

PA-TSA Competitive Events

2023



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PA-TSA DELTA DART

Middle School



OVERVIEW

The Delta Dart event requires analytical thinking, experimentation, and interpretation of instructions in the solution of a designed problem. The problem is to construct a glider following specifications and materials provided on-site.

ELIGIBILITY

Entries are limited to five individuals per chapter.

ATTIRE

Business Casual TSA attire (category C) as described in the PA-TSA dress code is the minimum requirement for the event.

REGULATIONS AND REQUIREMENTS

Students will work to develop their leadership and 21st-century skills in the process of preparing for and participating in this TSA competitive event. The development and application of those skills must be evident in their submission, demonstration, and/or communication about the entry.

A. The Glider

1. Contestants must provide an 11"x17" sheet of cardboard to be used as a pinboard and cutting board during construction.
2. Contestants must provide personal safety eyewear to be worn during the construction phase of the competition.
3. Except for the items above, contestants may not bring any notes, tools, or materials into the contest area. Tools and materials will be provided on-site.
4. Contestants will have one (1) hour to assemble the glider. Consult the conference schedule for the event start time.
5. Contestants may have two attempts to fly the glider for a timed glide. The longest-time flight will be the winner, with all other times ranked.

B. The top ten (10) finalists will be announced at the awards ceremony, as well as via the PA-TSA website.

EVALUATION

- A. Glider construction
- B. Flight time

Refer to the official rating form for more information.

OFFICIAL RATING FORM

Judges: Using minimal (1-4 points), adequate (5-8 points), or exemplary (9-10 points) performance levels as a guideline in the rating form, record the scores earned for the event criteria in the column spaces to the right. The X1 or X2 notation in the criteria column is a multiplier factor for determining the points earned (Example: an “adequate” score of 7 for an X1 criterion = 7 points; an “adequate” score of 7 for an X2 criterion = 14 points). A score of zero (0) points is acceptable if the minimal performance for any criterion is not met.

Go/No Go Specifications

- Before judging the entry, ensure that the items below are present; indicate presence with a check mark in the box
 - If an item is missing, leave the box next to the item blank and place a check mark in the box labeled ENTRY NOT EVALUATED
 - If a check mark is placed in the ENTRY NOT EVALUATED box, the entry is not to be judged.
-
- Glider was constructed
- Glider was flown by contestant
- ENTRY NOT EVALUATED

ENTRY (105 points)				Record scores in the column spaces below
CRITERIA	Minimal performance 1-4 points	Adequate performance 5-8 points	Exemplary performance 9-10 points	
Adherence to specification (X1)	Glider only loosely follows specifications provided in instructions	Glider follows most specifications provided in instructions	Glider adheres to all specifications provided in instructions	
Design (X1)	No alterations to the glider design have been made	Where possible, the glider design shows some alterations that may or may not improve performance and/or appearance	Where possible, the glider design has been altered in a way that definitively improves performance and/or appearance	
Appearance and Construction (X1)	Glider construction is sloppy; seems to be thrown together	Glider construction appearance indicates some attention has been paid to craftsmanship	Glider construction demonstrates a high level of craftsmanship	
Flight Time (X1)	1 st = 75 points 2 nd = 71 points 3 rd = 67 points 4 th = 63 points 5 th and 6 th = 60 points	7 th and 8 th = 55 points 9 th – 12 th = 50 points 13 th – 16 th = 44 points 17 th – 25 th = 36 points all others = 25 points		
ENTRY SUBTOTAL (105 points)				

Rules violation (a deduction of 20% of the total possible points for the above sections must be initialed by the judge, coordinator, and manager of the event. Record the deduction in the space to the right. Indicate the rule violated _____)	
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To arrive at the TOTAL score, add any subtotals and subtract rules violation points, as necessary.	TOTAL (105 points)
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PA-TSA DIGITAL VIDEO CHALLENGE

Middle School



OVERVIEW

The PA-TSA Digital Video Challenge is designed to allow TSA members to demonstrate their skills in the field of impromptu digital videography.

ELIGIBILITY

Entries are limited to one team of two members per chapter.

ATTIRE

Business Casual TSA attire (category C) as described in the PA-TSA dress code is the minimum requirement for the event.

REGULATIONS AND REQUIREMENTS

Students will work to develop their leadership and 21st-century skills in the process of preparing for and participating in this TSA competitive event. The development and application of those skills must be evident in their submission, demonstration, and/or communication about the entry.

C. The Video Design Challenge

6. On the challenge date and time, the design problem will be made available to participants.
7. Time starts when the challenge is released online.
8. Participants are permitted twenty-four (24) hours from the start time to complete and submit the entire sixty (60) second production.
9. A deduction of five (5) points will be incurred for exceeding the time limit.
10. All video footage must be an original creation of the participants and must be completed during the event timeline. Where applicable, all ideas, images, and sounds from other sources must be cited. Copyrighted materials may not be used.

NOTE: Failure to follow this procedure results in disqualification.

11. Participants must complete the Student Copyright Checklist (see Forms Appendix on the TSA website) and save it as a multi-page PDF to be submitted electronically with the entry online.
 - a. If the entry contains images of people, proof of consent must be provided for each person in the video.
 - b. Minors require parental consent. Use the Photo/Film/Video Consent and Release (see Forms Appendix on the TSA website) for any individuals included in the video footage.
 - c. Failure to include the Student Copyright Checklist will result in disqualification.

D. The Documentation Portfolio

1. The portfolio must include the following pages in a single, multi-page PDF document in this order:
 - a. Title page with the event title, the conference city, and state, the year, and the team/individual chapter ID number(s); one (1) page
 - b. Table of contents; pages as needed
 - c. Video script; pages as needed
 - d. Storyboard; pages as needed
 - e. Student Copyright Checklist; pages as needed
 - f. Photo/Film/Video Consent and Release (if applicable); pages as needed

E. Submission

1. Participants submit a multi-page PDF of the documentation portfolio.
 2. Participants submit a URL link to the video. Participants may choose any video hosting site, such as an UNLISTED YouTube URL of the video, as long as the video is located online and accessible for evaluation.
 3. Submission information will be provided on the PA-TSA website.
 4. Entries received, or changes made to submitted entries, after the deadline will not be judged.
- F. Judges score the entries.
- G. The top ten (10) finalists will be announced at the awards ceremony, as well as via the PA-TSA website.

EVALUATION

- C. The video production
- D. The documentation portfolio

Refer to the official rating form for more information.

OFFICIAL RATING FORM

Judges: Using minimal (1-4 points), adequate (5-8 points), or exemplary (9-10 points) performance levels as a guideline in the rating form, record the scores earned for the event criteria in the column spaces to the right. The X1 or X2 notation in the criteria column is a multiplier factor for determining the points earned (Example: an “adequate” score of 7 for an X1 criterion = 7 points; an “adequate” score of 7 for an X2 criterion = 14 points). A score of zero (0) points is acceptable if the minimal performance for any criterion is not met.

Go/No Go Specifications

- Before judging the entry, ensure that the items below are present; indicate presence with a checkmark in the box
- If an item is missing, leave the box next to the item blank and place a checkmark in the box labeled ENTRY NOT EVALUATED
- If a checkmark is placed in the ENTRY NOT EVALUATED box, the entry is not to be judged.

-
- Video production was submitted
 - PDF of the documentation portfolio was submitted
 - ENTRY NOT EVALUATED

VIDEO PRODUCTION (90 points)

CRITERIA	Minimal performance	Adequate performance	Exemplary performance	Record scores in the column spaces below
	1-4 points	5-8 points	9-10 points	
Camera Handling (X1)	Serious problems with focus, steadiness, and framing are evident	Most shots are focused and framed, with adequate close-ups included	Steady and creative shots that enhance the video are utilized, and excellent close-ups are included	
Lighting (X1)	Numerous shots are improperly lit; bleaching, shadows, or unbalanced conditions may be evident in some shots; there is no evidence of an attempt to correct problems	Most shots are properly lit, either through ambient lighting or the use of techniques to correct poor lighting conditions	All shots are well lit, either through ambient lighting or the use of techniques to correct poor lighting conditions	
Audio (X1)	Audio may be unclear, distorted, or washed out from poor signal-to-noise ratio; there is evidence of the use of a built-in camera microphone that detracts from the message	The audio is clear, with consideration given to a good signal-to-noise ratio; background or ambient noise may occasionally be a distraction	The audio is clear and recorded with a good signal-to-noise ratio, displaying skillful microphone choice, placement, and technique	
Continuity and Pacing (X2)	The story sequencing is confusing; shots are too long or “clipped” with edit points appearing “glitchy”	The pace and timing are well structured; clips move along and tell the story, with moderate use of transitions	Shots logically pace the story along in an interesting way, with excellent and purposeful use of transitions	
Aesthetics and Artanship (X1)	The work is unorganized and sloppy	The work provides an organized and logical presentation of essential issues	The work provides an exemplary use of layout and design principles to logically communicate important data	
Video Effectiveness (X2)	The video does not meet project goals/theme, presents an unclear message, and/or is sloppy	The video topic is presented with insights; the video adequately meets the	The video is focused on the objective/theme, with a rich variety of supporting material;	

	overall; leadership and/or 21 st -century skills are not evident	objective/theme; leadership and/or 21 st -century skills are somewhat evident	leadership and/or 21 st skills are evident	
Portfolio (X1)	The portfolio is unorganized and/or missing three (3) or more components	The portfolio has most components and it is somewhat organized	All components are included in the portfolio; content and organization are evident	
VIDEO PRODUCTION SUBTOTAL (90 points)				

Rules violation (a deduction of 20% of the total possible points for the above sections must be initialed by the judge, coordinator, and manager of the event. Record the deduction in the space to the right. Indicate the rule violated _____)	
A time violation (a deduction of five [5] points) will be incurred for exceeding the sixty (60) second time limit for the length of the video. Record the deduction in the space to the right.	

To arrive at the TOTAL score, add any subtotals and subtract rules violation points, as necessary.	TOTAL (90 points)
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PA-TSA ELECTRONIC RESEARCH & EXPERIMENTATION

High School



OVERVIEW

Participants research, plan, design, and construct an electronic device. Entries are evaluated on the quality of research, ingenuity, complexity of the device, and effectiveness of the exhibit display.

Work as part of a team to research, plan, design, and construct an electronic device.

ELIGIBILITY

Entries are limited to two teams of two-six members per chapter.

ATTIRE

Professional TSA attire (category B) as described in the PA-TSA dress code is the minimum requirement for the semifinal portion of this event.

REGULATIONS AND REQUIREMENTS

Students will work to develop their leadership and 21st-century skills in the process of preparing for and participating in this TSA competitive event. The development and application of those skills must be evident in their submission, demonstration, and/or communication about the entry.

PRELIMINARY ROUND

H. The Electronic Device

12. Commercially prepared kits are NOT acceptable entries and will not be evaluated by judges.

13. The major emphasis of the research is electronics. However, pneumatic, mechanical, and computer interface components also may be used.

I. The Video

1. Video must include at a minimum:

d. Team identification number

e. Summary of experimentation

f. Demonstration of the device in action

g. Digital images displaying the electronic device

h. Highlight your display with creative visual elements (e.g. photos, titles) to actively engage the audience. Participants may use images labeled "for reuse" but must properly cite the source

i. Video cannot exceed three (3) minutes in duration. Judges will not evaluate any information after the three (3) minute mark and will assess a rules violation.

j. Copyright

i. Citation of all ideas, fonts, and images from sources other than the designer and/or that are copyrighted (most fonts and images found on the web are copyrighted material unless purchased or offered as free-domain) MUST be included in the documentation portfolio. Clip art must be documented; failure to include necessary citations results in disqualification.

ii. Written permission for all copyrighted material must be included in the documentation portfolio (See Student Copyright Checklist in the Forms Appendix on the TSA website).

J. The Documentation Portfolio

2. The portfolio must include the following pages in a single, multi-page PDF document in this order:

g. Title page with the event title, the conference city, and state, the year, and the team/individual chapter ID number(s); one (1) page

- h. Table of contents; pages as needed
 - i. Brief description of the device; one (1) page
 - j. Description of possible real-life applications; one (1) page
 - k. Evidence of experimentation (charts and diagrams may be appropriate); pages as needed
 - i. A description of the components in the circuit and how they interact to accomplish the device's intended purpose
 - ii. An explanation of the different ideas, components, or options tested
 - iii. An analysis of testing results
 - l. Schematic diagrams (or block diagrams as appropriate) using engineering symbols as applicable; pages as needed
 - m. Photographic verification of the device; pages as needed
 - n. Plan of Work log (See the Forms Appendix on the TSA website); pages as needed
 - o. References and Resources, citing at least three (3) different types of resources such as literature, interviews, websites, etc., in proper Modern Language Association (MLA) style; pages as needed
- K. Submission
1. Participants submit a multi-page PDF of the documentation portfolio.
 2. Participants submit a URL link to the video. Participants may choose any video hosting site, such as an UNLISTED YouTube URL of the video, as long as the video is located online and accessible for evaluation.
 3. Submission information will be provided on the PA-TSA website.
 4. Entries received, or changes made to submitted entries, after the deadline will not be judged.
- L. Email verification of each team's entry will be made by the state conference planning team.
- M. Judges evaluate the entries.
- N. The top twelve (12) semifinalists will be announced via the PA-TSA website.

SEMIFINAL ROUND

- A. The Presentation/Interview
 1. Participants sign-up for a presentation/interview time via a procedure to be established and published on the PA-TSA website.
 2. Teams will demonstrate the device to the judges.
 3. Teams are allotted a maximum of ten (10) minutes to explain their entry and respond to questions.
 4. Participants may refer to the documentation and display during the presentation/interview.
- B. Judges score the presentations/interviews.
- C. The top ten (10) finalists will be announced at the awards ceremony, as well as via the PA-TSA website.

EVALUATION

PRELIMINARY ROUND

- E. The digital display
- F. The documentation portfolio

SEMIFINAL ROUND

- A. The presentation/interview

Refer to the official rating form for more information.

OFFICIAL RATING FORM

Judges: Using minimal (1-4 points), adequate (5-8 points), or exemplary (9-10 points) performance levels as a guideline in the rating form, record the scores earned for the event criteria in the column spaces to the right. The X1 or X2 notation in the criteria column is a multiplier factor for determining the points earned (Example: an “adequate” score of 7 for an X1 criterion = 7 points; an “adequate” score of 7 for an X2 criterion = 14 points). A score of zero (0) points is acceptable if the minimal performance for any criterion is not met.

Go/No Go Specifications

- Before judging the entry, ensure that the items below are present; indicate presence with a checkmark in the box
- If an item is missing, leave the box next to the item blank and place a checkmark in the box labeled ENTRY NOT EVALUATED
- If a checkmark is placed in the ENTRY NOT EVALUATED box, the entry is not to be judged.

-
- A digital display was submitted
 - PDF of the documentation portfolio was submitted
 - ENTRY NOT EVALUATED

DEVICE and DIGITAL DISPLAY (80 points)				Record scores in the column spaces below
CRITERIA	Minimal performance 1-4 points	Adequate performance 5-8 points	Exemplary performance 9-10 points	
Communication of Solution (X2)	Difficult to understand the solution being communicated; an illogical explanation is presented	The solution is communicated and thoughts are organized somewhat concisely	The solution is communicated in an organized, clear, and concise manner	
Explanation of Experimentation (X2)	Lacking depth; missing description of circuit/function, testing, and/or analysis of test results	Explanation addresses some of the circuit/function, testing, and/or analysis of test results	The explanation includes a full, detailed discussion of the circuit/function, testing, and/or analysis of test results	
Creativity and Innovation (X1)	Lacks creativity and/or originality; no, or very few, design principles evident	Some elements of creativity and originality exist, and essential design principles are generally evident	Exudes creativity and originality; essential design principles and elements are well integrated	
Complexity (X1)	The solution is simplistic and lacks complexity	The solution is somewhat complex; elements of higher-level thinking are evident	The solution is complex and indicative of higher-level thinking	
Appearance and Construction (X2)	Unorganized and sloppy; seems to be thrown together	Somewhat organized and aesthetically pleasing	Logical, organized, cohesive, and aesthetically pleasing	
DEVICE and DIGITAL DISPLAY SUBTOTAL (80 points)				

DOCUMENTATION PORTFOLIO (50 points)				Record scores in the column spaces below
CRITERIA	Minimal performance 1-4 points	Adequate performance 5-8 points	Exemplary performance 9-10 points	
Portfolio (X1)	The portfolio is unorganized and/or missing three (3) or more components	The portfolio has most components and it is somewhat organized	Only one (1) or none of the components are missing in the portfolio; content and organization are evident	
Definition and Explanation of Issue (X1)	Definition and explanation of the issue are unclear	The issue is defined and explained appropriately	A clear and concise definition and explanation of the issue are evident	
Research Base (X1)	Research is inadequate, and/or very few credible sources are referenced	Research has been conducted appropriately, with some credible sources included	Research indicates evidence of a comprehensive assortment of materials that are credible sources	
Support Materials (X1)	Support materials do not help clarify the documentation or are of little significance to the issue	Support materials are appropriate and help supplement documentation by providing clarity to the issue	Support materials are of excellent quality; if not original, they are cited; support materials clarify the issue	
Quality and Effectiveness (X1)	The portfolio appears to have been thrown together; distracting errors in punctuation, grammar, and spelling are evident in the documentation	The portfolio is generally organized; punctuation, grammar, and spelling are generally correct, with few errors	Work is of exceptional quality and well organized; punctuation, grammar, and spelling are correct with no errors	
DOCUMENTATION PORTFOLIO SUBTOTAL (50 points)				
Rules violation (a deduction of 20% of the total possible points for the above sections must be initialed by the judge, coordinator, and manager of the event. Record the deduction in the space to the right. Indicate the rule violated _____)				
PRELIMINARY SUBTOTAL (130 points)				

SEMIFINALIST PRESENTATION/INTERVIEW (60 points)				Record scores in the column spaces below
CRITERIA	Minimal performance 1-4 points	Adequate performance 5-8 points	Exemplary performance 9-10 points	
Organization (X1)	Participants seem unorganized and unprepared for the presentation/interview, with an illogical explanation of the problem and solution	Participants are generally prepared for the presentation/interview; the explanation of the problem and solution are communicated and generally organized	The presentation/interview is logical, well-organized, and easy to follow; the problem and solution are communicated in an organized and concise manner	
Articulation (X1)	Communication of the solution is unclear, unorganized, and/or illogical; leadership and/or 21 st -century skills are not evident	Communication of the solution is somewhat logical and clear; leadership and/or 21 st -century skills are somewhat evident	Communication of the solution is clear, concise, and logical; leadership and/or 21 st -century skills are evident	
Delivery (X1)	The team is verbose and/or uncertain in its presentation/interview; participants' posture, gestures, and lack of eye contact diminish the delivery	The team is somewhat well-spoken and clear in its presentation/interview; participants' posture, gestures, and eye contact result in an acceptable delivery	The team is well-spoken and distinct in its presentation/interview; participants' posture, gestures, and eye contact result in a polished, natural, and effective delivery	
Knowledge (X2)	Participants seem to have little understanding of the concepts in their project; answers to questions may be vague	Participants exhibit an understanding of the concepts in their project	Participants show clear evidence of a thorough understanding of the project	
Team Participation (X1)	The majority of the presentation/interview is made by one member of the team; the partner(s) may be disengaged	Team members generally are engaged in the process, though one member may take on more responsibility than the other(s)	All team members are actively involved in the presentation/interview	
SEMIFINALIST PRESENTATION/INTERVIEW SUBTOTAL (60 points)				
Rules violation (a deduction of 20% of the total possible points for the above sections must be initialed by the judge, coordinator, and manager of the event. Record the deduction in the space to the right. Indicate the rule violated _____)				
SEMIFINAL SUBTOTAL (60 points)				
To arrive at the TOTAL score, add any subtotals and subtract rules violation points, as necessary.			TOTAL (190 points)	

PA-TSA LOGO DESIGN

Middle and High School



OVERVIEW

Screen-printing utilizes an area of screen mesh blocked off with a non-permeable material to form a stencil creating a negative of the image to be printed; that is, the open spaces are where the ink will appear when printed. Transfers and Direct to Garment (DTG) printing IS NOT PERMITTED. This contest requires the student to create promotional logo designs to be utilized for the next year's PA-TSA T-shirt, PA-TSA State Conference program, and the PA-TSA website banner. The Middle School or High School winner will be chosen to have the designs appear on all PA-TSA State Conference publications (website, mailings, programs, etc.).

The State Conference PA-TSA Logo Design contest is designed to demonstrate design, layout, production, and presentation skills of Visual Communications with a primary focus on the screen-printing process.

ELIGIBILITY

Entries are limited to two individuals per chapter.

ATTIRE

Business Casual TSA attire (category C) as described in the PA-TSA dress code is the minimum requirement for the event.

REGULATIONS AND REQUIREMENTS

Students will work to develop their leadership and 21st-century skills in the process of preparing for and participating in this TSA competitive event. The development and application of those skills must be evident in their submission, demonstration, and/or communication about the entry.

O. The Digital Display

14. The design should include but is not limited to, the next year's TSA theme, the TSA logo, the year (example: 2022), and the words "Pennsylvania Technology Student Association" or "Pennsylvania TSA". Do not include the PA-TSA State Conference date(s) or the words Seven Springs Mountain Resort.
15. Display must include at a minimum:
 - k. Team identification number
 - l. T-shirt Design
 - i. Only the back of the shirt should be screen-printed. The design should be a maximum size of 11" x 17".
 - ii. The entry should be a multi-colored product with a maximum of three (3) inks.
 - iii. The entry may be produced on paper or other materials used in screen printing.
 - m. Webpage Header Design
 - i. The design should be a re-layout of the t-shirt design to fit the PA-TSA webpage header and should be no larger than 1" tall by 7 ½" wide, or a ratio of 1:7.5.
 - ii. The webpage header design does not need to be printed via screen-print methods.
 - n. Conference Program Cover Design
 - i. The design should be a re-layout of the t-shirt design to fit the PA-TSA conference program cover and should be no larger than 3 ½" wide by 7 ½" tall.
 - ii. The conference program cover design does not need to be printed via screen-print methods.
 - o. Digital images displaying the designs should be included.

- p. Maybe be a digital three-dimensional (3D) display
 - q. Highlight your display with creative visual elements (e.g. photos, titles) to actively engage the audience. Participants may use images labeled “for reuse” but must properly cite the source
 - r. Copyright
 - i. Citation of all ideas, fonts, and images from sources other than the designer and/or that are copyrighted (most fonts and images found on the web are copyrighted material unless purchased or offered as free-domain) MUST be included in the documentation portfolio. Clip art must be documented; failure to include necessary citations results in disqualification.
 - ii. Written permission for all copyrighted material must be included in the documentation portfolio (See Student Copyright Checklist in the Forms Appendix on the TSA website).
- P. The Documentation Portfolio
3. The portfolio must include the following pages in a single, multi-page PDF document in this order:
 - p. Title page with the event title, the conference city, and state, the year, and the team/individual chapter ID number(s); one (1) page
 - q. Table of contents; pages as needed
 - r. Technical paper – should outline the processes used and the procedural steps followed in the completion of the project, including all steps from design to completion; pages as needed
 - s. PA Logo Designs; pages as needed
 - i. T-shirt design with B&W color separations
 - ii. Webpage header design with B&W color separations
 - iii. Conference program cover design with B&W color separations
 - t. Specification Sheet
 4. In addition to the documentation portfolio in PDF format, .png files must be included for the t-shirt design, webpage header, and conference program.
- Q. The Physical Display
1. Since this is a test of the student’s ability to produce a message in quantity, no less than 25 screen-printed proofs shall be included, as well as one black and white copy of the color separations. These proofs and separations should be included in a folder or binder.
 2. A comprehensive layout must be submitted and displayed with each entry. One-color copy proof of the Webpage Header Design and the Conference Program Cover Design shall be printed and included in the display.
 3. Entries must be mounted on an illustration board or in an attractive manner. T-shirts not lending themselves to mounting must still conform to display area limits of 1’ deep x 3’ wide x 3’ tall.
 4. Displays shall demonstrate artisanship, creativity, and overall quality (sharp, clean edges of graphics and fonts; entry is clear of smudges, smears, pencil, or other extraneous marks).
 5. A Specification Sheet must be completed for the designs and displayed with each entry.
- R. Submission
5. Participants submit a multi-page PDF of the documentation portfolio, .png files of designs, and hyperlink to the digital display to the designated submission file.
 6. Submission information will be provided on the PA-TSA website.
 7. If a URL is provided, the URL must point directly to the participant’s entry. Entries that require a software download or request that access be granted, will not be judged.
 8. Entries received, or changes made to submitted entries (including the model/prototype) after the deadline will not be judged.
- S. Email verification of each team’s entry will be made by the state conference planning team.
- T. Upon arrival at the state conference, participants will set up physical displays at the time and place designated in the conference program.

U. Judges evaluate the entries.

V. The top ten (10) finalists will be announced via the PA-TSA website.

EVALUATION

G. The digital display

H. The documentation portfolio

I. The physical display

Refer to the official rating form for more information.

SPECIFICATION SHEET

T-shirt Design		
Document Size		
Font Type(s)		
Font Size(s)		
Software		

Webpage Header Design		
Document Size		
Font Type(s)		
Font Size(s)		
Software		

Conference Program Design		
Document Size		
Font Type(s)		
Font Size(s)		
Software		

Materials Used	
Item	Quantity

OFFICIAL RATING FORM

Judges: Using minimal (1-4 points), adequate (5-8 points), or exemplary (9-10 points) performance levels as a guideline in the rating form, record the scores earned for the event criteria in the column spaces to the right. The X1 or X2 notation in the criteria column is a multiplier factor for determining the points earned (Example: an “adequate” score of 7 for an X1 criterion = 7 points; an “adequate” score of 7 for an X2 criterion = 14 points). A score of zero (0) points is acceptable if the minimal performance for any criterion is not met.

Go/No Go Specifications

- Before judging the entry, ensure that the items below are present; indicate presence with a checkmark in the box
 - If an item is missing, leave the box next to the item blank and place a checkmark in the box labeled ENTRY NOT EVALUATED
 - If a checkmark is placed in the ENTRY NOT EVALUATED box, the entry is not to be judged.
-
- Designs and the Digital Display were submitted
 - PDF of the documentation portfolio was submitted
 - ENTRY NOT EVALUATED

DESIGNS and DISPLAYS (80 points)				Record scores in the column spaces below
CRITERIA	Minimal performance 1-4 points	Adequate performance 5-8 points	Exemplary performance 9-10 points	
Elements of Design (X2)	Choices of font, color, and images appear haphazard; eye appeal, proportion, balance, and unity are lacking	Choices of font, color, and images are somewhat indicative of an understanding of design principles; eye appeal, proportion, balance, and unity are somewhat evident	Choices of font, color, and images are indicative of a solid understanding of design principles; eye appeal, proportion, balance, and unity are high level	
Technical Aspects (X2)	Designs demonstrate little understanding of technical knowledge in terms of screen-printing	Designs demonstrate some understanding of technical knowledge in terms of screen-printing	Designs demonstrate a depth of technical knowledge in terms of screen-printing	
Creativity and Innovation (X1)	Lacks creativity and/or originality; no, or very few, design principles evident	Some elements of creativity and originality exist, and essential design principles are generally evident	Exudes creativity and originality; essential design principles and elements are well integrated	
Complexity (X1)	The solution is simplistic and lacks complexity	The solution is somewhat complex; elements of higher-level thinking are evident	The solution is complex and indicative of higher-level thinking	
Appearance and Construction (X2)	Unorganized and sloppy; seems to be thrown together	Somewhat organized and aesthetically pleasing	Logical, organized, cohesive, and aesthetically pleasing	
DEVICE and DIGITAL DISPLAY SUBTOTAL (80 points)				

DOCUMENTATION PORTFOLIO (50 points)				Record scores in the column spaces below
CRITERIA	Minimal performance	Adequate performance	Exemplary performance	
	1-4 points	5-8 points	9-10 points	
Portfolio (X1)	The portfolio is unorganized and/or missing three (3) or more components	The portfolio has most components and it is somewhat organized	Only one (1) or none of the components are missing in the portfolio; content and organization are evident	
Definition and Explanation of Process (X1)	Definition and explanation of the process are unclear	The process is defined and explained appropriately	A clear and concise definition and explanation of the process are evident	
Technical Aspects (X1)	Demonstration of technical knowledge is lacking, and/or very few credible sources are referenced	Demonstration of technical knowledge is somewhat evident, and/or some credible sources are referenced	Demonstration of technical knowledge is evident; credible sources are referenced	
Support Materials (X1)	Support materials do not help clarify the documentation or are of little significance to the issue	Support materials are appropriate and help supplement documentation by providing clarity to the issue	Support materials are of excellent quality; if not original, they are cited; support materials clarify the issue	
Quality and Effectiveness (X1)	The portfolio appears to have been thrown together; distracting errors in punctuation, grammar, and spelling are evident in the documentation	The portfolio is generally organized; punctuation, grammar, and spelling are generally correct, with few errors	Work is of exceptional quality and well organized; punctuation, grammar, and spelling are correct with no errors	
DOCUMENTATION PORTFOLIO SUBTOTAL (50 points)				

<p>Rules violation (a deduction of 20% of the total possible points for the above sections must be initialed by the judge, coordinator, and manager of the event. Record the deduction in the space to the right. Indicate the rule violated _____)</p>	
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<p>To arrive at the TOTAL score, add any subtotals and subtract rules violation points, as necessary.</p>	TOTAL (130 points)
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PA-TSA MATERIALS PROCESS

Middle and High School



OVERVIEW

TSA contestants entering the Materials Processes contest are required to submit drawings and photographs of a project that they have constructed during the school year.

The purpose of the Materials Processes contest is to provide a means for TSA members to demonstrate their ability to fabricate a project or product.

ELIGIBILITY

Entries are limited to one individual per chapter.

ATTIRE

Professional TSA attire (category B) as described in the PA-TSA dress code is the minimum requirement for the semifinal portion of this event.

REGULATIONS AND REQUIREMENTS

Students will work to develop their leadership and 21st-century skills in the process of preparing for and participating in this TSA competitive event. The development and application of those skills must be evident in their submission, demonstration, and/or communication about the entry.

PRELIMINARY ROUND

W. The Project

16. Commercially prepared kits are NOT acceptable entries and will not be evaluated by judges (i.e. clock kits with pre-cut parts). Commercially produced plans/drawings are permitted. Detailed drawings of the project are highly suggested.
17. The project may be fabricated from one or more of the following materials: wood, metal, plastics, composite, or earth material.
18. The project must be the work of one student.

X. The Documentation Portfolio

5. The portfolio must include the following pages in a single, multi-page PDF document in this order:
 - u. Title page with the event title, the conference city, and state, the year, and the team/individual chapter ID number(s); one (1) page
 - v. Table of contents; pages as needed
 - w. Description of the developmental procedures used to create the project, including materials list, the finish used, construction process, and project function; five (5) pages maximum
 - x. Working drawings, including parts list and all necessary dimensions; five (5) pages maximum
 - y. Photographic verification of the project; pages as needed
 - i. a variety of images are recommended to allow the judges to accurately evaluate workmanship and project complexity

Y. Submission

1. Participants submit a multi-page PDF of the documentation portfolio.
2. Submission information will be provided on the PA-TSA website.
3. Entries received, or changes made to submitted entries, after the deadline will not be judged.
4. The physical project will be dropped off at a prescribed location and time as outlined in the conference program.

Z. Email verification of each team's entry will be made by the state conference planning team.

AA. Judges evaluate the entries.

BB. The top twelve (12) semifinalists will be announced via the PA-TSA website.

SEMIFINAL ROUND

D. The Presentation/Interview

5. Participants sign-up for a presentation/interview time via a procedure to be established and published on the PA-TSA website.

6. Teams will demonstrate the project to the judges.

7. Teams are allotted a maximum of ten (10) minutes to explain their entry and respond to questions.

8. Participants may refer to the documentation and the display during the presentation/interview.

E. Judges score the presentations/interviews.

F. The top ten (10) finalists will be announced at the awards ceremony, as well as via the PA-TSA website.

EVALUATION

PRELIMINARY ROUND

J. The project

K. The documentation portfolio

SEMIFINAL ROUND

B. The presentation/interview

Refer to the official rating form for more information.

OFFICIAL RATING FORM

Judges: Using minimal (1-4 points), adequate (5-8 points), or exemplary (9-10 points) performance levels as a guideline in the rating form, record the scores earned for the event criteria in the column spaces to the right. The X1 or X2 notation in the criteria column is a multiplier factor for determining the points earned (Example: an “adequate” score of 7 for an X1 criterion = 7 points; an “adequate” score of 7 for an X2 criterion = 14 points). A score of zero (0) points is acceptable if the minimal performance for any criterion is not met.

Go/No Go Specifications

- Before judging the entry, ensure that the items below are present; indicate presence with a checkmark in the box
- If an item is missing, leave the box next to the item blank and place a checkmark in the box labeled ENTRY NOT EVALUATED
- If a checkmark is placed in the ENTRY NOT EVALUATED box, the entry is not to be judged.

-
- A physical project was submitted
 - PDF of the documentation portfolio was submitted
 - ENTRY NOT EVALUATED

PROJECT (80 points)				Record scores in the column spaces below
CRITERIA	Minimal performance	Adequate performance	Exemplary performance	
	1-4 points	5-8 points	9-10 points	
Workmanship (X2)	Difficult to understand the solution being communicated; an illogical explanation is presented	The solution is communicated and thoughts are organized somewhat concisely	The solution is communicated in an organized, clear, and concise manner	
Technical Aspects (X2)	Designs demonstrate little understanding of technical knowledge in terms of materials, finish, construction processes	Designs demonstrate some understanding of technical knowledge in terms of materials, finish, construction processes	Designs demonstrate a depth of technical knowledge in terms of materials, finish, construction processes	
Creativity and Innovation (X1)	Lacks creativity and/or originality; no, or very few, design principles evident	Some elements of creativity and originality exist, and essential design principles are generally evident	Exudes creativity and originality; essential design principles and elements are well integrated	
Complexity (X1)	The solution is simplistic and lacks complexity	The solution is somewhat complex; elements of higher-level thinking are evident	The solution is complex and indicative of higher-level thinking	
Appearance and Construction (X2)	Unorganized and sloppy; seems to be thrown together	Somewhat organized and aesthetically pleasing	Logical, organized, cohesive, and aesthetically pleasing	
PROJECT and DIGITAL DISPLAY SUBTOTAL (80 points)				

DOCUMENTATION PORTFOLIO (50 points)				Record scores in the column spaces below
CRITERIA	Minimal performance	Adequate performance	Exemplary performance	
		1-4 points	5-8 points	9-10 points
Portfolio (X1)	The portfolio is unorganized and/or missing three (3) or more components	The portfolio has most components and it is somewhat organized	Only one (1) or none of the components are missing in the portfolio; content and organization are evident	
Written Developmental Procedures (X2)	The written description of the developmental procedure(s) used to create the project is unclear and is missing information on information on materials, finish, processes, or function	The written description of the developmental procedure(s) used to create the project is mostly clear and includes some information on materials, finish, processes, and function	A clear and concise written description of the developmental procedure(s) used to create the project, including detailed information on materials, finish, processes, and function	
Working Drawings (X1)	Working drawings are included but lack clarity and maybe missing a parts list and/or all necessary dimensions	Working drawings are mostly clear, and include a parts list and nearly all necessary dimensions	Working drawings are high quality, easy to understand, and include a parts list and all necessary dimensions	
Quality and Effectiveness (X1)	The portfolio appears to have been thrown together; distracting errors in punctuation, grammar, and spelling are evident in the documentation	The portfolio is generally organized; punctuation, grammar, and spelling are generally correct, with few errors	Work is of exceptional quality and well organized; punctuation, grammar, and spelling are correct with no errors	
DOCUMENTATION PORTFOLIO SUBTOTAL (50 points)				

<p>Rules violation (a deduction of 20% of the total possible points for the above sections must be initialed by the judge, coordinator, and manager of the event. Record the deduction in the space to the right. Indicate the rule violated _____)</p>	
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PRELIMINARY SUBTOTAL (130 points)	
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SEMIFINALIST PRESENTATION/INTERVIEW (50 points)				Record scores in the column spaces below
CRITERIA	Minimal performance 1-4 points	Adequate performance 5-8 points	Exemplary performance 9-10 points	
Organization (X1)	The participant seems unorganized and unprepared for the presentation/interview, with an illogical explanation of the problem and solution	The participant is generally prepared for the presentation/interview; the explanation of the problem and solution are communicated and generally organized	The presentation/interview is logical, well-organized, and easy to follow; the problem and solution are communicated in an organized and concise manner	
Articulation (X1)	Communication of the solution is unclear, unorganized, and/or illogical; leadership and/or 21 st -century skills are not evident	Communication of the solution is somewhat logical and clear; leadership and/or 21 st -century skills are somewhat evident	Communication of the solution is clear, concise, and logical; leadership and/or 21 st -century skills are evident	
Delivery (X1)	The participant is verbose and/or uncertain in their presentation/interview; the participant's posture, gestures, and lack of eye contact diminish the delivery	The participant is somewhat well-spoken and clear in their presentation/interview; the participant's posture, gestures, and eye contact result in an acceptable delivery	The participant is well-spoken and distinct in their presentation/interview; the participant's posture, gestures, and eye contact result in a polished, natural, and effective delivery	
Knowledge (X2)	Participant seems to have little understanding of the concepts in their project; answers to questions may be vague	Participant exhibits an understanding of the concepts in their project	The participant shows clear evidence of a thorough understanding of the project	
SEMIFINALIST PRESENTATION/INTERVIEW SUBTOTAL (50 points)				

<p>Rules violation (a deduction of 20% of the total possible points for the above sections must be initialed by the judge, coordinator, and manager of the event. Record the deduction in the space to the right. Indicate the rule violated _____)</p>	
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SEMIFINAL SUBTOTAL (50 points)	
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<p>To arrive at the TOTAL score, add any subtotals and subtract rules violation points, as necessary.</p>	TOTAL (180 points)
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PA-TSA R/C OFF-ROAD RACING

Middle and High School



OVERVIEW

The R/C Off-Road Racing competition is designed to promote teamwork and problem solving among students as they acquire the technical skills to adapt, operate, race, and maintain a radio-controlled off-road racing vehicle that will also perform a task while racing around the track. Points earned for the portfolio contents, the appearance of the vehicle body and piece for the task, drawing(s) for the task, and racing results will determine each team's evaluation.

The task will change from year to year. The task and the specifications will be included in a separate document each year.

ELIGIBILITY

Entries are limited to one team of two to three members per chapter.

ATTIRE

Business Casual TSA attire (category C) as described in the PA-TSA dress code is the minimum requirement for the event.

REGULATIONS AND REQUIREMENTS

Students will work to develop their leadership and 21st-century skills in the process of preparing for and participating in this TSA competitive event. The development and application of those skills must be evident in their submission, demonstration, and/or communication about the entry.

ENTRY – VEHICLE AND PORTFOLIO

CC. The Vehicle

19. Teams must enter a vehicle that is a purpose-built 1/10th scale off-road racing vehicle that has been assembled from a kit or has been assembled from parts of other vehicles or that have been manufactured by the team during the current school year. Factory assembled/built vehicles that cannot be disassembled are not allowed. If the vehicle was purchased as an RTR (ready to run) vehicle during the current school year or has been used in previous years, it also must have been unassembled and reassembled during the current school year. Proof of the disassembling process must be one of the pictures in the picture documentation of the portfolio. The picture should show the disassembled pieces on a piece of paper or newspaper that clearly shows a current school year date.
20. The maximum length of the wheelbase is 16 inches from the center of the axle to the center of the axle. The maximum width is 14 inches from tire outside to tire outside, not including the body.
21. Motors may be any 1/10th scale motor of students' choosing. If a motor is NOT 1/10th sized (540-550 size), then it is not allowed. Only "inrunners" (motors with standard armature/rotor internally spinning) are allowed. The outer must not spin.
22. The batteries will be a maximum of 2s Lipo (7.4v nominal- Lipo Bags MUST BE USED). NiMH or NiCd cells will be a maximum of 6 cells (7.2v nominal).
23. Any tires and hubs can be used including student-made products.
24. The vehicle must have a crash-resistant, polycarbonate body and it must run the entire event. All vehicles must have closed (full) bodies. The body may be factory-made or made by the team. However, the body may not be factory painted and must be painted by the team. Bodies from

previous years' competitions are not permitted. The body must be finished with paint – no clear bodies will be permitted for competition. The body must have windows. Windows may be clear or painted, but if painted, they must be a different color than the main body. Bonus points will be considered for bodies that are painted and decorated to show the current year's TSA theme. Additionally, bonus points will be considered for student-made bodies that are formed from scratch (does not include purchased preformed bodies that are custom cut), and also contain clear and thorough documentation in the portfolio. 3D printed body pieces are permitted as long as they are mounted/ fastened securely.

25. Bodies must be removable but properly secured. Rubber bands, tape, and wire ties are not permitted to hold the body in place. Velcro securing is permissible. If the body falls off during the race, the vehicle must be taken to the "pit area" and refastened to resume the race. Bodies constructed of multiple pieces that come apart during the race must be reconnected to resume the race.
26. The front-most and the rearmost part of the vehicle must contain a shock-absorbing bumper or cushions/pads to absorb shock. Sharp, protruding objects are not permitted on the vehicle.
27. The vehicle must be off-road and capable of maneuvering over obstacles. The vehicle may be either two-wheel or four-wheel drive.
28. Any part of the vehicle may be customized as long as it does not violate any of the rules previously mentioned.

DD. The Documentation Portfolio

6. The portfolio must include the following pages in a single, multi-page PDF document in this order:
 - z. Title page with the event title, the conference city, and state, the year, and the team/individual chapter ID number(s); one (1) page
 - aa. Table of contents; pages as needed
 - bb. The typed descriptive report, including pictorial documentation with multi-sentence captions that detail the assembly and disassembly of the vehicle, the painting of the body, and the making and testing of the part(s) necessary to carry out the task; pages as needed
 - cc. Drawing(s) of the student-made parts; pages as needed
 - dd. Signed "Advisor Verification Statement" affirming that the painting of the vehicle body, making of the part(s) necessary to carry out the task, and the portfolio, with all its contents, were created during the current school year; one (1) page

EE. Submission

1. Participants submit a multi-page PDF of the documentation portfolio.
2. Submission information will be provided on the PA-TSA website.
3. Entries received, or changes made to submitted entries, after the deadline will not be judged.

FF. Consult the conference program for the time and place to submit the vehicle upon arrival at the conference.

GG.

Judges score the entries.

THE RACE

A. Race Set-up

1. The Track

- a. The track surface may be asphalt, concrete, carpet, wood, or any combination thereof.
- b. The track will be a continuous loop that may contain throw rugs, slippery and rough surfaces, and other obstacles that produce an off-road experience. The configuration of the track will be determined by the race director.

- c. No part of the vehicle may extend ahead of the starting line when staged.
- d. A designated pull-off area (pit area) will be provided on the race course for pit stops. A vehicle may be repaired at any time during the race if it is necessary. Vehicles may not be repaired on the track. The repairs must be made in the designated “pit area”, and the vehicle may not leave this area except to be replaced on the track. Once the vehicle is repaired, it must be returned to the track in front of the “pit area”. Only the other team members of the driver are permitted in the “pit area”.

2. Driving Rules

- a. Unruly or unsportsmanlike conduct will not be tolerated. Any team member in violation of this will be disqualified. If a team member is disqualified, the team is disqualified.
- b. Unsportsmanlike driving (intentional hitting of other vehicles, short coursing, etc.) is not permitted. Horseplay with a vehicle before, during, or after a race also applies. Anyone doing so may be disqualified at the judgment of the race director.
- c. The driver may not leave the driver’s platform at any time during the race. All repairs are to be done by the “pit crew”.
- d. A vehicle must finish the race under its power. It may not be pushed across the finish line.

3. Turn Marshalls

- a. Drivers must be turn marshals for the race immediately following their race. Failure to do so will result in the loss of two laps in their race. Another chapter member may substitute, if necessary, but the original driver is responsible for the actions of the substitute. Drivers scheduled for the last race in each level must be turn marshals for the first race in each level.
- b. Instructions on handling upset or stuck vehicles are included in the “Vehicle Task” document.
- c. Vehicles in need of repair are to be set outside of the track nearest the spot of the trouble. The pit crewmember must pick up the vehicle at that point and return it to the “pit area” for repairs. Pit crewmembers must go around the track, not across it, to pick up their vehicle. Once repaired, the vehicle must be returned to the track in front of the “pit area”.
- d. A vehicle on the track has the right of way over a vehicle that has gone off the track, overturned, or otherwise has problems.
- e. Turn marshals must treat all vehicles equally.
- f. Drivers, or their substitutes, are responsible for knowing the requirements of a turn marshal and following them appropriately.

B. The Races

- 1. The race director will generate and post a list of teams and a sequence of the races
- 2. Two members of the team must serve as drivers.
- 3. Each of the two (2) designated drivers of each team will drive in the preliminaries. The driver with the most laps will be the driver in the main race.
- 4. All team members must be present at an orientation meeting held before the start of the first race. The race director may make revisions to certain procedures he/she may deem necessary for certain conditions. Any revisions will be announced at the orientation meeting.
- 5. Just before each race, transponders will be issued to each driver of the race. Transponders must be returned immediately following the end of their race.

6. The procedure for racing is detailed in the RC VEHICLE TASK document.

EVALUATION

ENTRY – VEHICLE AND PORTFOLIO

- L. The documentation portfolio
- M. The vehicle

RACE

- C. The race

Refer to the official rating form for more information.

ADVISOR VERIFICATION STATEMENT

(this form must be included in the documentation portfolio)

Advisor: Please circle the letter before each item to indicate that you verify each of those items has been completed, then sign on the line provided.

By my signature, I am verifying the PA-TSA R/C Off-Road Racing team of our school's chapter:

- a) has disassembled the vehicle, prepared a vehicle body, and made the part(s) for the task during the current school year;
- b) has completed the documentation portfolio, including drawing(s) and pictorial documentation, during the current school year;
- c) has been instructed in safety precautions, especially in the use of soldering guns/pencils and safety glasses, when working on this vehicle.

Advisor Signature

Chapter ID#

OFFICIAL RATING FORM

Judges: Using minimal (1-4 points), adequate (5-8 points), or exemplary (9-10 points) performance levels as a guideline in the rating form, record the scores earned for the event criteria in the column spaces to the right. The X1 or X2 notation in the criteria column is a multiplier factor for determining the points earned (Example: an “adequate” score of 7 for an X1 criterion = 7 points; an “adequate” score of 7 for an X2 criterion = 14 points). A score of zero (0) points is acceptable if the minimal performance for any criterion is not met.

Go/No Go Specifications

- Before judging the entry, ensure that the items below are present; indicate presence with a checkmark in the box
 - If an item is missing, leave the box next to the item blank and place a checkmark in the box labeled ENTRY NOT EVALUATED
 - If a checkmark is placed in the ENTRY NOT EVALUATED box, the entry is not to be judged.
-
- PDF of the documentation portfolio was submitted
 - Advisor verification statement is present
 - The vehicle is a 1/10th scale model and is not a factory-assembled model unable to be disassembled
 - Wheelbase and width of vehicle meet requirements
 - Student-made part(s) meet requirements
 - The vehicle and student-made parts are safe to operate
 - Correct motor and/or battery are used
 - The vehicle has the correct body and has not previously been submitted
 - ENTRY NOT EVALUATED

DOCUMENTATION PORTFOLIO (50 points)				Record scores in the column spaces below
CRITERIA	Minimal performance 1-4 points	Adequate performance 5-8 points	Exemplary performance 9-10 points	
Portfolio (X1)	The portfolio is unorganized and/or missing two (2) or more components	The portfolio is generally well-organized is missing only one (1) component	Content and organization are evident; all sections are included	
Descriptive Report (X1)	The report has few details of construction, bodywork, and testing of the vehicle; includes more than three (3) spelling or grammatical errors	The report lacks some detail in terms of construction, bodywork, and testing of the vehicle; includes no more than three (3) spelling or grammatical errors	The report fully details the construction, bodywork, and testing of the vehicle; includes no spelling or grammatical errors	
Pictorial Documentation (X2)	The work of the team is poorly documented or; includes fewer than two (2) pictures; or includes more than one (1) caption that is not multi-sentence or; more than three spelling or grammatical errors	The work of the team is somewhat documented or; includes fewer than five (5) organized pictures; or includes one (1) caption that is not multi-sentence or; no more than three spelling or grammatical errors	The work of the team is documented or; includes five (5) or more neatly organized pictures with multi-sentence captions; no spelling or grammatical errors	
Drawing (X1)	The drawing is missing more than two (2) dimensions or its execution is poorly done	The drawing is missing one (1) or two (2) dimensions or its execution needs improvement	The drawing is complete with all dimensions and is well done.	
DOCUMENTATION PORTFOLIO SUBTOTAL (50 points)				

VEHICLE (30 points)				Record scores in the column spaces below
CRITERIA	Minimal performance	Adequate performance	Exemplary performance	
	1-4 points	5-8 points	9-10 points	
Body Appearance (X1)	The paint job does not meet regulations or is poorly done; the overall appearance of the vehicle shows little appeal to the viewer	The paint job meets regulations, but it and/or creativity show room for improvement; the vehicle's appearance is average with no outstanding features that the grab the eye of the viewer	The paint job is well done and shows evidence of creativity; the total vehicle appearance is neat and clean shows evidence of attention to detail in its overall construction	
Piece for the Task (X2)	The construction of the piece does not match the drawing at all or it and/or its attachment to the vehicle are poorly done	The construction of the pieces does not completely match the drawing or it and/or its attachment to the vehicle could use improvement	The construction of the piece matches the drawing, and it and its attachment to the vehicle is well done	
VEHICLE SUBTOTAL (30 points)				

RACE (75 points)		
Laps for Driver #1		
Laps for Driver #2		
Laps for Main Race		
Minus Lap Penalties		
Total Laps (used to determine race points)		
Race Points	1 st = 75 points 2 nd = 71 points 3 rd = 67 points 4 th = 63 points 5 th and 6 th = 60 points	7 th and 8 th = 55 points 9 th – 12 th = 50 points 13 th – 16 th = 44 points 17 th – 25 th = 36 points all others = 25 points
DOCUMENTATION PORTFOLIO, VEHICLE, BONUS, AND RACE SUBTOTAL (175 points)		

BONUS (20 points)				Record scores in the column spaces below
CRITERIA	Minimal performance	Adequate performance	Exemplary performance	
	1-4 points	5-8 points	9-10 points	
Student-made Body (X1)	Creativity and/or craftsmanship needs significant improvement, or clear/thorough documentation is inadequate or missing	Creativity and/or craftsmanship has some room for improvement, and/or needs additional documentation in the portfolio	The student-made body is creative, shows excellent craftsmanship, and is thoroughly and documented in the portfolio	
Body's Showcase of TSA's Current Year's Theme (X2)	Showcasing of the theme needs significant improvement and creativity, and/or lacks appeal	Showcasing of the themes has room for improvement and creativity, and/or has an average appeal	Showcasing of the theme is outstanding, is creatively done, and has excellent appeal	
BONUS SUBTOTAL (20 points)				
Rules violation (a deduction of 20% of the total possible points for the above sections must be initialed by the judge, coordinator, and manager of the event. Record the deduction in the space to the right. Indicate the rule violated _____)				

To arrive at the TOTAL score, add any subtotals and subtract rules violation points, as necessary.	TOTAL (175 points)
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PA-TSA ROBOTICS

Middle and High School



OVERVIEW

Students will design, build, test and demonstrate a remote controlled robot and necessary accessories in order to carry out a specific challenge. This event is not platform-specific.

ELIGIBILITY

Entries are limited to two teams of two to four members per chapter.

ATTIRE

TSA competition attire is required.

PREPARATION

- A. Teams are required to submit an Engineering Journal in PDF format on a USB flash drive for evaluation.
- B. Judges will use contest rubrics to determine results.

TIME LIMITS

- A. Entries must be started and completed during the current school year.
- B. Each team selects a demonstration time during check-in. Teams should try to avoid conflicts with other events when selecting their demonstration time.
- C. Each team is allowed three (3) minutes of preparation time.
- D. Each team has three (3) minutes to demonstrate its solution to the problem.

REGULATIONS AND REQUIREMENTS

Students will work to develop their leadership and 21st century skills in the process of preparing for and participating in this Pennsylvania TSA competitive event. The development and application of those skills must be evident in their submission, demonstration, and/or communication pertaining to the entry.

Competitors in this event cannot move onto the National TSA conference in this event, as it is state-only.

PROCEDURE

- A. Only registered team members are permitted to check in, prepare and demonstrate the entry. Conference ID Badge is required.
- B. **REGIONAL CONFERENCE** – Design Challenge will be determined by the state conference coordinator and specifications will be provided to contestants at least two months prior to the Regional Conference.
- C. **STATE CONFERENCE** – Design Challenge will be determined by the state conference coordinator and specifications will be the same for Regional and State Competitions.
- D. All robots, controllers, batteries, accessories and engineering journals on a USB flash drive will be collected at a time and place indicated in the conference program.
- E. When the demonstration begins, the testing area is accessible only to judges and the team currently competing.
- F. All other contestants must be outside the 10' x 10' perimeter testing area.
- G. A spectator area will be set up for viewing.
- H. Preparation time (maximum of 3 minutes) is used to install batteries and perform a system check, NOT for practice or modifications.
- I. Each team is allowed three (3) minutes to demonstrate the robot.

- J. The clock starts at the judge's signal.
- K. Each Team is given one (1) opportunity to demonstrate the robot. Elapsed time will be recorded to determine the place winners in event of a tie.
- L. Teams whose robot fails to begin at the signal may be given a second chance to start again at the discretion of the event coordinator.

REGULATIONS

- A. Course – Specifications for the Course/Challenge for each year will be made available on the PA-TSA website.
- B. Robot – The entry may only consist of the robot, batteries, controllers, and Engineering Journal on a USB flash drive.
- C. Robots may be constructed using recycled, salvaged, and commercial parts. There is no specific platform or vendor required.
- D. Any robot control system may be used. Commercial kits may be used, combined, adapted and re-engineered for the design challenge. Examples include, but are not limited to: VEX, LEGO, TETRIX, Fisher/Technic, Lynxmotion, HiTech and/or Arduino.
- E. Size Limit for Robot – Size Limit is defined by the competition and field requirements.
- F. The robot may be controlled by one or two remote control devices.
- G. One or two operators may control the robot during the competition.
- H. Bonus Points - teams may obtain bonus points for:
 - Use of sensors in robot performance
 - Use of programming to alter/assist robot control
 - Use of multiple, interchangeable end effectors

COMPETITION

Scenario: Powering through the Pandemic The Covid-19 pandemic has brought many challenges to all of our lives! School has changed, social standards have changed, and new industries have emerged. Your robot will model many of the changes by:

- Delivering vaccines to 3 locations
- Delivering food and water to a quarantine location
- Turning on the equipment for remote learning
- Maintaining appropriate distances
- Navigating obstacles

The tasks must be completed within 3 minutes.

EVALUATION

PA-TSA Robotics - Engineering Journal Evaluation

- A. Check the PA-TSA website for the current scoring rubric.
- B. Must be submitted on a USB flash drive in PDF format – clearly labeled with team ID # C. **Engineering Journal**
MUST include:
 - **Plan of Work** – may use worksheet or custom designed document: Date, Task, Time Involved, Team Member Responsible,
 - Robot description: Paragraph describing how the robot meets the challenge. Clearly explain bonus features you expect to receive points for.
 - Engineering Design Process: Problem definition, brainstorm, design, build, test, repeat.

- **Technical Drawings** – may include:
Sketches, and/or Tool Drawings, and/or CAD Drawings

C. Bonus Points - teams may obtain bonus points for:

- Use of sensors in robot performance
- Use of programming to alter/assist robot control
- Use of multiple, interchangeable end effectors

PA-TSA Robotics - Robot Evaluation

A. Check the PA-TSA website for the current scoring rubric

PA-TSA Robotics - Demonstration Evaluation

A. Check the PA-TSA website for the current scoring rubric.

B. Deductions of 50 points off of the total possible points may be made for the following: (only once for any or all infractions):

- Damaging the conference course
- Arriving late to the demonstration
- Any conduct unbecoming a TSA participant

C. Disqualification may result for the following:

- Failing to appear at the selected demonstration time
- Unsafe Robot Designs – decision at the discretion of the event coordinator

STEM INTEGRATION

This event aligns with the STEM (Science, Technology, Engineering, and Mathematics) educational standards.

COMPETITION

Scenario: Powering through the Pandemic

The Covid-19 pandemic has brought many challenges to all of our lives! School has changed, social standards have changed, and new industries have emerged. Your robot will model many of the changes by:

- Delivering vaccines to 3 locations
- Delivering food and water to a quarantine location
- Turning on the equipment for remote learning
- Maintaining appropriate distances
- Navigating obstacles

The tasks must be completed within 3 minutes.

Demonstration Process

- A. The robot begins in the staging/start area located between the PVC outer perimeter and the supplies and vaccine delivery location. The robot may be facing any direction to begin.
- B. Competitors may confirm location of supplies or adjust slightly to match their program (within 1" of picture) with permission of the judge.
- C. The robot must navigate all obstacles defined by the course layout.
- D. The robot cannot cross over or touch any of the PVC pipe that defines the course parameters (penalty for touching PVC).
- E. The robot must "social distance" from the PVC corners (penalty for knocking any of the standing PVC pieces over).
- F. The clock will start on the signal by the event coordinator/judge.
- G. The robot will pick up the 3 vaccine tubes and deliver to locations 1, 2, and 3. The vaccines must be placed upright inside the vaccine container. The robot can do this in one trip for bonus points, or can collect and deliver one at a time. Avoid or move the obstacles (wood blocks and golf balls) but still maintain your distance from the standing PVC pieces.
- H. The robot will pick up the food and water (again in one trip for bonus, or one at a time) and deliver to the quarantine location. The base of the robot must remain outside of the quarantine area, while the food and water are delivered beyond the designated line. The water must remain upright the entire time. (deductions if the water "tilts" past the marked line)
- I. The robot will navigate to the remote learning site and "turn on" the equipment by pressing the button inside the box (light should turn on).
- J. The robot must return to and remain in the staging area during the end effector change.
- K. The clock will not stop during the end effector change.
- L. The same robot base must be used for the entire demonstration.
- M. The clock will stop when the robot is parked in the staging area after all tasks have been completed or the designated time (3 minutes) expires.

Scoring

Scoring and placement will be based on the sum of the scores of the official scoring rubric

Tie Breaker

In the event of a tie score, the team with the least elapsed time will receive the higher placement.

RESOURCES/RECOMMENDATIONS FOR FIELD SET-UP MATERIALS

Competition Area

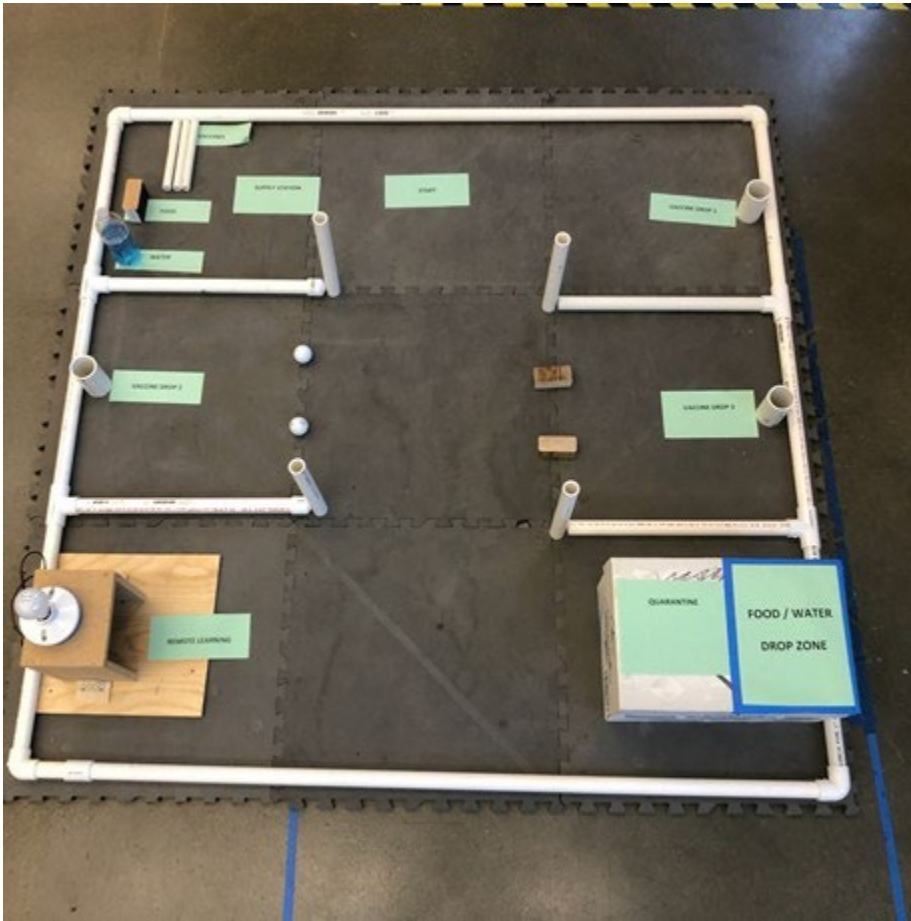
- The competition area will be defined by using 1" Schedule 40 PVC pipe and appropriate fittings. (Couplers, "T"s, Elbows)
- The inside dimensions of the boundary will measure: 64" L X 64" W. (+/- 1")
- See diagram and bill of materials for detailed field layout.

Bill of Materials

Quantity	Size	Material	Description
10	1" ϕ X 20"L	Schedule 40 PVC Pipe	Left, right, and dividers
2	1" ϕ X 64"L	Schedule 40 PVC Pipe	Top, bottom
4	1" X 1" X 1"	Schedule 40 PVC "T"	Dividers
4	1" X 1"	Schedule 40 PVC 90° Elbow	Corners
1	11 $\frac{3}{4}$ ", x 17 $\frac{3}{4}$ " x 9 $\frac{3}{4}$ "	Standard Paper Box – tape off back half	Quarantine Area
3	$\frac{1}{2}$ " ϕ X 8"L	Schedule 40 PVC Pipe	Vaccines
3	2" ϕ X 4"L	Schedule 40 PVC Pipe	Vaccine Holder
1	500 ml	Water bottle (Kirkland)	Water
1	1 $\frac{1}{2}$ " x 3 $\frac{1}{2}$ " x 2 $\frac{1}{4}$ "	Standard 2 x 4 wood cut	Food
2	1 $\frac{1}{2}$ " x 3 $\frac{1}{2}$ " x 1 $\frac{1}{2}$ "	Standard 2 x 4 wood cut	Obstacles
2	Standard	Golf Balls	Obstacles
1		"Switch in a box" – see Remote Learning Section for specifications.	Remote Learning

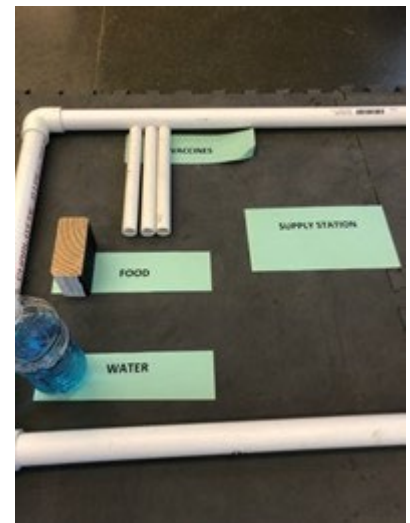
Field Boundaries:

- The field boundaries will be defined by 1" PVC pipe and fittings as demonstrated in the diagram below.
- The field surface will be 9 standard VEX field tiles.
- The field is divided into 9 approximately 20" x 20" squares.
- All the paper labels may be removed during robot demonstration.



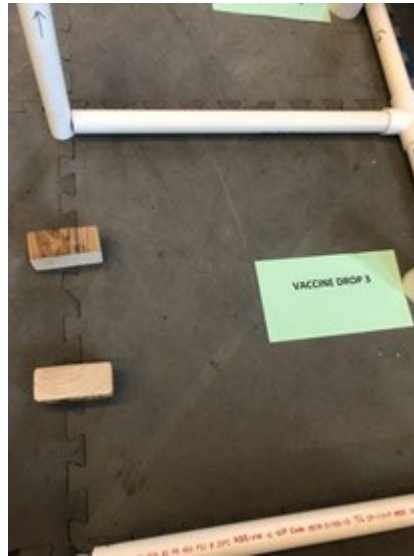
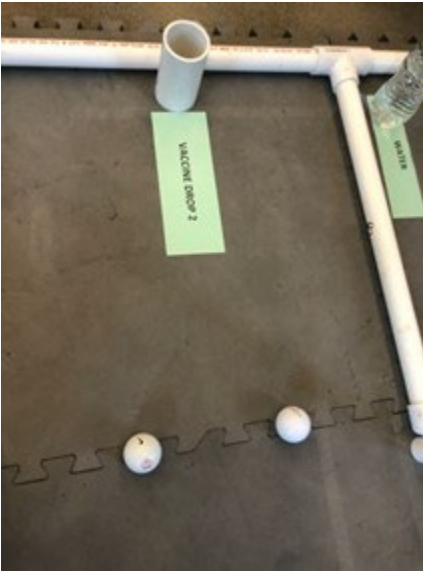
Supply Station:

- A. The three vaccine tubes are 8" long, ½" schedule 40 PVC. They begin lying flat, next to each other in the supplies section.
- B. The food is a block of wood placed as shown.
- C. The water is a Kirkland 500 ml water bottle. Use a sharpie to draw 2 lines on the top and bottom of the label (then remove the label). Fill the bottle to the bottom line. The water should never tilt past the top line. Add some food color to see the water better.



Vaccine Delivery Locations (1, 2, and 3)

- A. The vaccine containers are 4" long, 2" schedule 40 PVC. They begin in the 3 vaccine squares, touching the back wall (as shown in picture).
- B. Location 1 has no barriers, just a vaccine container.
- C. Location 2 has 2 golf balls in front of the entrance.
- D. Location 3 has 2 blocks of wood in front of the location.



Quarantine Station:

- A. The quarantine station is a standard paper box. The food and water must be placed in the back half, not touching the blue tape (food / water drop zone).



Remote Learning (note: This is the same device as previously used in Building Collapse):

- 1 each Push Dimmer (ACE Hardware # 3217205; \$6.49)
- 1 each Toggle Cover (ACE Hardware # 30299; \$.99)
- 1 each Handy Box (ACE Hardware # 30337; \$1.49)
- 1 each Keyless Plastic Lamp Holder ACE Hardware #3217171; \$2.79)
- 1 each 7-1/2 watt incandescent bulb (ACE Hardware #3179082; \$2.79)
- 1 each Octagon Box ACE Hardware #30327; \$1.99)

3 each 3/8" NM Connector (ACE Hardware; \$.49)

Also need standard plug and wiring for wall outlet power supply.

Inside dimensions of box are: 6-1/4" W x 8" H x 5-3/4" D

Standard surface mount handy box mounted on back wall of box. (switch)

Box is mounted on 1/4" T x 14" W X 14" L plywood.



DEMONSTRATION SCORING

Criteria	Points Possible	Points Earned	Notes
Missions			
Picked up 3 vaccines	5 ea		
Delivered vaccines to containers	5 ea		
Delivered food to quarantine area	10		
Delivered water to quarantine area	10		
Turned on remote learning devices	10		
Bonus Points			
Delivered 3 vaccines in one trip	10		
Delivered food and water in one trip	10		
Autonomous / programmed mission (3 max)	5 ea		
Use of sensors in performance.	5		
Use of multiple, interchangeable end effectors.	5		
Deductions			
Spilled Water	-5		
Social Distancing – touched or knocked over PVC.	-3 each		
Total Score:			
Elapsed Time			

PA-TSA ROBOTICS: OFFICIAL SCORING RUBRIC

Entrants ID: Engineering Journal – 50 points total <i>submitted on a USB flash drive in .pdf format</i>		Total Points	Comments	
“Plan of Work” – 2 Points each; 10 points maximum				
	Points			
Dates				
Task				
Time Involved				
Team Member Responsible				
Comments				
Robot Description: 10 points maximum (Complete and clearly described (10pts); One item missing or incomplete (5 – 7 pts); Unclear (0 pts))				
	Points			
Paragraph describing how the robot meets the challenge.				
Engineering Design Process: 50 points maximum (Complete and clearly described (10pts); One item missing or incomplete (5 – 7 pts); Unclear (0 pts))				
	Points			
Problem Definition: Identifies the robot design challenge in detail at the start of each picture. States the goals for accomplishing the challenge.				
Brainstorm: Lists three or more possible solutions to the challenge with labeled diagrams.				
Solution: Explains why the solution was selected through testing and/or a decision matrix for the solution.				
Build: Records the steps to build and program the solution. Includes enough detail to follow the steps in the Notebook.				
Test & Refine: Records all the steps to test the solution, including test results. Shows how to improve performance.				
Technical Drawings (Minimum 5 combined) (2 pts each) Technical Drawings May Include: CAD Drawings, Tool Drawings, Technical Sketches				
Robot Demonstration – As indicated; 105 points maximum Elapsed Time:				
Misc Deductions:				
Total Points				

I certify these results to be true and accurate to the best of my knowledge and ability.

Evaluator’s Signature _____

PA-TSA SAFETY ILLUSTRATION

Middle and High School



OVERVIEW

The Safety Illustration event is designed to encourage members' attention to the promotion of safety and safety practices when using any form of technology.

The purpose of the Safety Illustration event is to provide a means for TSA members to demonstrate their ability to recognize safety needs and safety practices when using all forms of technology, traditional or high tech.

ELIGIBILITY

Entries are limited to one individual per chapter.

ATTIRE

Business Casual TSA attire (category C) as described in the PA-TSA dress code is the minimum requirement for the event.

REGULATIONS AND REQUIREMENTS

Students will work to develop their leadership and 21st-century skills in the process of preparing for and participating in this TSA competitive event. The development and application of those skills must be evident in their submission, demonstration, and/or communication about the entry.

HH.The Illustration

29. The illustration will depict a safety procedure/concept that relates to the theme "Safety First when using Technology." The theme does not need to appear on the illustration but should be used as a guide in selecting an appropriate idea for the entry.
30. The illustration must be a flat, two-dimensional design.
31. The illustration size is 8 ½" x 11".
32. The illustration is to be an original work; Any use of copyrighted or registered artwork is prohibited.
 - s. Copyright
 - i. Citation of all ideas, fonts, and images from sources other than the designer and/or that are copyrighted (most fonts and images found on the web are copyrighted material unless purchased or offered as free-domain) MUST be included in the documentation. Clip art must be documented; failure to include necessary citations results in disqualification.
 - ii. Written permission for all copyrighted material must be included in the documentation portfolio (See Student Copyright Checklist in the Forms Appendix on the TSA website).
 - t. If the entry contains images of people, proof of consent must be provided for each person in the video.
 - u. Minors require parental consent. Use the Photo/Film/Video Consent and Release see Forms Appendix on the TSA website) for any individuals included in the video footage.

II. The Documentation Portfolio

7. The documentation portfolio must include the following information in a single, multi-page PDF document:
 - ee. Title page with the event title, the conference city, and state, the year, and the team/individual chapter ID number(s); one (1) page
 - ff. Table of contents; pages as needed

gg. Illustration; one (1) page

hh. Technical paper - explanation of the design process used to create the illustration as well as an explanation as to how the theme influenced the illustration's design; one (1) page

ii. Student Copyright Checklist (if applicable); pages as needed

jj. Photo/Film/Video Consent and Release (if applicable); pages as needed

JJ. Submission

1. Participants submit a multi-page PDF of the documentation portfolio.

2. Submission information will be provided on the PA-TSA website.

3. Entries received, or changes made to submitted entries, after the deadline will not be judged.

KK. Email verification of each team's entry will be made by the state conference planning team.

LL. Judges evaluate the entries.

MM.

The top ten (10) finalists will

be announced at the awards ceremony, as well as via the PA-TSA website.

EVALUATION

N. The illustration

O. The documentation portfolio

Refer to the official rating form for more information.

OFFICIAL RATING FORM

Judges: Using minimal (1-4 points), adequate (5-8 points), or exemplary (9-10 points) performance levels as a guideline in the rating form, record the scores earned for the event criteria in the column spaces to the right. The X1 or X2 notation in the criteria column is a multiplier factor for determining the points earned (Example: an “adequate” score of 7 for an X1 criterion = 7 points; an “adequate” score of 7 for an X2 criterion = 14 points). A score of zero (0) points is acceptable if the minimal performance for any criterion is not met.

Go/No Go Specifications

- Before judging the entry, ensure that the items below are present; indicate presence with a checkmark in the box
 - If an item is missing, leave the box next to the item blank and place a checkmark in the box labeled ENTRY NOT EVALUATED
 - If a checkmark is placed in the ENTRY NOT EVALUATED box, the entry is not to be judged.
-
- Illustration was submitted
 - PDF of the documentation report was submitted
 - ENTRY NOT EVALUATED

ENTRY (70 points)				Record scores in the column spaces below
CRITERIA	Minimal performance 1-4 points	Adequate performance 5-8 points	Exemplary performance 9-10 points	
Elements of Design (X2)	Choices of font, color, and images appear haphazard; eye appeal, proportion, balance, and unity are lacking	Choices of font, color, and images are somewhat indicative of an understanding of design principles; eye appeal, proportion, balance, and unity are somewhat evident	Choices of font, color, and images are indicative of a solid understanding of design principles; eye appeal, proportion, balance, and unity are high level	
Creativity and Innovation (X2)	Lacks creativity and/or originality; no, or very few, design principles evident	Some elements of creativity and originality exist, and essential design principles are generally evident	Exudes creativity and originality; essential design principles and elements are well integrated	
Appearance and Construction (X1)	Unorganized and sloppy; seems to be thrown together	Somewhat organized and aesthetically pleasing	Logical, organized, cohesive, and aesthetically pleasing	
Documentation report (X2)	Lacking depth; missing description of the design process used to create the poster and/or an explanation as to how the theme influenced the design	Explanation addresses some of the design processes used to create the poster as well as how the theme influenced the design	The explanation includes a full, detailed discussion of the design process used to create the poster as well as how the theme influenced the design	
ENTRY SUBTOTAL (70 points)				
Rules violation (a deduction of 20% of the total possible points for the above sections must be initialed by the judge, coordinator, and manager of the event. Record the deduction in the space to the right. Indicate the rule violated _____)				
To arrive at the TOTAL score, add any subtotals and subtract rules violation points, as necessary.			TOTAL (70 points)	

PA-TSA SNAPSHOT

Middle School



OVERVIEW

The theme for this event will match the theme for High School Photographic Technology. See the current National TSA Competitive Events Guide or visit www.tsaweb.org for the theme.

The PA-TSA Snapshot Contest is designed to allow TSA members to demonstrate their skills in the field of Photography.

ELIGIBILITY

Entries are limited to four individuals per chapter.

ATTIRE

Business Casual TSA attire (category C) as described in the PA-TSA dress code is the minimum requirement for the event.

REGULATIONS AND REQUIREMENTS

Students will work to develop their leadership and 21st-century skills in the process of preparing for and participating in this TSA competitive event. The development and application of those skills must be evident in their submission, demonstration, and/or communication about the entry.

- NN. The Photograph
- 33. Participants take an original photograph and then alter/edit that photograph using applications or programs of the participant's choosing.
 - 34. The photograph should be reflective of the theme for the current year.
 - 35. The photograph size is no larger than 5" x 7" and no smaller than 3 ½" x 5".
 - 36. If the entry contains images of people, proof of consent must be provided for each person in the photograph.
 - i. Minors require parental consent. Use the Photo/Film/Video Consent and Release see Forms Appendix on the TSA website) for any individuals included in the photograph.
- OO. The Documentation Portfolio
- 8. The portfolio must include the following pages in a single, multi-page PDF document in this order:
 - kk. Title page with the event title, the conference city, and state, the year, and the team/individual chapter ID number(s); one (1) page
 - ll. Table of contents; pages as needed
 - mm. Altered/edited photograph;
one (1) page
 - nn. Original photograph; one (1) page
 - oo. Technical paper – explanation of the design process used to create the illustration as well as an explanation as to how the theme influenced the illustration's design; one (1) page
 - pp. Specification Sheet; one (1) page
 - qq. Photo/Film/Video Consent and Release (if applicable); pages as needed
- PP. Submission
- 1. Participants submit a multi-page PDF of the documentation portfolio.
 - 2. Submission information will be provided on the PA-TSA website.
 - 3. Entries received, or changes made to submitted entries, after the deadline will not be judged.

- QQ. Email verification of each team's entry will be made by the state conference planning team.
- RR. Judges evaluate the entries.
- SS. The top ten (10) finalists will be announced at the awards ceremony, as well as via the PA-TSA website.

EVALUATION

- P. The photograph
- Q. The documentation portfolio

Refer to the official rating form for more information.

SPECIFICATION SHEET

Title of Entry	
Camera Specifications (make, model, etc)	
Editing Program/Application	

OFFICIAL RATING FORM

Judges: Using minimal (1-4 points), adequate (5-8 points), or exemplary (9-10 points) performance levels as a guideline in the rating form, record the scores earned for the event criteria in the column spaces to the right. The X1 or X2 notation in the criteria column is a multiplier factor for determining the points earned (Example: an “adequate” score of 7 for an X1 criterion = 7 points; an “adequate” score of 7 for an X2 criterion = 14 points). A score of zero (0) points is acceptable if the minimal performance for any criterion is not met.

Go/No Go Specifications

- Before judging the entry, ensure that the items below are present; indicate presence with a checkmark in the box
 - If an item is missing, leave the box next to the item blank and place a checkmark in the box labeled ENTRY NOT EVALUATED
 - If a checkmark is placed in the ENTRY NOT EVALUATED box, the entry is not to be judged.
-
- PDF of the documentation portfolio, including photographs, was submitted
 - ENTRY NOT EVALUATED

ENTRY (70 points)				Record scores in the column spaces below
CRITERIA	Minimal performance 1-4 points	Adequate performance 5-8 points	Exemplary performance 9-10 points	
Composition of Photograph (X2)	Composition lacks originality, a connection to the theme, and/or a demonstrated understanding of photography composition rules	The composition is somewhat original, connects to the theme, and demonstrates an understanding of photography composition rules	The composition demonstrates originality, interpretation of the theme, and a clear understanding of photography composition rules	
Technical Quality of Photograph (X2)	The photograph lacks technical quality in terms of contrast, lighting, and sharpness	The photograph demonstrates some technical quality in terms of contrast, lighting, and sharpness	The photograph demonstrates high technical quality in terms of contrast, lighting, and sharpness	
Technical Paper (X2)	Lacking depth; missing description of the design process used to alter/edit the photo and/or an explanation as to how the theme influenced the design	Explanation addresses some of the design processes used to alter/edit the photo as well as how the theme influenced the design	The explanation includes a full, detailed discussion of the design process used to alter/edit the photo as well as how the theme influenced the design	
Portfolio (X1)	The portfolio is unorganized and/or missing three (3) or more components	The portfolio has most components and it is somewhat organized	Only one (1) or none of the components are missing in the portfolio; content and organization are evident	
ENTRY SUBTOTAL (70 points)				
Rules violation (a deduction of 20% of the total possible points for the above sections must be initialed by the judge, coordinator, and manager of the event. Record the deduction in the space to the right. Indicate the rule violated _____)				
To arrive at the TOTAL score, add any subtotals and subtract rules violation points, as necessary.			TOTAL (70 points)	