

## Workshop Descriptions – FLC 2022

### 8:30 a.m. – 9:15 a.m. Break Out Session 1

**Title:** Assembly Line - STEM Challenge presented by Oklahoma University Gallogly College of Engineering

**Description:** Industrial and systems engineers work to make systems better, including efficiency, high quality and safer for workers. In this activity, you will learn how an assembly line not only makes products faster, but also of a higher quality.

**Who Should Attend:** Anyone!

**Room:** Oklahoma AB

**Title:** Grand STEM Wheel Challenge presented by Oklahoma State University CEAT K-12 STEM Program

**Description:** Students will be working on designing a working Ferris wheel using random supplies and materials provided. There will be challenges and tests to fulfill to gain maximum points. For example, the Ferris wheel will need to rotate AND hold a rider all the way around without falling out.

**Who Should Attend:** Anyone who enjoys an engineering challenge!

**Room:** Oklahoma CD

**Title:** Nationwide Eclipse Ballooning Project

**Description:** In 2024, a total solar eclipse will pass through Oklahoma and another won't appear in the state until 2045. The Nationwide Eclipse Ballooning Project is designed to promote the development of participants' STEM career skills by engaging them in a once-in-a-lifetime experience. NEBP will provide teams with experience flying off-the-shelf science payloads performing meteorological observations into the middle stratosphere. Participants will engage with introductory atmospheric science concepts, data collection, and operational efforts including sensor initialization, ground station operation, and scientific data analysis. No previous experience in atmospheric science is required, and all necessary training and materials will be provided. This session will explain the science behind the eclipse and how to get involved.

**Who Should Attend:** Anyone!

**Room:** Oklahoma EF

**Title:** Avoiding Disqualifications

**Description:** After you have done all the work to create your event artifacts, how can you best prepare so that your entry will not be disqualified before it is even judged? Come hear valuable information from veteran TSA advisor, Susan James.

**Who Should Attend:** TSA competitors and advisors

**Room:** Oklahoma G

**Title:** Middle School Droneworks Theme and Missions Reveal

**Description:** Join us for the launch of the 2023 Droneworks competition and see the new theme and missions revealed. Droneworks combines real-world drone applications, coding and challenging flights into an exciting drone competition. Droneworks is an Oklahoma TSA only event and more information is available at [www.droneworksite.com](http://www.droneworksite.com).

**Who Should Attend:** Middle School TSA competitors and advisors

**Room:** Oklahoma Ballroom H

**Title: Race You to the Moon!**

**Description:** As NASA prepares to send the first women and the first person of color to the surface of the moon in 2025, do you know what it will take to land them on the moon? In this hands-on inquiry-based session facilitated by NASA Education Coordinator Dorinda Risenhoover, participants will work in groups and will be tasked with creating a lunar lander which safely lands their “payload” (2 large marshmallows) on the surface of the “moon”.

**Who Should Attend:** Anyone!

**Room:** Ballroom I

**Title: “Ag on my Plate”**

**Description:** A hands-on activity hosted by Food on the Move

**Who Should Attend:** Anyone!

**Room:** Ballroom J

**Title: TSA Officer Panel**

**Description:** Ask your TSA state officer team questions about TSA, being a leader, running for state officer...and more!

**Who Should Attend:** TSA Members

**Room:** Boomer A

**Title: Tinker AFB Careers in STEM**

**Description:** This workshop will highlight the different Aerospace/STEM career opportunities at Tinker Airforce Base. The different education paths that could lead to a career at Tinker AFB, along with the benefits of Federal Employment, will also be discussed. There will be a Q&A session after the presentation to help.

**Who Should Attend:** Anyone!

**Room:** Boomer B

**Title: New (and updated) High School Events**

**Description:** The 2022-2023 high school guide has three exciting new events: Audio Podcasting, Senior Solar Sprint and Drone Challenge (UAV). Valerie McCauley, advisor and member of the national Competition Regulations Committee (CRC) will give valuable information about the new events plus important changes to current events.

**Who Should Attend:** high school advisors and students

**Room:** Sooner A

**Title: TSA Advisor Discussion**

**Description:** Come and enjoy coffee and a chat with your fellow TSA advisors!

**Who Should Attend:** TSA Advisors

**Room:** Sooner B

## 9:30 a.m. – 10:15 a.m. Breakout Session 2

**Title: Assembly Line - STEM Challenge presented by Oklahoma University Gallogly College of Engineering**

**Description:** Industrial and systems engineers work to make systems better, including efficiency, high quality and safer for workers. In this activity, you will learn how an assembly line not only makes products faster, but also of a higher quality.

**Who Should Attend:** Anyone!

**Room:** Oklahoma AB

**Title: Grand STEM Wheel Challenge presented by Oklahoma State University CEAT K-12 STEM Program**

**Description:** Students will be working on designing a working Ferris wheel using random supplies and materials provided. There will be challenges and tests to fulfill to gain maximum points. For example, the Ferris wheel will need to rotate AND hold a rider all the way around without falling out.

**Who Should Attend:** Anyone who enjoys an engineering challenge!

**Room:** Oklahoma CD

**Title: Nationwide Eclipse Ballooning Project**

**Description:** In 2024, a total solar eclipse will pass through Oklahoma and another won't appear in the state until 2045. The Nationwide Eclipse Ballooning Project is designed to promote the development of participants' STEM career skills by engaging them in a once-in-a-lifetime experience. NEBP will provide teams with experience flying off-the-shelf science payloads performing meteorological observations into the middle stratosphere. Participants will engage with introductory atmospheric science concepts, data collection, and operational efforts including sensor initialization, ground station operation, and scientific data analysis. No previous experience in atmospheric science is required, and all necessary training and materials will be provided. This session will explain the science behind the eclipse and how to get involved.

**Who Should Attend:** Anyone!

**Room:** Oklahoma EF

**Title: Information Overload**

**Description:** What does it take to work in the Information Technology field and how do you prepare? Learn these and other skills to make the most of an exciting and fulfilling career in IT.

**Who Should Attend:** Anyone!

**Room:** Oklahoma G

**Title: High School Droneworks Theme and Missions Reveal**

**Description:** Join us for the launch of the 2023 Droneworks competition and see the new theme and missions revealed. Droneworks combines real-world drone applications, coding and challenging flights into an exciting drone competition. Droneworks is an Oklahoma TSA only event and more information is available at [www.droneworksite.com](http://www.droneworksite.com).

**Who Should Attend:** High School TSA competitors and advisors

**Room:** OK Ballroom H

**Title: Race You to the Moon!**

**Description:** As NASA prepares to send the first woman and the first person of color to the surface of the moon in 2025, do you know what it will take to land them on the moon? In this hands-on inquiry-based session facilitated by NASA Education Coordinator Dorinda Risenhoover, participants will work

in groups and will be tasked with creating a lunar lander which safely lands their “payload” (2 large marshmallows) on the surface of the “moon”.

**Who Should Attend:** Anyone!

**Room:** Ballroom I

**Title:** “Ag on my Plate”

**Description:** A hands-on activity hosted by Food on the Move

**Who Should Attend:** Anyone!

**Room:** Ballroom J

**Title:** A Legacy of Leadership: Running for Office

**Description:** Are you interested in becoming a TSA state or regional officer? This workshop will explain the application process and discuss important information to make sure you have the confidence and preparation to run for office!

**Who Should Attend:** Members thinking about running for a state or regional office

**Room:** Boomer A

**Title:** Competitive Events

**Description:** Come to this in-depth competitive event workshop led by TSA State and Regional Officers. They will help you discover your interests, how that applies to competitive events and give valuable tips on how to get started!

**Who Should Attend:** Anyone!

**Room:** Boomer B

**Title:** Running a Chapter

**Description:** Do you need tips on how to run the best chapter? State and regional officers will go over core ideas such as outreach, fundraising, and team-building. Come by for a fun, informative session and meet new members!

**Who Should Attend:** Everyone!

**Room:** Sooner A

**Title:** Registering Teams for TSA VEX

**Description:** Emily Harris will walk advisors through the process of registering for TSA VEX in order to compete at the TSA State Conference.

**Who Should Attend:** TSA Advisors who’s students compete in VEX

**Room:** Sooner B

**10:30 am – 11:45 am General Session (ALL MEMBERS AND ADVISORS ATTEND)**

**11:45 a.m. – 1:00 pm Lunch on your own**

### **1:00 p.m. – 1:45 p.m. Breakout Session 3**

#### **Title: “Spin Up” VEX VRC**

**Description:** Do you love the idea of working with a team to design, build, and code a robot? If so, come learn about the 2022-2023 VEX VRC Spin Up game challenge. This year’s game is made up of scoring discs in goals, owning rollers and covering field tiles that will challenge you each step of the way. David Isenbart, TSA VEX VRC coordinator and his robotics team, will give information on the rules and regulations and tips on what you need to know to be successful at TSA State!

**Who Should Attend:** VEX VRC competitors and advisors

**Room:** Oklahoma AB

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**Who Should Attend:** Anyone who enjoys an engineering challenge!

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**Description:** The 2022-2023 high school guide has three exciting new events: Audio Podcasting, Senior Solar Sprint and Drone Challenge (UAV). Valerie McCauley, advisor and member of the national Competition Regulations Committee (CRC) will give valuable information about the new events plus important changes to current events.

**Who Should Attend:** high school advisors and students

**Room:** Oklahoma G

#### **Title: VEX IQ Presents Slapshot**

**Description:** Do you love the idea of working with a team to design, build, and code a robot? If so, come learn about the 2022-2023 VEX IQ Slapshot game challenge. This year’s game is made up of pushing, spinning, and shooting fun that will challenge you each step of the way. Emily Harris, TSA VEX IQ coordinator will give information on the rules and regulations and tips on what you need to know to be successful at TSA State!

**Who Should Attend:** VEX IQ competitors and advisors

**Room:** Ballroom H

#### **Title: Race You to the Moon!**

**Description:** As NASA prepares to send the first woman and the first person of color to the surface of the moon in 2025, do you know what it will take to land them on the moon? In this hands-on inquiry-based session facilitated by NASA Education Coordinator Dorinda Risenhoover, participants will work in groups and will be tasked with creating a lunar lander which safely lands their “payload” (2 large marshmallows) on the surface of the “moon”.

**Who Should Attend:** Anyone!

**Room:** Ballroom I

#### **Title: ID’ing Individuals: Collecting DNA and Prints**

**Description:** This will be a hands-on print collection and DNA extraction workshop

**Who Should Attend:** Anyone is welcome but those that compete in the forensics competitions will really benefit from this session!

**Room:** Ballroom J

**Title: Speak Your Legacy**

**Description:** This is an in-depth workshop on public speaking presented by regional and state officers. Come to learn the basics of presenting, how to communicate your thoughts and the importance of PICCC.

**Who Should Attend:** Anyone!

**Room:** Boomer A

**Title: Running a Chapter**

**Description:** Do you need tips on how to run the best chapter? State and regional officers will go over core ideas such as outreach, fundraising, and team-building. Come by for a fun, informative session and meet new members!

**Who Should Attend:** Everyone!

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**Title: Avoiding Disqualifications**

**Description:** After you have done all the work to create your event artifacts, how can you best prepare so that your entry will not be disqualified before it is even judged? Come hear valuable information from veteran TSA advisor, Susan James.

**Who Should Attend:** TSA competitors and advisors

**Room:** Sooner A

**Title: TSA Updates**

**Description:** Tami Redus, TSA State Advisor will give important updates on the regional and state conferences, available awards, and answer any questions from advisors.

**Who Should Attend:** TSA Advisors only!

**Room:** Sooner B

**2:00 pm – 2:45 pm Community Service**

**Title: Community Service**

**Description:** Join the TSA State and Regional Officers in giving back to your community. There will be several hands-on options such as making blankets and handmade dog toys, writing cards to veterans and uplifting note to friends, and making ribbons for cancer awareness.

**Who Should Attend:** Everyone!

**Room:** Oklahoma Ballroom