TSA
TECHNOLOGY STUDENT ASSOCIATION

2020 NJ TSA
HIGH SCHOOL
SUPPLEMENT

Revised for Online Competitions 3/31/20

Cover Art by:
David Munera
Roselle Park High School
1st Place Promotional Design
2019 NJ TSA High School Conference

2019-2020 New Jersey TSA
Executive Committee

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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

Foreword- Revised 3/31/20

Due to school closures as a result of the Covid 19 outbreak, the spring 2020 NJ TSA High School State Conference has been canceled at The College of New Jersey. NJ TSA will continue, however, to offer several competitions, the entries for which, will be submitted online. Each student may participate in a total of three (3) competitions.

All students/teams wishing to participate in these online competitions may do so free of charge; there is no registration fee to participate. All students/teams must be registered in the NJ TSA State Conference Registration System to participate: http://www.registermychapter.com/tsa/nj/Main.asp   They should use the Student/TEAM ID# they receive upon registration, to label all electronic entries. All entries are due via email by 5:00 PM on April 27, 2020.

The NJ Supplement has been revised to reflect these changes. Please DISCARD/DELETE any copies of the original NJ Supplement, as it is no longer valid. Please use only this updated version of the Supplement, in conjunction with the *TSA High School Competitive Events Guide (for the 2019 and 2020 National TSA Conferences).*

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The diverse competitive events that are listed within this booklet are open to TSA chapters affiliated through registration with the New Jersey state office of TSA.

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

This booklet presents the competitive events being offered through NJ TSA 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 NJ TSA competitive events this spring.

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

EVENTS WITH ONLINE SUBMISSION FOR SPRING 2020
Children's Stories Teams of 1-6 members create a documentation portfolio, and storybook. The portfolio, and photos of the storybook, are emailed to tsachall@tcnj.edu.
Computer-Aided Design (CAD), Architecture Individuals use CAD to solve an architectural design problem. Designs are emailed to tsachall@tcnj.edu.
Computer-Aided Design (CAD), Engineering Individuals use CAD to solve an engineering design problem. Designs are emailed to tsachall@tcnj.edu.
Cybersecurity   NEW for 2020! Teams of 1-6 members respond to a cybersecurity challenge by identifying a breach in computer security via "Capture the Flag" games. Participants have 72 hours, from 9am April 23 until 9am April 26, 2020, to address the online problems.
Engineering Design Teams of 1-6 members develop a solution to a National Academy of Engineering grand challenge. Documentation portfolio and video presentation emailed to tsachall@tcnj.edu.
Fashion Design and Technology Teams of 1-4 members per chapter design three (3) garments to fit the current year's theme and document their work in a Portfolio, which they email to tsachall@tcnj.edu.
Music Production Teams of 1-6 members produce an original musical piece to be played during a general session at the National TSA Conference. The musical piece and documentation portfolio are emailed to tsachall@tcnj.edu.
Promotional Design Individuals design a multi-piece promotional resource for TSA. Entries are emailed to tsachall@tcnj.edu.
Scientific and Technical Visualization (SciVis) Teams of 1-6 members create a visualization of STEM topic, idea, subject, or concept. Documentation portfolio and visualization are submitted electronically to tsachall@tcnj.edu.
Webmaster Teams of 1-5 members design, build, and launch a website based on the current year's theme. The URL is emailed to tsachall@tcnj.edu.

Each student may participate in three (3) events total, from the above list.

II.   PROJECT SUBMISSION

A. All entries must be submitted electronically by 5:00 PM on April 27, 2020.

B. Please see the specific submission requirements listed under each competition in this document.

III.   PARTICIPATION IN COMPETITIVE EVENTS

A. TSA members may register and participate in **three (3) total events**.

B. Students must be registered in the State Conference registration system in order to enter and become finalists/winners in a competition.

C. **There is no registration fee to participate in the above listed competitive events.**

D. **No school or individual names labeled on projects,** except for events which require school/student information. **Otherwise only 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. portfolios, copyright/release forms, video presentations, 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.

VI.   SCHOLARSHIPS AND AWARDS

NJ TSA Future Technology Teacher Scholarship
The purpose of the NJ TSA Future Technology Teacher Scholarship is to support the mission of TSA by encouraging NJ TSA 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 at the State Conference.

Click here to view application requirements.

Applications must be emailed to goeke2@tcnj.edu by 5:00pm on April 27, 2020 to:

Alison Goeke, State Advisor
New Jersey Technology Student Association
The College of New Jersey
2000 Pennington Rd.
103 Armstrong Hall
Ewing, NJ 08628-0718
Fax: 609.771.3330

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. Go to http://www.tsaweb.org/Student-Achievement-Awards to view and print forms. Please email completed forms to Alison Goeke (goeke2@tcnj.edu by *5:00pm on April 27, 2020.*

VII.   IMPORTANT DATES AND DEADLINES

April 27, 2020:

- All competitive event entries due by 5:00 PM via email.
- Technology Honor Society, and State Officer Nominations due by 5:00 PM via email.
- State Conference Registration CLOSES at 5:00 PM

May 2020 (date TBD):

- Online Awards Presentation for Competitive Events and Technology Honor Society

Level II – High School Events

Children's Stories
2020 Theme: Design a "choose your own adventure" book for children ages 5-8.

Revised 3/31/20

OVERVIEW:	No change
ELIGIBILITY:	A team for Children's Stories may consist of 1-6 members. Students may participate in a total of three (3) competitions listed in this guide.
TIME LIMITS:	Delete Semifinal Round No semifinalists. No on site component. No LEAP interview.
LEAP:	No LEAP Report. No LEAP interview.
ATTIRE:	See Page 6-7 of this guide for required dress code.
PROCEDURE:	Pre-Conference No change. Preliminary Round 1. Participants submit their Documentation Portfolio, including photos of their Storybook, via email to tsachall@tcnj.edu as a PDF attachment by 5pm on April 27, 2020. 3. No semifinalists. Winners announced during online Awards Presentation. Delete Semifinal Round No semifinalists. No reading/interview. No LEAP interview. No finalists. The 1st, 2nd and 3rd place winners are announced during the Awards Presentation.
REGULATIONS:	Preliminary Round A. Documentation Portfolio should be emailed as a PDF attachment. Portfolio must include photos of each page of storybook. Physical storybook is not submitted. C.1. Documentation Portfolio should be emailed as a PDF attachment to tsachall@tcnj.edu. C.2. No USB drive submission; entry is emailed. Change TSA to NJ TSA. C.4.a. No LEAP Report. C.4.f. Documentation Portfolio must include photos of each page of

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	storybook.
	Delete Semifinal Round No semifinalists. No reading/interview. No LEAP interview. No finalists. The 1st, 2nd and 3rd place winners are announced during the online Awards Presentation. ***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 multiple teams from one chapter for the same competition, include which team they are on (e.g. 2345-1, 2345-2, etc.).*
EVALUATION:	<u>Preliminary Round</u> No change. <u>Delete Semifinal Round</u> No semifinalists. No reading/interview. No LEAP interview. Evaluation is based on 190 points: • Documentation (90) • Storybook (100)

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Computer-Aided Design (CAD), Architecture
2020 Design Problem: https://njtsa.tcnj.edu/wp-content/uploads/sites/23/2020/01/2020-NJ-TSA-High-School-Design-Problems.pdf

Revised 3/31/20

OVERVIEW:	No change The 2020 design problem can be found on the NJ TSA website: https://njtsa.tcnj.edu/wp-content/uploads/sites/23/2020/01/2020-NJ-TSA-High-School-Design-Problems.pdf
ELIGIBILITY:	CAD, Architecture is an individual event. A student competes by himself/herself. Students may participate in a total of three (3) competitions listed in this guide.
TIME LIMITS:	Delete 1-4. Entries must be submitted electronically by 5pm on April 27, 2020. There is no on-site component. No LEAP interview.
LEAP:	No LEAP Report. No LEAP interview.
ATTIRE:	See Page 6-7 of this guide for required dress code.
PROCEDURE:	Delete 1-4. No on site component. Students solve the design problem found here: https://njtsa.tcnj.edu/content/uploads/sites/23/2020/01/2020-NJ-TSA-High-School-Design-Problems.pdf Entries must be emailed to tsachall@tcnj.edu by 5pm on April 27, 2020. Include "CAD Architecture" and ID# in email subject line. No LEAP Report. Delete 6-11. No on-site component. No semifinalists. No LEAP interview. 12. The 1st, 2nd and 3rd place winners are announced during the online Awards Presentation.
REGULATIONS:	Delete A-G. Entries must be emailed to tsachall@tcnj.edu by 5pm on April 27, 2020. Include "CAD Architecture" and ID# in email subject line. There is no on-site component. No semifinalists. No LEAP Report. **Entries should be submitted electronically in a form that will allow judges to review the drawings without special software.** **The drawings should show a floor plan with dimensions as well as front, side and rear elevations.**

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	Include notes that identify at least 5 features that make the home especially suited for a narrow lot. *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.)*
EVALUATION:	Delete 2. No LEAP Report. No LEAP interview. Evaluation is based on 140 points: • Solution to Problem (40) • Layout (60) • Architectural Application (20) • Software Utilization (20)

Computer-Aided Design (CAD), Engineering
Pre-Conference Event
2020 Design Problem: https://njtsa.tcnj.edu/wp-content/uploads/sites/23/2020/01/2020-NJ-TSA-High-School-Design-Problems.pdf

Revised 3/31/20

OVERVIEW:	No change The design problem can be found on the NJ TSA website here: https://njtsa.tcnj.edu/wp-content/uploads/sites/23/2020/01/2020-NJ-TSA-High-School-Design-Problems.pdf
ELIGIBILITY:	CAD, Engineering is an individual event. A student competes by himself/herself. Students may participate in a total of three (3) competitions listed in this guide.
TIME LIMITS:	Delete 1-4. Entries must be submitted electronically by 5pm on April 27, 2020. There is no on-site component. No LEAP interview.
LEAP:	No LEAP Report. No LEAP interview.
ATTIRE:	See Page 6-7 of this guide for required dress code.
PROCEDURE:	Delete 1-4. No on site component. Students solve the design problem found here: https://njtsa.tcnj.edu/wp-content/uploads/sites/23/2020/01/2020-NJ-TSA-High-School-Design-Problems.pdf Entries must be emailed to tsachall@tcnj.edu by 5pm on April 27, 2020. Include "CAD Engineering" and ID# in email subject line. No LEAP Report. Delete 6-11. No on-site component. No semifinalists. No LEAP interview. 12. The 1st, 2nd and 3rd place winners are announced during the online Awards Presentation.
REGULATIONS:	Delete A-G. Entries must be emailed to tsachall@tcnj.edu by 5pm on April 27, 2020. Include "CAD Engineering" and ID# in email subject line. There is no on-site component. No semifinalists. No LEAP Report. **Entries should be submitted electronically in a form that will allow judges to review the drawings without special software.** *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.)
EVALUATION:	Delete 2. No LEAP Report. No LEAP interview. Evaluation is based on 140 points: • Solution to Problem (40) • Layout (60) • Engineering Application (20) • Software Utilization (20)

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Cybersecurity *- New for 2020*

OVERVIEW:	The Cybersecurity competition will take place online from 9am April 23, 2020 to 9am April 26, 2020. Participants have 72 hours to respond to a cybersecurity challenge by identifying a breach in computer security via "Capture the Flag" games. No semifinalists. No LEAP interview. Competition takes place online. No on-site component. Please see the following eight pages for the 2020 Cybersecurity official guidelines.
ELIGIBILITY:	A team for Cybersecurity may consist of 1-6 members. Students may participate in a total of three (3) competitions listed in this guide.
TIME LIMITS:	Preliminary Round: Delete 1. No orientation meeting. 2. Participants have 72 hours to complete the online challenge. Delete Semifinal Round. No LEAP Report. No LEAP interview. No on-site component.
LEAP:	No LEAP Report. No LEAP interview.
ATTIRE:	See Page 6-7 of this guide for required dress code.
PROCEDURE:	Pre-Conference: 1. Prior to the NJ TSA Cybersecurity competition, chapter advisors must ensure that each participant from their team(s) completes the TSA Student and Parent Release Form and Acceptable Use Policy for Participating in Internet-Based Competitions Chapter Advisors are responsible for collecting the completed forms via email from their team member(s). 3. Once teams are registered for the Cybersecurity competition on the NJ TSA registration website, chapter advisors will receive the login information for teams to compete via the CTFd platform. Preliminary Round: Delete 1-2. Competition takes place online. No LEAP Report. 4. Teams have 72 hours to complete the online challenge during April 23-26, 2020. 7. Winners will be recognized during online Awards Presentation.

	Delete Semifinal Round. No LEAP Report. No LEAP interview. No on-site component.
REGULATIONS:	1. Teams will set up their teams on CTFd prior to the online competition. No on-site component. 3. Teams provide their own materials. Competition takes place online. Delete 6. No LEAP Report.
EVALUATION:	Preliminary Round: No change. Delete Semifinal Round. No LEAP Report. No LEAP interview. No on-site component.

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CYBERSECURITY

OVERVIEW

Participants respond to a cybersecurity challenge by identifying a breach in computer security via "Capture the Flag" games. Areas of challenge might include exploit development, digital puzzles, cryptography, reverse engineering, binary analysis, mobile security, etc. Participants must accurately address a series of on-site problems within a specified, limited amount of time. Conference semifinalists participate in a LEAP interview to demonstrate their knowledge and expertise in an authentic security environment, including leadership skills in effectively sourcing for solutions.

ELIGIBILITY

Two (2) teams of two to six (2-6) members per chapter may participate, one (1) entry per team.

TIME LIMITS

PRELIMINARY ROUND

1. Teams are required to attend the orientation meeting prior to receiving access to the challenges.
2. Participants have forty-eight (48) hours, beginning at the event orientation meeting, to complete the online preliminary challenge.

SEMIFINAL ROUND

1. Semifinalists will participate in a LEAP interview that will last a maximum of five (5) minutes.

LEAP

A team LEAP Response is required for this event and must be submitted at event check-in (see LEAP Program).

PROCEDURE

PRE-CONFERENCE

1. Prior to registration, chapter advisors collect executed TSA Student and Parent Release Form and Acceptable Use Policy for Participating in Internet-Based Competitions Form for all participants and will verify having done so when registering for the national conference competitions via TSA's registration system. A link to the TSA Student and Parent Release Form and Acceptable Use Policy for Participating in Internet-Based Competitions can be found on the TSA website.
2. The release form must be completed for every participant in order to compete in this event. Chapter advisors will keep copies of the executed forms and may be asked to procure them if needed.
3. Once registered and Student/Parent Consent forms are in possession by the chapter advisor, instructions to register teams to compete on-site via the CTFd platform will be sent to the chapter advisor by email. Please allow three (3) business days from the date of registration for receipt.

PRELIMINARY ROUND

1. Participants report to the event area at the time and place stated in the conference program to attend the mandatory orientation session.
2. Participants submit a hard copy of the LEAP response.
3. Participants receive information pertaining to the on-site problems (Note: Participants are required to provide their own computer hardware, including applicable software to solve challenges {e.g. NetCat or Putty; please refer to the CTFd rules and regulations page for additional information} and access to the challenges.

4. Teams have forty-eight (48) hours from the designated start time announced during the informational session to complete the online challenge. Teams that do not attend the informational session will not receive additional time and will need to meet with the CRC Manager of the event to participate.

5. For website support, teams shall contact the CRC coordinator or manager.

6. Solutions are scored in real-time and results will be posted on an online scoreboard. The URL will be provided on-site.

7. Twelve (12) semifinalist teams will be determined and posted by the CRC.

SEMIFINAL ROUND

1. Semifinalist teams will sign up for a LEAP interview time slot and report to the location stated in the conference program at the designated time.

2. LEAP Interviews are conducted with no more than three (3) representatives per team. The interview will last a maximum of five (5) minutes.

3. Judges evaluate the overall performance of each team and ten (10) finalists will be determined.

REGULATIONS

1. Teams who have not properly set-up their teams on CTFd prior to conference will not be permitted to participate at the National Conference. Teams will not be permitted to set-up their teams on-site.

2. Participants in this event should concentrate their efforts prior to the competition on researching, understanding, and practicing all aspects of cybersecurity. Please refer to the sample challenge topics listed below and the resources on the TSA website.

3. All work must be completed in the event area during the time specified for the event.

4. Materials:
   a. Teams are responsible for providing:
      - One (1) Power strip
      - Pencils
      - Paper
      - Optional: Teams may choose to bring one (1) or two (2) auxiliary monitors
      - Students are responsible for providing their own computer(s), including applicable software to solve challenges (see CTFd Rules and Regulations for more information).
      - Internet access

4. Teams may receive online hints on the CTFd platform throughout the competition but are not given the solution by organizers.

5. Teams are not to share solutions between teams, but they may communicate with their own team members. The sharing of information between teams will result in automatic disqualification.

6. The LEAP Report:
   a. Participants document the leadership skills they have developed and demonstrated while working on this event; they also must document a non-competitive event leadership experience.
   b. Specific LEAP Report regulations may be found in the LEAP Program section of this guide, and on the TSA website.

SAMPLE CHALLENGE TOPICS

This list serves only as an *example* of challenge categories.

1. **Web Security**
   a. The Web Security category often features custom developed web applications which include some web security flaw that must be identified and exploited. Very often SQL injection, command injection, directory traversal, and XSS vulnerabilities are introduced and exploited in these categories.

b. Examples:

    i. Exploiting poor security controls in a website as a regular user to gain higher level access.

    ii. Exploiting poor security practices in a website in order to read arbitrary data from the vulnerable server.

    iii. Exploiting a SQL injection vulnerability to extract the content of an intentionally vulnerable server.

2. **Forensics**

    a. The Forensics category often features memory dumps, hidden files, or encrypted data which must be analyzed for information about underlying information.

    b. Examples:

        i. Extracting hidden files from an image of a hard drive.

        ii. Extracting hidden files from a memory dump.

        iii. Determining the flow of data in a packet capture to ascertain the origin or destination of data.

3. **Cryptography**

    a. Cryptography is the reason we can use banking apps, transmit sensitive information over the web, and in general protect our privacy. However, a large part of CTFs is breaking widely used encryption schemes that are improperly implemented.

    b. Examples:

        i. Securing web traffic (passwords, communication, etc.).

        ii. Securing copyrighted software code.

4. **Reverse Engineering**

    a. The Reverse Engineering category often features programs from all operating systems which must be reverse engineered to determine how the program operates. Typically, the goal is to get the application to reach a certain point or perform some action in order to achieve a solution.

    b. Examples:

        i. Determining what input will cause a program to return True.

        ii. Disassembling a game to find a hidden Easter egg not normally accessible or a cheat code to make it easier to win the game.

        iii. Optimizing a program to make it run to completion.

        iv. Exploiting a buffer overflow with some security mitigations in place to gain a command shell and read a file.

        v. Exploiting a format string vulnerability to gain a command shell and read a file.

ADVANCED SAMPLE TOPICS

This list serves only as an *example* of challenge categories.

1. **Binary Exploitation**

    a. The Binary Exploitation category often features compiled programs that have a vulnerability allowing a competitor to gain a command shell on the server running the vulnerable program. This often requires reverse engineering skills.

    b. Examples:

        i. Exploiting a buffer overflow to gain a command shell and read a file.

        ii. Exploiting a buffer overflow with some security mitigations in place to gain a command shell and read a file.

        iii. Exploiting a format string vulnerability to gain a command shell and read a file.

EVALUATION

PRELIMINARY ROUND

The successful completion of the problems is evaluated, as is the time in which it takes teams to complete each challenge.

SEMIFINAL ROUND

The content and quality of the LEAP Report and interview will be evaluated.

Refer to the official rating form for more information.

STEM INTEGRATION

Depending upon the subject of the problem, this event may align to one or more STEM areas.

CAREERS RELATED TO THIS EVENT

- Vulnerability Assessor
- Chief Information Security Officer
- Forensic Expert
- Security Architect
- Security Director
- Incident Responder
- Security Manager
- Security Auditor
- Cryptographer
- Security Engineer
- Security Analyst

CYBERSECURITY
2019 & 2020 OFFICIAL RATING FORM
HIGH SCHOOL

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

Go/No Go Specifications

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

_____

☐ Completed LEAP Report is present.
☐ ENTRY NOT EVALUATED

PRELIMINARY ROUND (100 points)

Record the completed score and time for the online preliminary problem.

Team A Score:		**Team B Score:**	
Time (Needed for tie breaker):		**Time (Needed for tie breaker):**	
		PRELIMINARY ROUND SUBTOTAL (100 points)	

Record scores in the column spaces below.

SEMIFINAL LEAP INTERVIEW (10 points)

CRITERIA	Minimal performance	Adequate performance	Exemplary performance	
	1-4 points	5-8 points	9-10 points	
LEAP Report/ Interview (10% of total event points)	The individual's efforts are not clearly communicated, lack detail, and/or are unconvincing; few, if any, attempts are made to identify and/or incorporate the SLC Practices and Behaviors.	The individual's efforts are adequately communicated, include some detail, are clear, and/or are generally convincing; identification and/or incorporation of the SLC Practices and Behaviors is adequate.	The individual's efforts are clearly communicated, fully-detailed, and convincing; identification and/or incorporation of the SLC Practices and Behaviors is excellent.	
			SEMIFINAL LEAP INTERVIEW SUBTOTAL (10 points)	

Rules violations (a deduction of 20% of the total possible points for the above sections) must be initialed by the judge, coordinator, and manager of the event. Record the deduction in the space to the right.

Indicate the rule violated: _____

SEMIFINAL SUBTOTAL (10 points)	

To arrive at the TOTAL score, add any subtotals and subtract rules violation points, as necessary.	**TOTAL (110 points)**	

Comments:

_____

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

JUDGE

Printed name: _____   Signature: _____

CYBERSECURITY

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CYBERSECURITY
EVENT COORDINATOR INSTRUC TIONS

PERSONNEL

1. Event coordinator
2. Judges:
   a. Semifinal round, two (2) or more
3. Assistants for set-up and clean-up, two (2) or more.

MATERIALS

1. Coordinator's packet, containing:
   a. Event guidelines, one (1) copy for the coordinator and for each evaluator
   b. TSA Event Coordinator Report
   c. List of judges/assistants
   d. Stick-on labels for entries, as needed
   e. Envelope for LEAP Reports
2. Tables and chairs for participants
3. Tables and chairs for judges
4. A copy protocol for the online management materials/ onsite equipment as needed
5. Adequate conditions, tools, materials, monitoring, and testing devices for the problem

RESPONSIBILITIES

AT THE CONFERENCE

1. Attend the mandatory coordinator's meeting at the designated time and location.
2. Report to the CRC room and check the contents of the coordinator's packet.
3. Review the event guidelines and check to see that enough evaluators and assistants have been scheduled.
4. Inspect the area(s) in which the event is being held for appropriate set-up, including room size, chairs, tables, outlets, etc. Notify the event manager of any potential problems.
5. One (1) hour before the semifinal event is to begin, meet with evaluators to review time limits, procedures, and regulations. If questions arise that cannot be answered, speak to the event manager before the event begins.

PRELIMINARY ROUND

1. Begin the event at the scheduled time by closing the doors and checking the entry list.
2. Collect LEAP Reports, as part of the Go/No Go specifications, but do not review the reports at this time.
3. All participants and evaluators should be in the room at this time. Participants not present will still have the same submission time with no additional time. In order to compete, participants must be on the entry list or must have approval of the CRC.
4. Once teams are seated and general announcements have been given, distribute and review the procedure.
5. After the competition has started, late participants will need to contact the CRC manager to receive the instructions.
6. Check online progress throughout the preliminary event via the CTFd scoreboard.
7. After the designated time of forty-eight (48) hours has elapsed, the CTFd challenge site will become unavailable.
8. Twelve (12) semifinalist teams will be determined and posted by the CRC.

SEMIFINAL ROUND

1. At least one hour before the event is scheduled to begin, meet with semifinalist judges to review time limits, procedures, and regulations. Review the LEAP report of semifinalist teams and discuss judging protocol. If questions arise that cannot be answered, speak with the event manager before the event begins.
2. Decisions about rules violations must be discussed and verified with the judges, event coordinator, and CRC manager to determine either:
   • To deduct twenty percent (20%) of the total possible points in this round
   • To disqualify the entry
   • The event coordinator, judges, and CRC manager must all initial either of these actions on the rating form.

3. Inspect the area in which the LEAP interviews will take place. Ensure that there is a table and seating for participants and evaluators.

4. Begin the interviews at the scheduled time by closing the doors and checking the entry list. All participants and evaluators should be in the room at this time.

5. Conduct semifinalist LEAP interviews. Interviews should be a maximum of five (5) minutes in length.

6. Evaluators determine the ranking of the ten (10) finalists and discuss and break any ties.

7. Review and submit the finalist results and all items/forms in the results envelope to the CRC room.

8. If necessary, manage security and the removal of materials from the area.

SUPPORT

For competition support, organizers shall contact the CRC competitions manager.

Engineering Design

2020 Theme: Identify a need in a developing country and design a project that will empower that community to meet basic human needs (for ideas, check out: Engineers Without Borders and other similar organizations that are helping people build better, safer communities).

Revised 3/31/20

OVERVIEW:	Teams will present their solution through their documentation portfolio and a recorded presentation. Entries are submitted electronically. No semifinalists. All teams provide a video presentation.
ELIGIBILITY:	A team for Engineering Design may consist of 1-6 members. Students may participate in a total of three (3) competitions listed in this guide.
TIME LIMITS:	1. No semifinalists. All teams will provide a video presentation of no more than 5 minutes. Delete 2. Video presentation submitted electronically. No on-site component. Delete 3. No LEAP interview. No semifinalists.
LEAP:	No LEAP Report. No LEAP interview.
ATTIRE:	See Page 6-7 of this guide for required dress code.
PROCEDURE:	Preliminary Round 1.a. Portfolio, and video presentation, are to be emailed to tsachall@tcnj.edu by 5pm on April 27, 2020. No USB flash drive submission. Portfolio should be sent as a PDF attachment. Video presentation should be accessible online (e.g. YouTube) and the URL should be included in the body of the email, and listed in the documentation portfolio. Include "Engineering Design" and ID# in email subject line. Delete 1.b-d. No poster, model/display, or LEAP Report. 3. No semifinalists. All portfolios and videos will be evaluated. Delete 4. No semifinalists. Winners announced during the online Awards Presentation. No Semifinal Round 1-2. No semifinalists. All teams provide a video presentation of up to 5 minutes in length. Video should be accessible online (e.g. YouTube) and the URL should be included in the body of the email, and in the documentation materials.

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	Delete 3. No LEAP interview. 4. The 1st, 2nd and 3rd place winners are announced during the online Awards Ceremony.
REGULATIONS:	Preliminary Round C. Portfolio, and video presentation, are to be emailed to tsachall@tcnj.edu by 5pm on April 27, 2020. No USB flash drive submission. Portfolio should be sent as a PDF attachment. Video presentation should be accessible online (e.g. YouTube) and the URL should be included in the body of the email, and listed in the documentation portfolio. Include "Engineering Design" and ID# in email subject line. Delete C.1. No LEAP Report. Delete D-H. No poster, or model/display. No Semifinal Round A-B. No semifinalists. All teams provide a video presentation of up to 5 minutes in length. Video should be accessible online (e.g. YouTube) and the URL should be included in the body of the email, and in documentation materials. Delete 3. No LEAP Report. No LEAP interview. ***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 multiple teams from one chapter for the same competition, include which team they are on (e.g. 2345-1, 2345-2, etc.).*

EVALUATION:	Preliminary Round
	1. No semifinalists. All portfolios and videos will be evaluated.
	Delete 2-3. No model/display, no poster.
	
	No Semifinal Round
	1. No semifinalists. All teams provide a video presentation of up to 5 minutes in length.
	
	Delete 2. No LEAP Report. No LEAP interview.
	
	Evaluation is based on 200 points:
	   • Documentation (120)
	   • Video Presentation (please note that "Responses to judges questions," and "LEAP Report/Interview" are eliminated) (80)

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Fashion Design and Technology

2020 Theme: Students must design and create three (3) garments to fit the theme "Futuristic Formal Wear." Students will need to integrate technology into each one of their garments. This can include, but is not limited to: lights, sound and mechanical elements.

Revised 3/31/20

OVERVIEW:	Portfolio is submitted electronically. No wearable prototype. No semifinalists. No presentation/interview. No on-site component.
ELIGIBILITY:	A team for Fashion Design and Technology may consist of 1-4 members. Students may participate in a total of three (3) competitions listed in this guide.
TIME LIMITS:	Delete 1-2. No semifinalists. No presentation/interview. No LEAP interview.
LEAP:	No LEAP Report. No LEAP interview.
ATTIRE:	See Page 6-7 of this guide for required dress code.
PROCEDURE:	Preliminary Round 1. Portfolio is emailed to tsachall@tcnj.edu by 5pm on April 27, 2020 as a PDF attachment. Include "Fashion Design and Technology" and ID# in email subject line. No patterns, no garments. 3. No semifinalists. Winners are announced during the online Awards Presentation. Delete Semifinal Round No semifinalists. No presentation. No garments. No LEAP interview. The 1st, 2nd and 3rd place winners are announced at the Awards Ceremony.
REGULATIONS:	Preliminary Round A. Portfolio is submitted electronically. No patterns, no garments. B. Portfolio is emailed to tsachall@tcnj.edu by 5pm on April 27, 2020 as a PDF attachment. Include "Fashion Design and Technology" and ID# in email subject line. No patterns, no garments. Delete B.1.a. No LEAP Report. Delete C-D. No patterns, no garments. Portfolio only. Delete Semifinal Round No semifinalists. No presentation. No garments. No LEAP interview. The 1st, 2nd and 3rd place winners are announced at the Awards Ceremony.

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	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.).* Labels/tape are recommended for labeling garments, documentation, and on the outside of submission container and/or garment bag.
EVALUATION:	1. Portfolio only. No patterns, no prototypes. Delete 2-3. No LEAP Report. No LEAP interview. No semifinalists. No presentation/interview. Evaluation is based on 90 points: • Documentation (90)

Music Production

OVERVIEW:	No change
ELIGIBILITY:	A team for Music Production may consist of 1-6 members. Students may participate in a total of three (3) competitions listed in this guide.
TIME LIMITS:	Preliminary Round No change. No Semifinal Round Delete 1-2. No semifinalists. No interview. Entries submitted electronically. No LEAP interview.
LEAP:	No LEAP Report. No LEAP interview.
ATTIRE:	See Page 6-7 of this guide for required dress code.
PROCEDURE:	Preliminary Round 1. Portfolio and music file are to be emailed to tsachall@tcnj.edu by 5pm on April 27, 2020. Portfolio should be sent as a PDF attachment. Music file may be sent as an attachment, or should be accessible online and the URL included in the body of the email, and listed in the documentation portfolio. Include "Music Production" and ID# in email subject line. No LEAP Report. Delete 3. No semifinalists. Winners are announced during the online Awards Presentation. Delete Semifinal Round No semifinalists. No on-site component. Entries submitted electronically. No LEAP interview. The 1st, 2nd and 3rd place winners are announced during the online Awards Presentation.
REGULATIONS:	Preliminary Round A. Music file may be sent as an attachment, or should be accessible online and the URL included in the body of the email, and listed in the documentation portfolio. Include "Music Production" and ID# in email subject line D. Entries become the property of NJ TSA. Entries will be displayed online. I. Music file and documentation materials are submitted electronically. J. Documentation portfolio submitted electronically.

	Delete J.1. No LEAP Report.
	Delete Semifinal Round.
	No LEAP Requirements. No LEAP Report. No LEAP interview.
	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.
EVALUATION:	<u>Preliminary Round</u> No change.
	<u>Delete Semifinal Round.</u> No presentation/interview. No LEAP Report. No LEAP interview.
	Evaluation is based on 100 points: • Documentation (40) • Musical Piece (60)

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Promotional Design

OVERVIEW:	No semifinalists. No on-site problem. Entries submitted electronically.
ELIGIBILITY:	Promotional Design is an individual event. A student competes by himself/herself. Students may participate in a total of three (3) competitions listed in this guide.
TIME LIMITS:	Delete 1-2. No semifinalists. Entries submitted electronically. No on-site portion of the event. No LEAP interview.
LEAP:	No LEAP Report. No LEAP interview.
ATTIRE:	See Page 6-7 of this guide for required dress code.
PROCEDURE:	Preliminary Round 1. Entries are emailed to tsachall@tcnj.edu as a PDF attachment by 5pm on April 27, 2020. Include "Promotional Design" and ID# in email subject line. No LEAP Report. 3. No semifinalists. Winners are announced during the online Awards Presentation. Entries will be displayed online after judging concludes. Delete Semifinal Round No semifinalists. No on-site component. No LEAP Report. No LEAP interview. The 1st, 2nd and 3rd place winners are announced during the online Awards Ceremony.
REGULATIONS:	Preliminary Round A.1-5. Physical folder is not required. Only folder cover is to be submitted, as a PDF file, along with the other required items. B.1-10. Items are not printed; they are to be submitted electronically, as PDF files. Folder cover, and 4-5 promotional items, are emailed as a PDF attachment to tsachall@tcnj.edu by 5pm on April 27, 2020. Include "Promotional Design" and ID# in email subject line. Delete Semifinal Round No semifinalists. No on-site component. No LEAP Report. No LEAP interview. *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.)
EVALUATION:	<u>Preliminary Round</u> No change. <u>Delete Semifinal Round</u> No semifinalists. No LEAP Report. No LEAP interview. Evaluation is based on 110 points: • Promotional Folder Cover (40) • Promotional Folder Contents (70)

Scientific and Technical Visualization (SciVis)

OVERVIEW:	No change.
ELIGIBILITY:	A team for SciVis may consist of 1-6 members. Students may participate in a total of three (3) competitions listed in this guide.
TIME LIMITS:	Preliminary Round No change. Delete Semifinal Round No semifinalists. No interview. No LEAP interview.
LEAP:	No LEAP Report. No LEAP interview.
ATTIRE:	See Page 6-7 of this guide for required dress code.
PROCEDURE:	Preliminary Round 1. Portfolio and visualization are to be emailed to tsachall@tcnj.edu by 5pm on April 27, 2020. No USB flash drive submission. Portfolio should be sent as a PDF attachment. Visualization should be accessible online (e.g. YouTube) and the URL should be included in the body of the email, and listed in the documentation portfolio. Include "SciVis" and ID# in email subject line. No LEAP Report. 3. No semifinalists. Winners are announced during the online Awards Presentation. Delete Semifinal Round No semifinalists. No interview. No LEAP interview. Entries submitted electronically. The 1st, 2nd and 3rd place winners are announced during the online Awards Ceremony.
REGULATIONS:	Preliminary Round B. Entries will be displayed online. C.1-2. No USB submission. Documentation portfolio should be emailed as a PDF attachment to tsachall@tcnj.edu. Delete C.2.a-b. No USB submission. No LEAP Report. D.1. Visualization should be accessible online (e.g. YouTube) and the URL should be included in the body of the email, and listed in the documentation portfolio. D.7. No USB submission.

	Delete Semifinal Round No semifinalists. No interview. No LEAP Report. No LEAP interview. ***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.).*
EVALUATION:	<u>Preliminary Round</u> No change. <u>Delete Semifinal Round</u> No semifinalists. No interview. No LEAP Report. No LEAP interview. Evaluation is based on 110 points: • Documentation (40) • Visualization (70)

Webmaster

2020 Theme: Embracing Electric Vehicles

Context: Consumers are researching electric vehicles more than ever with their frequent appearances on roadways. It is estimated that by 2030, nearly one-third of all vehicles in America will be electric – potentially opening the vehicle market to 320 million people worldwide. With peak fossil fuel consumption on the horizon, and electric vehicles becoming more affordable, the automotive industry is preparing to see a consumer shift in the near future.

Challenge: Create a fictional electric vehicle manufacturing company and design a website. The website should serve as a guide for information about the company and their electric vehicles offered. Present an overview of vehicles as if you were a consumer. Provide the type of vehicles your company creates, sells, and serves. Sections of the site may include photos, vehicle descriptions, specs, company history, contact, and news updates.

Revised 3/31/20

OVERVIEW:	No semifinalists. No on-site component. Entries submitted electronically.
ELIGIBILITY:	A team for Webmaster may consist of 1-5 members. Students may participate in a total of three (3) competitions listed in this guide.
TIME LIMITS	1. The URL must be emailed to tsachall@tcnj.edu by 5:00pm on April 27, 2020. Be sure to include ID# and "Webmaster" in email subject line. 1.a. After 5:00pm on April 27, 2020, no changes can be made to the website or documentation. 1.d. All emails will be time stamped and serve as proof of submitting project on time. Delete 5-6. (1-2) No semifinalists. No on-site interview. No LEAP interview.
LEAP:	No LEAP Report. No LEAP interview.
ATTIRE:	See Page 6-7 of this guide for required dress code.
PROCEDURE:	Preliminary Round 4. No LEAP Report. 5. Entries are evaluated and winners are announced at an online Awards Presentation. 6. No semifinalists. Winners are announced at the online Awards Presentation. Delete Semifinal Round No semifinalists. No on-site interview. No LEAP Report. No LEAP interview.

	5. The 1st, 2nd and 3rd place winners are announced during the online Awards Presentation.
REGULATIONS:	Preliminary Round Delete C.1-6. Please not the following Competition Update on the National TSA website: *"P.318, Preliminary Round #C Regulations 1-6 are not applicable for the 2020 National TSA Conference. Please see the Themes and Problems page for the annual challenge information."* Delete Semifinal Round No semifinalists. No on-site interview. No LEAP Report. No LEAP interview. ***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 multiple teams from one chapter for the same competition, include which team they are on (e.g. 2345-1, 2345-2, etc.).*
EVALUATION:	Preliminary Round No change. Please note the following Competition Update on the National TSA website: *The rubric has been updated with the below two categories replacing "CTE Program Content," and "TSA Chapter Content" under the Website section:*

Theme (X2)	The annual theme is not addressed.	The annual theme is somewhat addressed, but the supporting pages don't adequately support or contribute to the overall design.	The annual theme is addressed and is reflected in the supporting pages.	
Content (X2)	The content lacks originality and does not contribute to the overall design of the webpage. The content does not align with the purpose of the website.	Very basic information is presented. The content aligns somewhat with the purpose of the website. Some pages are irrelevant.	The content aligns well with the purpose of the website and adds to its effectiveness.	

Delete Semifinal Round
No semifinalists. No on-site interview. No LEAP Report. No LEAP interview.

Evaluation based on 130 points:
- Website (130)