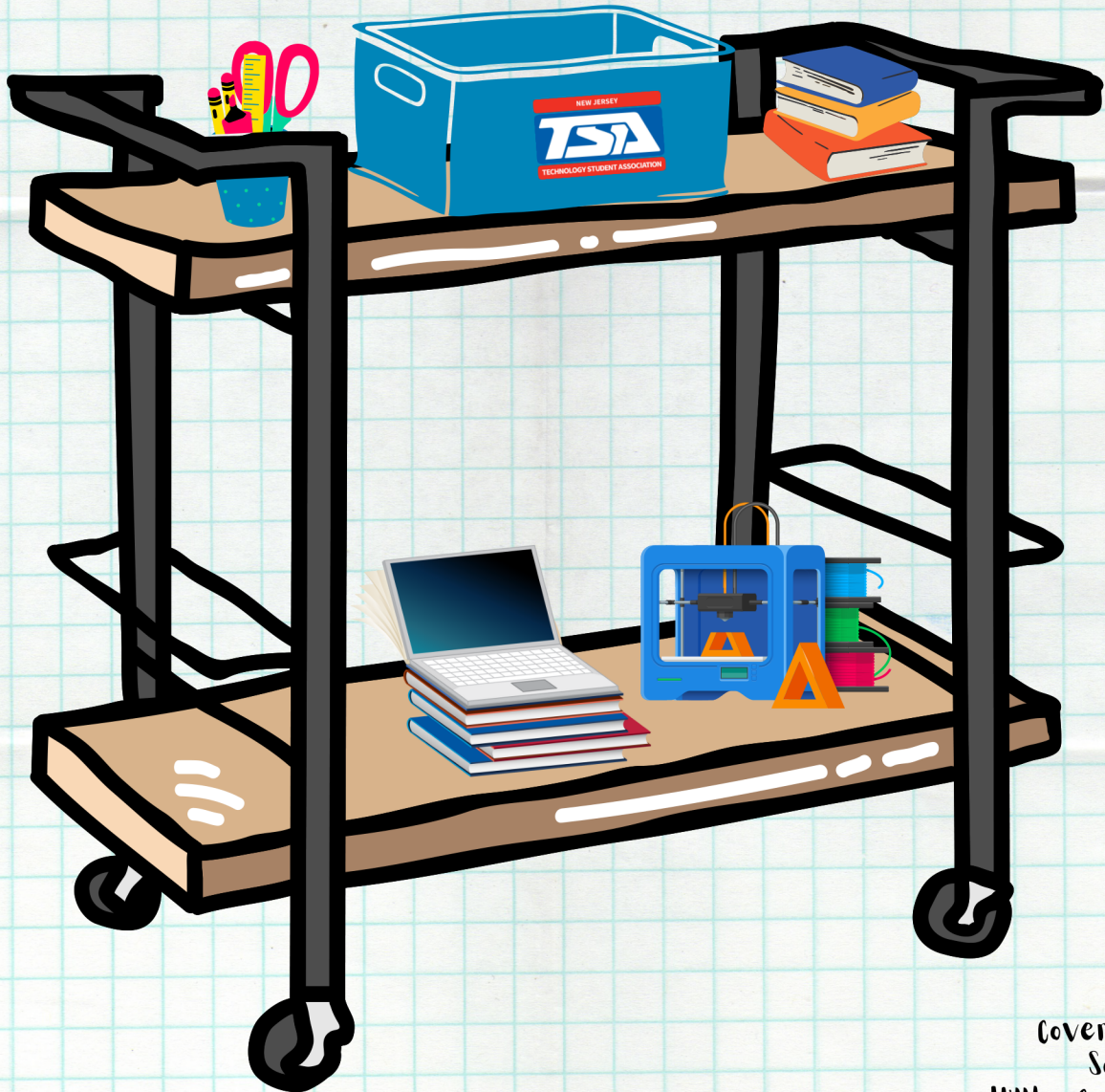




# 2023 NJ TSA Middle School Supplement



Cover Art Inspired By:  
Sophie Schaeffner  
Hilltop Country Day School  
1st Place Promotional Marketing  
2022 NJ TSA Middle School Conference

## 2022-2023 New Jersey TSA Executive Committee

### **State Officers**

Sahil Maher	President	Freehold Township High School
Michael Tepperman	Vice President	Biotechnology High School
Jack Wietzke	Secretary	Marine Academy of Science and Technology
Sutej Upadhyaya	Treasurer	Colts Neck High School
Khushi Patel	Reporter	Marine Academy of Science and Technology
Cassidy Brennan	Sergeant-at-Arms	Biotechnology High School
Anushka Gupta	Historian	High Technology High School
Paranjai Patel	Parliamentarian	Edison Academy Magnet School

### **State Officer Advisors**

Mr. Richard Fernandez	Edison Academy Magnet School
Mrs. Jennifer Garrity	High Technology High School
Mr. William Hercek	Biotechnology High School
Mr. Thomas Jennings/Mrs. Megan Herbert	Freehold Township High School
Ms. Samantha Moorzitz	Marine Academy of Science & Technology
Mr. Dave Niemierowski	Colts Neck High School

### **State Regional Coordinator**

Ms. Sherry Roses, Howell High School

### **State Advisor and Corporate Member**

Mrs. Alison Goeke, Center for Excellence in STEM Education, Department of Integrative STEM Education, School of Engineering, The College of New Jersey

### **Competitive Event Coordinator**

Mr. Henry Harms, Center for Excellence in STEM Education, Department of Integrative STEM Education, School of Engineering, The College of New Jersey

### **Business Administrator**

Mrs. Rebecca Turner, Center for Excellence in STEM Education, Department of Integrative STEM Education, School of Engineering, The College of New Jersey

# The 2023 NJ Supplement to the *TSA Middle School Competitive Events Guide* (for the 2022 and 2023 National TSA Conferences)

## Foreword

The diverse competitive events that are listed within this booklet are open to TSA chapters affiliated with National TSA, and registered through the NJ TSA State Conference registration system. The Middle School State Conference will be held on Wednesday, April 26, 2023 at The College of New Jersey.

### **How this booklet works**

The NJ Supplement works in conjunction with the National TSA Competitive Events Guide, which you receive access to, online, after affiliation with the National TSA Office has taken place.

This booklet presents the competitive events offered at the NJ State Conference in alphabetical order as well as the maximum number of participants, or teams, permitted to compete in each event, from each chapter.

Each New Jersey competitive event in this booklet lists ONLY the modifications NJ makes to the National guidelines, for the NJ State Conference. Substitute the NJ modification in this booklet for the number or letter on the National guidelines to ensure that your chapter meets the guidelines for the NJ Competitive Events.

### **Competitive Event Categories**

Competitive Events are organized according to the requirements for student participation in those competitions. There are three categories: On-Site, Pre-Conference and Static.

“ON-SITE EVENTS” require student participation on conference day. Some On-Site Events may even include components that must be completed and submitted prior to conference day. Because of the time commitment involved, **students may participate in only ONE (1) On-Site Event, and no more than SIX (6) total events.**

“PRE-CONFERENCE EVENTS” require that entries be submitted prior to the conference, on a designated submission date established by NJ TSA. These entries are judged days prior to the conference and put on display the day of the conference. Some Pre-Conference events may have components or presentations that also take place the day of the conference.

“STATIC EVENTS” require students to submit entries on conference day, however, students are not required to remain with their entries or make presentations. Static Events usually consist of students creating a display or prototype. These entries are checked-in the morning of the conference in the designated event room listed in the conference program. Judging takes place behind closed doors. After judging is finished, all entries are put on display for the remainder of the conference day.

Please be sure to read all sections of the Supplement carefully! It is the hope of the NJ TSA Executive Committee that this guide will enable teachers, advisors, students and competitive event judges to be well-prepared for participation at the State Conference this spring.

Any questions may be directed to Mrs. Alison Goeke, NJ TSA State Advisor at (609)771-3244 or [goeke2@tcnj.edu](mailto:goeke2@tcnj.edu) or Henry Harms, NJ TSA Competitive Event Coordinator, at [harms@tcnj.edu](mailto:harms@tcnj.edu), or Rebecca Turner, at [turner25@tcnj.edu](mailto:turner25@tcnj.edu).

## General Rules Governing Competitive Events

### I. MIDDLE SCHOOL EVENTS

The officially approved **Level I** New Jersey TSA Competitive Events are:

PRE-CONFERENCE EVENTS	ON-SITE EVENTS	STATIC EVENTS
<b>Biotechnology</b> 1 team of 3-6 members per chapter.	<b>Challenging Technology Issues</b> 2 teams of 2 members per chapter.	<b>Off the Grid</b> 1 team of up to 6 members per chapter. Teams of 1 individual are permitted.
<b>Career Prep</b> 2 individuals per chapter.	<b>Chapter Team</b> 2 teams of 6 members per chapter.	<b>System Control Technology</b> 2 teams of 3 members per chapter.
<b>Children's Stories</b> 2 teams of up to 6 members per chapter. Teams of 1 individual are permitted.	<b>Construction Challenge</b> 2 teams of up to 6 members per chapter.	
<b>Coding</b> 2 teams of 2 members per chapter.	<b>Cybersecurity</b> 3 individuals per chapter.	
<b>Community Service Video</b> 2 teams of up to 6 members per chapter. Teams of 1 individual are permitted.	<b>Electrical Applications</b> 2 teams of 2 members per chapter.	
<b>Computer Aided Design CAD Foundations</b> 3 individuals per chapter.	<b>Essays on Technology</b> 2 individuals per chapter.	
<b>Data Science &amp; Analytics</b> 2 teams of 2-3 members per chapter.	<b>Flight</b> 2 individuals per chapter.	
<b>Digital Photography</b> 2 individuals per chapter.	<b>Forensic Technology</b> 1 team of 2 members per chapter. <i>Test taken PRIOR to conference</i>	
<b>Dragster</b> 2 individuals per chapter. <i>Cars raced on conference day</i>	<b>Foundations of Information Technology</b> 2 individuals per chapter.	
<b>Mass Production</b> 1 team of 3-6 members per chapter.	<b>Inventions and Innovations</b> 1 team of 3-6 members per chapter.	
<b>Medical Technology</b> 1 team of up to 6 members per chapter.	<b>Junior Solar Sprint</b> 1 team of 2-4 members per chapter. <i>Car/display and portfolio due pre-conference.</i>	
<b>Promotional Marketing</b> 2 individuals per chapter.	<b>Leadership Strategies</b> 2 teams of 3 members per chapter.	
<b>STEM Animation</b> 2 teams of up to 6 members per chapter.		
<b>Technical Design</b> 1 team of 2 members per chapter. <i>Due early</i>	<b>Mechanical Engineering</b> 1 team of 2-3 members per chapter.	
<b>Video Game Design</b> 1 team of 2-6 members per chapter.	<b>Microcontroller Design</b> 2 teams of up to 6 members per chapter. Teams of 1 individual are permitted.	
<b>Website Design</b> 2 teams of 3-6 members per chapter.	<b>Prepared Speech</b> 2 individuals per chapter.	
	<b>Problem Solving</b> 2 teams of 2 members per chapter.	
	<b>Structural Engineering</b> 1 team of 2 members per chapter.	
	<b>Tech Bowl</b> 1 team of 3 members per chapter. <i>Test taken PRIOR to conference</i>	

## II. PROJECT SUBMISSION

- A. ON-SITE events require students to submit entries, make presentations and/or participate/compete in activities at the conference.
- B. STATIC events require students to submit a display or prototype the day of the conference, however, there is no presentation component along with the entry.
- C. PRE-CONFERENCE events require projects to be submitted and judged prior to the conference

- 1. **ONLINE SUBMISSIONS:** There are some Pre-Conference entries that require online submission to the NJ TSA online conference system by **11:59pm on April 5, 2023**. Check guidelines in this document to see how an item should be submitted. Online submission directions will be shared with advisors/students closer to the due date.
- 2. **IN-PERSON SUBMISSIONS:** There are some Pre-Conference entries that require in-person submissions to the NJ TSA Office by **April 5, 2023**. These may be mailed or delivered in person to:

NJ TSA/Alison Goeke  
The College of New Jersey  
2000 Pennington Rd.  
103 Armstrong Hall  
Ewing, NJ 08628

Please email [goeke2@tcnj.edu](mailto:goeke2@tcnj.edu) to indicate description/quantity of items being mailed/delivered and expected delivery date.

- 3. All Pre-Conference submissions are due by April 5, 2023.
- 4. A **Northern NJ drop off site** for northern chapters will be available on April 4, 2023 from 3:30-5:00pm at the parking lot of Heritage Middle School, 20 Foxcroft Drive, Livingston, NJ 07039. Look for the TSA banner on a truck in the parking lot. Email [goeke2@tcnj.edu](mailto:goeke2@tcnj.edu) to arrange your drop off time.
  - Items received after these dates may not be included in competitions.
  - Mailed deliveries should include provision for obtaining proof of delivery.
  - Packages should include a label or packing slip describing contents.

## III. PARTICIPATION IN COMPETITIVE EVENTS

- A. TSA members may only register and participate in **ONE (1) On-site event**, and no more than **SIX (6) total events**.
- B. Students must be registered at the state conference in order to enter and become finalists/winners in a competition. **NO ON-SITE OR LATE REGISTRATIONS WILL BE ACCEPTED.**
- C. No substitutions will be accepted after registration closes, or at the conference. Substitutions in team events will be accepted only from pre-registered applicants, and only under extenuating circumstances.
- D. **Official Rating Forms** included in the TSA Competitive Events Guide **are used to evaluate all entries**, unless otherwise noted in this document.
- E. No school or individual names labeled on projects except for events that require school information. Otherwise, only ID#'s are to be used. Upon registering students online for the state conference, they are automatically assigned a state conference ID# (this ID# is different from their National TSA ID#).

This state conference ID number needs to be labeled on every piece of a project/entry (i.e. portfolios, models, displays, copyright/release forms, etc.).

- F. **Projects/entries will be put on display after judging concludes. Students MUST pick up their entries prior to leaving the conference.** All entries not accounted for will be discarded the following day if no arrangements have been made with the NJ TSA office otherwise.
- G. Audio visual equipment will be provided for competitive events that require it, unless otherwise noted in this document.
- H. NJ TSA is not responsible for compatibility issues with electronic files. Judges will not be permitted to install programs to view files.
- I. Proper procedures for citing material taken from other sources must be followed as outlined in specific competitive event guidelines. Copyright procedures, checklist and forms must be completed and submitted with entries when necessary.
- J. No electronic communication devices of any kind are permitted during competitions and will result in disqualification.
- K. No one will be permitted to leave a test event and return unless instructed by judges.
- L. In addition to the information found in the NJ Supplement, participants are responsible for knowing any updates, changes or clarifications that are made to competitive events prior to participation. This information is posted on both the National TSA and NJ TSA websites. It is crucial that students check the Competition Updates page of BOTH the NJ and National TSA websites. DIFFERENT information is posted on each site.

#### IV. COMPETITIVE EVENTS ATTIRE

ALL STUDENTS ATTENDING THE CONFERENCE **MUST** wear either official TSA or business-like attire. Your cooperation with this policy will assist in providing a positive image for the organization and its members.

**NOTE:** All students participating at the 2023 National TSA Conference will be required to wear the Official TSA Shirt (royal blue). Students are strongly encouraged to wear the Official TSA Shirt to the 2023 State Conference.

##### A. Official TSA Attire:

Blazer: navy blue with official TSA patch

Tie: scarlet red imprinted with official TSA logo (for males only, optional for females)

Shirt or blouse: Official TSA Shirt (royal blue) (A white button-down with turn down collar may be substituted for the Official TSA Shirt at the NJ State Conference)

Pants or skirt: light gray

Dark socks: males only (black or dark blue)

Shoes: black dress shoes (unacceptable: athletic shoes, combat or work boots)

Sandals: females only may wear black open toe shoes or sandals

##### B. Business-like attire is considered to minimally include:

collared shirt/blouse (polo shirt is acceptable)

long pants (no shorts or jeans)

dresses/skirts

socks/hosiery

appropriate footwear

Students NOT wearing official TSA or business-like attire will lose 20 points from total score of each event entered and will not be granted entry into the awards ceremony. A 20 point deduction will also result from the wearing of hats.

Anyone not in possession of their official State Conference ID Badge **will not** be admitted to the Awards Ceremony.

## V. PROPERTY DAMAGE OR LOSS

The College of New Jersey and NJ TSA are not responsible for damage to or loss of property brought to the conference. Students' personal belongings are their sole responsibility and they should not be left behind in any location on campus.

## VI. SCHOLARSHIPS AND AWARDS

### TSA Technology Honor Society

The TSA Technology Honor Society recognizes TSA members who excel in academics, leadership, and service to their school and community. The TSA Technology Honor Society is (1) an opportunity for student members to be recognized for their efforts and (2) designed to recognize TSA members who exemplify the high ideals of academics. Click [here](#) to view and print forms. Recipients will be recognized at the State Conference.

Please send completed forms to Rebecca Turner at [turner25@tcnj.edu](mailto:turner25@tcnj.edu) by 11:59pm on April 6, 2023.

### TSA Achievement Program

The TSA Achievement Program, Pathways to Excellence, encourages TSA student members to engage in the areas/categories of service leadership, STEM immersion, and personal/professional development. Students participate in activities in these areas and have the opportunity to earn sequentially a bronze, silver, and gold award at the local, state, and national level, respectively.

Completion of one activity in each area/category – for a total of three completed activities per level – is required for bronze, silver, and gold award eligibility.

Members submit documentation of their activities for each level via the TSA Student Member Site.

Chapter advisors are responsible for verifying the successful completion of a member's activities for each level.

For forms and more information, go to: <https://tsaweb.org/competitions-programs/programs/tsa-achievement-program>

Please send completed forms to Rebecca Turner at [turner25@tcnj.edu](mailto:turner25@tcnj.edu) by 11:59pm on April 6, 2023.

## VII. IMPORTANT DATES AND DEADLINES

<p><b>January 20, 2023</b> NJ TSA Design Problems for the following events posted on the <a href="#">NJ TSA website</a>:</p> <ul style="list-style-type: none"><li>• Coding</li><li>• Computer-Aided Design (CAD) Foundations</li><li>• System Control Technology</li></ul> <p>Note- all other design problems/themes for 2023 can be found within this document, and on the <a href="#">National TSA website</a></p> <p><b>February 2023</b> NJ State Conference Registration opens (date TBA)</p> <p><b>March 9, 2023- March 14, 2023 – Technical Design</b></p> <ul style="list-style-type: none"><li>• Design Problem for Technical Design will be posted at 5pm on March 9, 2023 on the <a href="#">NJ TSA website</a></li><li>• Completed entries must be uploaded to the NJ online conference system by 5pm on March 14, 2023.</li><li>• This competition allows a limited window of time for teams to create and submit their video.</li></ul> <p><b>March 29, 2023 - Online Testing Dates</b> The following competitive events require online tests prior to conference day. Testing procedures will be shared with advisors</p> <ul style="list-style-type: none"><li>• Forensic Tech – Tues, March 28, 2023, 6:00pm-7:00pm</li><li>• Tech Bowl – , Tues, March 28, 2023, 7:15pm-8:15pm</li></ul> <p><b>April 5, 2023 – 11:59pm- Online Submissions Due</b> The following competitive events have components that are due ONLINE ONLY and must be uploaded to the NJ online conference system by 11:59 pm on April 5, 2023:</p> <ul style="list-style-type: none"><li>• Career Prep</li><li>• Coding</li><li>• Community Service Video</li><li>• CAD Foundations</li><li>• Digital Photography</li><li>• Promotional Marketing</li><li>• STEM Animation</li><li>• Video Game Design</li><li>• Website Design</li></ul>	<p><b>April 5, 2023 – All Other Pre-Conference Entries are Due In-Person at the NJ TSA Office (please also see the Northern Area drop-off option below)</b></p> <p>The following competitive events are due IN-PERSON and must be mailed or delivered to the NJ TSA Office. Email <a href="mailto:goeke2@tcnj.edu">goeke2@tcnj.edu</a> to arrange a drop off time anytime on, or prior to, April 5, 2023:</p> <ul style="list-style-type: none"><li>• Biotechnology</li><li>• Children’s Stories</li><li>• Data Science &amp; Analytics</li><li>• Dragster</li><li>• Junior Solar Sprint</li><li>• Mass Production</li><li>• Medical Technology</li></ul> <p><b>April 4, 2023 – 3:30-5:00pm Northern Area Drop-Off</b> For northern NJ chapters! NJ TSA staff will be at the parking lot of Heritage Middle School, 20 Foxcroft Drive, Livingston, NJ 07039 to collect projects that are due In-Person. Look for the TSA banner on a truck in the parking lot. Email <a href="mailto:goeke2@tcnj.edu">goeke2@tcnj.edu</a> to arrange a drop off time.</p> <p><b>April 6, 2023</b></p> <ul style="list-style-type: none"><li>• NJ State Conference Registration CLOSES.</li><li>• All award forms are due to the NJ TSA Office. Forms can be emailed to <a href="mailto:turner25@tcnj.edu">turner25@tcnj.edu</a></li></ul> <p><b>April 26, 2023</b> NJ TSA State Conference The College of New Jersey</p> <p><b>June 28-July 2, 2023</b> National TSA Conference Kentucky International Convention Center Louisville, Kentucky Theme: A Legacy of Innovation</p>
--	---



## Level I – Middle School Events

### **Biotechnology**

#### **Pre-Conference Event**

For 2023, teams select a contemporary issue concerning biotechnology

<b>OVERVIEW:</b>	No semifinalists. No presentation. Entries submitted Pre-Conference.  The documentation portfolio, and display, must be received by the NJ TSA office by 11:59pm on April 5, 2023.
<b>ELIGIBILITY:</b>	1 team of 3-6 members per chapter.
<b>TIME LIMITS:</b>	Delete A.-C. No semifinalists. No presentation.
<b>ATTIRE:</b>	See Page 6 of this guide for required dress code.
<b>PROCEDURE:</b>	<p><u>Pre-Conference:</u> No change.</p> <p><u>Preliminary Round:</u> A. The documentation portfolio, and display, must be received by the NJ TSA office by 11:59pm on April 5, 2023. B.1.-B.2. Judges score the display criteria, and the documentation criteria for all teams. No preliminary teams, no semifinalists. Winners announced at Awards Ceremony. C. No semifinalists. Winners announced at Awards Ceremony.</p> <p><u>Delete Semifinal Round.</u> No semifinalists. No presentation/interview. No finalists. Top three winners will be announced at Awards Ceremony.</p>
<b>REGULATIONS AND REQUIREMENTS:</b>	<p><u>Pre-Conference:</u> D. Entries submitted Pre-Conference.</p> <p><u>Delete Semifinal Round.</u> No semifinalists. No presentation/interview. No finalists. Top three winners will be announced at Awards Ceremony.</p> <p><b><i>No school or individual names labeled on projects; only State Conference ID#'s are to be used. Upon registering students for the State Conference online, they are automatically assigned a State Conference ID#. This number needs to be on all parts of student projects (i.e. portfolio, display, model, etc.)</i></b> <b><i>Team ID#s may be used for team events. A Team ID# is the first four numbers of students' individual ID#s (e.g. if a student ID# is 1234567, the Team ID# would be 1234. If there are multiple teams from one chapter for the same competition, include which team they are on (e.g. 1234-1, 1234-2, etc.).</i></b></p>
<b>EVALUATION:</b>	<p><u>Preliminary Round:</u> No change.</p> <p><u>Delete Semifinal Round.</u> No semifinalists. No presentation/interview. No finalists. Top three winners will be</p>

	<p>announced at Awards Ceremony.</p> <p>Evaluation is based on 140 points:</p> <ul style="list-style-type: none"><li>• Display (90)</li><li>• Documentation Portfolio (50)</li></ul>
--	--

# Career Prep

## Pre-Conference Event

2023 Theme: Select a career from one (1) of the following career clusters:

1. Architecture & Construction
2. Health Sciences
3. Human Services
4. Law, Public Safety, Corrections, & Security

<b>OVERVIEW:</b>	No semifinalists. No mock interview.  <b>The letter and resume are to be submitted in PDF form to NJ TSA's online conference system by 11:59pm on April 5, 2023. Submission procedures will be shared with advisors.</b>
<b>ELIGIBILITY:</b>	2 individuals per chapter.
<b>TIME LIMITS:</b>	<u>Preliminary Round:</u> A. Change May 15 <sup>th</sup> to April 5, 2023. C. NJ TSA's online conference system provides verification that the documents have been uploaded.  <u>Delete Semifinal Round.</u> No semifinalists. No mock interview.
<b>ATTIRE:</b>	See Page 6 of this guide for required dress code.
<b>PROCEDURE:</b>	<u>Pre-Conference:</u> D. Change May 15 <sup>th</sup> to April 5, 2023. E. Submission information will be provided by NJ TSA.  <u>Preliminary Round:</u> No semifinalists. Top three winners announced at Awards Ceremony.  <u>Delete Semifinal Round.</u> No semifinalists. No mock interview. Top three winners announced at Awards Ceremony.
<b>REGULATIONS AND REQUIREMENTS:</b>	<u>Pre-Conference:</u> No change. <i>Please be sure that submissions have fictitious home address and telephone number. Correct participant names must be used.</i>  <b>No school or individual names labeled on projects; only State Conference ID#'s are to be used. Upon registering students for the State Conference online, they are automatically assigned a State Conference ID#. This number needs to be on all parts of student projects (i.e. portfolio, display, model, etc.)</b>
<b>EVALUATION:</b>	<u>Preliminary Round:</u> No change.  <u>Delete Semifinal Round.</u> No mock interview. No semifinalists. Winners announced at Awards Ceremony.  Evaluation is based on 80 points: <ul style="list-style-type: none"> <li>• Cover Letter (40)</li> <li>• Job-Specific Resume (40)</li> </ul>

# Challenging Technology Issues

## On-Site Event

2023 Topics:

- Autonomous Vehicles
- Biometric Recognition (e.g., facial, temporal, fingerprint, etc.)
- Cloud Computing
- Robotic Technology Surgery
- Wearable Technology (e.g., watches, rings, glasses, etc.)

<b>OVERVIEW:</b>	No change.
<b>ELIGIBILITY:</b>	2 teams of 2 members per chapter.
<b>TIME LIMITS:</b>	No change.
<b>ATTIRE:</b>	See Page 6 of this guide for required dress code.
<b>PROCEDURE:</b>	<p><u>Preliminary Round:</u> Delete E. No semifinalists. Winners are announced at the Awards Ceremony.</p> <p><u>Delete Semifinal Round.</u> No semifinalists. No semifinal round. No finalists. Top three winners announced at Awards Ceremony.</p>
<b>REGULATIONS AND REQUIREMENTS:</b>	A. Preliminary round only. No semifinal round. No semifinalists.
<b>EVALUATION:</b>	<p>No semifinal round. No semifinalists.</p> <p>Evaluation is based on 150 points:</p> <ul style="list-style-type: none"> <li>• Pro Side (70)</li> <li>• Con Side (70)</li> <li>• Participation (10)</li> </ul>

## Chapter Team On-Site Event

<b>OVERVIEW:</b>	All teams take test and do oral presentation. No semifinalists.
<b>ELIGIBILITY:</b>	A. 2 teams of 6 members per chapter. C. No semifinalists. All teams take test and do oral presentation.
<b>TIME LIMITS:</b>	<u>Preliminary Round:</u> No change.  <u>Semifinal Round.</u> No semifinalists. All teams take test and do oral presentation.
<b>ATTIRE:</b>	See Page 6 of this guide for required dress code.
<b>PROCEDURE:</b>	<u>Preliminary Round:</u> C.No semifinalists. All teams take test and do oral presentation.  <u>Semifinal Round.</u> A.-B. No semifinalists. All teams do oral presentation. C. 5. No finalists. Winners announced at Awards Ceremony.
<b>REGULATIONS AND REQUIREMENTS:</b>	<u>Preliminary Round:</u> C.1. No semifinal round. All teams take test and do oral presentation. C.3. Written materials are provided by NJ TSA.  <u>Semifinal Round.</u> E.-F. No semifinalists. All teams do oral presentation. Winners announced at Awards Ceremony.
<b>EVALUATION:</b>	<u>Preliminary Round:</u> No change.  <u>Semifinal Round.</u> No semifinalists. All teams do oral presentation. Winners announced at Awards Ceremony.  Evaluation is based on 10 points: <ul style="list-style-type: none"> <li>• Team test (10)</li> <li>• Business Meeting Demonstration (190)</li> </ul>

## Children's Stories

### Pre-Conference Event

2023 Theme: Students will write and illustrate a book that promotes leadership and perseverance. The book should be geared towards students in kindergarten to 2nd Grade.

<b>OVERVIEW:</b>	No change.  <b>The documentation portfolio and storybook, must be received by the NJ TSA Office by April 5, 2023.</b>
<b>ELIGIBILITY:</b>	2 teams of up to 6 members per chapter. Teams of 1 individual are permitted.
<b>TIME LIMITS:</b>	<u>Delete Semifinal Round.</u> No semifinalists. No on-site component. No reading or interview.
<b>ATTIRE:</b>	See Page 6 of this guide for required dress code.
<b>PROCEDURE:</b>	<u>Pre-Conference:</u> No change.  <u>Preliminary Round:</u> A. The storybook and documentation portfolio must be received by the NJ TSA Office by April 5, 2023. B.1.-B.2. Judges score the Storybook criteria, and the Documentation criteria for all teams. No preliminary contestants. No semifinalists. C. No semifinalists. Winners announced at Awards Ceremony.  <u>Delete Semifinal Round.</u> No semifinalists. No on-site component. No reading or interview. No finalists. Top three winners announced at Awards Ceremony.
<b>REGULATIONS AND REQUIREMENTS:</b>	<u>Pre-Conference:</u> No change.  <u>Preliminary Round:</u> A. The storybook and documentation portfolio must be received by the NJ TSA Office by April 5, 2023.  <b><i>No school or individual names labeled on projects; only State Conference ID#'s are to be used. Upon registering students for the <u>State Conference</u> online, they are automatically assigned a State Conference ID#. This number needs to be on all parts of student projects (i.e. portfolio, display, model, etc.)</i></b> <i>Team ID#s may be used for team events. A Team ID# is the first four numbers of students' individual ID#s (e.g. if a student ID# is 1234567, the Team ID# would be 1234. If there are multiple teams from one chapter for the same competition, include which team they are on (e.g. 1234-1, 1234-2, etc.).</i>
<b>EVALUATION:</b>	<u>Preliminary Round:</u> No change.  <u>Delete Semifinal Round.</u> No reading. No interview. No semifinalists. Winners announced at Awards Ceremony.

	<p>Evaluation is based on 210 points:</p>
--	---

- Storybook (130)
- Documentation Portfolio (80)

# Coding

## Pre-Conference Event

2023 Topic: Pet Rescue Startup

Design Problem and Requirements: <https://njtsa.tcnj.edu/wp-content/uploads/sites/23/2023/01/2023-NJ-TSA-Middle-School-Design-Problems.pdf>

<b>OVERVIEW:</b>	No test. No onsite/live coding challenge. Teams create solution to the design problem on the NJ TSA website: <a href="https://njtsa.tcnj.edu/wp-content/uploads/sites/23/2023/01/2023-NJ-TSA-Middle-School-Design-Problems.pdf">https://njtsa.tcnj.edu/wp-content/uploads/sites/23/2023/01/2023-NJ-TSA-Middle-School-Design-Problems.pdf</a>  <b>The solution to the design problem must be finished, submitted, and accessible via the Internet by 11:59pm on April 5, 2023. Submission procedures will be shared with advisors.</b>
<b>ELIGIBILITY:</b>	2 teams of 2 members per chapter.
<b>TIME LIMITS:</b>	<u>Delete Preliminary Round and Semifinal Round.</u> No test. No on-site challenge. No semifinalists. Teams create solution to the design problem on the NJ TSA website. Entries are submitted to the online NJ TSA conference system by 11:59pm on April 5, 2023. Submission procedures will be shared with advisors.
<b>ATTIRE:</b>	See Pages 6 of this guide for required dress code.
<b>PROCEDURE:</b>	<u>Delete Preliminary Round and Semifinal Round.</u> No test. No on-site challenge. No semifinalists. Teams create solution to the design problem on the NJ TSA website. Entries are submitted to the online NJ TSA conference system by 11:59pm on April 5, 2023. Submission procedures will be shared with advisors. Top three winners are announced at Awards Ceremony.
<b>REGULATIONS AND REQUIREMENTS:</b>	<u>Delete Preliminary Round and Semifinal Round.</u> No test. No on-site challenge. No semifinalists. Teams create solution to the design problem on the NJ TSA website. Entries are submitted to the online NJ TSA conference system by 11:59pm on April 5, 2023. Submission procedures will be shared with advisors. Top three winners are announced at Awards Ceremony.
<b>EVALUATION:</b>	<u>Delete Preliminary Round and Semifinal Round.</u>  Evaluation criteria is listed in the design problem: <a href="https://njtsa.tcnj.edu/wp-content/uploads/sites/23/2023/01/2023-NJ-TSA-Middle-School-Design-Problems.pdf">https://njtsa.tcnj.edu/wp-content/uploads/sites/23/2023/01/2023-NJ-TSA-Middle-School-Design-Problems.pdf</a>



## Community Service Video Pre-Conference Event

<b>OVERVIEW:</b>	No change.  <b>The video and supporting documentation must be finished, submitted, and accessible via the Internet by 11:59pm on April 5, 2023. Submission procedures will be shared with advisors.</b>
<b>ELIGIBILITY:</b>	2 teams of up to 6 members per chapter. Teams of 1 individual are permitted.
<b>TIME LIMITS:</b>	A. Change May 15 <sup>th</sup> to April 5, 2023. B. NJ TSA's online conference system provides verification that projects have been uploaded.
<b>ATTIRE:</b>	See Page 6 of this guide for required dress code.
<b>PROCEDURE:</b>	<u>Pre-Conference:</u> C. Entries are due by 11:59pm EST on April 5, 2023. D. Submission information will be provided by NJ TSA. The URL of the video, and PDF of required forms, must be submitted to NJ TSA's online conference system.  <u>Preliminary Round:</u> No semifinalists. No interview. Winners announced at Awards Ceremony.  <u>Delete Semifinal Round.</u> No semifinalists. No interview. No finalists. Top three winners announced at Awards Ceremony.
<b>REGULATIONS AND REQUIREMENTS:</b>	<u>Pre-Conference:</u> No change.  <u>Delete Semifinal Round.</u> No semifinalists. No interview. Top three winners announced at Awards Ceremony.  <i><b>No individual names labeled on projects; only State Conference ID#'s are to be used. Upon registering students for the <u>State Conference</u> online, they are automatically assigned a State Conference ID#. This number needs to be on all parts of student projects (i.e. portfolio, display, model, etc.)</b></i> <i>Team ID#s may be used for team events. A Team ID# is the first four numbers of students' individual ID#s (e.g. if a student ID# is 1234567, the Team ID# would be 1234. If there are multiple teams from one chapter for the same competition, include which team they are on (e.g. 1234-1, 1234-2, etc.).</i>
<b>EVALUATION:</b>	<u>Preliminary Round:</u> No change.  <u>Delete Semifinal Round.</u> No semifinalists. No interview. Top three winners announced at Awards Ceremony.  Evaluation is based on 150 points: <ul style="list-style-type: none"> <li>• Video Production (50)</li> <li>• Video Effectiveness (100)</li> </ul>

## Computer-Aided Design (CAD) Foundations

### Pre-Conference Event

2023 Design Problem: <https://njtsa.tcnj.edu/wp-content/uploads/sites/23/2023/01/2023-NJ-TSA-Middle-School-Design-Problems.pdf>

<b>OVERVIEW:</b>	No change.  <b>Students create a solution to the design problem posted on the <a href="#">NJ TSA website</a>. The solution must be finished, submitted, and accessible online by 11:59pm on April 5, 2023. Submission procedures will be shared with advisors.</b>
<b>ELIGIBILITY:</b>	3 individuals per chapter.
<b>TIME LIMITS:</b>	Delete A.-B. Students create a solution to the design problem posted on the <a href="#">NJ TSA website</a> . The solution (PDF) must be finished, submitted, and accessible online by 11:59pm on April 5, 2023. Submission procedures will be shared with advisors.
<b>ATTIRE:</b>	See Page 6 of this guide for required dress code.
<b>PROCEDURE:</b>	Delete A.-J. No on site component. Students create a solution to the design problem posted on the <a href="#">NJ TSA website</a> . The solution (PDF) must be finished, submitted, and accessible online by 11:59pm on April 5, 2023. Submission procedures will be shared with advisors. No finalists. Top three winners will be announced at Awards Ceremony.
<b>REGULATIONS AND REQUIREMENTS:</b>	Delete A.-G. No on site component. Students create a solution to the design problem posted on the <a href="#">NJ TSA website</a> . The solution (PDF) must be finished, submitted, and accessible online by 11:59pm on April 5, 2023. Submission procedures will be shared with advisors. No finalists. Top three winners will be announced at Awards Ceremony.  <i>No school or individual names labeled on projects; only State Conference ID#'s are to be used. Upon registering students for the <a href="#">State Conference</a> online, they are automatically assigned a State Conference ID#. This number needs to be on all parts of student projects (i.e. portfolio, display, model, etc.)</i>
<b>EVALUATION:</b>	A. PDF of design solution must be submitted online. No USB submission. Submission procedures will be shared with advisors.  Evaluation is based on 100 points: <ul style="list-style-type: none"> <li>• Layout (70)</li> <li>• Software Utilization (30)</li> </ul>

## Construction Challenge

### On-Site Event

<b>OVERVIEW:</b>	No semifinalists. All teams give a presentation highlighting their model/display.
<b>ELIGIBILITY:</b>	2 teams of up to 6 members per chapter.
<b>TIME LIMITS:</b>	<p><u>Preliminary Round:</u> No change.</p> <p><u>Semifinal Round:</u> All teams give a presentation of up to five (5) minutes in length. No semifinalists. Winners announced at Awards Ceremony.</p>
<b>ATTIRE:</b>	See Page 6 of this guide for required dress code.
<b>PROCEDURE:</b>	<p><u>Pre-Conference:</u> No change.</p> <p><u>Preliminary Round:</u> B.1.-B.2. Judges score the Model/Prototype, Display, and documentation criteria for all teams. No preliminary contestants, no semifinalists. C. No semifinalists. All teams give presentation.</p> <p><u>Semifinal Round:</u> A. No semifinalists. All teams give a presentation up to five (5) minutes in length. B. All team members may participate in the presentation. D. No finalists. Top three winners announced at Awards Ceremony.</p>
<b>REGULATIONS AND REQUIREMENTS:</b>	<p><u>Pre-Conference:</u> No change.</p> <p><u>Preliminary Round:</u> No change.</p> <p><u>Semifinal Round:</u> A. No semifinalists. All teams give a presentation up to five (5) minutes in length. All team members may participate in the presentation.</p> <p><b><i>No individual names labeled on projects; only State Conference ID#'s are to be used. Upon registering students for the <u>State Conference</u> online, they are automatically assigned a State Conference ID#. This number needs to be on all parts of student projects (i.e. portfolio, display, model, etc.)</i></b> <b><i>Team ID#s may be used for team events. A Team ID# is the first four numbers of students' individual ID#s (e.g. if a student ID# is 1234567, the Team ID# would be 1234. If there are multiple teams from one chapter for the same competition, include which team they are on (e.g. 1234-1, 1234-2, etc.).</i></b></p>
<b>EVALUATION:</b>	<p><u>Preliminary Round:</u> No tiered judging. All teams are evaluated on their involvement in a community project, model/prototype, display, and documentation portfolio.</p> <p><u>Semifinal Round:</u></p>

	<p>A. No semifinalists. All teams give presentation.</p> <p>Evaluation is based on 150 points:</p> <ul style="list-style-type: none"><li>• Model/Display (40)</li><li>• Documentation Portfolio (60)</li><li>• Presentation/Interview (50)</li></ul>
--	--

## Cybersecurity On-Site Event

<b>OVERVIEW:</b>	One hour test only. No presentation.
<b>ELIGIBILITY:</b>	3 individuals per chapter.
<b>ATTIRE:</b>	See Page 6 of this guide for required dress code.
<b>REGULATIONS AND REQUIREMENTS:</b>	<p><u>Preliminary Round:</u> C. No semifinalists. No presentation. Winners announced at Awards Ceremony.</p> <p><u>Delete Semifinal Round.</u> No semifinalists. No presentation. Exam only. Top three winners announced at Awards Ceremony.</p>
<b>EVALUATION:</b>	<p><u>Preliminary Round:</u> No change.</p> <p><u>Delete Semifinal Round.</u> No semifinalists. No presentation. Exam only. Top three winners announced at Awards Ceremony.</p> <p>Evaluation is based on 50 points:</p> <ul style="list-style-type: none"> <li>• Test (50)</li> </ul>

## Data Science and Analytics

### Pre-Conference Event

2023 Topic: Use “College/University Data ” to review and analyze how various institutions stack up in comparison to each other. Analyze the quantitative, qualitative, and geospatial data to provide additional insights on institutions based on one or more metric.

<b>OVERVIEW:</b>	No semifinalists. No on-site challenge. Entries submitted Pre-Conference to the NJ TSA office by April 5, 2023.
<b>ELIGIBILITY:</b>	2 teams of 2-3 members per chapter.
<b>TIME LIMITS:</b>	<p><u>Preliminary Round:</u> No presentation.</p> <p><u>Delete Semifinal Round:</u> No semifinalists. No on-site data analysis/synthesis challenge.</p>
<b>ATTIRE:</b>	See Page 6 of this guide for required dress code.
<b>PROCEDURE:</b>	<p><u>Pre-Conference:</u> No change.</p> <p><u>Preliminary Round:</u> A.1.-A.2. Documentation portfolio and display are submitted to the NJ TSA office by April 5, 2023. B.1.-B.2. Judges score the display and documentation criteria for all teams. No preliminary contestants, no semifinalists. C. No semifinalists. No on-site challenge. Winners announced at Awards Ceremony.</p> <p><u>Delete Semifinal Round.</u> No semifinalists. No on-site analysis/synthesis challenge. Top three winners will be announced at Awards Ceremony.</p>
<b>REGULATIONS AND REQUIREMENTS:</b>	<p><u>Preliminary Round:</u> No change.</p> <p><u>Delete Semifinal Round.</u> No semifinalists. No on-site analysis/synthesis challenge. Top three winners will be announced at Awards Ceremony.</p> <p><b><i>No school or individual names labeled on projects; only State Conference ID#'s are to be used. Upon registering students for the <u>State Conference</u> online, they are automatically assigned a State Conference ID#. This number needs to be on all parts of student projects (i.e. portfolio, display, model, etc.)</i></b> <b><i>Team ID#s may be used for team events. A Team ID# is the first four numbers of students' individual ID#s (e.g. if a student ID# is 1234567, the Team ID# would be 1234. If there are multiple teams from one chapter for the same competition, include which team they are on (e.g. 1234-1, 1234-2, etc.).</i></b></p>
<b>EVALUATION:</b>	<p><u>Preliminary Round:</u> No tiered judging. All teams are evaluated on their display, and documentation portfolio.</p> <p><u>Delete Semifinal Round.</u></p>

	<p>No semifinalists. No on-site analysis/synthesis challenge. Top three winners will be announced at Awards Ceremony.</p> <p>Evaluation is based on 140 points:</p> <ul style="list-style-type: none"><li>• Display (80)</li><li>• Documentation Portfolio (60)</li></ul>
--	---

## Digital Photography

### Pre-Conference Event

2023 Theme: Patterns or Textures in Architecture

Four (4) digital photographs are required for the portfolio.

<b>OVERVIEW:</b>	No semifinalists. No on-site challenge. Digital portfolio submitted online Pre-Conference.  <b>The digital portfolio must be finished, submitted, and accessible via the Internet by 11:59pm on April 5, 2023. Submission procedures will be shared with advisors.</b>
<b>ELIGIBILITY:</b>	2 individuals per chapter.
<b>TIME LIMITS:</b>	<u>Preliminary Round:</u> A. Change May 15 <sup>th</sup> to April 5, 2023. B. NJ TSA's online conference system provides verification of project submission.  <u>Delete Semifinal Round.</u> No semifinalists. No on-site challenge. Winners announced at Awards Ceremony.
<b>ATTIRE:</b>	See Page 6 of this guide for required dress code.
<b>PROCEDURE:</b>	<u>Pre-Conference:</u> C. Digital portfolio must be submitted to the NJ TSA online conference system, as a PDF by 11:59pm EST on April 5, 2023. Submission procedures will be provided by NJ TSA. D. NJ TSA's online conference system provides verification of project submission.  <u>Preliminary Round:</u> A. No semifinalists. Winners announced at Awards Ceremony.  <u>Delete Semifinal Round.</u> No semifinalists. No on-site challenge. Top three winners announced at Awards Ceremony.
<b>REGULATIONS AND REQUIREMENTS:</b>	<u>Pre-Conference:</u> D. The digital portfolio must be submitted as a PDF online by 11:59pm EST on April 5, 2023. Submission procedures will be provided by NJ TSA.  <u>Delete Semifinal Round.</u> No semifinalists. No on-site challenge. Top three winners announced at award ceremony.  <i><b>No school or individual names labeled on projects; only State Conference ID#'s are to be used. Upon registering students for the <u>State Conference</u> online, they are automatically assigned a State Conference ID#. This number needs to be on all parts of student projects (i.e. portfolio, display, model, etc.)</b></i>
<b>EVALUATION:</b>	<u>Preliminary Round:</u> No change.  <u>Delete Semifinal Round.</u> No semifinalists. No on-site challenge. Top three winners announced at award ceremony  Evaluation is based on 60 points: <ul style="list-style-type: none"> <li>• Digital Photographic Portfolio (60)</li> </ul>



## Dragster Design

### Pre-Conference Event

For 2023, there are no special design requirements.

<b>OVERVIEW:</b>	No change.
<b>ELIGIBILITY:</b>	2 individuals per chapter.
<b>TIME LIMITS:</b>	A. The dragster, drawing, and materials list must be received by the NJ TSA office by April 5, 2023. Delete B. No interview.
<b>ATTIRE:</b>	See Page 6 of this guide for required dress code.
<b>PROCEDURE:</b>	<p><u>Pre-Conference</u> No change.</p> <p><u>Preliminary Round</u> A.1.-A.3. The dragster, drawing, and materials list must be received by the NJ TSA office by April 5, 2023.</p> <p><u>Semifinal Round</u> Delete A. No interview. E. No finalists. The 1<sup>st</sup>, 2<sup>nd</sup> and 3<sup>rd</sup> place winners are announced at the Awards Ceremony.</p>
<b>REGULATIONS AND REQUIREMENTS:</b>	<p><u>Preliminary Round</u> E. All CO2 cartridges are provided by NJ TSA.</p> <p><u>Semifinal Round</u> Delete A. No interview.</p> <ul style="list-style-type: none"> <li>• The top 16 dragsters meeting specifications will be raced in the double elimination bracket at the conference.</li> <li>• Cars not meeting specs WILL BE DISQUALIFIED from the competition.</li> <li>• A caliper will be used for all measurements</li> <li>• Place ID# on drawings and directly on dragster. It is recommended ID#'s are placed on bottom or back side of dragster with tape or label.</li> </ul> <p><b><i>No school or individual names labeled on projects; only State Conference ID#'s are to be used. Upon registering students for the <u>State Conference</u> online, they are automatically assigned a State Conference ID#. This number needs to be on all parts of student projects (i.e. portfolio, display, model, etc.)</i></b>  <i>Team ID#s may be used for team events. A Team ID# is the first four numbers of students' individual ID#s (e.g. if a student ID# is 2345678, the Team ID# would be 2345. If there are multiple teams from one chapter for the same competition, include which team they are on (e.g. 2345-1, 2345-2, etc.).</i></p>
<b>EVALUATION:</b>	<p>Delete C. No interview.</p> <p>Evaluation is based on 120 points:</p> <ul style="list-style-type: none"> <li>• Dragster Construction (60)</li> <li>• Race (60)</li> </ul>

## Electrical Applications

### On-Site Event

<b>OVERVIEW:</b>	Test only. No semifinalists. No on-site problem or interview.
<b>ELIGIBILITY:</b>	2 teams of 2 members per chapter.
<b>TIME LIMITS:</b>	<u>Preliminary Round:</u> No change  <u>Delete Semifinal Round.</u> No on-site problem or interview.
<b>ATTIRE:</b>	See Page 6 of this guide for required dress code.
<b>PROCEDURE:</b>	<u>Preliminary Round:</u> Delete C.-D. No semifinalists. No semifinal round. Test only.  <u>Delete Semifinal Round.</u> No on-site problem or interview. Test only. Top three winners announced at Awards Ceremony.
<b>REGULATIONS AND REQUIREMENTS:</b>	<u>Preliminary Round:</u> No change.  <u>Delete Semifinal Round.</u> No on-site problem or interview. Test only. Top three winners announced at Awards Ceremony.
<b>EVALUATION:</b>	<u>Preliminary Round:</u> No change.  <u>Delete Semifinal Round.</u> No on-site problem or interview. Test only. Top three winners announced at Awards Ceremony.  Evaluation is based on 50 points: <ul style="list-style-type: none"> <li>• Written test (50 points)</li> </ul>

# Essays on Technology

## On-Site Event

2023 Topic: Is the use of technology changing people for the better ... or worse?

### Subtopics:

- Cell phone technology
- Medical technology
- Careers in technology

<b>OVERVIEW:</b>	No change.
<b>ELIGIBILITY:</b>	2 individuals per chapter.
<b>TIME LIMITS:</b>	<p><u>Preliminary Round:</u> No change.</p> <p><u>Semifinal Round:</u> No semifinalists. All participants complete the essay challenge.</p>
<b>ATTIRE:</b>	See Page 6 of this guide for required dress code.
<b>PROCEDURE:</b>	<p><u>Pre-Conference:</u> No change.</p> <p><u>Preliminary Round:</u> <b>Creating a Detailed Outline</b> Delete F. No semifinalists. All participants complete the essay challenge.</p> <p><u>Semifinal Round:</u> <b>The Essay</b> A.-B. No semifinalists. All participants have one (1) hour to write an essay on the subtopic, using their detailed outline. C. The essay cannot exceed two (2) pages. E. No finalists. Top three winners announced at Awards Ceremony.</p>
<b>REGULATIONS AND REQUIREMENTS:</b>	<p><u>Preliminary Round:</u> G. No semifinalists. All participants write essay. Winners announced at Awards Ceremony.</p> <p><u>Semifinal Round:</u> E. The essay may not exceed two (2) pages. G. Change National TSA to NJ TSA.</p>
<b>EVALUATION:</b>	<p><u>Preliminary Round:</u> No change.</p> <p><u>Semifinal Round:</u> No semifinalists. All participants write essay.</p> <p>Evaluation is based on 170 points:</p> <ul style="list-style-type: none"> <li>• Detailed Outline (80)</li> <li>• Essay (90)</li> </ul>

## Flight Endurance On-Site Event

<b>OVERVIEW:</b>	No change. Participants bring completed documentation portfolio, and glider, on conference day.
<b>ELIGIBILITY:</b>	2 individuals per chapter.
<b>TIME LIMITS:</b>	<u>Preliminary Round:</u> No change.  <u>Delete Semifinal Round.</u> No semifinalists. No on-site construction of glider.
<b>ATTIRE:</b>	See Page 6 of this guide for required dress code.
<b>SAFETY</b>	E.No on-site construction of glider. Students bring pre-built glider to test.
<b>PROCEDURE:</b>	<u>Preliminary Round:</u> No change.  <u>Delete Semifinal Round.</u> No semifinalists. No on-site construction of glider.
<b>REGULATIONS AND REQUIREMENTS:</b>	<u>Pre-Conference:</u> No change.  <u>Preliminary Round:</u> B.-C. Catapults at the NJ TSA State Conference are supplied by NJ TSA.  <u>Delete Semifinal Round.</u> No semifinalists. No on-site construction of glider.
<b>EVALUATION:</b>	<u>Preliminary Round:</u> No change.  <u>Delete Semifinal Round.</u> No semifinalists. No on-site construction of glider. No semifinal round.  Evaluation is based on 140 points: <ul style="list-style-type: none"> <li>• Documentation Portfolio (70)</li> <li>• Flight Times (70)</li> </ul>

## Forensic Technology On-Site Event

<b>OVERVIEW:</b>	Test of forensic science theory will be taken online PRIOR to the State Conference, on March 28, 2023 from 6-7pm. Test procedures will be shared with advisors. No semifinalists. All teams analyze crime scene on conference day and write an analysis. No skills demonstration/presentation.
<b>ELIGIBILITY:</b>	1 teams of 2 members per chapter.
<b>TIME LIMITS:</b>	<p><u>Preliminary Round:</u> No change. One (1) hour test of forensic science theory will be taken online PRIOR to the State Conference, on March 28, 2023 from 6-7pm. Test procedures will be shared with advisors. No semifinalists.</p> <p><u>Delete Semifinal Round.</u> No semifinalists. No skills demonstration/presentation. All teams will analyze crime scene on conference day and write an analysis. Judges will determine the amount of time allowed to review the crime scene, based on the number of teams present on conference day. Teams will have 20 minutes to write their analysis. Winners announced at Awards Ceremony.</p>
<b>ATTIRE:</b>	See Page 6 of this guide for required dress code.
<b>PROCEDURE:</b>	<p><u>Preliminary Round:</u> A. Team members take a one (1) hour test of forensic science theory online PRIOR to the State Conference, on March 28, 2023 from 6-7pm. Team members take the test individually. Test procedures will be shared with advisors. Delete C.D. No semifinalists. No skills demonstration/presentation.</p> <p><u>Delete Semifinal Round.</u> No skills demonstration/presentation. All teams will analyze crime scene on conference day and write an analysis. Judges will determine the amount of time allowed to review the crime scene, based on the number of teams present on conference day. Teams will have 20 minutes to write their analysis. No finalists. Winners announced at Awards Ceremony.</p>
<b>REGULATIONS:</b>	<p><u>Preliminary Round:</u> A. One (1) hour test of forensic science theory will be taken online PRIOR to the State Conference, on March 28, 2023 from 6-7pm. Test procedures will be shared with advisors. C. Test is taken online prior to the conference day. D. All teams analyze crime scene on conference day and write an analysis.</p> <p><u>Delete Semifinal Round.</u> No skills demonstration/presentation. All teams will analyze crime scene on conference day and write an analysis. Judges will determine the amount of time allowed to review the crime scene, based on the number of teams present on conference day. Teams will have 20 minutes to write their analysis. No finalists. Winners announced at Awards Ceremony.</p>
<b>EVALUATION:</b>	<p><u>Preliminary Round:</u> No change.</p>

Delete Semifinal Round.

No skills demonstration/presentation. All teams will analyze crime scene on conference day and write an analysis. Judges will determine the amount of time allowed to review the crime scene, based on the number of teams present on conference day. Teams will have 20 minutes to write their analysis. No finalists. Winners announced at Awards Ceremony.

Evaluation is based on 50 points:

- Online Test Score (50)
- Survey/Investigation of Crime Scene (20)
- Written Analysis of Crime Scene (20)

## Foundations of Information Technology (FIT)

### On-Site Event

<b>OVERVIEW:</b>	No change.
<b>ELIGIBILITY:</b>	2 individuals per chapter.
<b>ATTIRE:</b>	See Page 6 of this guide for required dress code.
<b>REGULATIONS AND REQUIREMENTS:</b>	C. Top three winners are announced at the Awards Ceremony.
<b>EVALUATION:</b>	<u>Preliminary Round:</u> No change.  Evaluation is based on 100 points: <ul style="list-style-type: none"> <li>• Test (100)</li> </ul>

# Inventions and Innovations

## On-Site Event

2023 Theme: A device that will make your daily life easier

<b>OVERVIEW:</b>	No semifinalists. All teams give oral presentation.
<b>ELIGIBILITY:</b>	<u>Preliminary round:</u> 1 teams of 3-6 members per chapter.
<b>TIME LIMITS:</b>	No semifinalists. All teams give oral presentation.
<b>ATTIRE:</b>	See Page 6 of this guide for required dress code.
<b>PROCEDURE:</b>	<p><u>Pre-conference:</u> No change.</p> <p><u>Preliminary Round:</u> C. No semifinalists. All teams give oral presentation.</p> <p><u>Semifinal Round:</u> B.-C. All teams give oral presentation. All team members are permitted to participate in the presentation. E. No finalists. Top three winners announced at Awards Ceremony.</p>
<b>REGULATIONS AND REQUIREMENTS:</b>	<p><u>Pre-conference:</u> No change.</p> <p><u>Preliminary Round:</u> C. No semifinalists. All teams give oral presentation.</p> <p><u>Semifinal Round:</u> B. All team members are permitted to participate in the presentation.</p> <p><b><i>No school or individual names labeled on projects; only State Conference ID#'s are to be used. Upon registering students for the <u>State Conference</u> online, they are automatically assigned a State Conference ID#. This number needs to be on all parts of student projects (i.e. portfolio, display, model, etc.)</i></b> <i>Team ID#s may be used for team events. A Team ID# is the first four numbers of students' individual ID#s (e.g. if a student ID# is 1234567, the Team ID# would be 1234. If there are multiple teams from one chapter for the same competition, include which team they are on (e.g. 1234-1, 1234-2, etc.).</i></p>
<b>EVALUATION:</b>	<p><u>Preliminary Round:</u> No change.</p> <p><u>Semifinal Round:</u> No semifinalists. All teams give oral presentation.</p> <p>Evaluation is based on 150 points:</p> <ul style="list-style-type: none"> <li>• Interactive Display (80)</li> <li>• Presentation (70)</li> </ul>



## Junior Solar Sprint On-Site Event

<b>OVERVIEW:</b>	No change. Documentation portfolio, shoebox, and car must be submitted Pre-Conference to the NJ TSA office by April 5, 2023. Cars raced on conference day.
<b>ELIGIBILITY:</b>	1 team of 2-4 members per chapter.
<b>TIME LIMITS:</b>	No change.
<b>ATTIRE:</b>	See Page 6 of this guide for required dress code.
<b>PROCEDURE:</b>	<p><u>Pre-Conference:</u> No change.</p> <p><u>Preliminary Round:</u> A. Car, shoebox, and documentation portfolio must be submitted Pre-Conference to the NJ TSA office by April 5, 2023. Cars raced on conference day. E. No interview.</p> <p><u>Semifinal Round:</u> Delete A. No semifinalist interview. C. The top three winners will be announced at Awards Ceremony.</p>
<b>REGULATIONS AND REQUIREMENTS:</b>	<p><u>Pre-Conference:</u> D.14. Teams must provide their own battery pack and batteries. Batteries used must be two (2) AA 1.5 V batteries. It is recommended that teams test their vehicle with their battery pack prior to the conference.</p> <p><u>Preliminary Round:</u> No change.</p> <p><u>Semifinal Round:</u> No change.</p> <p><b><i>No school or individual names labeled on projects; only State Conference ID#'s are to be used. Upon registering students for the <u>State Conference</u> online, they are automatically assigned a State Conference ID#. This number needs to be on all parts of student projects (i.e. portfolio, display, model, etc.)</i></b> <b><i>Team ID#'s may be used for team events. A Team ID# is the first four numbers of students' individual ID#'s (e.g. if a student ID# is 1234567, the Team ID# would be 1234. If there are multiple teams from one chapter for the same competition, include which team they are on (e.g. 1234-1, 1234-2, etc.).</i></b></p>
<b>EVALUATION:</b>	<p><u>Preliminary Round:</u> No change.</p> <p><u>Semifinal Round:</u> A. No interview.</p> <p>Evaluation is based on 190 points:</p> <ul style="list-style-type: none"> <li>• Display and Model (80)</li> <li>• Documentation Portfolio (50)</li> <li>• Race (60)</li> </ul>

## Leadership Strategies

### On-Site Event

<b>OVERVIEW:</b>	No change.
<b>ELIGIBILITY:</b>	2 teams of 3 members per chapter.
<b>TIME LIMITS:</b>	No change.
<b>ATTIRE:</b>	See Page 6 of this guide for required dress code.
<b>PROCEDURE:</b>	<u>Preliminary Round:</u> I. No semifinalists. No semifinal round. Winners announced at Awards Ceremony.  <u>Delete Semifinal Round.</u> No semifinalists. No finalists. Top three winners announced at Awards Ceremony.
<b>REGULATIONS AND REQUIREMENTS:</b>	No change.
<b>EVALUATION:</b>	No semifinal round. Preliminary round only.  Evaluation is based on 80 points: <ul style="list-style-type: none"> <li>• Presentation (80)</li> </ul>

## Mass Production

### Pre-Conference Event

2023 Theme: Remote control organizer for 4 remotes

<b>OVERVIEW:</b>	No semifinalists. No presentation. Entries submitted Pre-Conference to the NJ TSA office by April 5, 2023.
<b>ELIGIBILITY:</b>	1 team of 3-6 members per chapter.
<b>TIME LIMITS:</b>	Delete A.-C. No presentation/interview. Entries submitted Pre-Conference.
<b>ATTIRE:</b>	See Page 6 of this guide for required dress code.
<b>PROCEDURE:</b>	<p><u>Pre-conference:</u> No change.</p> <p><u>Preliminary Round:</u> A.1.-A.2. Documentation portfolio, and prototype are submitted Pre-Conference. C. No semifinalists. No presentation. Winners are announced at Awards Ceremony.</p> <p><u>Delete Semifinal Round:</u> No semifinalists. No presentation. No finalists. Top three winners will be announced at Awards Ceremony.</p>
<b>REGULATIONS AND REQUIREMENTS:</b>	<p><u>Pre-Conference:</u> No change.</p> <p><u>Preliminary Round:</u> A.1.-A.2. Documentation portfolio, and prototype are submitted Pre-Conference.</p> <p><u>Delete Semifinal Round:</u> No semifinalists. No presentation. No finalists. Top three winners will be announced at Awards Ceremony.</p> <p><b><i>No school or individual names labeled on projects; only State Conference ID#'s are to be used. Upon registering students for the <u>State Conference</u> online, they are automatically assigned a State Conference ID#. This number needs to be on all parts of student projects (i.e. portfolio, display, model, etc.)</i></b> <b><i>Team ID#s may be used for team events. A Team ID# is the first four numbers of students' individual ID#s (e.g. if a student ID# is 1234567, the Team ID# would be 1234. If there are multiple teams from one chapter for the same competition, include which team they are on (e.g. 1234-1, 1234-2, etc.).</i></b></p>
<b>EVALUATION:</b>	<p><u>Preliminary Round:</u> No change.</p> <p><u>Semifinal Round.</u> No semifinalists. No presentation.</p> <p>Evaluation is based on 110 points:</p> <ul style="list-style-type: none"> <li>• Documentation Portfolio (70)</li> <li>• Prototype (40)</li> </ul>

# Mechanical Engineering

## On-Site Event

2023 Problem: Mousetrap Vehicle – 2023 – Vehicle full stop required target distance is 19 feet

<b>OVERVIEW:</b>	No change.
<b>ELIGIBILITY:</b>	1 team of 2-3 members per chapter.
<b>TIME LIMITS:</b>	No change.
<b>ATTIRE:</b>	See Page 6 of this guide for required dress code.
<b>PROCEDURE:</b>	<p><u>Pre-Conference:</u> No change.</p> <p><u>Preliminary Round:</u> Delete K. No interview. L. All teams will have their documentation portfolios judged.</p>
<b>REGULATIONS AND REQUIREMENTS:</b>	<p><u>Preliminary Round:</u> No change.</p> <p><b><i>No school or individual names labeled on projects; only State Conference ID#'s are to be used. Upon registering students for the <u>State Conference</u> online, they are automatically assigned a State Conference ID#. This number needs to be on all parts of student projects (i.e. portfolio, display, model, etc.)</i></b></p> <p><b><i>Team ID#'s may be used for team events. A Team ID# is the first four numbers of students' individual ID#'s (e.g. if a student ID# is 1234567, the Team ID# would be 1234. If there are multiple teams from one chapter for the same competition, include which team they are on (e.g. 1234-1, 1234-2, etc.).</i></b></p>
<b>EVALUATION:</b>	<p><u>Preliminary Round:</u> Delete E. No exit interview.</p> <p><u>Semifinal Round:</u> A. All teams are evaluated on their documentation portfolio and performance. No interview. Top three winners announced at Awards Ceremony.</p> <p>Evaluation is based on 100 points:</p> <ul style="list-style-type: none"> <li>• Placement from Best of Two Runs (60)</li> <li>• Portfolio Contents (40)</li> </ul>

## Medical Technology

### Pre-Conference Event

For 2023- Participants select a contemporary medical technology issue

<b>OVERVIEW:</b>	No semifinalists. No presentation. Display and Model/Prototype are submitted to the NJ TSA office by April 5, 2023.
<b>ELIGIBILITY:</b>	1 team of up to 6 members per chapter.
<b>TIME LIMITS:</b>	A.-C. No semifinalists. No presentation. Pre-Conference event.
<b>ATTIRE:</b>	See Page 6 of this guide for required dress code.
<b>PROCEDURE:</b>	<p><u>Pre-Conference:</u> No change.</p> <p><u>Preliminary Round:</u> A. Display and model/prototype are submitted to the NJ TSA office by April 5, 2023. C. No semifinalists. No presentation.</p> <p><u>Delete Semifinal Round:</u> No semifinalists. No presentation. No finalists. Top three winners announced at Awards Ceremony.</p>
<b>REGULATIONS AND REQUIREMENTS:</b>	<p><u>Pre-Conference:</u> No change.</p> <p><u>Delete Semifinal Round:</u> No semifinalists. No presentation. No finalists. Top three winners announced at Awards Ceremony.</p> <p><b><i>No school or individual names labeled on projects; only State Conference ID#'s are to be used. Upon registering students for the <u>State Conference</u> online, they are automatically assigned a State Conference ID#. This number needs to be on all parts of student projects (i.e. portfolio, display, model, etc.)</i></b> <i>Team ID#s may be used for team events. A Team ID# is the first four numbers of students' individual ID#s (e.g. if a student ID# is 1234567, the Team ID# would be 1234. If there are multiple teams from one chapter for the same competition, include which team they are on (e.g. 1234-1, 1234-2, etc.).</i></p>
<b>EVALUATION:</b>	<p><u>Preliminary Round:</u> No change.</p> <p><u>Delete Semifinal Round:</u> No semifinalists. No presentation. No finalists. Top three winners announced at Awards Ceremony.</p> <p>Evaluations will be based on 120 points:</p> <ul style="list-style-type: none"> <li>• Display (80)</li> <li>• Model/Prototype (40)</li> </ul>

# Microcontroller Design

## On-Site Event

2023 Problem: Design an interactive educational toy for toddlers.

<b>OVERVIEW:</b>	No change.
<b>ELIGIBILITY:</b>	2 teams of up to 6 members per chapter. Teams of 1 individual are permitted.
<b>TIME LIMITS:</b>	No change.
<b>ATTIRE:</b>	See Page 6 of this guide for required dress code.
<b>PROCEDURE:</b>	<p><u>Pre-Conference:</u> No change.</p> <p><u>On-Site Challenge:</u> C. Any team member may participate in the recorded presentation. E. No finalists. Winners announced at Awards Ceremony.</p>
<b>REGULATIONS AND REQUIREMENTS:</b>	<p><u>Pre-Conference:</u> No change.</p> <p><u>On-Site Challenge:</u> B. Teams should pick up their entries prior to leaving the conference.</p> <p><b><i>No school or individual names labeled on projects; only State Conference ID#'s are to be used. Upon registering students for the <u>State Conference</u> online, they are automatically assigned a State Conference ID#. This number needs to be on all parts of student projects (i.e. portfolio, display, model, etc.)</i></b> <b><i>Team ID#s may be used for team events. A Team ID# is the first four numbers of students' individual ID#s (e.g. if a student ID# is 1234567, the Team ID# would be 1234. If there are multiple teams from one chapter for the same competition, include which team they are on (e.g. 1234-1, 1234-2, etc.).</i></b></p>
<b>EVALUATION:</b>	<p>No change.</p> <p>Evaluation is based on 140 points:</p> <ul style="list-style-type: none"> <li>• Documentation Portfolio (20)</li> <li>• Device (80)</li> <li>• Presentation (40)</li> </ul>

## Off the Grid

### Static Event

2023 Design Brief: Design a home in a country containing a forest biome for a family of four (4) with three (3) generations living in the home. The country can be any country containing the forest biome of your choice. The house must be designed for an area that does not have access to a power grid. In addition, the house must include a renewable energy source, vegetation gardening system for food production, and solve one (1) problem that is specific to the area.

<b>OVERVIEW:</b>	No semifinalists. No presentation/interview. Teams submit their display, model, and documentation portfolio on conference day for evaluation.
<b>ELIGIBILITY:</b>	1 team of up to 6 members per chapter. Teams of 1 individual are permitted.
<b>TIME LIMITS:</b>	No semifinalists. No presentation/interview.
<b>ATTIRE:</b>	See Page 6 of this guide for required dress code.
<b>PROCEDURE:</b>	<p><u>Pre-Conference:</u> Delete E. No presentation.</p> <p><u>Preliminary Round:</u> B.1.-B.2. Judges score the Model and Display criteria, and Documentation Portfolio criteria, for all teams. No preliminary contestants, no semifinalists. C. Winners announced at Awards Ceremony.</p> <p><u>Delete Semifinal Round.</u> No semifinalists. No presentation/interview. Top three winners announced at Awards Ceremony.</p>
<b>REGULATIONS AND REQUIREMENTS:</b>	<p><u>Pre-Conference:</u> No change.</p> <p><u>Preliminary Round:</u> No change.</p> <p><u>Delete Semifinal Round.</u> No semifinalists. No presentation/interview. Top three winners announced at Awards Ceremony.</p> <p><b><i>No school or individual names labeled on projects; only State Conference ID#'s are to be used. Upon registering students for the State Conference online, they are automatically assigned a State Conference ID#. This number needs to be on all parts of student projects (i.e. portfolio, display, model, etc.)</i></b> <b><i>Team ID#'s may be used for team events. A Team ID# is the first four numbers of students' individual ID#'s (e.g. if a student ID# is 1234567, the Team ID# would be 1234. If there are multiple teams from one chapter for the same competition, include which team they are on (e.g. 1234-1, 1234-2, etc.).</i></b></p>
<b>EVALUATION:</b>	<p><u>Preliminary Round:</u> No tiered judging. All teams are evaluated on their display, model, and documentation portfolio.</p> <p><u>Delete Semifinal Round.</u></p>

	<p>No semifinalists. No presentation/interview.</p> <p>Evaluations will be based on 170 points:</p> <ul style="list-style-type: none"><li>• Display (40)</li><li>• Model Design (50)</li><li>• Documentation Portfolio (80)</li></ul>
--	---



**Prepared Speech**  
**On-Site Event**  
 2023 Theme: A Legacy of Innovation

<b>OVERVIEW:</b>	No change.
<b>ELIGIBILITY:</b>	2 individuals per chapter.
<b>TIME LIMITS:</b>	No change.
<b>ATTIRE:</b>	See Page 6 of this guide for required dress code.
<b>PROCEDURE:</b>	<p><u>Preliminary Round:</u>          No semifinalists. No semifinal round.</p> <p><u>Delete Semifinal Round.</u>          No semifinalists. Preliminary round only. No finalists. Top three winners announced at award ceremony.</p>
<b>REGULATIONS AND REQUIREMENTS:</b>	<p><u>Preliminary Round:</u>          H. NJ TSA will provide a podium.          J. Observers are not permitted.</p> <p><u>Delete Semifinal Round.</u>          No semifinalists. Students make one speech. Top three winners announced at award ceremony.</p>
<b>EVALUATION:</b>	<p>No change.</p> <p>Evaluation is based on 100 points:</p> <ul style="list-style-type: none"> <li>• Content (30)</li> <li>• Stage Presence (30)</li> <li>• Organization (40)</li> </ul>

## Problem Solving On-Site Event

<b>OVERVIEW:</b>	No change.
<b>ELIGIBILITY:</b>	2 teams of 2 members per chapter.
<b>TIME LIMITS:</b>	Teams will have 1.5 hours for design and construction of the solution.
<b>ATTIRE:</b>	See Page 6 of this guide for required dress code.
<b>PROCEDURE:</b>	<u>Preliminary Round:</u> A. Teams do not need to bring a tool box or safety glasses. NJ TSA will provide all materials and tools. C. Teams are allowed 1.5 hours to design and construct a solution.
<b>REGULATIONS AND REQUIREMENTS:</b>	<u>Preliminary Round:</u> B. NJ TSA will provide all materials. Delete D.-G. Teams do not need to bring a tool box or glasses. NJ TSA will provide all materials and tools.
<b>EVALUATION:</b>	A.-C. Scoring will be outlined on the design brief, which teams will receive on conference day.

## Promotional Marketing

### Pre-Conference Event

2023 Theme: College students are attending a college fair. Your challenge is to create promotional materials used to encourage them to pursue a career in STEM/Technology Education.

Your promotional toolkit needs to include the following three items.

1. Printable: Design a tri-fold brochure
2. Wearable: A tote bag that can be used to carry promotional materials
3. Digital Signage: Short video (1 ½ - 2 ½ minutes) to be shown at the career fair booth

<b>OVERVIEW:</b>	No semifinalists. No on-site problem. Pre-Conference event. <b>All components of the chapter's entry must be submitted to NJ TSA's online conference system by 11:59 pm on April 5, 2023. Submission procedures will be shared with advisors.</b>
<b>ELIGIBILITY:</b>	2 individuals per chapter.
<b>TIME LIMITS:</b>	<u>Pre-Conference:</u> A. Change May 15 <sup>th</sup> to April 5, 2023. C. NJ TSA's online conference system provides submission verification.  <u>Delete Semifinal Round.</u> No semifinalists. No on-site problem.
<b>ATTIRE:</b>	See Page 6 of this guide for required dress code.
<b>PROCEDURE:</b>	<u>Pre-Conference:</u> E. Change May 15 <sup>th</sup> to April 5, 2023. F. Submission information will be provided by NJ TSA.  <u>Preliminary Round:</u> No semifinalists. Winners announced at Awards Ceremony.  <u>Delete Semifinal Round.</u> No semifinalists. No on-site problem. Top three winners announced at Awards Ceremony.
<b>REGULATIONS AND REQUIREMENTS:</b>	<u>Pre-Conference</u> F. Change May 15 <sup>th</sup> to April 5, 2023.  <u>Delete Semifinal Round.</u> No semifinalists. No on-site problem.  <b><i>No school or individual names labeled on projects; only State Conference ID#'s are to be used. Upon registering students for the <u>State Conference</u> online, they are automatically assigned a State Conference ID#. This number needs to be on all parts of student projects (i.e. portfolio, display, model, etc.)</i></b>
<b>EVALUATION:</b>	Delete B. No on-site design challenge. No semifinalists.  Evaluation is based on 150 points: <ul style="list-style-type: none"> <li>• Print Design (50)</li> <li>• Wearable Design (50)</li> <li>• Digital Signage (50)</li> </ul>

## STEM Animation Pre-Conference Event

2023 Theme: The Sun, Moon, Planets, and Stars: Patterns of Apparent Motion.

<b>OVERVIEW:</b>	No semifinalists. No presentation.  <b>Documentation portfolio, and animation video, must be finished, submitted, and accessible via the Internet by 11:59pm on April 5, 2023. Submission procedures will be shared with advisors.</b>
<b>ELIGIBILITY:</b>	2 teams of up to 6 members per chapter.
<b>TIME LIMITS:</b>	<u>Preliminary Round:</u> A. Change May 15 <sup>th</sup> to April 5, 2023. C. NJ TSA's online conference system provides submission verification.  <u>Delete Semifinal Round.</u> No semifinalists. No presentation.
<b>ATTIRE:</b>	See Page 6 of this guide for required dress code.
<b>PROCEDURE:</b>	<u>Pre-Conference:</u> C. Change May 15 <sup>th</sup> to April 5, 2023. D. Submission information will be provided by NJ TSA. URL of animation video, and PDF of documentation portfolio must be submitted online by 11:59pm on April 5, 2023.  <u>Preliminary Round:</u> No semifinalists. Winners announced at Awards Ceremony.  <u>Delete Semifinal Round.</u> No semifinalists. No presentation. Top three winners announced at Awards Ceremony.
<b>REGULATIONS AND REQUIREMENTS:</b>	<u>Preliminary Round:</u> No change.  <b><i>No school or individual names labeled on projects; only State Conference ID#'s are to be used. Upon registering students for the <u>State Conference</u> online, they are automatically assigned a State Conference ID#. This number needs to be on all parts of student projects (i.e. portfolio, display, model, etc.) Team ID#s may be used for team events. A Team ID# is the first four numbers of students' individual ID#s (e.g. if a student ID# is 1234567, the Team ID# would be 1234. If there are multiple teams from one chapter for the same competition, include which team they are on (e.g. 1234-1, 1234-2, etc.).</i></b>
<b>EVALUATION:</b>	<u>Preliminary Round:</u> No change.  <u>Delete Semifinal Round.</u> No presentation. No semifinalists.  Evaluation is based on 80 points: <ul style="list-style-type: none"> <li>• Documentation Portfolio (30)</li> <li>• Animation (50)</li> </ul>

# Structural Engineering

## On-Site Event

2023 Problem Design Brief: <https://tsaweb.org/competitions-programs/tsa/themes-problems>

<b>OVERVIEW:</b>	No semifinalists. No on-site construction problem. Teams bring their documentation portfolio, and pre-built structure for destructive testing on conference day.
<b>ELIGIBILITY:</b>	1 team of 2 members per chapter.
<b>SAFETY EYEWEAR:</b>	No change.
<b>TIME LIMITS:</b>	Delete A.-B. Teams bring their documentation portfolio, and pre-built structure for destructive testing on conference day. There is no on-site construction. No semifinalists.
<b>ATTIRE:</b>	See Page 6 of this guide for required dress code.
<b>PROCEDURE:</b>	<p><u>Pre-Conference</u> No change.</p> <p><u>Preliminary Round</u> Delete. E. No semifinalists. Winners announced at Awards Ceremony.</p> <p><u>Delete Semifinal Round</u> No semifinalists. No on-site construction. Top three winners announced at Awards Ceremony.</p>
<b>REGULATIONS AND REQUIREMENTS:</b>	<p><u>Pre-Conference</u> No change.</p> <p><u>Preliminary Round</u> No change.</p> <p><u>Delete Semifinal Round</u> No semifinalists. No on-site construction. Top three winners announced at Awards Ceremony.</p> <p><b><i>No school or individual names labeled on projects; only State Conference ID#'s are to be used. Upon registering students for the <u>State Conference</u> online, they are automatically assigned a State Conference ID#. This number needs to be on all parts of student projects (i.e. portfolio, display, model, etc.)</i></b> <i>Team ID#s may be used for team events. A Team ID# is the first four numbers of students' individual ID#s (e.g. if a student ID# is 2345678, the Team ID# would be 2345. If there are multiple teams from one chapter for the same competition, include which team they are on (e.g. 2345-1, 2345-2, etc.).</i></p>
<b>EVALUATION:</b>	All structures meeting requirements will be tested. Rank will be determined by the efficiency rating. Evaluation is based on the Pre-Built Structure and Documentation Portfolio

# System Control Technology

## Static Event

2023 NJ TSA Design Problem: Design and build a computer-controlled system to demonstrate one task needed in a metal recycling facility. Your model should demonstrate the ability to separate ferrous and non-ferrous metals. Your model working system should be no larger than 2' x 2'.

<b>OVERVIEW:</b>	<p>No change</p> <p><b>Teams solve the design problem posted on the NJ TSA website. Model is constructed off-site. No on-site portion. Teams bring completed model for evaluation on conference day, and leave instructions for evaluators to operate the device.</b></p>
<b>ELIGIBILITY:</b>	2 teams of 3 members per chapter
<b>TIME LIMITS:</b>	<p>Delete A.-C.</p> <p>Teams solve the design problem posted on the NJ TSA website. Model is constructed off-site. No on-site portion. No interview. <a href="#">Design Problem</a></p> <p>There will be a 15 minute set up time (students set up completed model and leave instructions for evaluators to operate the device).</p>
<b>ATTIRE:</b>	See Page 6-7 of this guide for required dress code.
<b>PROCEDURE:</b>	Delete A.-I. All components of the team's project (Inventor's Log and Solution to Problem) are constructed off-site. There is no on-site portion. All teams solve the design problem posted on the NJ TSA website and bring their completed device on conference day for evaluation. Teams will set up their device, and leave instructions for evaluators to operate it. No interview. No finalists. Top three winners are announced at Awards Ceremony.
<b>REGULATIONS AND REQUIREMENTS:</b>	<p>A.-H. All components of the team's project (Inventor's Log and Solution to Problem) are constructed off-site. There is no on-site portion. All teams solve the design problem posted on the NJ TSA website and bring their completed device on conference day for evaluation. Teams will set up their device, and leave instructions for evaluators to operate it. No interview. No finalists. Top three winners are announced at Awards Ceremony.</p> <p><b><i>No school or individual names labeled on projects; only State Conference ID#'s are to be used. Upon registering students for the <u>State Conference</u> online, they are automatically assigned a State Conference ID#. This number needs to be on all parts of student projects (i.e. portfolio, display, model, etc.)</i></b></p> <p><b><i>Team ID#'s may be used for team events. A Team ID# is the first four numbers of students' individual ID#'s (e.g. if a student ID# is 2345678, the Team ID# would be 2345. If there are multiple teams from one chapter for the same competition, include which team they are on (e.g. 2345-1, 2345-2, etc.).</i></b></p>
<b>EVALUATION:</b>	<p>Delete D. No interview.</p> <p>Evaluation is based on 100 points:</p> <ul style="list-style-type: none"> <li>• Inventor's Log (20)</li> <li>• Solution to Problem (60)</li> <li>• Programming Structure (20)</li> </ul>

## Tech Bowl On-Site Event

<b>OVERVIEW:</b>	All participants will complete an online, objective test PRIOR to the State Conference, on March 28, 2023 from 7:15pm-8:15pm. Testing procedures will be shared with advisors. All teams will compete in a head-to-head competition on conference day.
<b>ELIGIBILITY:</b>	1 team of 3 members per chapter.
<b>TIME LIMITS:</b>	<p><u>Preliminary Round</u> A. The (1) hour test is taken by all team members, individually, online, PRIOR to the State Conference, on March 28, 2023 from 7:15pm-8:15pm. Testing procedures will be shared with advisors.</p> <p><u>Semifinal Round</u> No semifinalists. All teams participate in the oral competition on conference day.</p>
<b>ATTIRE:</b>	See Page 6 of this guide for required dress code.
<b>PROCEDURE:</b>	<p>Delete ALL. Follow the procedures listed below:</p> <ol style="list-style-type: none"> <li>1. All participants will take the test online, prior to conference day. Testing procedures will be shared with advisors.</li> <li>2. On conference day, team members will report to the oral event area holding room for briefing at the designated time. After briefing, advisors must leave and the team will remain in the holding room until called for competition. Teams may visit with other teams; however, <b>no advisors or visitors</b> may enter the holding room.</li> <li>3. <b>No audience members are permitted into the oral event area.</b></li> <li>4. When instructed to do so, two (2) teams will enter the event area</li> <li>5. and be seated according to instructions.</li> <li>6. When a team has been defeated in any round of the oral event, the team is out of the competition.</li> <li>7. Questions will be drawn, as needed, from a card file resource bank.</li> <li>8. A team's total score is derived from the correct answers to the questions asked. For each correct answer, a team will receive ten (10) points. When a question has been completely read and a team is recognized to answer, if the team does not answer or answers incorrectly, five (5) points will be deducted from the team's score. In this instance, the other team does not have the opportunity to respond to this question, and the next question is read for both teams. If a question is being read and a team member presses the button before the question is finished, the member must answer completely as stated on the answer card. If the answer given is incorrect, the entire question will be read for the other team.</li> <li>9. A total of twelve (12) questions will be asked per round. <b>No questions will be repeated in another round.</b> In the case of the tie, five (5) additional questions will be asked. This procedure will continue until the tie is broken. The questions will be picked at random from the basic areas tested.</li> <li>10. Bonus Question There will be one additional question (bonus question). The bonus question will be announced, and the team that answers it correctly will have the opportunity to answer one additional question. This is the only time when team members may consult with each other before giving an answer. The</li> </ol>

	<p>team will have ten (10) seconds to give its answer. If a team gives an incorrect answer to the bonus question, then the question will be read to the other team. Bonus point scoring: If a team answers the bonus correctly, that team receives fifteen (15) points; if a team answers the bonus incorrectly, that team loses five (5) points from its score.</p> <p>11. A panel of evaluators will be available to respond to questions concerning acceptable answers.</p> <ol style="list-style-type: none"> <li>1. Rulings on acceptable answers will be made only during the round in question.</li> <li>2. Rulings will be made immediately, to do one of the following: <ol style="list-style-type: none"> <li>a. Accept only the answers listed on the card.</li> <li>b. Accept the student's answer and renew points, or remove the question and read another in its place.</li> <li>c. The rulings of the panel will be final.</li> </ol> </li> </ol>
<p><b>REGULATIONS AND REQUIREMENTS:</b></p>	<p>Delete ALL. Follow regulations listed below:</p> <ol style="list-style-type: none"> <li>1. No transmitting or recording devices, including cell phones, will be permitted in the event area. No prompting will be permitted.</li> <li>2. The team member who "buzzes in" will have five (5) seconds to answer the question, without discussion.</li> <li>3. The team that answers the bonus question will be allowed ten (10) seconds to discuss the extra question and give an answer.</li> <li>4. After a question is read, the competing teams will have ten (10) seconds to answer. If neither team can answer the question, then another question will be read.</li> <li>5. If a team member "buzzes in" before a question is finished being read, that member must give the exact answer as printed on the card.</li> </ol>
<p><b>EVALUATION:</b></p>	<p>Delete ALL. Follow evaluation listed below:</p> <p>Evaluation is based on the total points from the three written tests plus the total points from the oral competition. Awards will be given to the top three (3) teams.</p>



## Technical Design Pre-Conference Event

The 2023 design problem will be posted on the NJ TSA website at 5pm on March 9, 2023. Teams submit their solution online by 5pm on March 14, 2023. Submission procedures will be shared with advisors.

Please note—this event has an **earlier due date** than other events. Teams have a limited amount of time to solve the problem and submit their solution.

<b>OVERVIEW:</b>	Problem is solved off-site. Students have a limited amount of time to solve the problem. The design problem will be posted on the NJ TSA website at 5pm on March 9, 2023. Entries must be submitted online by 5pm on March 14, 2023.
<b>ELIGIBILITY:</b>	1 team of 2 members per chapter.
<b>TIME LIMITS:</b>	Problem is solved off-site. Students have a limited amount of time to solve the problem. The design problem will be posted on the NJ TSA website at 5pm on March 9, 2023. Entries must be submitted online by 5pm on March 14, 2023.
<b>ATTIRE:</b>	See Page 6 of this guide for required dress code.
<b>PROCEDURE:</b>	<p><u>Preliminary Round:</u> A. Problem is solved off-site. Students have a limited amount of time to solve the problem. The design problem will be posted on the NJ TSA website at 5pm on March 9, 2023. Entries must be submitted online by 5pm on March 14, 2023. Submission procedures will be provided by NJ TSA.</p>
<b>REGULATIONS AND REQUIREMENTS:</b>	<p><u>Preliminary Round:</u> D.1. The documentation portfolio must be submitted online as a PDF document. Submission procedures will be provided by NJ TSA.</p> <p><b><i>No school or individual names labeled on projects; only State Conference ID#'s are to be used. Upon registering students for the <u>State Conference</u> online, they are automatically assigned a State Conference ID#. This number needs to be on all parts of student projects (i.e. portfolio, display, model, etc.)</i></b> <i>Team ID#s may be used for team events. A Team ID# is the first four numbers of students' individual ID#s (e.g. if a student ID# is 1234567, the Team ID# would be 1234. If there are multiple teams from one chapter for the same competition, include which team they are on (e.g. 1234-1, 1234-2, etc.).</i></p>
<b>EVALUATION:</b>	<p>No change.</p> <p>Evaluation is based on 100 points:</p> <ul style="list-style-type: none"> <li>• Solution (100)</li> </ul>

## Video Game Design

### Pre-Conference Event

<b>OVERVIEW:</b>	No semifinalists. No on-site interview.  <b>The video game, and documentation portfolio, must be finished, submitted, and accessible via the Internet by 11:59pm on April 5, 2023. Submission procedures will be shared with advisors.</b>
<b>ELIGIBILITY:</b>	1 team of 2-6 members per chapter.
<b>TIME LIMITS:</b>	<u>Pre-Conference/Preliminary Round:</u> A. Change submission date from May 15 to April 5, 2023. B. Verification will be made through NJ TSA's online conference system.  <u>Delete Semifinal Round.</u> No semifinalists. No on-site interview.
<b>ATTIRE:</b>	See Page 6 of this guide for required dress code.
<b>PROCEDURE:</b>	No change.
<b>REGULATIONS AND REQUIREMENTS:</b>	<u>Preliminary Round:</u> D.2. Submission information will be provided by NJ TSA. D.E. Email verification will be made through NJ TSA's online conference system. G. No semifinalists. Winners announced at Awards Ceremony.  <u>Delete Semifinal Round.</u> No semifinalists. No interview.  <i><b>No school or individual names labeled on projects; only State Conference ID#'s are to be used. Upon registering students for the <u>State Conference</u> online, they are automatically assigned a State Conference ID#. This number needs to be on all parts of student projects (i.e. portfolio, display, model, etc.) Team ID#'s may be used for team events. A Team ID# is the first four numbers of students' individual ID#'s (e.g. if a student ID# is 1234567, the Team ID# would be 1234. If there are multiple teams from one chapter for the same competition, include which team they are on (e.g. 1234-1, 1234-2, etc.).</b></i>
<b>EVALUATION:</b>	<u>Preliminary Round:</u> No change.  <u>Delete Semifinal Round.</u> No semifinalist presentation. No interview.  Evaluation is based on 100 points: <ul style="list-style-type: none"> <li>• Video Game Design (80)</li> <li>• Documentation Portfolio (20)</li> </ul>

## Website Design

### Pre-Conference Event

#### 2023 Design Brief: Website for a New Children's Show - rated TV Y

Challenge: Develop a website for a fictitious children's show rated TV Y that is interactive, engaging, graphically interesting, and easy to understand and navigate with the intent of enticing viewers to watch. The website must introduce the characters of the show, inform viewers where and when they can watch the show, and have an interactive area that is geared towards its viewers.

<b>OVERVIEW:</b>	No semifinalists. No interview.  <b>The website, and any required documentation, must be finished, submitted, and accessible via the Internet by 11:59pm on April 5, 2023. Submission procedures will be shared with advisors.</b>
<b>ELIGIBILITY:</b>	2 teams of 3-6 members per chapter.
<b>TIME LIMITS:</b>	<u>Pre-Conference/Preliminary Round:</u> A. Change date from May 15 to April 5, 2023. URL must be submitted online. Any required forms must be submitted online in PDF format. Submission procedures will be provided by NJ TSA. B. Email verification will be made through NJ TSA's online conference system.  <u>Delete Semifinal Round.</u> No semifinalists. No interview. Winners announced at Awards Ceremony.
<b>ATTIRE:</b>	See Page 6 of this guide for required dress code.
<b>PROCEDURE:</b>	<u>Pre-Conference:</u> C. Change date from May 15 <sup>th</sup> to April 5, 2023. D. Submission information will be provided by NJ TSA.  <u>Preliminary Round:</u> No semifinalists. No interview. Winners announced at Awards Ceremony.  <u>Delete Semifinal Round.</u> No semifinalists. No interview. Top three winners announced at Awards Ceremony.
<b>REGULATIONS AND REQUIREMENTS:</b>	<u>Pre-conference/Preliminary Round:</u> I. Change date from May 15 <sup>th</sup> to April 5, 2023.  <u>Delete Semifinal Round.</u> No semifinalists. No interview. Top three winners announced at Awards Ceremony.  <b><i>No school or individual names labeled on projects; only State Conference ID#'s are to be used. Upon registering students for the <u>State Conference</u> online, they are automatically assigned a State Conference ID#. This number needs to be on all parts of student projects (i.e. portfolio, display, model, etc.) Team ID#'s may be used for team events. A Team ID# is the first four numbers of students' individual ID#'s (e.g. if a student ID# is 1234567, the Team ID# would be 1234. If there are multiple teams from one chapter for the same competition, include which team they are on (e.g. 1234-1, 1234-2, etc.).</i></b>

<b>EVALUATION:</b>	<p><u>Preliminary Round:</u> No change.</p> <p><u>Delete Semifinal Round.</u> No semifinalist interview.</p> <p>Evaluation based on 90 points:</p> <ul style="list-style-type: none"><li>• Website (90)</li></ul>
--------------------	---