North Carolina Technology Student Association

Jerianne S. Taylor, State Advisor

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DATE: January 7, 2019

TO: NC TSA Chapter Advisors

FROM: Mr. Neil Williamson, NC TSA State President

Dr. Jerianne S. Taylor, NC TSA State Advisor

SUBJECT: 2019 NC-TSA STATE CONFERENCE

The North Carolina Technology Student Association (NCTSA) will hold its 40th Annual State Conference **April 3-5, 2019 (Wednesday – Friday)** at the Sheraton Four Seasons Hotel, Greensboro, NC. The NCTSA Leadership Team and the State Technology Education staff invite and encourage all affiliated chapters to attend and participate to make this the best conference yet. The 2019 theme is **"Model the Way"**

LODGING

Each chapter is responsible for reserving their own rooms. Please make reservations directly with the **Sheraton Four Seasons Hotel, Greensboro** by faxing or mailing the appropriate attached form to the hotel. A special room rate of **$158.98**, (single, double or quad) has been arranged. Schools located more than 45 miles from the conference site are expected to stay on-site. Hotel reservations must be made by **March 12, 2019** to receive the special rates.

REGISTRATION

Registration will **open on January 30, 2019 and close on March 3, 2019.**
To register, go to https://www.registermychapter.com/tsa/nc/Main.asp
Conference registration fee is $65.00 for all participants and guests. Conference registration is waived for Event Coordinators and Judges. **Everyone** must complete the online registration process. *Each school attending is expected to provide at least one event coordinator and one judge. Blue CAP Chapters are expected to two event coordinators and two judges. NCTSA encourages you to reach out to your central office CTE staff and school CTE faculty and administrators for assistance.*

Registration fees are used to cover the cost of conference awards, trophies, mixer functions, and other conference expenses. Copies of all conference registration forms and fees must be postmarked by March 8, 2019.

Please make checks payable to NCTSA and mail to Jerianne S. Taylor, 292 Ridgefield Road, Boone NC 28607.

- Only affiliated members may participate.
- THERE WILL BE NO ON-SITE REGISTRATION.

There will be no on-site changes for individual events. Students will NOT be allowed to add, switch, change, or substitute one individual event for another. However, for team events, advisors may make substitutions as long as the student is registered for the conference.

CHAPTER REGISTRATION FORM
NCTSA SPRING CONFERENCE
April 3-5, 2019

Advisor's Name: _____

School/Chapter: _____

School Address: _____

Email Address: _____

Planning Period Time: _____ Cell #: _____

Number of Students Registered for the Conference (Registration = $65.00): _____
Number of Guests Registered for the Conference (Registration = $65.00): _____
Number of Judges Registered for the Conference (Registration = $65.00): _____
Number of Advisors Registered for the Conference (Registration = $65.00): _____
     (Waived if coordinating an event, click on the following link to sign-up)
Total Number Registered for the Conference (Registration = $65.00): _____

Name of person(s) willing to judge an event(s)	Event(s) he/ she would like to judge

Please do not mail your registration packet until everything is complete. REGISTRATION DEADLINE is March 3, 2019. Listed below is a summarization of information that you need to enclose with your registration packet:

☐ **1.**   REGISTRATION FEES. . . ONLY ONE CHECK PER CHAPTER
          (Make sure the individual registration fees are processed through local
          accounts so that the NC-TSA State Office receives one check, made
          payable to NC-TSA, for your total chapter participation.)
☐ **2.**   CHAPTER REGISTRATION FORM
☐ **3.**   OFFICER CANDIDATE FORMS (If applicable: E-mail to Emily McAdams)
☐ **4.**   WAYNE & KARYN CLARK SCHOLARSHIP APPLICATION (If applicable)

Please bring your students Code of Conduct and Medical Liability forms with you to the conference to present at the registration desk before you can pick up your conference packets/information. Do not mail.

You will receive an e-mail confirmation message once you complete and submit your on-line registration. It is the chapter advisor's responsibility to make sure their students are registered for the correct events. Please make copies of all information prior to mailing the registration packet to Jerianne Taylor. This form must be returned with registration packet not later than March 3, 2019.

ON-LINE REGISTRATION INFORMATION

North Carolina TSA will continue to utilize the online registration program for our State Conference. **ALL REGISTRATION MUST BE COMPLETED ONLINE!** The URL for completing your Chapter Registration is: www.registermychapter.com/tsa/nc

The conference registration period begins **January 30 – March 3, 2019,** please register your chapter online at this time. During this open registration period you may add, delete and edit your registration input. After **March 3,** you *will not* be able to make any changes, additions or deletions. As you complete your registration, an invoice will be presented to you and available for   print and submission to your bookkeeper for processing. Payments for conference registrations are due postmarked date by March 8, 2019. Please make one check payable to NCTSA. Mail all conference materials and your payment to: Jerianne S. Taylor, 292 Ridgefield Road, Boone, NC   28607.

To log into the online registration program, go to the website indicated below and enter your unique user name and password.

Website for on-line registration: **www.registermychapter.com/tsa/nc**

User Name {Advisor's last name and first initial – no space}
Password {Advisor's first name}

If you have any questions or experience difficulties at any time during this process, please contact Jerianne Taylor, 336-692-4794 or jerianne.taylor@dpi.nc.gov. **If you sponsor two or more chapters** you will need to contact Jerianne immediately for the correct password and   username for each chapter, they will be different.

TSA Online Conference Registration Instructions
1. In your web browser, go to http://www.registermychapter.com/TSA/NC.

2. If this is your first time to the site, click the **Register** link. You will be asked to log in. Log in using the user name and password that your State Advisor gave to you.

3. The first time in, you will be asked to verify your school information. Double check all the fields, and press the **Submit** button at the bottom to save any changes.

4. Your name will automatically be added to the list as an Advisor.

5. Click the **Add New Name** link to add a new name to the list. Provide the participant's last name, first name, and select their status from the drop down list. Be sure to check all contests that this individual will participate in. Remember, you will need to select two voting delegates (or the number allowed for your chapter - 2 per ten members affiliated, maximum of 12 delegates) so be sure to include those as you enter names.

6. To enter Team events, be sure to select the correct team number. Most team events only allow you to enter one team. However, some events allow you to enter more than one team. In such cases, separate team #'s should be designated for each team.

7. Continue adding names until you have entered all of your participants. As you add participants, if you attempt to enter more participants in an event than are allowed, you will be informed, and not allowed to exceed the event maximum. At any point, you may press the **View Registration** link to get an idea of your total invoice amount, and a better understanding of who is registered for which events.

8. When you are finished, press the **Finished Registering** link at the bottom. At this point, you may have several red messages at the top of the screen. Please read these carefully. Your registration will not be complete until these problems have been resolved. For instance, you may be informed that you must have 2 voting delegates. To correct this problem, click the **Back To Registration** link at the bottom, select the student(s) you want to be voting delegates and click the **Edit** link beside each student. Change the Status field to Voting Delegate and press **Submit** to save. When you're finished making these changes, press the **Finished Registering** link again.

9. If you get a message that states that you have not met the minimum requirements for an event, then you must click the **Back To Registration** link, and either add students to those contests that are short, or remove students from those contests. When you're finished making those changes, press the **Finished Registering** link again.

10. When you have corrected any problems that may have appeared, from the Finished Registering screen, first, be sure to **Print** a copy of this invoice to send in with your payment. Next, press the **Confirm** link at the bottom to confirm that the invoice is correct. A copy of the e-mail will be sent to you, and to the State advisor.

11. If you need to edit your registration, you may come back to this location and make changes up until the close date, March 3, 2019.

12. Once you are finished with your registration, be sure to either click the **Log Out** link to make sure that the connection is securely closed, or exit your browser. This will ensure that no one can get in and make changes to your registration.

REMINDERS AND OTHER INFORMATION

Voting Delegates

Each chapter is entitled to two (2)-voting delegates per 10 chapter members. CAP affiliates have a   maximum of twelve (12) delegates. Advisors MUST designate on the registration forms those students who will be acting as delegates.

NC-TSA Officer Candidates

Please encourage your students to run for a NC-TSA State office. This is an excellent opportunity for you and your students to participate in activities that are enjoyable, educational, and important to our association. The state officers receive additional leadership training and represent NC-TSA at special events. No more than two students per chapter may run for office. Candidates for TSA State Office are expected to wear official TSA dress as described in the Competitive Events Guides. Ties, patches, and other TSA attire can be purchased through the TSA Store at www.tsaweb.org. Officer interest forms were sent out in January. If you have a student that is interested, please have them contact Emily McAdams via email at emily.mcadams@gmail.com   as soon as possible.

Awards and Recognition Program

Advisors are reminded to encourage students to apply for **TSA Technology Honor Society** membership. Each applicant is required to submit ***$5.00*** when applying for an Achievement Award **or** Honor Society membership. Upon receipt, NCTSA will send the required $5.00 fee and application to National TSA. ***Honor Society*** members will be recognized at both the state and national conferences.

Wayne and Karyn Clark Technology Scholarship

NCTSA offers eligible seniors attending a North Carolina public or private high school, who intend to enter a North Carolina state supported university to prepare to teach Technology Education upon graduation **or** seniors who are entering a technology related field may apply for the $500.00 Wayne and Karyn Clark Scholarship. See attached application.

Competitive Events

National rules and criteria will apply to the NC-TSA conference. **Middle School** competition will be governed by the 2018 - 2019 Competitive Events Guide; **High School** the 2019 – 2020 Competitive Events guide.

Ignorance of the rules WILL NOT be accepted as an excuse for not applying the rules and criteria as defined within the TSA Curricular Resource Guides.

To avoid confusions and/or unpleasantness, please make every effort to understand the requirements of each event before conference and ensure that each student knows what is expected of him or her.

Check the TSA National web page for additional information.
http://tsaweb.org/Competitions

Contact the Events Coordinators listed on the web page for clarification of rules with questions or concerns. http://tsaweb.org/Competition-Regulations-Committee

TSA Official Dress

During general sessions at the state conference, student members must wear official TSA attire: competition TSA attire or general session TSA attire. Adults must dress appropriately. No flip flops, halter tops, tank tops or shorts are permitted for anyone at the general sessions. This is in   accordance with the TSA National rules and guidelines found at: http://tsaweb.org/Dress-Code

VEX ROBOTICS Competition: TEAMS must be registered with VEX and TSA for the current school year 2018-2019 in order to compete. Teams are required to wear TSA Competition Attire. We will host the TSA VEX Robotics Competition (VRC) — High School/Middle School and VEX IQ – Middle School Information about the competition is located at: http://tsaweb.org/Vex-Robotics-Competition

ADVISORS: Please call Jerianne Taylor (336-692-4794) if you have questions or concerns about the dress codes. NCTSA will work with new chapters to secure appropriate attire for the state conference. In order to prepare our students for the national conference and to be professionals, we need to adhere to the required dress code.

SPECIFIC EVENT THEMES 2019

Detailed information pertaining to the events can be found on the TSA webpage www.tsaweb.org.
http://tsaweb.org/Themes-and-Problems
http://tsaweb.org/Updates-and-Clarification
http://tsaweb.org/competition-forms

If you need additional information please call Jerianne Taylor (336-692-4794).

Mandatory Advisor's Meeting –This year, we will have a brief but Mandatory Advisor's Meeting on Wednesday at 2:30 pm.

STUDENT CODE OF CONDUCT

Student Conduct Practices and Procedures
Print Student's Name:
Print Student's School:

1. There shall be no defacing of property. Any damages to the property or furnishings in the hotel rooms or buildings must be paid for by the individual responsible.
2. Students shall keep their advisor and chaperone informed of their activities and whereabouts AT ALL TIMES.
3. Students should be prompt and prepared for all activities.
4. Students should be financially prepared for all responsibilities.
5. Students not staying at the Sheraton Four Seasons shall be off the grounds of the hotel by curfew or immediately following the last scheduled event.
6. NO ALCOHOLIC BEVERAGES OR NARCOTICS IN ANY FORM SHALL BE POSSESSED BY PARTICIPANTS AT ANY TIME, UNDER ANY CIRCUMSTANCES.
7. Out of common courtesy to the general public, smoking will not be permitted by any student representing NC-TSA.
8. No student shall leave the hotel (except for authorized events) unless permission has been received from their chapter advisor.
9. Students are required to attend all general sessions and activities assigned, including workshops, competitive events, committee meetings, etc..., for which they are registered unless engaged in some specific assignment taking place at the same time.
10. Identification nametags shall be worn at all times during the conference.
11. Chapter advisors and chaperons will be accountable for students' conduct.
12. Students violating or ignoring any of the conduct rules will subject their entire delegation to being unseated and their officer candidates and competitive events' participants being disqualified. Individual students may be sent home immediately at their own expense. CURFEW WILL BE ENFORCED! **(Curfew means students must be in assigned rooms during the designated time.)**
13. Casual wear will be accepted during specific social functions as designated.

"I have read and fully understand the NC-TSA State Conference Code of Conduct and agree to comply with these guidelines."

Student's Signature: _____ Date _____

"Approval for the student named above to attend the 40th NCTSA State Conference, at the Sheraton Four Seasons, Greensboro, North Carolina is hereby granted."

Parent or Guardian's Signature: _____ Date _____

This form must be returned with registration ...one form per student participant.
   ~ **NAME TAGS AND WRISTBANDS MUST BE WORN AT ALL TIMES DURING CONFERENCE!**
   ~ **THERE WILL BE A FIVE-DOLLAR {$5.00} REPLACEMENT FEE FOR EITHER NAME TAGS OR WRISTBANDS!**

North Carolina Technology Student Association

Personal Liability and Medical Release Form

Name of Participant: _____
Please Print

Name of Chapter: _____

NOTE: STUDENT AND PARENT(S) MUST SIGN THIS FORM

Having read and completely understood the "Student Code of Conduct" for the North Carolina Technology Student Association, Inc., I do hereby agree to follow the conduct described. I fully understand that this is an educational activity and will, to the best of my ability, apply myself for the purpose of learning, and at all times uphold the fine qualities of a person representing the North Carolina Technology Student Association, Inc.

Participant _____   Date_____
Signature

AND

I hereby agree to release the North Carolina Technology Student Association, Inc., its representatives, agents, servants, and employees from liability for any injury to above named person, resulting from any cause whatsoever occurring to above named person at any time while attending the annual North Carolina Technology Student Association State Conference, including travel to and from the conference, excepting only such injury or damage resulting from willful acts of such representatives, agents, servants and employees.

AND

I do voluntarily authorize NCTSA State Conference supervisors, assistants and/or designee to administer and/or obtain routine or emergency diagnostic procedures and/or routine or emergency medical treatment for the above named person as deemed necessary in medical judgment.

I agree to indemnify and hold harmless the NCTSA State Conference coordinators, the North Carolina-Technology Student Association, Inc., and said medical service coordinator and/or assistants and designees from any and all claims, demands, actions, rights of action, on account of said procedures and/or treatment rendered in good faith and according to accepted medical standards.

Parent or Guardian_____Date_____
Signature

Home Phone #:(Area Code)_____-_____- _____
Work Phone #:(Area Code)_____-_____- _____
Cell Phone #:(Area Code)_____-_____- _____

Health Care Provider_____ Policy # _____

☐ **I DO NOT** give NCTSA the right to publish a photograph of my child for publicity purposes.

☐ **I DO NOT** give NCTSA the right to collect self-reported data for educational purposes from my
child.

Chapter of the Year Award 2019

The NC TSA Chapter of the Year Award is one of the highest awards recognized by the association.

It consists of two parts:
- a portfolio submitted at the state conference during check-in
- the number of 1st, 2nd and 3rd place finishes at the State Conference.

The TSA Chapter of the Year Awards will also be split into two divisions: small chapters and large chapters, based on State Conference registration. There will be a Middle School and High School chapter recognized in each division. A large chapter is defined as having at least 25 members registered at the State Conference and a small chapter has less than 25 members registered.

The Chapter of the Year will be calculated 50% on the Chapter Portfolio score and 50% based on number of 1st, 2nd and 3rd place finishes at State Conference. The Chapter Portfolio has a maximum score of 50 points with maximum of 10 points awarded for each category:

1. Chapter involvement with the American Cancer Society (Make checks payable to NCTSA – ACS or provide proof of submission of funds to ACS) – Up to 10 points

2. Leadership development activities for students – Up to 10 points

3. Chapter engagement activities: chapter teambuilding, fun activities – Up to 10 points

4. Chapter service activities for their school and community – Up to 10 points

5. Layout and Presentation of the Portfolio – Up to 10 points

Chapters are to submit their Chapter Portfolio at the Conference Headquarters at the State Conference on April 3, 2019 on or before 7:00 PM.

Please contact Jerianne Taylor with any questions.

American Cancer Society Service Project

Dear NCTSA Advisors:

As you may know, TSA's National Service Project is to raise funds for the American Cancer Society, a nationwide health organization dedicated to eliminating cancer (for more information about the ACS, visit www.cancer.org). To contribute to this effort, for the past few years, the NCTSA officer team has organized a fundraiser at the State Conference. Last year, we sold luminaries at the state conference and raised at the state and locally over $3,000.00 for the ACS.

This year, in addition to the officer fundraising efforts, we are encouraging every chapter to hold their own fundraiser before the state conference. This fundraiser can be in any form, such as a bake sale, a raffle, or a contest—be creative with your fundraising ideas! Take photos and/or videos of your fundraising efforts, submit them to me by April 1, 2019 they will be shown during the state conference. Please turn in all money raised at the conference. Checks should be made to NCTSA ACS. The chapter who raises the most money for ACS by April 1, 2019 will receive special recognition at the state conference.

If you have any questions or wish to send in pictures/videos, please contact Dr.Taylor at Jerianne.taylor@dpi.nc.gov. Thank you in advance for your chapter's hard work in supporting the American Cancer Society.

Sincerely,

Neil Williamson

Mr. Neil Williamson, NCTSA President

THE OFFICIAL SPONSOR OF BIRTHDAYS.

Wayne and Karyn Clark
NC TSA Technology Scholarship Application

One $500.00 Scholarship Awarded Annually at the NC TSA State Conference

Name: Age: Date:

Home Address:

City: State: Zip:

Phone: Email:

Technology Education Teacher:

School Name:

School Address:

City: State: Zip:

School Phone:

Date of Expected Graduation:

University that you plan to attend:

Have you already applied?   Date of Application:

Have you been accepted?

Attachments Required:

- High School Transcripts
- 2 Letter of Recommendation
    - 1 from NC Technology Teacher or NC TSA Advisor
    - 1 from a community person who knows you well.
- A One Page Essay on one of the following –
    - Why I want to teach Technology, Engineering and Design Education?
    - Why I want to work in a technology related field?
- A Statement of Need –
    - A brief statement from your parents that describes their financial status. It may include a copy of the past year's federal income tax form.

Application Deadline**: Postmarked by March 23, 2019**. Please send to required documents to Jerianne Taylor at the following address:

Jerianne Taylor
292 Ridgefield Rd.
Boone, NC 28607

Email Applications will also be accepted. Please email the required attachments to Jerianne.Taylor@dpi.nc.gov. Be sure to include Wayne and Karen Clark Scholarship in the Subject Heading.

NCTSA New Chapter of the Year Award Honoring
Dr. Laura Hummell

The NCTSA New Chapter of the Year Award was created in 2019 to honor Dr. Laura Hummell. Laura was killed tragically in a hit and run accident in late 2018. Prior to returning to her home state, she was a Technology and Engineering Teacher in North Carolina at Manteo Middle School. She also served on the NCTSA Board of Directors and as the Northeast Region NCTSA Competitive Events Coordinator for many years. She was actively involved in NCTSA and TSA at the national level. She advocated for new chapters and worked to mentor several TSA advisors.

The NCTSA New Chapter of the Year Award will recognize NEW Red or White CAP Chapter and one NEW Blue CAP chapter each year.

Chapters will be recognized at the State Conference. Chapters are to submit their Chapter Portfolio at the Conference Headquarters at the State Conference on April 3, 2019 on or before 7:00 PM.

To be eligible for the award, the chapter must meet the following requirements:
- Be in their first three years of affiliation
- Participate in the regional and/or state conference.
- Complete one fundraiser or service project during the year
- Have elected officers and an advisor
- Complete the nomination form below.

School Name:
School Address:
Advisor's Name:
Advisor's Email:
Advisor's Cell Phone Number:

Name of Officers:

Answer the following questions:
1. Describe one fundraiser or service project that you completed during the school year and how it helped your chapter.
2. Briefly describe what you would like to see your chapter do in the next three years.

Evaluation:
Completed form: up to 10 points
Response to Questions: up to 20 for each question
Participation in Regionals: 10 points
Participation in State Conference: 10 points
Number of 1st, 2nd or 3rd place finishes at Regionals: up to 15 points
Number of 1st, 2nd or 3rd place finishes at State Conference: up to 15 points

NCTSA Influence Award
Honoring
Dr. Richard E. Peterson

My wish, for you, is that this life becomes all that you want it to,
Your dreams stay big, your worries stay small,
You never need to carry more than you can hold,
And while you're out there getting where you're getting to,
I hope you know somebody loves you, and wants the same things too,
Yeah, this, is my wish.
Rascal Flatts

The NCTSA Influence Award was created in 2019 in honor of Dr. Richard E. "Dick" Peterson. Dr. Peterson was an Associate Professor in the Department of Science, Technology, Engineering and Mathematics Education at North Carolina State University. He was an avid supporter of the arts, STEM education and teacher education across the state and nation. He is remembered for his ability to tell stories that capture your attention and many times convey a hidden message.
The NCTSA Influence Award provides North Carolina TSA members and alumni the opportunity to recognize former and/or present North Carolina TSA Advisors that impacted their career choice and/or perspective on life and education.

Advisors will be recognized at the State Conference.

To nominate a North Carolina TSA Advisor, please complete the following and submit it Jerianne Taylor (Jerianne.taylor@dpi.nc.gov) under the subject heading: NCTSA Influence Award on or before **March 3, 2019.**

- Name of the TSA Advisor being nominated:
- Email address of the TSA Advisor being nominated:
- A One Page Typed Essay on the following:
    - Describe how your TSA Advisor that impacted their career choice and/or perspective on life and education.
- Name of the TSA member/alumni nominating the TSA Advisor
- Email address for the TSA member/alumni nominating the TSA Advisor
- Cell phone number the TSA member/alumni nominating the TSA Advisor

3D Animation Participants (two [2] teams of two [2] to six [6] members per chapter) demonstrate their knowledge of 3D animation technology and design skills to creatively solve the challenge posted on Themes and Problems.

Animatronics Participants (two [2] teams per chapter) demonstrate knowledge of mechanical and control systems by designing, fabricating, and controlling an animatronics device that will communicate, entertain, inform, demonstrate and/or illustrate a topic, idea, subject, or concept. Sound, lights, and a surrounding environment must accompany the device.

Architectural Design Participants (two [2] teams, or two [2] individuals, per chapter) develop a set of architectural plans and related materials for an annual architectural design challenge and construct a physical, as well as a computer-generated model, to accurately depict their design.

Biotechnology Design Participants (three [3] teams per chapter, two to six [2-6] members per team) select a contemporary biotechnology problem (that relates to the current year's published topic) and demonstrate understanding of it through documented research, the development of a solution, a display (including an optional model or prototype), and an effective multimedia presentation.

Board Game Design Participants (two [2] teams per chapter) develop, build, and package a board game that focuses on the subject of their choice. The game should be interesting, exciting, visually appealing, and intellectually challenging. Each team will have to design the packaging, instructions, pieces, and cards associated with creating and piloting a new board game. Semifinalists for the event will set up the game, demonstrate how the game is played, and explain the game's features.

Chapter Team Participants (one [1] team of six [6] members per chapter) take a written parliamentary procedures test in order to qualify for the semifinals, in which they complete an opening ceremony, items of business, parliamentary actions, and a closing ceremony within a specified time period.

Children's Stories Participants (three [3] teams or three [3] individuals per chapter – or a combination of teams and individuals that equals three [3] entries per chapter) create an illustrated children's story of high artistic, instructional, and social value. The narrative may be written in prose or poetry and take the form of a fable, adventure story, or other structure. The physical story book should be of high quality and designed to meet the year's given theme. The story must have a science, technology, engineering, and mathematics (STEM) focus.

Coding Participants (one [1] individual, or one [1] team of two [2] members, per chapter) respond to an annual coding-related design challenge by developing a software program that will accurately address an on-site problem in a specified, limited amount of time.

Computer-Aided Design (CAD), Architecture Participants (two [2] individuals per chapter) use complex computer graphic skills, tools, and processes to develop representations of architectural subjects, such as foundation and/or floor plans, and/or elevation drawings, and/or details of architectural ornamentation or cabinetry.

Computer-Aided Design (CAD), **Engineering** Participants (two [2] individuals per chapter) use complex computer graphic skills, tools, and processes to develop three-dimensional representations of engineering subjects such as a machine part, tool, device, or manufactured product.

Computer Integrated Manufacturing (CIM) Participants (two [2] teams of two to six [2–6] members per chapter) design, fabricate, and use Computer Integrated Manufacturing (CIM) to create a promotional TSA product that will showcase the current conference city and/or state.

Debating Technological Issues Participants (three [3] teams of two [2] members per chapter) work together to prepare for a debate against a team from another chapter. The teams will be instructed to take either the Pro or Con side of a selected subtopic.

Digital Video Production Participants (three [3] teams per chapter; an individual may participate solo in this team event) develop a public service announcement and a digital video (with sound) that focuses on the given year's theme.

Dragster Design Participants (two [2] individuals per chapter; one [1] entry per individual) design, produce a working drawing for, and build a CO_2-powered dragster.

Engineering Design Participants (three [3] teams of three to six [3 - 6] members per chapter develop a solution to a National Academy of Engineering grand challenge that is posted on the national TSA website. The solution offered will be informed and designed by precise problem definition, thorough research, creativity, experimentation (when possible), and the development of documents and appropriate models (mathematical, graphical, and/or physical prototype/model). Semifinalist teams present and defend their proposed solution to a panel of judges.

Essays on Technology Participants (three [3] individuals per chapter) write a research-based essay (using two or more sources provided on-site) that makes insightful connections about a current technological topic.

Extemporaneous Speech Participants (three [3] individuals per chapter) verbally communicate their knowledge of technology or TSA subjects by giving a speech after having drawn a card on which a technology or TSA topic is written.

Fashion Design and Technology Participants (three [3] teams of two to four [2-4] members per chapter) research, design, and create a portfolio and wearable prototype that reflect the current year's theme. Semifinalist teams participate in a presentation/interview in which they present their garment designs to judges.

Flight Endurance Participants (two [2] individuals per chapter; one [1] entry per individual) analyze flight principles with a rubber band-powered model aircraft.

Forensic Science Participants (one [1] team of two [2] members per chapter) take a written test of basic forensic science theory to qualify as semifinalists. Semifinalist teams will examine a mock crime scene and demonstrate their knowledge of forensic science and crime scene analysis. Students will be expected to survey the scene and use proper techniques to collect evidence from the mock crime scene. Students will then collect their data and perform a detailed written analysis of the crime scene.

Future Technology Teacher Participants (two [2] individuals per chapter) investigate technology education preparation programs in higher education and test their potential as a future technology educator.

Music Production Participants (three [3] teams per chapter; an individual may participate solo in this team event) produce an original musical piece that is designed to be played during the National TSA Conference opening or closing general sessions.

On Demand Video Participants (one [1] team of two to six [2-6] members per chapter) write, shoot, and edit a 60–second video onsite during the conference.

Photographic Technology Participants (one [1] individual per chapter) demonstrate understanding of and expertise in using photographic and imaging technology processes to convey a message based on a theme. Semifinalists record images and then utilize graphic editing software to prepare a single final image as a solution to an onsite prompt.

Prepared Presentation Participants (three [3] individuals per chapter) deliver an oral presentation, using a digital slide deck, on a topic provided onsite.

Promotional Design Participants (three [3] individuals per chapter) use computerized graphic communications layout and design skills in the production of a promotional resource for TSA.

Scientific Visualization (SciVis) Participants (three [3] teams per chapter; an individual may participate solo in this team event) use either 2D or 3D computer graphics tools and design processes to communicate, inform, analyze, and/or illustrate a STEM topic, idea, subject, or concept.

Software Development Participants (one [1] team per chapter) use knowledge of cutting-edge technologies, algorithm design, problem-solving principles, effective communication, and collaborative teamwork to design, implement, test, and document a software development project of educational or social value.

Structural Design and Engineering Participants (one [1] team of two [2] members per chapter) work as a team to build a designated structure that is posted on the TSA website. Teams apply the principles of structural design and engineering through research, design, construction, destructive testing, and assessment to determine the design efficiency of the structure.

System Control Technology Participants (one [1] team of three [3] members per chapter) work on site to develop a computer-controlled model-solution to a problem,

typically one from an industrial setting. Teams analyze the problem, build a computer-controlled mechanical model, program the model, explain the program and mechanical features of the model-solution, and write instructions for evaluators to operate the device.

Technology Bowl Participants (one [1] team of three [3] members per chapter) demonstrate their knowledge of TSA and concepts addressed in the technology content standards by completing a written, objective test; semifinalist teams participate in question/response, head to head team competition.

Technology Problem Solving Participants (one [1] team of two [2] members per chapter) use their skills in problem solving to develop a finite solution to a problem provided on site.

Transportation Modeling Participants (one [1] individual per chapter) research, design, and produce a scale model of a vehicle that fits the annual design problem.

Video Game Design Participants (three [3] teams per chapter) develop a game that focuses on the yearly theme. The game must have high artistic, educational, and social value and be interesting, exciting, visually appealing, and intellectually challenging.

Webmaster Participants (one [1] team of three to five [3-5] members per chapter) design, build, and launch a website that features the school's career and technology/engineering program, the TSA chapter, and the chapter's ability to research and present a given topic pertaining to technology. Semifinalists participate in an onsite interview to demonstrate the knowledge and expertise gained during the development of the website—with an emphasis on web design methods and practices, as well as their research for the annual design topic.

2019-2020 Competitive Event Themes and Problems are located at http://tsaweb.org/Themes-and-Problems

Competition Updates are located at *http://tsaweb.org/Updates-and-Clarification*

Be sure to review the General Rules and Regulations are located in the TSA High School General Rules Guide for the 2019 and 2020 National TSA Conference.

Below is a summary description of the 2018 and 2019 middle school level TSA competitive events. Detailed specifications and rules regarding each event can be found in *the TSA **Middle School Competitive Events Guide*** for the 2018 and 2019 National TSA Conferences.

Biotechnology Participants (three [3] teams per CHAPTER) conduct research on a contemporary biotechnology issue of their choosing, document their research, and create a display. The information gathered may be student-performed research or a re-creation or simulation of research performed by the scientific community. If appropriate, a model or prototype depicting some aspect of the issue may be included in the display. Semifinalist teams make a presentation and are interviewed about their topic.

CAD Foundations Participants (two [2] individuals per CHAPTER) have the opportunity to demonstrate their understanding of CAD fundamentals as they create a two-dimensional (2D) graphic representation of an engineering part or object.

Career Prep Participants (THREE [3] individuals per chapter) conduct research on a selected technology-related career according to a theme posted on the TSA website, and use this knowledge to prepare a letter of introduction and a chronological skills resume. Semifinalists participate in a mock interview.

Challenging Technology Issues Participants (three [3] teams of two [2] individuals per CHAPTER) work together to prepare and deliver a debate-style presentation with participants explaining opposing views of a current technology issue. The current year's topics will be posted on the TSA website under Competitions/Themes and Problems.

Chapter Team Participants (one [1] team of six [6] individuals per chapter) take a written parliamentary procedures test in order to qualify for the semifinals, in which they complete an opening ceremony, items of business, parliamentary actions, and a closing ceremony within a specified time period.

Children's Stories Participants (three [3] teams per CHAPTER; a team of one (1) is permitted) create an illustrated children's story that will incorporate educational and social values. The story may be written in a genre of choice. Examples are fables, adventures, non-fiction, fiction, and fairy tales. The story must revolve around the theme chosen for the given year. The theme will be posted on the TSA website under Competitions/Themes and Problems.

Coding Participants (one [1] team of two [2] members per chapter) will demonstrate their knowledge of computer science and coding by taking a written test. Semifinalists will further demonstrate their programming knowledge by participating in an on-site

programming challenge. Details about the on-site challenge (e.g., programming language to be used and practice problems) can be found on the TSA website under Themes and Problems.

Community Service Video Participants (TWO [2] teams per chapter; entries may be submitted by an individual or group) create and submit a video that depicts the local TSA chapter's service with the American Cancer Society, national TSA's community service partner.

Construction Challenge Participants (TWO [2] teams per chapter) submit a scale model/prototype with a portfolio that documents the use of their leadership and technical skills to fulfill an identified community need related to construction. Semifinalists discuss their projects in a presentation and an interview.

Digital Photography Participants (three [3] individuals per CHAPTER) produce a digital album consisting of color or black and white digital photographs that represent or relate to a chosen theme (posted on the TSA website under Competitions/Themes and Problems) and place the album on a storage device (USB flash drive) for submission. Semifinalists produce a series of digital photographs taken at the conference site that are edited appropriately for the on-site task. Details about the currect year's theme can be found on the TSA website under Themes and Problems.

Dragster Participants (THREE [3] individuals per chapter; one [1] entry per individual) design and produce a race-worthy CO_2-powered dragster according to stated specifications, using only specified materials. Special design requirements will be posted for this event on the TSA website under Competitions/Themes and Problems

Electrical Applications Participants (TWO [2] teams of two [2] individuals per chapter) take a written test of basic electrical and electronic theory. Semifinalists assemble a specific circuit from a schematic diagram using their own kit and make required electrical measurements, and explain their solution during an interview.

Essays on Technology Participants (three [3] individuals per CHAPTER) conduct research on specified subtopics of a broader technological area and, using the knowledge and resources gained through that research, write a comprehensive essay on one subtopic that is designated on site.

Flight Participants (two [2] individuals per chapter; one [1] entry per individual) study the principles of flight and design in order to fabricate a glider that stays in flight for the greatest elapsed time. The glider must be designed to be launched from a catapult that is provided on site. The design process is documented in a portfolio that is submitted for evaluation.

Forensic Technology Participants (TWO [2] teams of two [2] individuals per chapter) take a written test of basic forensic science theory to qualify as semifinalists.

Semifinalists demonstrate their ability to use forensic technology and skills by collecting evidence from – and analyzing – a mock crime scene.

Inventions and Innovations Participants (TWO [2] teams of at least three [3] individuals per chapter; one [1] entry per team) investigate and determine the need for an invention or innovation of a device, system, or process, and then brainstorm ideas for a possible solution. Semifinalists make an oral presentation to a panel of judges (who act as venture capitalist investors) to persuade the panel to invest in their invention/innovation.

Junior Solar Sprint Participants (one [1] team of two to four [2-4] per chapter, one [1] entry per team) apply STEM concepts, creativity, teamwork, and problem-solving skills as they design, construct, and race a solar-powered model car.

Leadership Strategies Participants (one [1] team of three [3] individuals per chapter) demonstrate leadership and team skills by preparing a presentation based on a selected challenge the officers of a TSA chapter might encounter.

Mass Production Participants (TWO [2] teams of at least two [2] individuals) manufacture a marketable product related to the current year's theme, which can be found on the TSA website under Themes and Problems. The team submits a documentation portfolio of the activities involved and three identical products made during the manufacturing process.

Mechanical Engineering Participants (one [1] team of three to six [3-6] individuals per chapter; one [1] entry per team) will design and build a "Rube Goldberg" mechanical device. This device will contain three (3) subsystems within a larger system. Each subsystem will contain all six (6) simple machines in a fun and inventive way. The final solution or grand finale is open-ended to maximize creativity. The transfer of energy in a device will travel a specific path from start to finish for a minimum of seven(7) seconds per board. The device must be self-powered utilizing kinetic energy. The device must be capable of repeated demonstrations without long setup times. Semifinalists participate in a presentation interview.

Medical Technology Participants (three [3] teams of at least two [2] individuals per CHAPTER; one [1] entry per team) conduct research on a contemporary medical technology issue of their choosing, document their research, and create a display. If appropriate, a model or prototype depicting an aspect of the issue may be included in the display. Semifinalists give a presentation.

Microcontroller Design Participants (THREE [3] teams of three to five [3-5] individuals per chapter) develop a working digital device (product) with real-world applications. Through a multimedia presentation, product demonstration, and documentation, the team demonstrates in detail its knowledge of microcontroller programming, simple circuitry, and product design and marketing. The project should have educational and social value, and conform to the theme for the year. The theme

will be posted on the TSA website (www.tsaweb.org) under Competitions/Themes and Problems. Teams demonstrate and promote their work in a timed presentation.

Off the Grid Throughout the world, people are working to become more self-sustaining when it comes to landscaping and architectural design. Sometimes the purpose is to live off the grid, and other times it is to create a smaller carbon footprint. There are many options throughout the world, but sometimes a location limits or enables those options. In this event, participants conduct research on a sustainable architectural design for a home in a country of the team's choosing (other than their home country). Participants (three [3] teams per CHAPTER) will create a display and a model. The model can be of the home the team designed or of a specific aspect of their design. Semifinalist teams will give a presentation and are interviewed about their design. The design brief for this competition will be posted on the TSA website under Competitions/Themes and Problems.

Prepared Speech Participants (three [3] individuals per CHAPTER) deliver a speech that reflects the theme of the current year's national conference.

Problem Solving Participants (one team of two individuals per chapter) use problem solving skills to develop a finite solution to a problem provided on site.

Promotional Marketing Participants (one [1] individual per chapter; one (1) entry each) create marketing tools that could be used in a TSA Promotional Kit. The theme and required elements for this event will be posted on the TSA website under Competitions/Themes and Problems. The toolkit components will be digitally submitted on a USB flash drive in an envelope, both labeled with the student's identification number. Semifinalists are asked to work creatively under constraints to design a solution to a problem given on site, using their own computer/laptop work station. Semifinalist entries will be saved to the individual's event USB drive for judging.

STEM Animation Participants (three [3] teams per CHAPTER; one [1] entry per team) use computer graphics tools and design processes (i.e., animation) to communicate, inform, analyze and/or illustrate a topic, idea, subject, or concept that focuses on one (1) or more of the following areas: science, technology, engineering, or mathematics; sound may accompany graphic images. Participants will find the current year's theme posted on the TSA website (www.tsaweb.org) under Competitions/Themes and Problems for this information. A documentation portfolio and a USB flash drive with the STEM animation comprise the entry. Semifinalists make a presentation.

Structural Engineering Participants (TWO [2] teams of two [2] individuals per chapter may participate, one [1] entry per team) apply the principles of structural design and engineering through basic research, design, construction, and destructive testing to determine the design efficiency of a structure. Details about the structure and information related to it will be posted on the TSA website (www.tsaweb.org) under

Competitions/Themes and Problems. The on-site semifinalist problem will be a variation of the pre-conference problem posted on the TSA website.

System Control Technology Participants (TWO [2] teams of three [3] individuals per CHAPTER may participate, one [1]] entry per team) use a team approach to develop a computer-controlled model solution to a given problem, typically one based on an industrial setting. Teams analyze the problem, build a computer-controlled mechanical model, program the model, explain the program and mechanical features of the model-solution, and leave instructions for judges to operate the device.

Tech Bowl Participants (one [1] team of three [3] individuals per chapter) demonstrate their knowledge of TSA and concepts addressed in the technology content standards by completing a written objective test; semifinalist teams participate in a question/response, head-to-head competition.

Technical Design Participants (one [1] team of two [2] individuals per chapter) demonstrate their ability to use the technical design process to solve an engineering design problem on site at the conference.

Video Game Design   Participants (one [1] team of two to six [2-6] individuals per chapter; one [1] entry per team) develop, build, and launch an E-rated, online game that focuses on the subject of their choice. The game should be interesting, exciting, visually appealing, and intellectually challenging. The game and all required documentation must be submitted — and will be evaluated — online, pre-conference. Semifinalist teams (list posted at the conference) participate in an on-site interview to demonstrate the knowledge and expertise they gained during the development of the game.

Website Design Participants (TWO [2] teams of three to six [3-6] individuals per chapter; one entry per team) design, build, and launch a website that features the team's ability to incorporate the elements of website design, graphic layout, and proper coding techniques. The design brief for this event will be posted on the TSA website (www.tsaweb.org) under Competitions/Themes and Problems. Semifinalists (determined prior to the conference) participate in an on-site conference interview, with an emphasis on web design as it pertains to their solution, to demonstrate the knowledge and expertise gained during the development of the website.

2018-2019 Competitive Event Themes and Problems are located at
http://tsaweb.org/Themes-and-Problems

Competition Updates are located at *http://tsaweb.org/Updates-and-Clarification*

Be sure to review the General Rules and Regulations are located in the *TSA Middle School Competitive Events Guide for the 2018 and 2019 National TSA Conferences.*

Below is a summary description of the 2019 NC TSA ONLY competitive events. Detailed specifications and rules regarding each event can be found at:

https://drive.google.com/drive/folders/0B84UxEoLQ8nCUlhxeTJlWTFpYkU

- NEW CHAPTER EVENTS:
  - These select competitive events are designed for chapters that have existed three years or less.
    - Solve the Problem MS and HS
    - Structures MS and HS
    - Robotics MS and HS
    - Comic Strip MS
    - Storyboarding HS
    - Catapult MS
    - Trebuchet HS

  - Beginning February 1, 2019, detailed specifications and rules regarding each event can be found: at https://drive.google.com/drive/folders/0B84UxEoLQ8nCUlhxeTJlWTFpYkU

NC TSA State Pin Design - Open to MS and HS participants - Submit by 1/11/19

NC TSA State T-Shirt Design – Open to MS and HS participants -Submit by 3/1/19

NC TSA Design Your Own Competitive Event – HS Only

NC TSA Engineered Dragster Design – Open to MS and HS participants

TSA and VEX Competitions 2019
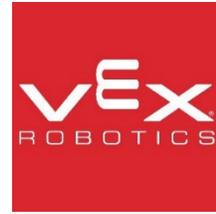
VEX VRC – Challenge: Turning Point. Limit of TWO teams. Open to Middle or High School

VEX Skills – Limit of TWO individuals. Open to Middle or High School

VEX IQ – Challenge: Next Level. Limit of TWO teams. Open to Middle School Only

Rules and Regulations:

- Visit the National TSA site for additional information located at http://tsaweb.org/Vex-Robotics- Competition

- Your team must register for the event on robotevents.com on or before March 1, 2019.

- Your team then should register and pay on the NC TSA site for the conference.

- For information about North Carolina TSA Tournaments, contact NCTSA VEX Coordinator: John Butler at jbutler@rock.k12.nc.us

Descriptions	Check - In from 3:00 - 5:00 in Guilford	Semifinals Judging	Room	Finals	Room
HS 3D Animation **	X	6:00 -9:00, Wednesday	Guilford DE	1:00 -6:00, Thursday	Arrowhead B
HS Animatronics **	X	6:00 -9:00, Wednesday	Guilford DE	9:00 AM -12:00 PM, Thursday	Guilford DE
HS Architectural Design **	X	6:00 -9:00, Wednesday	Guilford DE	9:00 AM -12:00 PM, Thursday	Guilford DE
HS Biotechnology Design **	X	6:00 -9:00, Wednesday	Guilford DE	9:00 AM -12:00 PM, Thursday	Guilford DE
HS Board Game Design	x	6:00 -9:00, Wednesday	Guilford DE	9:00 AM -12:00 PM, Thursday	Guilford DE
HS Chapter Team **		8:00-11:00, Wednesday	Auditorium IV	9:00AM-1:00 PM,Thursday	Auditorium 1
HS Children's Stories **	X	6:00 -9:00, Wednesday	Guilford DE	9:00AM-3:00 PM,Thursday	Biltmore
HS CIM **	X	6:00 -9:00, Wednesday	Guilford DE	1:00 -5:00 PM, Thursday	Guilford DE
HS Coding **		9:00 - 1:00 Thursday -Problems	Augusta B/TBD	1:00 -5:00 PM, Thursday	Guilford C
HS Computer Aided Design 2D, Architecture		9:00 AM - 12:00 PM, Thursday	Pebble Beach	1:00 -5:00 PM, Thursday	Guilford C
HS Computer Aided Design 3D, Engineering		9:00 AM - 12:00 PM, Thursday	Pebble Beach	1:00 -5:00 PM, Thursday	Guilford C
HS Debating Technological Issues		9:00AM -12:00 PM, Thursday	Arrowood A/B	1:00 -5:00 PM, Thursday	Guilford C
HS Digital Video Production	X	6:00 -9:00, Wednesday	Guilford DE	1:00 -5:00 PM, Thursday	Guilford C
HS Dragster Design **	X	6:00 -9:00, Wednesday	Guilford C	9:00 AM -12:00 PM, Thursday Races/ 1:00 -5:00 Interview	Guilford C
HS Engineering Design **	X	6:00 -9:00, Wednesday	Guilford DE	9:00 AM -12:00 PM, Thursday	Guilford DE
HS Essays on Technology		3:00 - 6:00 PM, Wednesday	Auditorium 2/TBD	9:00 AM - 12:00 PM, Thursday - LEAP Interviews	Augusta A
HS Extemporaneous Speech		9:00 AM -1:00PM, Thursday	Colony A	1:00 -4:00 PM Thursday - Finalists	Arrowhead B
HS Forensics		9:00 AM -1:00PM, Thursday		1:00 -4:00 PM Thursday - Finalists	
HS Fashion Design **	X	6:00 -9:00, Wednesday	Guilford DE	1:00 -4:00 PM Thursday - Finalists	Auditorium II
HS Flight Endurance **		9:00 AM - 12:00 PM, Thursday	Guilford A	Interviews 3:00 -5:00 PM Thursday	Guilford A
HS Future Technology Teacher **	X	6:00 -9:00, Wednesday	Guilford DE	1:00 - 6:00 PM - Finalists	Old North
HS Music Production **	X	6:00 -9:00, Wednesday	Guilford DE	1:00 - 5:00 PM - Finalists	Pebble Beach
HS On Demand Video	X	3:00 -4:00, Wednesday Pick-Up Topic	Blandwood	3:00 - 3:30 Turn In /5:00 -7:00 Interviews with Finalists	Sandpiper
HS Photographic Technology **	X	6:00 -9:00, Wednesday	Guilford DE	12:00 PM - 6:00 PM, Thursday	Riverdale
HS Prepared Presentation		9:00 AM -1:00 PM	Tidewater A	3:00 - 6:00 PM, Thursday - Finalists	Tidewater A
HS Promotional Design	X	6:00 -9:00, Wednesday	Guilford DE	1:00 - 5:00 PM, Thursday	Colony B
HS SciViz **	X	6:00 -9:00, Wednesday	Guilford DE	1:00 - 4:00 PM - Thursday- Finalists	Tidewater B
HS Software Development **	X	6:00 -9:00, Wednesday	Guilford DE	9:00 AM - 12:00 PM, Thursday	Old North
	X	6:00 -9:00, Wednesday	Guilford DE	9:00 AM - 12:00 PM, Thursday	St. Andrews
HS Structural Engineering **		3:00 -4:00, Wednesday -Testing/ 8:00 -11:00 PM	Oak	9:00 AM - 12:00 PM Testing and Interviews Thursday	Oak
HS System Control Technology		3:30 -7:00, Wednesday On-Site Problem	Augusta B	1:00 -5:00 PM, Thursday	Guilford C

Descriptions	Check - In from 3:00 - 5:00 in Guilford	Semifinals Judging	Room	Finals	Room
HS Technology Bowl **		4:00-6:00, Wednesday -Written	Auditorium III	1:00 -4:00 PM - Finalists	Meadowbrook/Need a Holding Room for Interviews
HS Technology Problem Solving		8:00-11:00, Wednesday	Colony BC	1:00 -5:00 PM, Thursday	Guilford C
HS Transportation Modeling **	X	6:00 -9:00, Wednesday	Guilford C	1:00 -5:00 PM, Thursday	Guilford C
HS VEX Robotics **		3:00 -11:00, Wednesday	Guilford FG	9:00 a.m.-6:00, Thursday	Guilford FG
HS VEX Robotics -Skill **		3:00 -11:00, Wednesday	Guilford FG		
HS Video Game Design **	X	6:00 -9:00, Wednesday	Guilford DE	3:00 - 6:00, Thursday	Edgewood
HS Webmaster **	X	6:00 -9:00, Wednesday	Guilford DE	1:00 -5:00 PM, Thursday	St. Andrews
NCTSA Only: HS Design Your Own Competition	X	6:00 -9:00, Wednesday	Guilford DE	1:00 -6:00 PM, Thursday	Guilford DE
MS Biotechnology Design **	X	6:00 -9:00, Wednesday	Guilford DE	9:00 a.m. -12:00	Guilford DE
MS CAD Foundations **		8:00-11:00, Wednesday	Tidewater	no finals	Tidewater
MS Career Prep **	X	6:00 -9:00, Wednesday	Guilford DE	9:00 AM - 12:00 PM, Thursday	Links
MS Challenging Tech. Issues **		4:00-7:00, Wednesday	Cedar/Morehead	1:00 - 4:00 PM, Thursday	Cedar/Morehead
MS Chapter Team **		8:00-11:00, Wednesday	Auditorium IV	1:00 PM - 4:00 PM, Thursday	Auditorium I
MS Childrens Stories **	X	6:00 -9:00, Wednesday	Guilford DE	1:00 PM - 6:00 PM, Thursday	Links
MS Coding		4:00 -6:00 Wednesday Written Test	Auditorium IV	2:00 - 4:00 Thursday Finals	Augusta B
MS Community Service Video	X	6:00 -9:00, Wednesday	Guilford DE		
MS Construction Challenge **	X	6:00 -9:00, Wednesday	Guilford DE	8:00 -10:00 PM, Wednesday	Sandpiper
MS Digital Photography **	X	6:00 -9:00, Wednesday	Guilford DE	1:00 PM - 4:00 PM, Thursday	Colony C
MS Dragster **	X	6:00 -9:00, Wednesday	Guilford C	9:00 a.m. - 12, Thursday	Guilford C
MS Electrical Applications **		8:00 -10:00 PM, Wednesday (Written)	Tanglewood	9:00 AM - 12:00 PM, Thursday	Blandwood
MS Essays on Technology		1:00 - 4:00 PM, Thursday	Auditorium IV		
MS Flight **		8:00 -11:00, Wednesday	Guilford A	1:00 - 4:00 PM	Guilford A
MS Forensic Technology **		8:00 -11:00, Wednesday	Grandover East	9:00 AM -11:00PM	Grandover East
MS Inventions & Innovations **	X	6:00 -9:00, Wednesday	Guilford DE	1:00 - 4:00 PM, Thursday	Blandwood
MS Junior Solar Sprint **	X	6:00 -9:00, Wednesday	Guilford DE	1:00-4:00, Thursday	Guilford C/Outside
MS Leadership Strategies **		8:00-11:00, Wednesday	Auditorium II/III	9:00 AM - 12:00 PM, Thursday	Sandpiper/ Tanglewood
MS Mass Production **	X	6:00 -9:00, Wednesday	Guilford DE	1:00-4:00, Thursday	Guilford DE
MS Medical Technology Issues **	X	6:00 -9:00, Wednesday	Guilford DE	9:00 AM - 12:00 PM, Thursday	Guilford C
MS Mechanical Challenge	X	6:00 -9:00, Wednesday	Guilford DE	1:00-4:00, Thursday	Guilford C
MS Microcontroller Design **	X	6:00 -9:00, Wednesday	Guilford DE	9:00 am - 12, Thursday	Guilford DE
MS Off the Grid	X	6:00 -9:00, Wednesday	Guilford DE	9:00 am - 12, Thursday	Guilford DE
MS Prepared Speech		9:00 AM -12:00 PM, Thursday	Cedar		
MS Problem Solving		8:00-11:00, Wednesday	Colony A		
MS Promotional Marketing **	X	6:00 -9:00, Wednesday	Guilford DE	1:00 - 4:00 PM, Thursday	Colony A
MS STEM Animation **	X	6:00 -9:00, Wednesday	Guilford DE	1:00 - 4:00 PM, Thursday	Augusta A

Descriptions	Check - In from 3:00 - 5:00	Semifinals Judging	Room	Finals	Room
MS Structural Engineering **		3:00 -4:00, Wednesday -Testing/4:00-7:00, Wednesday - Build	Oak	9:00 AM - 12:00 PM, Thursday (Testing)	Oak
MS System Control Technology		3:30 -7:00, Wednesday On-Site Problem	Augusta B		
MS Tech Bowl **		4:00-6:00, Wednesday -Written	Auditorium IIi	9:00 AM - 12:00 PM, Thursday	Meadowbrook
MS Technical Design		3:00-3:30, Wednesday Pick-Up Topic	Auditorium IV	3:00 -3:30, Thursday Turn-In-Judging 3:00-7:00	Auditorium IV
MS VEX IQ **		Guilford FG		Guilford FG	
MS VEX Robotics **		12:00-5:00, Wednesday	Guilford FG	9:00 a.m. - 6:00, Thursday	Guilford FG
MS VEX Skill **		12:00-5:00, Wednesday	Gulford FG		
MS Video Game Design **		6:00 -9:00, Wednesday	Guilford DE	1:00-4:00PM, Thursday	Edgewood
MS Website Design **		6:00 -9:00, Wednesday	Guilford DE	3:30 -6:00, Thursday	St. Andrews
NCTSA ONLY -ENGINEERED DRAGSTER	X	6:00 -9:00, Wednesday	Guilford DE	1:00-4:00PM, Thursday	Guilford C
NCTSA ONLY –Robotics Competition	X	4:00 -6:00, Wednesday	Guilford FG	Open to NEW Chapters ONLY	
NCTSA ONLY – Solve the Problem MS/HS		9:00 -12:00 Thursday		Open to NEW Chapters ONLY	
NCTSA ONLY – Structures MS and HS		8:00 – 10:00 Wednesday		Open to NEW Chapters ONLY	
NCTSA Only – Comic Strip MS and Storyboarding	X			Open to NEW Chapters ONLY	
NCTSA Only – Catapult MS and Trebuchet HS	X	Testing – 12:00 -2:00 Thursday		Open to NEW Chapters ONLY	
Board of Director's Meeting		12:00 -3:00PM, Thursday	Olympia		
General Session		Wednesday 7:00 -8:00	Guilford B		
General Session		Thursday 8:00 -9:00	Guilford B		
General Session		Thursday 7:00 -8:00	Guilford B		
Awards Ceremony		Friday 9:00 -noon	Guilford B		
Mixer		Thursday 9:00 PM - 11:00 PM			