

# SOARING OKLAHOMA: AEROSPACE & DEFENSE



## TEACHER & STUDENT RESOURCES:

### Summer Camps

#### 1) Teen Scene Aerospace Camp

The Community Learning Center at Rose State College, through a partnership with the Oklahoma Aeronautics Commission is proud to offer a FREE Aerospace camp to middle school students to learn more about the field of aerospace, some of the scientific concepts, and future careers. The objectives of the Aerospace Camp are:

- a) To have students become knowledgeable of how scientists explore space, and to provide an introductory foundation to astronomy, metrics, rocketry, and density.
- b) To provide students with an understanding of aerospace and potential career opportunities.
- c) To help students foster personal development skills such as leadership, confidence, self-determination, and an understanding of the importance of teambuilding and partnerships.

#### For more information, please Contact:

**Dr. Bret Wood | Associate Vice President of Workforce & Community Development | Rose State College**

**Phone: 405.733.7488 | Email: [bwood@rose.edu](mailto:bwood@rose.edu)**

#### 2) Northern Oklahoma Flight Academy

The Northern Oklahoma Flight Academy is a one-week summer day-camp for young people grades 6-12. It has a middle school course and a high school course. The middle school course is for students going into grades 6-8 next fall. The high school course is more advanced and is for students going into grades 9-12 who have attended the middle school course previously. This camp is held at the Ponca City, OK Regional airport, M-F during the 3rd week of June. The activities consist of classes, demonstrations, and hands-on, fun exercises and activities related to aviation or aerospace which are FUN but yet teach fundamental concepts. Students will learn:

- a) Basic concepts related to aerospace.
- b) How to begin to think analytically and logically, and get the opportunity to work with their hands.
- c) Information about careers in aviation and aerospace to perhaps spark a dream and to assist them to begin thinking about how to prepare for one of those careers.
- d) Students participate in projects and demonstrations that illustrate the physical principles of flight such as lift, drag, power, thrust, weight and balance, materials, and instrumentation.
- e) The history of flight, careers in aerospace, and the medical considerations for human flight.

### Classroom Adventures & Field Trips

#### 1) Team Tinker K-12 STEM Education Outreach

Team Tinker provides STEM education outreach in various forms: The primary objective is to increase awareness for the need of scientists and engineers in the aerospace community. This is done through base tours (age limit-high school and above), guest speakers, science fair judges (all ages), capstone reviews, funding/sponsoring many STEM activities (when funding is available) and bringing Team Tinker hands-on activities to schools. Another focus is to reduce the future college attrition rate by helping students make informed choices and promoting women in the STEM career fields.

#### Contact: Cynthia Kennedy

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#### 2) Tulsa Air and Space Museum- School Field Trip Program

The TASM School Field Trip Program fosters interactive, out-of-school learning for Tulsa and surrounding area schoolchildren. The curriculum is designed to complement Oklahoma state standards and every field trip allows students to view an educational planetarium program, tour the museum, and participate in hands-on classroom activities designed to show them how the concepts they have learned translate into practical applications. The experience of viewing a full-dome planetarium presentation is one that many students have never encountered. Our interactive museum exhibits give the students more than just information. They can operate a flight simulator, maneuver a robotic arm, and participate in the launch of the space shuttle. Using tools that we have available in the planetarium and museum allow us to pique interest in STEM-related subjects in a completely different manner than teachers can in the classroom. We currently have five topics available for teachers to choose from:

- a) **Aviation: Planetarium program** – Dream To Fly; Museum tour focused on airplanes; Classroom focused on principles of flight and stomp rocket activity
- b) **Astronomy: Planetarium program** – Earth Moon and Sun; Museum tour focused on space exhibits; Classroom focused on building a solar system
- c) **Weather: Planetarium program** – Dynamic Earth; Museum tour focused on how weather affects flight; Classroom focused on weather experiments
- d) **Colonial Life: Planetarium program** – Two Small Pieces of Glass; Museum tour focused on telescopes and constellations; Classroom focused on using constellations for seasonal reference and navigation

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## TEACHER & STUDENT RESOURCES: (cont.)

e) **Solar Energy: Planetarium program** – Dynamic Earth; Museum tour focused on uses of solar energy in space; Classroom focused on uses of solar energy on earth and in space.

**To schedule a classroom field trip, contact Ethan at [estill@tulsamuseum.org](mailto:estill@tulsamuseum.org) or at (918) 834-9900**

3) **DOD Starbase Program** STARBASE Oklahoma is an Oklahoma National Guard Youth Program. As a part of a national program, STARBASE seeks to intervene in the lives of children during their elementary & middle school years. The positive role model of the citizen soldier, coupled with the latest in technology, provides a rich environment for students to dream & set goals. STARBASE Oklahoma typically serves 4,000 or more students each year.

STARBASE Oklahoma's unique "hands-on" approach to enriching Science, Technology, Engineering, & Mathematics (STEM) skills integrates highly motivational goal setting & team building. During their Career Day tour, students interact with the many STEM professionals on their respective military installation, exploring the aircraft, technology, & military equipment utilized. Many of the students who attend STARBASE Oklahoma start dreaming about success for the first time, taking steps toward STEM careers that will make them productive members of our state & nation.

**For more information regarding the DOD Starbase Program please contact Pamela Kirk at (918) 833-7757**

### Teacher Professional Development Opportunities

1) Oklahoma Education Industry Partnership (OEIP) – Teacher Professional Development

OEIP was created as an opportunity to forge partnerships between educators, counselors, administrators, parents, students, industry leaders, government policy makers, and members of the economic development community focused on:

- a) Supporting Governor Fallin's Oklahoma Works Initiative
- b) Providing relevance and rigor to STEM education, training, and workforce development
- c) Exposing STEM educators to high value careers in Oklahoma
- d) Motivating students to develop and maintain a career pathway
- e) Providing professional development for Oklahoma STEM educators

**Contact: Brig. General Ben Robinson**

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