



# 2022 NJ TSA HIGH SCHOOL SUPPLEMENT



**NEW JERSEY**



**TECHNOLOGY STUDENT ASSOCIATION**



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1st Place Promotional Design  
2021 NJ TSA High School Conference

## 2021-2022 New Jersey TSA Executive Committee

### **State Officers**

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Harrison Adler	Vice President	Marine Academy of Science and Technology
Olga Garyaeva	Secretary	Freehold Township High School
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Gavin Corley	Reporter	Clearview Regional High School
Michael Tepperman	Sergeant-at-Arms	Biotechnology High School
Khushi Patel	Historian	Marine Academy of Science and Technology
Sutej Upadhyaya	Parliamentarian	Colts Neck High School

### **State Officer Advisors**

Mr. William Hercek	Biotechnology High School
Ms. Melissa Parr	Clearview Regional High School
Ms. Angela Bavaro	Colts Neck High School
Mr. Thomas Jennings	Freehold Township High School
Ms. Megan Herbert	Freehold Township High School
Ms. Samantha Moorzitz	Marine Academy of Science & Technology

### **State Regional Coordinator**

Ms. Sherry Roses	Howell High School
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### **State Advisor and Corporate Member**

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

### **Competitive Event Coordinator**

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

### **Business Administrator**

Ms. Rebecca Turner, Center for Excellence in STEM Education, Department of Technological Studies, School of Engineering, The College of New Jersey

# **The 2022 NJ Supplement to the TSA High School Competitive Events Guide (for the 2021 and 2022 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 High School State Conference will be held virtually, in Spring 2022. Competitive event entries will be submitted electronically, by March 30, 2022, and a virtual Awards Ceremony will take place on an April date TBA. Participants wishing to take part in these online competitions may do so FREE of charge; there is no registration fee to participate. All students must be registered in the NJ TSA State Conference Registration System to participate. Students will need the ID# they receive upon conference registration, to label electronic entries.

### **How this booklet works**

The *NJ Supplement* works in conjunction with the **National TSA High School 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 through the NJ TSA Virtual State Conference in alphabetical order as well as the maximum number of participants or teams permitted to compete from each chapter. Each New Jersey competitive event in this booklet lists only the modifications from the National guidelines. 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.

### **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 better prepared for participation in competitive events this spring.

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

## General Rules Governing Competitive Events

### I. HIGH SCHOOL EVENTS

The officially approved **Level II** New Jersey TSA Competitive Events for high school are:

EVENT	ELIGIBILITY
Entries for the following events are due February 24, 2022:	
Extemporaneous Speech	2 individuals per chapter.
Entries for the following events are due March 1, 2022:	
Debating Technological Issues	2 teams of 2 members per chapter.
Essays on Technology	2 individuals per chapter.
On Demand Video	2 teams of up to 6 members per chapter. Teams of 1 individual are permitted.
Prepared Presentation	2 individuals per chapter.
Entries for the following events are due March 30, 2022:	
Animatronics	2 teams of up to 6 members per chapter. Teams of 1 individual are permitted.
Architectural Design	2 teams of up to 6 members per chapter. Teams of 1 individual are permitted.
Biomimicry	3 teams of 3-6 members per chapter. Teams of 1 individual are permitted.
Biotechnology Design	2 teams of up to 6 members per chapter. Teams of 1 individual are permitted.
Board Game Design	2 teams of up to 6 members per chapter. Teams of 1 individual are permitted.
Children's Stories	2 teams of up to 6 members per chapter. Teams of 1 individual are permitted.
Coding	2 teams of 2 members per chapters. Teams of 1 individual are permitted.
Computer-Aided Design (CAD), Architecture	2 individuals per chapter.
Computer-Aided Design (CAD), Engineering	2 individuals per chapter.
Data Science & Analytics	2 teams of 2 members per chapter. Teams of 1 individual are permitted.
Digital Video Production	2 teams of up to 6 members per chapter. Teams of 1 individual are permitted.
Engineering Design	2 teams of 3-6 members per chapter. Teams of 1 individual are permitted.
Fashion Design and Technology	2 teams of 2-4 members per chapter. Teams of 1 individual are permitted.
Future Technology and Engineering Teacher	3 individuals per chapter.
Geospatial Technology	2 teams of up to 3 members per chapter. Teams of 1 individual are permitted.
Music Production	2 teams of up to 6 members per chapter. Teams of 1 individual are permitted.
Optical Engineering	3 teams of 3-6 members per chapter. Teams of 1 individual are permitted.
Photographic Technology	2 individuals per chapter.
Promotional Design	2 individuals per chapter.
Scientific and Technical Visualization (SciVis)	3 teams of up to 6 members per chapter. Teams of 1 individual are permitted.
Software Development	2 teams of up to 6 members per chapter. Teams of 1 individual are permitted.
Transportation Modeling	2 individuals per chapter.
Video Game Design	2 teams of up to 6 members per chapter. Teams of 1 individual are permitted.
Webmaster	2 teams of up to 6 members per chapter. Teams of 1 individual are permitted.
The following events consist of online tests/challenges only. Testing dates will be announced in the spring.	
Chapter Team	2 teams of 6 members per chapter.
Cybersecurity	2 teams of up to 6 members per chapter.
Forensic Science	2 teams of 2 members per chapter.
Technology Bowl	2 teams of 3 members per chapter.

## II. PROJECT SUBMISSION

All entries must be uploaded (NOT EMAILED) to the NJ online conference system by 11:59pm on March 30, 2022. For team events, a team captain must be designated to upload the team's project.

Please note the events with an earlier deadline, listed on Page 4, which are due on February 24 and March 1. For these events, guidelines require a short window of time for students to solve problems. Please see the specific submission requirements listed under each competition in this document.

When uploading entries, the individual or student ID#, must be used to name/label projects.

Upon registering students in the State Conference Registration System, they are automatically assigned a State Conference ID# (this is different from a National TSA ID#). The State Conference ID# needs to be saved all parts of student projects (i.e. portfolios, models, digital displays, copyright/release forms, 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.).

## III. PARTICIPATION IN COMPETITIVE EVENTS

- A. Participation in the 2022 NJ TSA High School Virtual State Conference is FREE.
- B. TSA members may register and participate in no more than **FOUR total events**.
- C. Students must be registered in the State Conference Registration System in order to enter and become finalists/winners in a competition.
- D. **No school or individual names labeled on electronic projects**, unless otherwise noted. **Only ID#'s are to be used.** Upon registering students in the State Conference Registration System, they are automatically assigned a State Conference ID#. This number needs to be on all parts of student projects (i.e. portfolios, models, displays, copyright/release forms, 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.).
- E. NJ TSA is not responsible for compatibility issues with electronic files. Judges will not be permitted to install programs to view files.
- F. Proper procedures for citing material taken from other sources must be followed as outlined in specific competitive event guidelines. Copyright procedures and forms must be completed and submitted with entries when necessary.
- G. The maximum size of a team is 6 members, unless otherwise designated in a competition's eligibility guideline.
- H. 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 EVENT ATTIRE

ALL STUDENTS APPEARING IN A PRESENTATION VIDEO **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.

Please note—the Official TSA Shirt (royal blue) is mandatory for participation at the *National TSA Conference*. Students are strongly encouraged to wear the Official TSA Shirt to the NJ TSA *State Conference*, however, it is not required.

- A. Official TSA Attire:
  - Blazer: navy blue with official TSA patch
  - Tie: scarlet red imprinted with official TSA logo (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:
  - A collared shirt/blouse, long pants (no shorts or jeans), dresses/skirts, socks/hosiery and appropriate footwear.
- C. A polo shirt may be substituted for a collared shirt/blouse.

#### VI. AWARDS

##### Virtual Awards Ceremony

A virtual Awards Ceremony will take place in April 2022 (date TBA) to celebrate the achievements of NJ TSA members and conference participants. 1<sup>st</sup>, 2<sup>nd</sup>, and 3<sup>rd</sup> place winners of competitions will be recognized.

##### 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. Please email completed forms to Alison Goeke, [goeke2@tcnj.edu](mailto:goeke2@tcnj.edu) by March 30, 2022. Go to <https://tsaweb.org/resources/student-members/student-achievement-awards> to access forms.

##### NJ TSA Future Technology Teacher Scholarship

The NJ TSA Future Technology Teacher Scholarship supports the mission of TSA by encouraging members to pursue careers as technology education teachers. A qualifying student will receive a \$500 scholarship to use toward continuing their education. The recipient will be announced each spring. Please email completed forms to Alison Goeke, [goeke2@tcnj.edu](mailto:goeke2@tcnj.edu) by March 30, 2022. [Click here](#) for application.

## VII. IMPORTANT DATES AND DEADLINES

### January 10, 2022

NJ State Conference Registration OPENS

### January 10, 2022

Design Problems for the following events will be posted on [NJ TSA website](#):

Coding  
Computer-Aided Design (CAD), Architecture  
Computer-Aided Design (CAD), Engineering  
Optical Engineering

Note- other design problems/themes for 2022 can be found within this document, and on the [National TSA website](#)

### February 24, 2022- March 1, 2022

Design Problems/themes for the following events are posted at 5pm on February 24, 2022 on the [NJ TSA website](#). Completed entries must be uploaded to the NJ online conference system by 5pm on March 1, 2022.

Debating Technological Issues  
Essays on Technology  
Extemporaneous Speech – DUE SAME DAY- February 24, 2022  
On Demand Video  
Prepared Presentation

### March 30, 2022

The following competitive event entries are due, and must be uploaded to the NJ online conference system by 11:59 pm:

Animatronics  
Architectural Design  
Biomimicry  
Biotechnology Design  
Board Game Design  
Children's Stories  
Coding  
Computer-Aided Design (CAD), Architecture  
Computer-Aided Design (CAD), Engineering  
Data Science & Analytics  
Digital Video Production  
Engineering Design  
Fashion Design and Technology  
Future Technology and Engineering Teacher  
Geospatial Technology  
Music Production  
Optical Engineering  
Photographic Technology  
Promotional Design  
Scientific Visualization (SciVis)  
Software Development  
Transportation Modeling  
Video Game Design  
Webmaster

### Testing Dates TBD

The following competitive events consist of online tests/challenges only. Testing dates will be announced in the spring.

Chapter Team  
Cybersecurity  
Forensic Science  
Technology Bowl

### March 30, 2022

Technology Honor Society, NJ Scholarship, and State Officer Nominations due.

### March 31, 2022

NJ State Conference Registration CLOSSES at 5pm.

### April 2022 (date TBA)

NJ TSA Virtual Awards Ceremony

### June 26-30, 2022

In-Person National TSA Conference  
Gaylord Texan Resort & Convention Center  
Dallas, Texas  
Theme: Discover Your Journey

## Level II – High School Events

### Animatronics

2022 Theme: Create an animatronic exhibit for the entrance of a children’s hospital waiting room. Refer to section “F” in General Rules and Regulations.

<b>OVERVIEW:</b>	<p>No change.</p> <p><b>The video showing the animatronic elements must be finished, submitted, and accessible via the Internet by 11:59pm on March 30, 2022. Submission procedures will be shared with advisors.</b></p>
<b>ELIGIBILITY:</b>	2 teams of up to 6 members per chapter. Teams of 1 individual are permitted.
<b>TIME LIMITS:</b>	<p>A. There is no limit to set up time. Teams are to record a video presentation.</p> <p>B. Up to five (5) minutes for the video presentation.</p> <p>Delete B.3. No judges’ interview.</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>No On-Site Presentation/Interview</u> Delete A-C. No on-site presentation/interview. Teams record a video presentation up to five (5) minutes in length to explain the project, show the display, and demonstrate the animatronic elements. All team members may participate in the video presentation. E. 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>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 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>B. No interview, just a video presentation.</p> <p>Evaluation is based on 120 points:</p> <ul style="list-style-type: none"> <li>• Model Appearance (30)</li> <li>• Model Function (60)</li> <li>• Demonstration/Presentation Video (30)</li> </ul>



## Architectural Design

2022 Design Problem: Design a park lodge for 12 park rangers to live during the 10 months of the year they work in the park.

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

<b>OVERVIEW:</b>	<p>No change</p> <p><b>The documentation portfolio, and video presentation, must be finished, submitted, and accessible via the Internet by 11:59pm on March 30, 2022. Submission procedures will be shared with advisors.</b></p>
<b>ELIGIBILITY:</b>	2 teams of up to 6 members per chapter. Teams of 1 member are permitted.
<b>TIME LIMITS:</b>	<p><u>Preliminary Round</u>  A. The documentation portfolio, and video presentation, must be finished, submitted, and accessible via the Internet by 11:59pm on March 30, 2022. Submission procedures will be shared with advisors.  B. Email verification will be made upon request.</p> <p><u>Semifinal Round</u>  A. No semifinalists. All teams record a video presentation, up to five (5) minutes in length, to demonstrate features of the model. No interview, only a video presentation.</p>
<b>ATTIRE:</b>	See Page 6-7 of this guide for required dress code.
<b>PROCEDURE:</b>	<p><u>Pre-Conference</u>  D.-E. The documentation portfolio and video presentation is to be submitted by 11:59pm on March 30, 2022. Submission procedures will be shared with advisors.</p> <p><u>Preliminary Round</u>  A.-D. No semifinalists. No on-site component. The documentation portfolio and video presentation is to be submitted by 11:59pm on March 30, 2022. Submission procedures will be shared with advisors. Winners are announced at Awards Ceremony.</p> <p><u>Semifinal Round</u>  A.-C. No semifinalists. All teams record a video presentation, up to five (5) minutes in length, to demonstrate features of the model. No interview, only a video presentation. Teams may designate as many members as they choose to be in the video.  D. The 1<sup>st</sup>, 2<sup>nd</sup> and 3<sup>rd</sup> place winners are 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><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</i></b></p>

	<p><i>of student projects (i.e. portfolio, display, model, etc.)</i></p> <p><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><u>Preliminary Round</u> No change.</p> <p><u>Semifinal Round</u> A. No interview. All teams do video presentation. No semifinalists. Winners announced at Awards Ceremony.</p> <p>Evaluation is based on 260 points:</p> <ul style="list-style-type: none"> <li>• Documentation Portfolio (90)</li> <li>• Design Challenge (50)</li> <li>• Model (70)</li> <li>• Video Presentation (50)</li> </ul>

## Biomimicry

2022 Topic: Technology (i.e. cell phones, TVs, computers, etc.)

Please note: this event is being offered at the state level only; it is NOT an official TSA competitive event. Follow the guidelines/procedures below to prepare for entry into the NJ Virtual State Conference.

<b>OVERVIEW:</b>	<p>An increasing number of engineers and designers are looking to nature for inspiration in developing new products, systems and solutions to problems.</p> <p>Animals and plants have already come up with effective approaches to many of the same challenges humans face every day. Nature, after all, has gone through 3.8 billion years of research and development!</p> <p>Biomimicry is a new science that studies nature’s best ideas, then imitates these designs to solve human problems.</p> <p>For this event, participants work as part of a team to research a given topic, identify a problem within that topic, and use biomimicry, or the example of an organism or system in nature, to solve the problem related to that topic.</p> <p>For example, if the topic were natural resource collection, students could apply the design of the shell of the namib desert beetle, which collects water directly out of the air, in the middle of the desert. The shell could be redesigned to collect water for desert communities with little access to water, or to anyone in need of fresh water.</p> <p>The team will create three (3) alternate solutions to solve the problem, choosing one (1) as their final solution. Each team will compile a documentation portfolio, and create a digital display.</p> <p><b>The topic for 2022 is Technology (i.e. cell phones, TVs, computers, etc).</b></p> <p><b>The documentation portfolio and digital display must be finished, submitted, and accessible via the Internet by 11:59pm on March 30, 2022. Submission procedures will be shared with advisors.</b></p>
<b>PURPOSE:</b>	Participants apply the principles and practices of industrial design in developing and proposing a product inspired by nature.
<b>ELIGIBILITY:</b>	3 teams of 3-6 members per chapter. Teams of 1 individual are permitted.
<b>SUBMISSION INFORMATION:</b>	Documentation portfolio must be submitted as a multipage PDF document. Digital display may be submitted as a URL or PDF attachment. Documentation portfolio and digital display must be submitted by 11:59pm on March 30, 2022. Submission procedures will be shared with advisors.
<b>ATTIRE:</b>	See Page 6 of this guide for required dress code.

<b>PREPARATION:</b>	<p>A. Participants research and identify a problem within the designated topic.</p> <p>B. Using that problem, participants will find at least three (3) alternative solutions to that problem, inspired by nature.</p> <p>C. Participants select one of these solutions and explain why it is the best choice.</p> <p>D. Participants create a documentation portfolio compiling all information, and a digital display of the final solution.</p>
<b>REGULATIONS AND REQUIREMENTS:</b>	<p>A. Each team is required to secure the assistance of a biomimicry mentor; someone other than the TSA Advisor, who has experience related to the year's topic. The name, address, and occupation of this individual should be documented and included in the team's portfolio.</p> <p>B. Each team is encouraged to identify the demographics of the society where the problem exists. This information can be documented on the same page as the above and included in the team's portfolio.</p> <p>C. The entry will consist of a documentation portfolio and a digital display.</p> <p>D. The digital display will include:</p> <ol style="list-style-type: none"> <li>1. Name of the final solution, conference city, state and year.</li> <li>2. Rationale for the final solution.</li> <li>3. Detailed explanation of the final solution.</li> <li>4. A three (3)-dimensional technical or CAD drawing and/or rendering of the final solution.</li> </ol> <p>E. The documentation portfolio must include the following pages in a single, multi-page PDF document in this order:</p> <ol style="list-style-type: none"> <li>1. Title page with the event title, the conference city and state, and the year; one (1) page.</li> <li>2. Table of contents; pages as needed.</li> <li>3. Mentor verification that includes the name, address, and occupation of the mentor; one (1) page.</li> <li>4. A design brief (format that follows) that describes the design and its constraints; one (1) or more pages.</li> </ol> <p><b><u>DESIGN BRIEF</u></b></p> <p><b>Context:</b> States the nature of the engineering design</p> <p><b>Task:</b> Clearly states what the team will be involved in</p> <p><b>Restrictions:</b> Identifies any restrictions</p> <p><b>Investigations:</b> Identifies the research involved</p>

	<p><b>Development:</b> States essential elements involved in planning</p> <p><b>Production:</b> Identifies the expected result</p> <p><b>Evaluation:</b> Identifies the expected assessment procedure and criteria</p> <ol style="list-style-type: none"> <li>5. A description of the problem solving steps; pages as needed.</li> <li>6. Plan of Work log that indicates preparation for the event, as noted by date, task, time involved, team member responsible and comments (see Plan of Work log in the National TSA Competitive Events Guide); one (1) page.</li> <li>7. Evidence of research conducted by the design team; pages as needed.</li> <li>8. Documentation of brainstorming; pages as needed.</li> <li>9. Descriptions and illustrations of three (3) possible solutions with a brief but concise evaluation of the merits of each; three (3) or more pages.</li> <li>10. A detailed description of the final solution; pages as needed.</li> <li>11. A three (3)-dimensional technical or CAD drawing and/or rendering of the final solution; the maximum sheet size is drawing sheet cut size B - 11"x17"; drawing must be appropriately scaled to fit the PDF format required for submission.</li> <li>12. Math and science concepts and applications involved in the final design solution; one (1) page.</li> <li>13. A list of references and resources; MLA style must be used in citing all references and resources; pages as needed.</li> <li>14. An evaluation of how well the final solution addresses the identified problem and an explanation of the impact of the solution on society; pages as needed.</li> </ol> <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>Please see the rating form on the following pages.</p> <p>Evaluation is based on 90 points:</p> <ul style="list-style-type: none"> <li>• Documentation Portfolio (50 points)</li> <li>• Digital Display (40 points)</li> </ul>

<b>STEM INTEGRATION:</b>	This event aligns with the STEM educational standards noted below.  Science, Technology, Engineering, Mathematics
<b>PRIMARY LEADERSHIP SKILLS:</b>	Leadership skills promoted in this event: <ul style="list-style-type: none"> <li>• COMMUNICATION — Students choose an existing design problem and develop and explain their solution. Suggested leadership lessons: <i>Personality Types</i> and <i>Promote It</i></li> <li>• CRITICAL THINKING — Students analyze and evaluate a problem in order to develop an acceptable solution. Suggested leadership lessons: <i>And The Answer Is</i> and <i>Critical Thinking Tips</i></li> <li>• PROBLEM SOLVING — Students devise a plan that will yield an acceptable solution. Suggested leadership lessons: <i>Debate It</i> and <i>Effective Brainstorming</i></li> </ul> <i>Additional leadership skills promoted in this event: creative thinking, decision making, ethics, evaluation, organization, teamwork</i>
<b>TSA AND CAREERS:</b>	This competition connects to one or more of the career areas featured in the TSA AND CAREERS section of the National TSA Competitive Events Guide. Use <i>The 16 Career Clusters</i> chart and the <i>TSA Competitions and The 16 Career Clusters</i> grid as resources for information about careers.
<b>CAREERS RELATED TO THIS EVENT:</b>	All fields of engineering and design (and related areas)

Participant ID/Team ID# \_\_\_\_\_

# BIOMIMICRY

**2022 OFFICIAL RATING FORM**

**HIGH SCHOOL**

## Documentation (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
Evaluators: Using minimal (1-4 points), adequate (5-8 points) or exemplary (9-10 points) performance levels as a guideline, record the scores earned for the event criteria in the column spaces to the far 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.)			
<b>Portfolio components</b> See Regulation C (X1)	The portfolio is unorganized and/or is missing three or more components.	The portfolio is missing two components, and/or it is loosely organized.	The portfolio has one or no components missing and is clearly well organized.
<b>Definition and explanation of problem and solution</b> (X1)	The definition and explanation of the problem and/or the solutions to the problem are unclear; major grammatical errors are evident.	The definition and explanation of the problem, and/or the solutions to the problem are overgeneralized and/or not concise; some grammatical errors are present.	The definition and explanation of solutions to the problem are clear and concise, with few or no grammatical errors.
<b>Research base</b> (X1)	The research is inadequate and/or very few credible sources are cited.	The research is conducted appropriately, with some credible sources cited.	There is a comprehensive research base with fully credible sources cited.
<b>Supporting graphics and materials</b> (X1)	The graphics and supporting materials do not clarify the documentation, and/or they do not relate to the problem, and/or they may not be properly cited (MLA format).	The graphics and supporting materials are appropriate, properly cited (if needed), and supplement the documentation by providing clarity to the problem.	The graphics and supporting materials are of excellent quality; graphics clearly clarify abstract concepts and, if not original, are properly cited.
<b>Quality and effectiveness</b> (X1)	The work is sloppy and disorganized, as if thrown together.	The work is mostly organized and of sufficient quality.	The work is well organized and of exceptional quality.

**SUBTOTAL (50 points)**

## Digital Display (40 points)

CRITERIA	Minimal performance 1-4 points	Adequate performance 5-8 points	Exemplary performance 9-10 points
<b>Communication of problem</b> (X1)	The problem is difficult to understand as communicated and is presented in an illogical manner.	The problem is communicated, and thoughts are somewhat organized and/or concise.	The problem is communicated in an organized, clear, and concise manner.
<b>Communication of solution</b> (X1)	The solution is difficult to understand as communicated and is presented in an illogical manner.	The solution is communicated, and thoughts are somewhat organized and/or concise.	The solution is communicated in an organized, clear, and concise manner.
<b>Creativity</b> (X1)	The work lacks creativity, with little or no integration of design principles.	Some creative elements are included, and essential design principles and elements are used somewhat effectively.	The work exudes creativity, and essential design principles and elements are integrated.
<b>Aesthetics and Artanship</b> (X1)	The work is unorganized and sloppy, and the display seems to be an afterthought.	The work is organized, with essential design principles given in a logical format.	The work reflects an exemplary use of layout and design principles to logically communicate important data.

**SUBTOTAL (40 points)**

Rules violations (a deduction of 20% of the total possible points) must be initiated by the evaluator, coordinator and manager of the event. Record the deduction in the space to the right.

Indicate the rule violated: \_\_\_\_\_

(To arrive at TOTAL score, add any subtotals and subtract rules violation points, as necessary. Check your math twice!)

**TOTAL (90 points)**

Comments:

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

Evaluator

Printed name: \_\_\_\_\_

Signature: \_\_\_\_\_



## Biotechnology Design

2022 Design Challenge: You are employed by an environmental protection company that has been asked to create a solution to control or eradicate cyanobacteria, also known as blue green algae.

<b>OVERVIEW:</b>	No semifinalists. All teams record a presentation. No live interview.  <b>The documentation portfolio, and presentation must be finished, submitted, and accessible via the Internet by 11:59pm on March 30, 2022. 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.1.-3. All teams provide a video presentation of no more than five (5) minutes in length.
<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 is to be shown/demonstrated in the video presentation. No live setup of display. B.1.-B.2. No preliminary contestants, no semifinalists. All teams are evaluated on display, documentation portfolio, and video presentation. C. No semifinalists. Winners announced at Awards Ceremony.</p> <p><u>Semifinal Round</u> A.-B. No semifinalists. All teams provide a video presentation of up to five (5) minutes in length. Teams may designate as many members as they choose to participate in presentation. C. 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> C.1. Documentation portfolio is submitted online as a PDF document. No printed pages.  C.J. No USB flash drive submission. The presentation is to be submitted online. Submission procedures will be shared with advisors.</p> <p><u>Semifinal Round</u> A. No semifinalists. All teams submit a presentation of up to five (5) minutes in length online. Submission procedures will be shared with advisors. Teams may designate as many members as they choose to participate in presentation.  B. Teams should reference/highlight their display and documentation during the presentation. C. Presentation is submitted online. No live presentation.</p> <p><b><i>No school or individual names labeled on projects; only State Conference ID#'s are</i></b></p>

	<p><i>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></p> <p><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><u>Preliminary Round</u> No change</p> <p><u>Semifinal Round</u> A. No interview. No semifinalists. All teams provide a presentation of up to five (5) minutes in length</p> <p>Evaluation is based on 190 points:</p> <ul style="list-style-type: none"> <li>• Display (80)</li> <li>• Documentation Portfolio (50)</li> <li>• Presentation (60)</li> </ul>

## Board Game Design

<b>OVERVIEW:</b>	<p>No semifinalists. No interview. All teams create game, documentation portfolio, and video demonstration of game features.</p> <p><b>The documentation portfolio, and video, must be finished, submitted, and accessible via the Internet by 11:59pm on March 30, 2022. Submission procedures will be shared with advisors.</b></p>
<b>ELIGIBILITY:</b>	2 teams of up to 6 members per chapter. Teams of 1 individual are permitted.
<b>TIME LIMITS:</b>	<p><u>Semifinal Round</u>  A. No semifinalists. All teams submit a video demonstration of up to five (5) minutes in length to demonstrate/discuss the features of the game.  Delete B. No interview.</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., A.1.-A.2. All teams submit their documentation portfolio, and video demonstration, online, by 11:59pm on March 30, 2022. Submission procedures will be shared with advisors.  B.1.-B.2. No preliminary contestants, no semifinalists. All teams are evaluated on their documentation portfolio, video demonstration, and packaging and board game criteria.  C. Winners are announced at the Awards Ceremony.</p> <p><u>Semifinal Round</u>  A.-D. No semifinalists. No interview. All teams submit a video demonstration of up to five (5) minutes in length to demonstrate/discuss the features of the game. Teams may designate as many representatives as they choose to demonstrate the functionality of the game in the video, including the packaging and unpackaging.  F. The 1<sup>st</sup>, 2<sup>nd</sup> and 3<sup>rd</sup> place winners are announced at the Awards Ceremony.  Delete G. No on-site component.</p>
<b>REGULATIONS AND REQUIREMENTS:</b>	<p><u>Preliminary Round</u>  D.2. No USB flash drive submission. Documentation portfolio is to be submitted as a PDF document online. Submission procedures will be shared with advisors.</p> <p><u>Semifinal Round</u>  A-C. No semifinalists. No interview. All teams submit a video demonstration of up to five (5) minutes in length to demonstrate/discuss the features of the game. Teams may designate as many representatives as they choose to demonstrate the functionality of the game in the video, including the packaging and unpackaging.</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><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><u>Preliminary Round</u> No change.</p> <p><u>Semifinal Round</u> A. All teams submit a video demonstration of up to five (5) minutes in length to demonstrate/discuss the features of the game. Delete B. No interview. No live component.</p> <p>Evaluation is based on 130 points:</p> <ul style="list-style-type: none"> <li>• Packaging (30)</li> <li>• Board Game (30)</li> <li>• Documentation Portfolio (70)</li> <li>• Demonstration (40)</li> </ul>

## Chapter Team

<b>OVERVIEW:</b>	Test of parliamentary procedures will be taken online. No semifinals. No oral presentation. Testing date and procedures will be shared with advisors.
<b>ELIGIBILITY:</b>	A. 2 teams of 6 members per chapter. C. No semifinalists. No oral presentation. Test only.
<b>TIME LIMITS:</b>	<u>Preliminary Round</u> No change.  <u>Delete Semifinal Round</u> No semifinalists. No oral presentation. Parliamentary procedures test only.
<b>ATTIRE:</b>	See Page 6 of this guide for required dress code.
<b>PROCEDURE:</b>	<u>Preliminary Round</u> A. Test will be taken online. Testing date and procedures will be shared with advisors. C. No semifinalists. No oral presentation. Test only. Winners announced at Awards Ceremony.  <u>Delete Semifinal Round</u> No semifinalists. No oral presentation. Parliamentary procedures test only.
<b>REGULATIONS AND REQUIREMENTS:</b>	<u>Preliminary Round</u> B. No semifinalists. No oral presentation. Test only. Online test date and procedures will be shared with advisors.  <u>Delete Semifinal Round</u> No semifinalists. No oral presentation. Parliamentary procedures test only. Online test date and procedures will be shared with advisors.
<b>EVALUATION:</b>	<u>Preliminary Round</u> No change.  <u>Delete Semifinal Round</u> No semifinalists. No oral presentation. Parliamentary procedures test only. Online test date and procedures will be shared with advisors.  Evaluation is based on 10 points: <ul style="list-style-type: none"> <li>• Team Test (10)</li> </ul>

## Children's Stories

2022 Theme: Create a book for students in pre-k to 1st grade that showcases/promotes engineering. The solution must also include an activity to accompany the book for teachers to use with their students. The activity needs to be a PDF file submitted at the end of the portfolio documentation.

<b>OVERVIEW:</b>	No change  <b>The documentation portfolio, and photos or PDF or slides of the physical storybook, must be finished, submitted, and accessible via the Internet by 11:59pm on March 30, 2022. 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>	<u>Delete Semifinal Round</u> No semifinalists. 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 documentation portfolio, and photos of the physical storybook are to be submitted online by 11:59pm on March 30, 2022. It is up to teams how they want to document the physical storybook (e.g. photos within a slideshow), however, judges need clear photos of each page so that they can read and evaluate the book. B.1.-B.2. No preliminary contestants, no semifinalists. All teams are evaluated on their documentation portfolio and storybook criteria. C. Winners are announced at the Awards Ceremony.  <u>Delete Semifinal Round</u> No semifinalists. No reading or interview. The 1 <sup>st</sup> , 2 <sup>nd</sup> and 3 <sup>rd</sup> place winners are announced at the Awards Ceremony.
<b>REGULATIONS AND REQUIREMENTS:</b>	<u>Pre-Conference/Preliminary Round</u> B. Documentation Portfolio must be submitted as a PDF document. Teams must also submit photos, or a PDF, or slides, etc. of the physical storybook. It is up to teams how they want to document the physical storybook, however, judges need clear photos of each page so that they can read and evaluate the book.  <u>Delete Semifinal Round</u> No semifinalists. No reading or interview. The 1 <sup>st</sup> , 2 <sup>nd</sup> and 3 <sup>rd</sup> place winners are announced at the 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</i></b>

	<i>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>EVALUATION:</b>	<p><u>Preliminary Round</u> No change.</p> <p><u>Delete Semifinal Round</u> No semifinalists. No reading or interview. The 1<sup>st</sup>, 2<sup>nd</sup> and 3<sup>rd</sup> place winners are announced at the Awards Ceremony.</p> <p>Evaluation is based on 210 points:</p> <ul style="list-style-type: none"> <li>• Storybook (130)</li> <li>• Documentation Portfolio (80)</li> </ul>

## Coding

2022 Design Problem will be posted on the NJ TSA website on January 10, 2022

<b>OVERVIEW:</b>	No onsite/live coding challenge. Design problem will be posted on the NJ TSA website on January 10, 2022.  <b>The solution to the design problem must be finished, submitted, and accessible via the Internet by 11:59pm on March 30, 2021. Submission procedures will be shared with advisors.</b>
<b>ELIGIBILITY:</b>	2 teams of 2 members per chapter. Teams of 1 individual are permitted.
<b>TIME LIMITS:</b>	Delete A.-B. Design problem will be posted on January 10, 2022. Entries are submitted online. 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.-C. Design problem will be posted on January 10, 2022. Entries are submitted online by 11:59pm on March 30, 2022. Submission procedures will be shared with advisors. The 1 <sup>st</sup> , 2 <sup>nd</sup> and 3 <sup>rd</sup> place winners are announced at the Awards Ceremony.
<b>REGULATIONS AND REQUIREMENTS:</b>	Delete A.-K. Design problem will be posted on January 10, 2022. Entries are submitted online by 11:59pm on March 30, 2022. Submission procedures will be shared with advisors. The 1 <sup>st</sup> , 2 <sup>nd</sup> and 3 <sup>rd</sup> place winners are announced at the Awards 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.) 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.).</b></i>
<b>EVALUATION:</b>	Evaluation criteria will be included in the design problem.



## Computer-Aided Design (CAD), Architecture

2022 Design Problem will be posted on the NJ TSA website on January 10, 2022

<b>OVERVIEW:</b>	<p>No change</p> <p>The design problem will be posted on the NJ TSA website on January 10, 2022.</p> <p><b>The solution to the design problem must be finished, submitted, and accessible via the Internet by 11:59pm on March 30, 2021. Submission procedures will be shared with advisors.</b></p>
<b>ELIGIBILITY:</b>	2 individuals per chapter.
<b>TIME LIMITS:</b>	Delete A.-C. The design problem will be posted on the NJ TSA website on January 10, 2022 and must be submitted online by 11:59pm on March 30, 2022. Submission procedures will be shared with advisors.
<b>ATTIRE:</b>	See Page 6-7 of this guide for required dress code.
<b>PROCEDURE:</b>	Delete A.-J. The design problem will be posted on the NJ TSA website on January 10, 2022. Participants solve the design problem and submit their solutions, in PDF format, online by 11:59pm on March 30, 2022. Submission procedures will be shared with advisors. The 1 <sup>st</sup> , 2 <sup>nd</sup> and 3 <sup>rd</sup> place winners are announced at the Awards Ceremony.
<b>REGULATIONS AND REQUIREMENTS:</b>	<p>Delete A.-D. The design problem will be posted on the NJ TSA website on January 10, 2022. Participants solve the design problem and submit their solutions, in PDF format, online by 11:59pm on March 30, 2022. Submission procedures will be shared with advisors. The 1<sup>st</sup>, 2<sup>nd</sup> and 3<sup>rd</sup> place winners are announced at the 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>
<b>EVALUATION:</b>	<p>Delete B. No interview. No on-site component.</p> <p>Evaluation is based on 150 points:</p> <ul style="list-style-type: none"> <li>• Solution to Problem (50)</li> <li>• Layout (60)</li> <li>• Architectural Application (20)</li> <li>• Software Utilization (20)</li> </ul>

## Computer-Aided Design (CAD), Engineering

2022 Design Problem will be posted on the NJ TSA website on January 10, 2022

<b>OVERVIEW:</b>	<p>No change</p> <p>The design problem will be posted on the NJ TSA website on January 10, 2022.</p> <p><b>The solution to the design problem must be finished, submitted, and accessible via the Internet by 11:59pm on March 30, 2021. Submission procedures will be shared with advisors.</b></p>
<b>ELIGIBILITY:</b>	2 individuals per chapter
<b>TIME LIMITS:</b>	Delete A.-C. The design problem will be posted on the NJ TSA website on January 10, 2022 and must be submitted online by 11:59pm on March 30, 2022. 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. The design problem will be posted on the NJ TSA website on January 10, 2022. Participants solve the design problem and submit their solutions, in PDF format, online by 11:59pm on March 30, 2022. Submission procedures will be shared with advisors. The 1 <sup>st</sup> , 2 <sup>nd</sup> and 3 <sup>rd</sup> place winners are announced at the Awards Ceremony.
<b>REGULATIONS AND REQUIREMENTS:</b>	<p>Delete A.-D. The design problem will be posted on the NJ TSA website on January 10, 2022. Participants solve the design problem and submit their solutions, in PDF format, online by 11:59pm on March 30, 2022. Submission procedures will be shared with advisors. The 1<sup>st</sup>, 2<sup>nd</sup> and 3<sup>rd</sup> place winners are announced at the 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>
<b>EVALUATION:</b>	<p>Delete B. No interview. No on-site component.</p> <p>Evaluation is based on 150 points:</p> <ul style="list-style-type: none"> <li>• Solution to Problem (50)</li> <li>• Layout (60)</li> <li>• Engineering Application (20)</li> <li>• Software Utilization (20)</li> </ul>

## Cybersecurity

<b>OVERVIEW:</b>	No change. Event date and procedures will be shared with advisors. Teams participate virtually.
<b>ELIGIBILITY:</b>	2 teams of up to 6 members per chapter.
<b>TIME LIMITS:</b>	No change.
<b>PROCEDURE:</b>	<u>Pre-Conference</u> No change.  On-Site Challenge A. Teams participate virtually. Event does not take place “on-site.” H. The 1 <sup>st</sup> , 2 <sup>nd</sup> , and 3 <sup>rd</sup> place winners are announced at the Awards Ceremony.
<b>REGULATIONS AND REQUIREMENTS:</b>	A. Participants will set up their teams on the cybersecurity platform prior to the NJ event date/cybersecurity challenge. Participants will set up their teams remotely/virtually (not “on-site”). Event date and procedures will be shared with advisors.
<b>EVALUATION:</b>	No change.

## Data Science & Analytics

<b>OVERVIEW:</b>	<p>No semifinalists. No semifinal round. No visual representation. All teams create documentation portfolio, scientific poster, and poster presentation.</p> <p><b>The documentation portfolio, and poster presentation, must be finished, submitted, and accessible via the Internet by 11:59pm on March 30, 2022. Submission procedures will be shared with advisors.</b></p>
<b>ELIGIBILITY:</b>	2 teams of 2 members per chapter. Teams of 1 individual are permitted.
<b>TIME LIMITS:</b>	<p>A. The documentation portfolio, and poster presentation, must be finished, submitted, and accessible via the Internet by 11:59pm on March 30, 2022. Submission procedures will be shared with advisors.</p> <p>B. Email verification will be made upon request.</p> <p>C., C.1.-C.3. All teams record and submit a scientific poster presentation up to five (5) minutes in length. Presentation may be submitted as a PDF, or hyperlink, and must show the scientific poster. No live presentation/interview.</p> <p>Delete D. No semifinalists. No on-site challenge.</p>
<b>ATTIRE:</b>	See Page 6 of this guide for required dress code.
<b>PROCEDURE:</b>	<p><u>Pre-Conference</u> C. PDF of the documentation portfolio, and PDF or hyperlink of the scientific poster presentation, must be submitted online by March 30, 2022. Presentation must show the scientific poster. No live presentation. D. Submission procedures will be shared with advisors.</p> <p><u>Preliminary Round</u> A.-F. No on-site component. Teams submit documentation portfolio and scientific poster presentation, up to five(5) minutes in length, online. Judges review and score each team's documentation portfolio and the scientific poster presentation. No preliminary contestants, no semifinalists. No on-site challenge. Winners announced at Awards Ceremony.</p> <p><u>Delete Semifinal Round</u> No semifinalists. No on-site challenge. No visual representation. 1<sup>st</sup>, 2<sup>nd</sup>, and 3<sup>rd</sup> place winners are 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 on-site challenge. No visual representation. 1<sup>st</sup>, 2<sup>nd</sup>, and 3<sup>rd</sup> place 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 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.) Team ID#s may be used for team events. A Team ID# is the first four numbers of</i></b></p>

	<i>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>EVALUATION:</b>	<p><u>Preliminary Round:</u> No change.</p> <p><u>Delete Semifinal Round.</u> No semifinalists. No visual representation and synopsis challenge.</p> <p>Evaluation is based on 160 points:</p> <ul style="list-style-type: none"> <li>• Documentation Portfolio (70)</li> <li>• Scientific Poster Presentation (90)</li> </ul>

## Debating Technological Issues

2022 Topic: Americans rely daily on the internet for information, education, and social media  
Subtopics:

- Medical research being available online
- Remote learning for K-12 education
- Companies tracking data using cell phones

The selected Sub Topic will be posted on the NJ TSA website at 5pm on February 24, 2022. Participants record a debate-style presentation with their team member, and submit the video online by 5pm on March 1, 2022. Submission procedures will be shared with advisors.

Please note—this event has an **earlier due date** than other events. Participants have a limited amount of time to complete the challenge.

<b>OVERVIEW:</b>	<p>The selected Sub Topic will be posted on the NJ TSA website at 5pm on February 24, 2022. Participants record a debate-style presentation with their team member, and email the video by 5pm on March 1, 2022.</p> <p>Participants prepare and deliver a debate-style presentation. Teams will prepare both the Pro and Con side of a selected topic. There is no live debate with teams from other schools. Team members present opposing views of the assigned topic, and record their presentation/debate.</p>
<b>ELIGIBILITY:</b>	2 teams of 2 members per chapter.
<b>TIME LIMITS:</b>	Each team member has two (2) minutes to present their side. Team members must track their own time while recording their presentation.
<b>ATTIRE:</b>	See Page 6-7 of this guide for required dress code.
<b>PROCEDURE:</b>	<p><u>Pre-Conference</u> C. Selected Sub Topic will be posted on the NJ TSA website at 5pm on February 24, 2022.</p> <p><u>Delete Check-In</u> No on-site component. Teams record and submit a presentation.</p> <p><u>Preliminary Round</u> Delete A.-T. There is no live debate against other schools. Please follow guidelines below:</p> <ol style="list-style-type: none"> <li>1. Selected Sub Topic will be posted on the NJ TSA website at 5pm on February 24, 2022. Participants record a debate-style presentation with their team member, and submit the video (URL) and Summary of References (PDF) online by 5pm on March 1, 2022. Submission procedures will be shared with advisors.</li> <li>2. The Summary of References should be prepared according to Regulations and Requirements O.1.-6. on Page 147 of the Competitive Events Guide. The Summary is to be submitted online as a PDF, along with the video presentation.</li> </ol>

	<p>2. Participants each have two minutes to present their side. Participants are responsible for tracking their time while recording their presentation.</p> <p>3. Teams present opposing views of the topic. Order of debate format: a. Pro Speaker (maximum of 2 minutes) b. Con Speaker (maximum of 2 minutes). Teams may use the following suggested format to present opposing views:</p> <p>-Introduction -Position -Conclusion</p> <p>4. The Pro speaker will be first to present.</p> <p>5. The video recording should end when the Con Speaker is finished.</p> <p>6. The 1<sup>st</sup>, 2<sup>nd</sup> and 3<sup>rd</sup> place winners are announced at the Awards Ceremony.</p>
<p><b>REGULATIONS AND REQUIREMENTS:</b></p>	<p><u>Delete Semifinal Round</u> No semifinalists. No on-site debate. Students record debate-style presentation as outlined above.</p>
<p><b>EVALUATION:</b></p>	<p>No semifinal round. Each team member has two (2) minutes to present their side. Delete Cross Examination, Question Responses, and Rebuttal from Criteria on Official Rating Form.</p> <p>Evaluation is based on 80 points for the following criteria:</p> <ul style="list-style-type: none"> <li>• Points of Argument (10)</li> <li>• Organization (10)</li> <li>• Topic Knowledge (20)</li> <li>• Delivery (20)</li> <li>• Voice and Language (10)</li> <li>• Group Member Participation (one pro, one con) (10)</li> </ul>

## Digital Video Production

### 2022 Design Challenge: A day in the life - self, school, family, friends, etc.

<b>OVERVIEW:</b>	<p>No change</p> <p><b>Note:</b> NJ TSA reserves the right to disqualify any entries that contain inappropriate content. These entries will not be judged.</p> <p><b>The video, and documentation portfolio, must be finished, submitted, and accessible via the Internet by 11:59pm on March 30, 2022. Submission procedures will be shared with advisors.</b></p>
<b>ELIGIBILITY:</b>	2 teams of up to 6 members per chapter. Teams of 1 individual are permitted.
<b>TIME LIMITS:</b>	<p><u>Preliminary Round</u>  A. The video, and documentation portfolio, must be finished, submitted, and accessible via the Internet by 11:59pm on March 30, 2022. Submission procedures will be shared with advisors.  B. Email verification will be made upon request.</p> <p><u>Delete Semifinal Round</u>  No semifinalists. No interview. Top three 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>  D. Participants submit their entry online by 11:59pm on March 30, 2022.  E. Submission procedures will be shared with advisors.</p> <p><u>Preliminary Round</u>  A.1.-A.2. No preliminary contestants, no semifinalists. Judges score the Digital Video criteria and the Documentation Portfolio criteria for all teams.  B. No semifinalists. Top three winners are announced at Awards Ceremony.</p> <p><u>Delete Semifinal Round</u>  No semifinalists. No interview. 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>Pre-Conference/Preliminary Round</u>  A. 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.)  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>	<u>Preliminary Round</u>



	<p>No change.</p> <p><u>Delete Semifinal Round</u> No semifinalists. No interview.</p> <p>Evaluation is based on 100 points</p> <ul style="list-style-type: none"><li>• Video Production (70)</li><li>• Documentation Portfolio (30)</li></ul>
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## Engineering Design

2022 Theme: Restore and improve an urban infrastructure

<b>OVERVIEW:</b>	<p>No change.</p> <p><b>The documentation portfolio, display/model, and video presentation must be finished, submitted, and accessible via the Internet by 11:59pm on March 30, 2022. Submission procedures will be shared with advisors.</b></p>
<b>ELIGIBILITY:</b>	2 teams of 3-6 members per chapter. Teams of 1 individual are permitted.
<b>TIME LIMITS:</b>	<p>A. All teams will provide a video presentation of no more than five (5) minutes in length, with their entry.</p> <p>Delete B. No interview. Video presentation only.</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., A.1. The PDF of the documentation portfolio is submitted online. No USB flash drive submission. A.2.-A.3. The display and prototype/model of the solution should be highlighted in the video presentation so that judges can clearly view and evaluate them. URL of video presentation submitted online. C. No semifinalists. Winners announced at the Awards Ceremony.</p> <p><u>Semifinal Round</u> A.-C. No semifinalists. All teams provide a video presentation of up to five (5) minutes in length. Teams may designate as many members as they choose to participate in presentation. The presentation should show/demonstrate the display and model/prototype.  E. 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> B.1. Portfolio is to be submitted online as a PDF. No USB flash drive submission.  C.3.b.-c. Teams will operate their own power/electricity during the video 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.) 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><u>Preliminary Round</u> No change.</p> <p><u>Semifinal Round</u> A. No semifinalists. No interview. All teams provide a video presentation of up to 5 minutes in length.</p> <p>Evaluation is based on 200 points:</p> <ul style="list-style-type: none"><li>• Display and Model (40)</li><li>• Documentation Portfolio (110)</li><li>• Video Presentation (50)</li></ul>
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## Essays on Technology

The 2022 topic and sources will be posted on the NJ TSA website at 5pm on February 24, 2022. Participants email their completed essay by 5pm on March 1, 2022.

Please note—this event has an **earlier due date** than other events. Participants have a limited amount of time to write their essay.

<b>OVERVIEW:</b>	No change.  No change. Topic and sources will be posted on the NJ TSA website at 5pm on February 24, 2022. All participants submit their completed essay and bibliography by 5pm on March 1, 2021. Submission procedures will be shared with advisors.
<b>ELIGIBILITY:</b>	2 individuals per chapter.
<b>TIME LIMITS:</b>	Topic and sources will be posted on the NJ TSA website at 5pm on February 24, 2022. All participants submit their completed essay and bibliography by 5pm on March 1, 2021. Submission procedures will be shared with advisors.
<b>ATTIRE:</b>	See Page 6 of this guide for required dress code.
<b>PROCEDURE:</b>	<u>On-Site Challenge</u> A.-F. Writing prompt/topic, and articles will be posted on the NJ TSA website at 5pm on February 24, 2022. Participants must submit their completed essay, not to exceed three (3) typed pages, (in PDF format), and bibliography/works cited page (in PDF format), by 5pm on March 1, 2022. No USB flash drive submission. Submission procedures will be shared with advisors. H. No finalists. The 1 <sup>st</sup> . 2 <sup>nd</sup> and 3 <sup>rd</sup> place winners are announced at the Awards Ceremony.
<b>REGULATIONS AND REQUIREMENTS:</b>	A.-E. Participants write essay remotely/virtually. No on-site component. No USB flash drive needed. Directions for submission of completed essays and bibliography will be provided to advisors.  K. All essays become the property of NJ TSA. No USB flash drives. Essay and bibliography submitted online.
<b>EVALUATION:</b>	No change.  Evaluation is based on 110 points: <ul style="list-style-type: none"> <li>• Essay (110)</li> </ul>

## Extemporaneous Speech

The 2021 topic will be posted on the NJ TSA website at 5pm on February 24, 2022. Participants record their speech, and submit it online by 6pm the same day. Submission procedures will be shared with advisors.

Please note—this event has an **earlier due date** than other events. Participants have a limited amount of time to give their speech.

<b>OVERVIEW:</b>	Topic will be posted on the NJ TSA website at 5pm on February 24, 2022. Participants record their three-to-five (3-5) minute speech, and submit it online by 6pm the same day.
<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>On-Site Challenge</u>  <u>A.-G.</u> Topic will be posted on the NJ TSA website at 5pm on February 24, 2022. Participants record their three-to-five (3-5) minute speech, and submit it online by 6pm the same day. Participants have one (1) hour to view topic, take notes, record speech, and submit it online. Submission procedures will be shared with advisors.  <u>I.</u> No finalists. Top three winners are announced at the Awards Ceremony.</p>
<b>REGULATIONS AND REQUIREMENTS:</b>	<p>A.1. Participant records speech remotely, not on-site. There will not be name tags.  A.3.-5. Participant records speech remotely, not on-site. Participants provide their own note cards as needed.  Delete B. Participant records speech remotely.</p>
<b>EVALUATION:</b>	<p>No change.</p> <p>Evaluation is based on 80 points:</p> <ul style="list-style-type: none"> <li>• Speech (80)</li> </ul>

## Fashion Design and Technology

2022 Theme: Amusement theme parks open new attractions and rides annually. Create three (3) different prototypes of attire for park employees who operate a new family-friendly ride called the “Power Charger.” The park is open during all seasons throughout the year and this new ride has the color theme of red, white, and navy blue. One (1) of the three (3) prototypes is submitted for evaluation.

<b>OVERVIEW:</b>	<p>No semifinalists. No live presentation/interview. All teams create a presentation video in which they present their garment designs and discuss the design process.</p> <p><b>The documentation portfolio, and presentation video, must be finished, submitted, and accessible via the Internet by 11:59pm on March 30, 2022. Submission procedures will be shared with advisors.</b></p>
<b>ELIGIBILITY:</b>	2 teams of 2-4 members per chapter.
<b>TIME LIMITS:</b>	1. Presentation video should be no more than five (5) minutes in length. No interview.
<b>ATTIRE:</b>	See Page 6-7 of this guide for required dress code.
<b>PROCEDURE:</b>	<p><u>Pre-Conference</u> No change.</p> <p><u>Preliminary Round</u> A. Participants submit their documentation portfolio (as a PDF) and presentation video (URL), highlighting their wearable prototype, online by 11:59pm on March 30, 2022. B.1.-B.2. Judges score the Quality of Garment and Pattern criteria, and Documentation Portfolio criteria, for all teams. No preliminary contestants. No semifinalists or finalists. C. No semifinalists. Winners announced at Awards Ceremony.</p> <p><u>Semifinal Round</u> A.-B. All teams create presentation video. No semifinalists. No live interview. C. No semifinalists. All teams create presentation video where they present their designs. Teams should showcase the quality of the construction during their presentation video. Refer to the Official Rating Form for additional information. E.1.-4. Presentation video should be no more than five (5) minutes in length. Points will be deducted from a team’s score for exceeding the five (5) minute time frame. F. No live presentation. Presentation video only. Delete 6. No LEAP interview. G. 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> A. Entry is submitted online. B. Please include photos/images of patterns and prototypes in Documentation Portfolio. D.4.-5. Prototypes should be showcased in the presentation video and in photos included in the Documentation Portfolio. All entries are submitted online. F. No semifinalists. All teams create presentation video. G.1. Scanned copies, or photos, of patterns, must be included in the Documentation Portfolio. H.1. Documentation Portfolio must be submitted online as a PDF. Please include scanned copies, or photos, of patterns in the Documentation Portfolio.</p>

	<p><u>Semifinal Round</u> A-B. No semifinalists. All teams create and submit a presentation video. No live presentation or interview.</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> <p>Labels/tape are recommended for labeling garments, documentation, and on the outside of submission container and/or garment bag.</p>
<b>EVALUATION:</b>	<p><u>Preliminary Round</u> No change.</p> <p><u>Semifinal Round</u> A. No interview. No semifinalists. All teams create a presentation video.</p> <p>Evaluation is based on 210 points:</p> <ul style="list-style-type: none"> <li>• Quality of garments (50)</li> <li>• Patterns (20)</li> <li>• Documentation Portfolio (70)</li> <li>• Presentation Video (70)</li> </ul>

## Forensic Science

<b>OVERVIEW:</b>	Test of forensic science theory will be taken online. No semifinals. No mock crime scene. Testing date and procedures will be shared with advisors.
<b>ELIGIBILITY:</b>	2 teams of 2 members per chapter.
<b>TIME LIMITS:</b>	<u>Preliminary Round</u> No change.
<b>ATTIRE:</b>	See Page 6 of this guide for required dress code.
<b>PROCEDURE:</b>	<p><u>Preliminary Round</u> A. Testing date and procedures will be shared with advisors. Test is taken online. D. No semifinalists. Winners announced at Awards Ceremony.</p> <p><u>Delete Semifinal Round</u> No on-site challenge. No semifinalists. Online test only. 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> B.-C. Test is administered online. Testing date and procedures will be shared with advisors. Delete D. No semifinal round. Test only.</p> <p><u>Delete Semifinal Round</u> No on-site challenge. No semifinalists. Online test only. The 1<sup>st</sup>, 2<sup>nd</sup> and 3<sup>rd</sup> place winners are announced at the Awards Ceremony.</p>
<b>EVALUATION:</b>	<p><u>Preliminary Round</u> No change.</p> <p><u>Delete Semifinal Round</u> No on-site challenge. No semifinalists. Online test only.</p> <p>Evaluation is based on 50 points:</p> <ul style="list-style-type: none"> <li>• Test Score (50)</li> </ul>



## Future Technology Teacher

<b>OVERVIEW:</b>	<p>No semifinalists. All participants create instructional video, and lesson plan video. No live interview.</p> <p><b>The instructional video, and lesson plan video, must be finished, submitted, and accessible via the Internet by 11:59pm on March 30, 2022. Submission procedures will be shared with advisors.</b></p>
<b>ELIGIBILITY:</b>	3 individuals per chapter
<b>TIME LIMITS:</b>	<p><u>Pre-Conference/Preliminary Round</u>  A. The instructional video, and lesson plan video, must be finished, submitted, and accessible via the Internet by 11:59pm on March 30, 2022.  B. Email verification is made upon request.  C. The video cannot exceed five (5) minutes in length.</p> <p><u>Semifinal Round</u>  A. No semifinalists. All participants submit a lesson plan video online, not to exceed five (5) minutes in length.  B. No semifinalists. All participants submit lesson plan video, no longer than five (5) minutes in length.  Delete B.1.-B.3. No live presentation/interview.</p>
<b>ATTIRE:</b>	See Page 6 of this guide for required dress code.
<b>PROCEDURE:</b>	<p><u>Pre-Conference/Preliminary Round</u>  C.-D. Participants submit both the instructional video and lesson plan video by 11:59pm on March 30, 2022. Submission procedures will be shared with advisors.  E. No semifinalists. Winners announced at Awards Ceremony.</p> <p><u>Semifinal Round</u>  Delete B.-D. No live presentation/interview. Lesson plan video submitted online.  E., E.1., E.3. Lesson plan video is submitted online and cannot exceed five (5) minutes in length. No live presentation/interview.  F. 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>Pre-Conference/Preliminary Round</u>  A.3.a. The video cannot exceed five (5) minutes.  A.4. Copyright forms must be submitted as needed, as a PDF, online with the videos.</p> <p><u>Semifinal Round</u>  A.6. Copyright forms should be submitted online, as a PDF, with the videos. No USB submission.  A.7. No USB submission. Videos and forms are submitted online by 11:59pm March 30, 2022. Submission procedures will be provided.  D. No live presentation/interview.</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</i></b></p>

	<i>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>	<p><u>Preliminary Round</u> No change.</p> <p><u>Semifinal Round</u> Delete B. No live presentation/interview. No semifinalists. All participants create instructional video, and lesson plan video.</p> <p>Evaluation is based on 180 points:</p> <ul style="list-style-type: none"> <li>• Instructional Video (80)</li> <li>• Lesson Plan Video (100)</li> </ul>

## Geospatial Technology

2022 Theme: Research a local, regional, state, or national manufacturing issue

<b>OVERVIEW:</b>	<p>No preliminary round participants, no semifinalists. All teams submit digital portfolio and infographic map. No semifinal presentation/interview.</p> <p><b>The digital documentation portfolio, and visual infographic map, must be finished, submitted, and accessible via the Internet by 11:59pm on March 30, 2022. Submission procedures will be shared with advisors.</b></p>
<b>ELIGIBILITY:</b>	2 teams of up to 3 members per chapter. Teams of 1 individual are permitted.
<b>TIME LIMITS:</b>	<p><u>Preliminary Round</u>            A. Portfolio and infographic map must be submitted online by 11:59pm on March 30, 2022.            B. Email verification will be made upon request.</p> <p><u>Delete Semifinal Round</u>            No defense presentation. No semifinalists.</p>
<b>ATTIRE:</b>	See Page 6 of this guide for required dress code.
<b>PROCEDURE:</b>	<p><u>Pre-Conference</u>            D. Participants submit portfolio (and infographic map) by 11:59pm on March 30, 2022.            E. Submission procedures will be provided by NJ TSA.</p> <p><u>Preliminary Round</u>            A.-E. No preliminary contestants. No semifinalists. Judges review and score the Documentation Portfolio criteria, and the Visual Infographic criteria for each team. Top three winners are announced at Awards Ceremony.</p> <p><u>Delete Semifinal Round.</u>            No semifinalists. No defense presentation/interview. Top three winners announced at Awards Ceremony.</p>
<b>REGULATIONS AND REQUIREMENTS:</b>	<p><u>Pre-Conference</u>            B.2. Portfolio must be submitted online by 11:59pm on March 30, 2022. NJ TSA will provide submission procedures.</p> <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.)            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><u>Preliminary Round:</u> No change.</p> <p><u>Delete Semifinal Round.</u> No semifinalists. No defense presentation/interview.</p> <p>Evaluation is based on 150 points:</p> <ul style="list-style-type: none"><li>• Documentation Portfolio (100)</li><li>• Visual Infographic Map (50)</li></ul>
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## Music Production

<b>OVERVIEW:</b>	<p>No change</p> <p><b>The documentation portfolio, and musical piece, must be finished, submitted, and accessible via the Internet by 11:59pm on March 30, 2022. Submission procedures will be shared with advisors.</b></p>
<b>ELIGIBILITY:</b>	2 teams of up to 6 members per chapter. Teams of 1 individual are permitted.
<b>TIME LIMITS:</b>	<p><u>Preliminary Round</u>  A. The documentation portfolio, and musical piece, must be finished, submitted, and accessible via the Internet by 11:59pm on March 30, 2022. Submission procedures will be shared with advisors.  B. Email verification will be made upon request.</p> <p><u>Delete Semifinal Round</u>  No semifinalists. No interview.</p>
<b>ATTIRE:</b>	See Page 6-7 of this guide for required dress code.
<b>PROCEDURE:</b>	<p><u>Pre-Conference</u>  C. Change May 15<sup>th</sup> to March 30, 2022.  D. Submission information will be provided by NJ TSA.</p> <p><u>Preliminary Round</u>  A.-B. No preliminary contestants. No semifinalists. Judges score the Musical Piece criteria, and the Documentation Portfolio criteria, for each team. Top three winners are 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>  D.9. Change TSA to NJ TSA.</p> <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.)  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.).  ID#'s should be labeled on CD, CD case (if included) and portfolio.</i></b></p>
<b>EVALUATION:</b>	<p><u>Preliminary Round</u>  No change.</p>

Delete Semifinal Round

No presentation/interview. No semifinalists. Winners announced at Awards Ceremony.

Evaluation is based on 100 points:

- Documentation Portfolio (30)
- Musical Piece (70)

## On Demand Video

The 2022 theme will be posted on the NJ TSA website at 5pm on February 24, 2022. Participants submit their completed video and documentation online by 5pm on March 1, 2022. Submission procedures will be shared with advisors.

Please note—this event has an **earlier due date** than other events. Participants have a limited amount of time to complete the challenge.

<b>OVERVIEW:</b>	<p>Participants will write, shoot and edit a sixty (60) second video.</p> <p>The theme and any required criteria will be announced on the NJ TSA website at <b>5pm on February 24, 2022.</b></p> <p>The video and documentation must be <b>submitted online by 5pm on March 1, 2022.</b> Submission procedures will be shared with advisors.</p> <p><b>Note:</b> NJ TSA reserves the right to disqualify any entries that contain inappropriate content. These entries will not be judged.</p>
<b>ELIGIBILITY:</b>	2 teams of up to 6 members per chapter. Teams of 1 individual are permitted.
<b>TIME LIMITS:</b>	B. The theme will be posted on the NJ TSA website at 5pm on February 24, 2022. Entries must be submitted online by 5pm on March 1, 2022.
<b>ATTIRE:</b>	See Page 6 of this guide for required dress code.
<b>PROCEDURE:</b>	<p><u>No On-Site Challenge</u></p> <p>A.-B. The theme will be posted on the NJ TSA website at 5pm on February 24, 2022. Entries must be submitted online by 5pm on March 1, 2022. There is no on-site challenge. Teams create video remotely.</p> <p>E.-F. Entries are reviewed by judges. No finalists. Top three winners are announced at the Awards Ceremony.</p>
<b>REGULATIONS AND REQUIREMENTS:</b>	<p>A.1.a.-d. Participants film their footage remotely and must adhere to all guidelines set forth by their school/chapter/community.</p> <p>A.2. Entries become the property of NJ TSA.</p> <p>B. Entries are submitted online by 5pm on March 1, 2022.</p> <p>Delete 8. Teams create entry remotely.</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></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>No change.</p> <p>Evaluation is based on 100 points:</p> <ul style="list-style-type: none"> <li>• Production (100)</li> </ul>

## Optical Engineering

2022 Design Problem will be posted on the NJ TSA website on January 10, 2020

**Please note:** this event is being offered at the state level only; it is NOT an official TSA competitive event. Follow the guidelines/procedures below to prepare for entry into the state competition.

<b>OVERVIEW:</b>	<p>Participants work as part of a team to design and fabricate an optical device that meets a specific need. The focus will be on the design process; participants should incorporate innovation into their entry/solution.</p> <p>The solution should incorporate the application of optical and mathematical principles and should assess its impact on the community. Entries will consist of a documentation portfolio and a digital display (including a prototype/device). Participants will present and defend their solution in a timed presentation.</p> <p><b>The documentation portfolio, and digital display, must be finished, submitted, and accessible via the Internet by 11:59pm on March 30, 2022. Submission procedures will be shared with advisors.</b></p>
<b>ELIGIBILITY:</b>	3 teams of up to 6 members per chapter. Teams of 1 member are permitted.
<b>TIME LIMITS:</b>	<ol style="list-style-type: none"> <li>1. Entries must be started and completed during the current school year.</li> <li>2. Documentation portfolio, digital display (including prototype/device) and presentation video must be submitted online by March 30, 2022. Submission procedures will be shared with advisors.</li> <li>3. Teams create a presentation video, no more than five (5) minutes in length, to present their solutions, and demonstrate the prototype/device.</li> </ol>
<b>ATTIRE:</b>	See Page 6 of this guide for required dress code.
<b>PROCEDURE:</b>	<ol style="list-style-type: none"> <li>1. Participants submit their entries online by March 30, 2022. Entries consist of:             <ol style="list-style-type: none"> <li>a. documentation portfolio (submitted as PDF)</li> <li>b. digital display (submitted as PDF)</li> <li>c. prototype/device (featured in the digital display and presentation video)</li> <li>d. presentation video, up to 5 minutes in length (submitted as hyperlink)</li> </ol> </li> <li>2. Entries are reviewed by a panel of Edmund Optics Engineers.</li> <li>3. The 1<sup>st</sup>, 2<sup>nd</sup> and 3<sup>rd</sup> place winners are announced at the Awards Ceremony.</li> </ol>
<b>REGULATIONS AND REQUIREMENTS:</b>	<p>A. Teams must demonstrate a firm understanding of the challenge and problem they are addressing. A team’s entry must reflect thorough and serious research, as well as a creative and plausible solution.</p> <p>B. A team’s solution must include likely impacts to the environment, economy, and society, as well as any important ethical considerations, and/or political ramifications.</p> <p>C. A Documentation portfolio is required and should be saved as a multi-page PDF</p>



document with the pages in this order:

1. Title page with the challenge listed, event title, the conference city and state, and the year; one (1) page
2. Table of contents; pages as needed
3. Definition of the challenge/problem; one (1) page
4. Explanation of importance: Explain why the problem is important to society and describe the necessary scientific and technical concepts, as well as current issues related to the challenge; two (2) pages
5. Pages titled "Problem Solution": Present the solution for the identified problem, with support from scientific concepts and principles drawn from evidence. Mathematical and graphic models should be included as necessary, as well as photographs of any physical models developed; seven (7) pages, maximum
6. Patent Application: to include specification, drawing, and oath or declaration (refer to [www.uspto.gov](http://www.uspto.gov))
7. Plan of Work log that covers the life of the project including date, task, time involved, team member responsible, and comments (see Forms Appendix or TSA website); pages as needed
8. Page(s) titled "References and Resources" that cite books, interviews, professional journals, websites, etc., using Modern Language Association (MLA) style; pages as needed

D. The digital display must be saved as a PDF and should include, at a minimum, the following: (a) photographs of the prototype; (b) summary of the findings/outcomes of the design process; (c) citations of all ideas, text, and images from other sources.

E. A physical device (or prototype/s) is/are required and should be highlighted in the digital display and presentation video.

F. If the physical model/s or prototype/s require power, they must be powered by dry cell(s) or photo-voltaic cells.

H. No harmful or illegal substances are permitted. No viruses, live plants, or animals are permitted. No dangerous processes, experiments, or physical models may be displayed or demonstrated.

I. During the presentation video, each team has a maximum of (5) minutes to present their entry.

***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.)***

***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***

	<i>multiple teams from one chapter for the same competition, include which team they are on (e.g. 2345-1, 2345-2, etc.).</i>
<b>EVALUATION:</b>	<p>Evaluation is based on 220 points:</p> <ul style="list-style-type: none"> <li>• Documentation (120)</li> <li>• Display (including prototype/device) (50)</li> <li>• Video Presentation (50)</li> </ul> <p>Please see the rating form on the following pages.</p>
<b>STEM INTEGRATION:</b>	This event aligns with the STEM educational standards noted below. Science, Technology, Engineering, Mathematics
<b>PRIMARY LEADERSHIP SKILLS:</b>	<p>Leadership skills promoted in this event:</p> <ul style="list-style-type: none"> <li>• COMMUNICATION — Students choose an existing design problem and develop and explain their solution. Suggested leadership lessons: <i>Personality Types</i> and <i>Promote It</i></li> <li>• CRITICAL THINKING — Students analyze and evaluate a problem in order to develop an acceptable solution. Suggested leadership lessons: <i>And The Answer Is</i> and <i>Critical Thinking Tips</i></li> <li>• PROBLEM SOLVING — Students devise a plan that will yield an acceptable solution. Suggested leadership lessons: <i>Debate It</i> and <i>Effective Brainstorming</i></li> </ul> <p><i>Additional leadership skills promoted in this event: creative thinking, decision making, ethics, evaluation, organization, teamwork</i></p>
<b>TSA AND CAREERS:</b>	This competition connects to one or more of the career areas featured in the TSA AND CAREERS section of the National TSA Competitive Events Guide. Use <i>The 16 Career Clusters</i> chart and the <i>TSA Competitions and The 16 Career Clusters</i> grid as resources for information about careers.
<b>CAREERS RELATED TO THIS EVENT:</b>	<p>Optical engineer  Mechanical engineer  Manufacturing consultant  Mathematician  CAD Technician</p>

Participant ID/Team ID# \_\_\_\_\_

# OPTICAL ENGINEERING

**2022 OFFICIAL RATING FORM**

**HIGH SCHOOL**

CRITERIA	Minimal performance 1-4 points	Adequate Performance 5-8 points	Exemplary Performance 9-10	Record the scores in the column spaces below.
Evaluators: Using minimal (1-4 points), adequate (5-8 points) or exemplary (9-10 points) performance levels as a guideline, record the scores earned for the event criteria in the column spaces to the far right. The X1, X2 or X3 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; an “adequate” score of 7 for an X3 criterion = 21 points.)				

## Documentation Portfolio (120 Points)

<b>Portfolio components</b> (X1)	Portfolio is unorganized and/or is missing three or more components.	Portfolio has most components and is generally organized.	Portfolio has all required components and is well organized.	
<b>Problem definition</b> (X1)	The problem is not clearly written or defined; the problem does not fall within the grand challenge selected.	The problem is somewhat clearly written and defined.	The problem is clearly written, concise, and well defined; the problem falls within the grand challenge selected.	
<b>Explanation of importance</b> (X2)	There is little evidence of research; there is a lack of understanding of the issues cited.	There is some evidence of research; an adequate understanding of the issues is present.	Thorough research is clearly evident with a firm understanding of the issues established.	
<b>Problem solution</b> (X4)	A very brief explanation of the final solution is presented; there is a lack of creativity; descriptions are weak.	An adequate description of the solution is presented and supported by some amount of research and evidence; the solution is somewhat creative.	The solution is supported by the research gathered and scientific and engineering evidence; the solution is plausible and creative.	
<b>Patent application</b> (X2)	The patent application is incomplete, poorly worded, or missing.	The patent application is complete, but adequately worded, with somewhat effective drawings.	The patent application is complete and effective in presenting the inventor’s product design.	
<b>Plan of Work log</b> (X1)	The log is poorly organized and/or incomplete.	The log is adequately detailed, organized, and contains most of the required components.	The log is very well done and contains all the required components.	
<b>References and resources</b> (X1)	There are few references listed, and/or references listed show little relevance to the project’s goal.	There are a sufficient number and quality of references listed.	Many quality references are listed, reflecting research in the areas covered.	

### DOCUMENTATION SUBTOTAL (120 points)

## Display and Model (50 Points)

<b>Aesthetics</b> (X1)	The display design is unattractive in appearance and shows a lack of understanding of graphic design principles.	The display design is somewhat attractive and shows an adequate understanding of the use of graphic design principles.	The display is of professional quality with an exemplary use of graphic design principles.	
<b>Model/Prototype</b> (X1)	Model is confusing and does not represent and/or support the proposed problem solution.	Model provides adequate representation and support of the proposed problem solution.	Model provides excellent representation and support of the proposed problem solution.	
<b>Overall impact</b> (X3)	The display and model does not detail or enhance the essential components of the team’s problem identification and solution.	The display and model somewhat detail and enhance the essential components of the team’s problem identification and solution.	The display and model greatly detail and enhance the essential components of the team’s problem identification and solution.	

### DISPLAY AND MODEL SUBTOTAL (50 points)

Rules violations (a deduction of 20% of the total possible points for the above sections) must be initiated by the judge, coordinator, and manager of the event. Record the deduction in the space to the right.  
 Indicate the rule violated: \_\_\_\_\_

**Video Presentation (50 Points)**

<b>Organization</b> (X1)	Team seems unprepared and unorganized for the presentation, with an illogical explanation of the project.	Team is prepared for the interview and is somewhat organized in its presentation to judges; team's presentation thesis is, for the most part, logical and/or clear.	Team's presentation with judges is well organized; the interview is concise and logical, with a clear explanation of the development of the project.
<b>Knowledge</b> (X1)	Team members seem to have little understanding of the concepts in their project; vague interview answers are provided.	Team members have a generalized understanding of the concepts discussed and answer questions adequately.	Evidence is clear that team members have a thorough understanding of the concepts discussed; they answer questions thoroughly.
<b>Articulation</b> (X1)	The presentation and provide an unclear, unorganized, and or illogical description of the project.	The presentation and offer a somewhat logical and easy-to-understand project description.	The presentation provides a clear, concise, and easy-to-follow description of the project.
<b>Delivery</b> (X1)	The team is verbose and/or uncertain in its presentation; participants' posture, gestures, and lack of eye contact diminish the delivery.	The team is somewhat well-spoken and clear in its presentation; participants' posture, gestures, and eye contact result in an acceptable delivery.	The team is well-spoken and distinct in its presentation; participants' posture, gestures, and eye contact result in a polished, natural, and effective delivery.
<b>Team participation</b> (X1)	Only one person in the group communicates with judges; there is little or no participation from other team members.	Team members all participate to some extent and seem to understand the concepts.	Team members seem to fully understand the concepts and share an equal role in the interview.

**PRESENTATION/INTERVIEW SUBTOTAL (50 points)**

Rules violations (a deduction of 20% of the total possible points for the above sections) must be initiated 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 TOTAL score, add any subtotals and subtract rules violation points, as necessary. **TOTAL (220 points)**

Comments:

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

Printed Name: \_\_\_\_\_ Signature: \_\_\_\_\_

## Photographic Technology

2022 Theme: Challenges - personal, school, family, friends, etc.

<b>OVERVIEW:</b>	No semifinalists. No on-site interview or problem.  <b>The photographic portfolio must be finished, submitted, and accessible via the Internet by 11:59pm on March 30, 2022. Submission procedures will be shared with advisors.</b>
<b>ELIGIBILITY:</b>	2 individuals per chapter.
<b>TIME LIMITS:</b>	<u>Preliminary Round</u> A. The photographic portfolio must be finished, submitted, and accessible via the Internet by 11:59pm on March 30, 2022. Submission procedures will be shared with advisors. B. Email verification will be made upon request.  <u>Delete Semifinal Round</u> No on-site challenge. No semifinalists. 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 May 15 <sup>th</sup> to March 30, 2022. D. Submission information will be provided by NJ TSA.  <u>Preliminary Round</u> No semifinalists. Winners are announced at the Awards Ceremony.  <u>Delete Semifinal Round</u> No on-site challenge. No semifinalists. The 1 <sup>st</sup> , 2 <sup>nd</sup> and 3 <sup>rd</sup> place winners are announced at the Awards Ceremony.
<b>REGULATIONS AND REQUIREMENTS:</b>	<u>Preliminary Round</u> No change.  <u>Delete Semifinal Round</u> No semifinalists. No on-site challenge.  Please read Regulations carefully, paying close attention to image size requirements, order of pages, etc.  <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>	<u>Pre-Conference/Preliminary Round</u> No change.  <u>Delete Semifinal Round</u> No semifinalists. No on-site challenge. No interview.

	<p>Evaluation is based on 60 points:</p> <ul style="list-style-type: none"><li>• Photographic Portfolio (60)</li></ul> <p><b>Please take note of the Criteria used for evaluation of the Portfolio on the Official Rating Form:</b></p> <ul style="list-style-type: none"><li>• Principles and Elements of Design and Composition and Creativity (10)</li><li>• Technical Quality (10)</li><li>• Impact and Theme (10)</li><li>• Written statements (10)</li><li>• Resources/References (20)</li></ul>
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## Prepared Presentation

The 2022 topic will be posted on the NJ TSA website at 5pm on February 24, 2022. Participants email their completed presentation by 5pm on March 1, 2022. Submission procedures will be shared with advisors.

Please note—this event has an **earlier due date** than other events. Participants have a limited amount of time to complete the challenge.

<b>OVERVIEW:</b>	The assigned topic will be posted on the NJ TSA website on February 24, 2022, at 5pm. Completed presentations must be submitted by 5pm on March 1, 2022.
<b>ELIGIBILITY:</b>	2 individuals per chapter
<b>TIME LIMITS:</b>	B-C. Presentation is recorded, then submitted online. Participants must track their own time while recording presentation, to ensure they meet the minimum (3 minutes) and maximum (5 minutes) time requirements.
<b>ATTIRE:</b>	See Page 6 of this guide for required dress code.
<b>PROCEDURE:</b>	<u>No On-Site Challenge</u> A.-C. No on-site presentation. The assigned topic will be posted on the NJ TSA website on February 24, 2022, at 5pm. Completed presentations (URL) must be submitted by 5pm on March 1, 2022. E. No finalists. Winners are announced at the Awards Ceremony.
<b>REGULATIONS AND REQUIREMENTS:</b>	A. The assigned topic will be posted on the NJ TSA website on February 24, 2022, at 5pm. Completed presentations must be submitted by 5pm on March 1, 2022. C.-F. No on-site presentation. The assigned topic will be posted on the NJ TSA website on February 24, 2022, at 5pm. Completed presentations (URL) must be submitted by 5pm on March 1, 2022. Delete G.1.-3. No set up/take down time. Presentations are recorded off site. Delete H. Presentations are recorded off site.
<b>EVALUATION:</b>	No change.  Evaluation is based on 100 points: <ul style="list-style-type: none"> <li>• Presentation (30)</li> <li>• Stage Presence (30)</li> <li>• Organization of the Presentation (40)</li> </ul>

## Promotional Design

2022 Design Challenge: Your school is hosting a student organization fair to promote clubs and activities. You have the responsibility of developing promotional materials to hand out to students at the fair who are interested in joining the TSA chapter. All items are to be placed into a two-pocket folder. All student and school names must be fictitious.

<b>OVERVIEW:</b>	No semifinalists. No on-site technical challenge.  <b>The digital promotional materials must be finished, submitted, and accessible via the Internet by 11:59pm on March 30, 2022. Submission procedures will be shared with advisors.</b>
<b>ELIGIBILITY:</b>	2 individuals per chapter.
<b>TIME LIMITS:</b>	Delete A.-B. No semifinalists. No on-site problem. Entries are submitted online by 11:59pm on March 30, 2022.
<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. Entries are created remotely/virtually, and submitted online. C. No semifinalists. Winners are announced at the Awards Ceremony.</p> <p><u>Delete Semifinal Round</u> No semifinalists. No on-site component. 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> A.1.-3. Physical folder is not submitted, only cover image that is to appear on cover of folder. The cover image, and the other required promotional publication items, are to be submitted online as a PDF document. A minimum of four (4) promotional publication items are required (folder cover is not included as one of these four items). B. The entry is submitted online as a PDF document. C.1.-10. No printed items. All items and required documents are submitted as a PDF document, no paper copies. Entry is submitted online. D. Change TSA to NJ TSA.</p> <p><u>Delete Semifinal Round</u> No semifinalists. No on-site component. The 1<sup>st</sup>, 2<sup>nd</sup> and 3<sup>rd</sup> place winners are announced at the 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>
<b>EVALUATION:</b>	<p><u>Preliminary Round</u> No change.</p>



Delete Semifinal Round

No semifinalists. No on-site component. The 1<sup>st</sup>, 2<sup>nd</sup> and 3<sup>rd</sup> place winners are announced at the Awards Ceremony.

Evaluation is based on 110 points:

- Promotional Folder Cover (40)
- Promotional Folder Contents (70)

## Scientific and Technical Visualization (SciVis)

<b>OVERVIEW:</b>	<p>No change.</p> <p><b>The documentation portfolio and visualization must be finished, submitted, and accessible via the Internet by 11:59pm on March 30, 2022. Submission procedures will be shared with advisors.</b></p>
<b>ELIGIBILITY:</b>	3 teams of up to 6 members per chapter. Teams of 1 individual are permitted.
<b>TIME LIMITS:</b>	<p><u>Preliminary Round</u> No change.</p> <p><u>Delete Semifinal Round</u> No semifinalists. No interview.</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. The documentation portfolio and visualization must be submitted online by 11:59pm on March 30, 2022. Submission procedures will be shared with advisors. B.1.-2. Judges review and score the Visualization criteria, and Documentation Portfolio criteria, for all teams. No preliminary contestants, no semifinalists. C. No semifinalists. Top three winners are announced at the Awards Ceremony.</p> <p><u>Delete Semifinal Round</u> No semifinalists. No interview. 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> B. Entries become the property of NJ TSA. C.1. Documentation portfolio is to be submitted online as a PDF document. Delete C.1.a. No USB flash drive submission. D.1. No USB flash drive submission. Hyperlink to the visualization must be submitted online. Submission procedures will be provided by NJ TSA. D.5. All work must be submitted online. No USB flash drive submission.</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.) 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><u>Preliminary Round</u> No change.</p>

	<p><u>Delete Semifinal Round</u> No semifinalists. No interview.</p> <p>Evaluation is based on 130 points:</p> <ul style="list-style-type: none"><li>• Documentation Portfolio (50)</li><li>• Visualization (80)</li></ul>
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## Software Development

<b>OVERVIEW:</b>	<p>No change.</p> <p><b>The demonstration video showing the software design must be finished, submitted, and accessible via the Internet by 11:59pm on March 30, 2022. Submission procedures will be shared with advisors.</b></p>
<b>ELIGIBILITY:</b>	2 teams of up to 6 members per chapter. Teams of 1 individual are permitted.
<b>TIME LIMITS:</b>	No interview. Teams create a demonstration video of up to seven (7) minutes in length.
<b>ATTIRE:</b>	See Page 6 of this guide for required dress code.
<b>PROCEDURE:</b>	<p><u>Pre-Conference</u>            B. No live demonstration. Teams create a demonstration video to highlight the functionality of their project, describe the design process, and discuss the value of the project. The hyperlink to the demonstration video is submitted online by 11:59pm on March 30, 2022. Submission procedures will be provided by NJ TSA.</p> <p><u>No On-Site Presentation/Interview</u>            Delete A.-E. No live demonstration/presentation. Teams create a demonstration video to highlight the functionality of their project, describe the design process, and discuss the value of the project. The video (URL) is submitted online.            F. No finalists. Top three winners announced at Awards Ceremony.</p>
<b>REGULATIONS AND REQUIREMENTS:</b>	<p>A.-B. No live demonstration. Teams create a demonstration video to highlight the functionality of their project, describe the design process, and discuss the value of the project. The hyperlink to the demonstration video is submitted online by 11:59pm on March 30, 2022. 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 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>No change.</p> <p>Evaluation is based on 100 points:</p> <ul style="list-style-type: none"> <li>• Software Design (70)</li> <li>• Demonstration Video (30)</li> </ul>

## Technology Bowl

<b>OVERVIEW:</b>	All participants will complete an online, objective test. No oral competition. Test only. No semifinalists. Testing date and procedures will be shared with advisors.
<b>ELIGIBILITY:</b>	2 teams of 3 members per chapter. Test only. No semifinalist portion.
<b>TIME LIMITS:</b>	<u>Preliminary Round</u> A. One (1) hour test is taken by all team members online.  <u>Delete Semifinal Round</u> No semifinalists. No oral competition. Test only.
<b>ATTIRE:</b>	See Page 6 of this guide for required dress code.
<b>PROCEDURE:</b>	Delete ALL. Online testing date and procedures will be shared with advisors. All team members take the exam. No semifinalists. No oral competition. Winners announced at Awards Ceremony.
<b>REGULATIONS AND REQUIREMENTS:</b>	Delete ALL. Online testing date and procedures will be shared with advisors. All team members take the exam. No semifinalists. No oral competition. Winners announced at Awards Ceremony.
<b>EVALUATION:</b>	Delete ALL. Averaged test scores are used to determine team rankings. No semifinalists. Top three winning teams announced at Awards Ceremony.

## Transportation Modeling

2022 Theme: History of package or product delivery vehicles

<b>OVERVIEW:</b>	<p>No change</p> <p><b>The documentation portfolio, and presentation video (highlighting the model/display), must be finished, submitted, and accessible via the Internet by 11:59pm on March 30, 2022. Submission procedures will be shared with advisors.</b></p>
<b>ELIGIBILITY:</b>	2 individuals per chapter
<b>TIME LIMITS:</b>	No semifinalists. No interview. No on-site component.
<b>ATTIRE:</b>	See Page 6-7 of this guide for required dress code.
<b>PROCEDURE:</b>	<p><u>Pre-Conference</u> No change.</p> <p><u>Preliminary Round</u> A. PDF of the documentation portfolio, and hyperlink of the presentation video (highlighting the model/display) are submitted online by 11:59pm on March 30, 2022. Submission procedures will be provided by NJ TSA. B.1.-2. Judges score the Model and Display criteria, and the Documentation Portfolio criteria, for each team. No semifinalists. Winners are announced at Awards Ceremony. C. No semifinalists. Winners are announced at the Awards Ceremony.</p> <p><u>Delete Semifinal Round</u> No semifinalists. No interview. Entries submitted online. 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> Documentation Portfolio is submitted online as a PDF document. Teams create a presentation video of up to five (5) minutes in length, to show/highlight the model and/display. Hyperlink of the presentation video is submitted online with the Documentation Portfolio (PDF document).</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>
<b>EVALUATION:</b>	<p><u>Preliminary Round</u> A. The documentation portfolio is submitted in PDF form. B.-C. Model and Display are shown in the presentation video.</p> <p><u>Delete Semifinal Round</u> No semifinalists. No interview.</p> <p>Evaluation is based on 120 points:</p> <ul style="list-style-type: none"> <li>• Model and Display (50)</li> <li>• Documentation Portfolio (70)</li> </ul>

## Video Game Design

2022 Theme: An arcade game for a museum.

Refer to section “F” in General Rules and Regulations.

Note: The URL must point to the team’s entry. Entries that require a software download, running an executable file (.exe), or a request that access be granted will not be judged.

<b>OVERVIEW:</b>	No semifinalists. No onsite presentation/interview. Entries are submitted online.  <b>The documentation portfolio, and video game, must be finished, submitted, and accessible via the Internet by 11:59pm on March 30, 2022. 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>	<p><u>Pre-Conference</u>            A. The documentation portfolio, and video game, must be finished, submitted, and accessible via the Internet by 11:59pm on March 30, 2022. Submission procedures will be shared with advisors.            B. Email verification will be made upon request.            F. Change National TSA Conference to NJ TSA State Conference.</p> <p><u>Delete Semifinal Round</u>            No semifinalists. No interview. Top three 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>            C. Change May 15<sup>th</sup> to March 30, 2022.            D. Submission information will be provided by NJ TSA.</p> <p><u>Preliminary Round</u>            No semifinalists. Winners are announced at the Awards Ceremony.</p> <p><u>Delete Semifinal Round</u>            No semifinalists. No interview. 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>Pre-Conference/Preliminary Round</u>            A. Hyperlink to the online game, and PDF of documentation portfolio, must be submitted online by 11:59pm on March 30, 2022.            D.9. Change National TSA Conference to NJ TSA Conference.            G. Change TSA to 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>  <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><u>Preliminary Round</u> No change.</p> <p><u>Delete Semifinal Round</u> No semifinalists. No interview. The 1<sup>st</sup>, 2<sup>nd</sup> and 3<sup>rd</sup> place winners are announced at the Awards Ceremony.</p> <p>Evaluation is based on 120 points:</p> <ul style="list-style-type: none"><li>• Game design (70)</li><li>• Documentation Portfolio (40)</li><li>• Possible bonus points for exceptional game features (10)</li></ul>



## Webmaster

2022 Theme: A virtual event

**Context:** Due to the global pandemic, in-person events have not been held as in the past. Instead of canceling or postponing events, many organizers chose to hold them virtually. These virtual events had to be interactive and provide participants similar experiences as in-person events.

**Challenge:** Create a fictitious virtual event and design an accompanying website. The website should identify the type of event, serve as an information guide, and include the virtual experiences related to the event. Sections of the site may include photos, product descriptions, renderings history, contact, and news updates. Present an overview of event details as if you were a consumer.

<b>OVERVIEW:</b>	<p>No semifinalists. No interview.</p> <p><b>The website, and any required forms, must be finished, submitted, and accessible via the Internet by 11:59pm on March 30, 2022. Submission procedures will be shared with advisors.</b></p>
<b>ELIGIBILITY:</b>	2 teams of up to 6 members per chapter. Teams of 1 individual are permitted.
<b>TIME LIMITS</b>	<p><u>Preliminary Round</u>            A. The website (URL), and any required forms (PDF), must be finished, submitted, and accessible via the Internet by 11:59pm on March 30, 2022. Submission procedures will be shared with advisors.            C. Email verification will be made upon request.</p> <p><u>Delete Semifinal Round</u>            No semifinalists. No interview.</p>
<b>ATTIRE:</b>	See Page 6 of this guide for required dress code.
<b>PROCEDURE:</b>	<p><u>Pre-Conference</u>            C. NJ TSA will provide submission procedures. The website, and any required forms, must be finished, submitted, and accessible via the Internet by 11:59pm on March 30, 2022. Submission procedures will be shared with advisors.</p> <p><u>Preliminary Round</u>            A. No semifinalists. Winners are announced at the Awards Ceremony.</p> <p><u>Delete Semifinal Round</u>            No semifinalists. No interview. 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>Pre-Conference/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</i></b></p>

	<p><i>automatically assigned a State Conference ID#. This number needs to be on all parts of student projects (i.e. portfolio, display, model, etc.)</i></p> <p><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><u>Preliminary Round</u> No change.</p> <p><u>Delete Semifinal Round</u> No semifinalists. No interview. The 1<sup>st</sup>, 2<sup>nd</sup> and 3<sup>rd</sup> place winners are announced at the Awards Ceremony.</p> <p>Evaluation based on 130 points:</p> <ul style="list-style-type: none"> <li>• Website (130)</li> </ul>