEM skills that they would need for this career.

Regulations

1. Title Page with career and what part of engineering it falls under.
2. Table of contents
3. Description of a STEM-related job shadow/internship experience and what the outcome of the experience would look like, including STEM skills; three (3) single-sided pages
4. Description of research about the STEM skills selected and developed, and the related STEM career pathway; two (2) single-sided pages
5. Skill demonstration video. The video will be no more than 3 minutes in length.

Evaluation

Evaluation will be based on the participant's documentation and video.

The Engineering fields in which careers can be chosen are:

1. Aerospace Engineering
2. Biomedical Engineering
3. Chemical Engineering
4. Civil Engineering
5. Electrical Engineering
6. Mechanical Engineering

The event will be due by **November 2, 2020** to an email address that will be posted on the Virginia TSA website.



Structural Engineering and Structural Design and Engineering

The first structural event for both middle and high school students in the fall will consist of a bridge or tower being built with toothpicks.

Middle School student teams (two teams of two members) will construct a truss tower using toothpicks that meets the standards from the traditional National TSA guide for Structural Engineering and the theme and problem for that event on the national website. You will do the event as it is written except you will build it with toothpicks. You will film yourself after the tower is finished showing its measurements and any required information that you know is part of the scoring rubric. After that you will put weighted objects on your tower until it breaks and falls. You will weigh and document the items you put on your tower for a total amount of weight it could take. All designs (in PDF) and video will be uploaded to a google form that will be posted on the Virginia TSA website. Event will be due by 11:59 PM on **October 23, 2020**. (No semifinals will take place in this event)

High School student teams (two teams of two members) will construct a trestle bridge using toothpicks that meets the standards from the traditional National TSA guide for Structural Design and Engineering and the theme and problem for that event on the national website. You will do the event as it is written except you will build it with toothpicks. You will film yourself after the bridge is finished showing its measurements and any required information that you know is part of the scoring rubric. After that you will put weighted objects on your bridge until it breaks and falls. You will weigh and document the items you put on your tower. All designs (in PDF) and video will be uploaded to a google form that will be posted on the Virginia TSA website. Event will be due by 11:59 PM on **October 23, 2020**. (No semifinals will take place in this event)

The second structural event for both middle and high school will follow the traditional guide from National TSA as it is written.

Middle School students (two teams of two members) will construct a truss tower. This event will follow the traditional Structural Engineering guide. These towers and supporting documents will be mailed to a location that will be posted on the Virginia TSA website. Event entries will be postmarked by **December 2, 2020**. Towers will sit for 14 days based on CDC guidelines and planned to be judged and tested on or about December 18, 2020. (No semifinals will take place in this event)

High School students (two teams of two members) will construct a trestle bridge. This event will follow the traditional Structural Design and Engineering guide. These bridges and supporting documents will be mailed to a location that will be posted on the Virginia TSA website. Event entries will be postmarked by **December 2, 2020**. Bridges will sit for 14 days based on CDC guidelines and planned to be judged and tested on or about December 18, 2020. (No semifinals will take place in this event)