

# Aerospace Education

A to Z



A Resource Guide for Teachers

Oklahoma Department of Career and Technology Education  
Oklahoma Aeronautics Commission

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**About the Resource Center**

The Resource Center for CareerTech Advancement is a division of the Oklahoma Department of Career and Technology Education, located in Stillwater, Oklahoma. The staff of the Center research educational materials and best practices to disseminate throughout the state CareerTech system. The Resource Center also provides support in identifying curriculum, assessments, professional development, and other instructional delivery resources on request.

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This guide may be printed or posted online for educational use.

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# Working with Websites

Websites are subject to change. The organization may no longer exist, a resource may no longer be supported, or an organization may have restructured its web pages. In some cases, the website address (URL) is still accurate, but does not work when you click on the link in a document.

If a website address appears to be no longer accurate:

- Try entering (or pasting) the website address directly into the browser window, instead of clicking on the link provided in this book.
- Search for the title of the referenced resource online to locate the new address.

# A

**DESTINATION:** Acceleration in Aviation

**NAVIGATION:** <https://www.faa.gov/tv/?mediaId=451>

**AERIAL VIEW:** This video from the FAA explains the potential problems aviators may encounter when exposed to accelerative forces and the subsequent problem of G loads. It describes signs and symptoms of excess G loads on the various axes of the body and provides practical countermeasures that can be used in the air and preventative steps to take while on the ground.

**DESTINATION:** Advanced Air Mobility STEM Learning Modules

**NAVIGATION:** <https://www.nasa.gov/aeroresearch/stem/AAM>

**AERIAL VIEW:** NASA activities and resources to explore the STEM principles behind Unmanned Aerial Vehicles (UAVs) and the advanced air mobility system. Includes titles such as the following:

- Air Taxi Design Challenge
- Finding the Center of Gravity
- Rubber Band Powered Helicopter Engineering Challenge
- The Science Behind Quadcopters
- Attack of the Drones—Coding Activity
- Package Delivery Drone Simulation
- Flight Control Math
- Small Unmanned Aerial Vehicle Safety

**DESTINATION:** Aerodynamics & Hydrodynamics STEM Activities for Kids

**NAVIGATION:** <https://www.sciencebuddies.org/stem-activities/subjects/aerodynamics-hydrodynamics>

**AERIAL VIEW:** Activities with reviews from Science Buddies.

**DESTINATION:** Aeronautical Charts Online with Flight Planning Tools

**NAVIGATION:** <https://skyvector.com/>

**AERIAL VIEW:** From SkyVector. Includes airport search and sectional charts features.

**DESTINATION:** Aeronautics @ Home (NASA)

**NAVIGATION:** <https://www.nasa.gov/aero-at-home>

**AERIAL VIEW:** Teach air, aeronautics, and sound with hands-on activities. The Aeronautics @ Home page has airplanes, kites, weather gauges and models to build. Activities let students explore aspects of sound and the forces of flight. Download and print word puzzles and coloring pages. Use lesson plans and

learning modules to teach aeronautics principles to students in preschool to high school.

**DESTINATION:** Aeronautics Classroom Activities

**NAVIGATION:** <https://www.grc.nasa.gov/www/k-12/TRC/Aeronautics/AeronauticActivitiesHome2.htm>

**AERIAL VIEW:** 48 classroom activities developed by teachers, educators, and NASA engineers and scientists for the NASA Glenn Learning Technologies Project in 1996 and 1997.

**DESTINATION:** Aerospace Adventures Activity Guides

**NAVIGATION:** <https://shop4-h.org/collections/science-technology-engineering-math-curriculum>

**AERIAL VIEW:** Aerospace activity guides for grades 1-12 from 4-H. Available for purchase.

**DESTINATION:** Aerospace & Defense Industry Sector (Oklahoma)

**NAVIGATION:** <https://www.okcommerce.gov/doing-business/business-relocation-expansion/industry-sectors/aerospace-defense/>

**AERIAL VIEW:** Facts about the Aerospace & Defense industry in Oklahoma from the Oklahoma Department of Commerce.

**DESTINATION:** Aerospace and Defense State-Level Data

**NAVIGATION:** <https://www.aia-aerospace.org/research-center/statistics/state-level-data/>

**AERIAL VIEW:** State-level data from the Aerospace Industries Association.

**DESTINATION:** Aerospace Education Resources

**NAVIGATION:** <https://sites.google.com/a/akwg.cap.gov/ak001-home/staff-offices/aerospace-education/resources>

**AERIAL VIEW:** Resources from the Alaska Wing, Civil Air Patrol

**DESTINATION:** Aerospace Engineering

**NAVIGATION:** <https://oeta.pbslearningmedia.org/collection/aeroeng/>

**AERIAL VIEW:** Video and interactive media resources that support the middle and high school Engineering Design core ideas and practices of the Next Generation Science Standards and related state standards. These aerospace engineering resources also encompass physical science; science, technology, and society; and career exploration. A production of WGBH and The Documentary Group, this collection is a collaboration with Boeing engineers to commemorate the centennial of the Boeing Company.

**DESTINATION:** Aerospace Engineers—What is it?

**NAVIGATION:** <https://www.youtube.com/watch?v=STYw2OTOveY>

**AERIAL VIEW:** A video from ThinkTVPBS.

**DESTINATION:** Aerospace History Timeline

**NAVIGATION:** <https://www.aiaa.org/about/History-and-Heritage/History-Timeline>

**AERIAL VIEW:** From the American Institute of Aeronautics and Astronautics.

**DESTINATION:** Aerospace Pioneers

**NAVIGATION:** <https://www.faa.gov/about/history/pioneers/>

**AERIAL VIEW:** Profiles of aerospace pioneers.

**DESTINATION:** AFA STEM Activity Round-Up

**NAVIGATION:** <https://www.afa.org/publications-news/news/2020-03-17/stem-activity-round-up>

**AERIAL VIEW:** List of STEM resources and links from the Air Force Association.

**DESTINATION:** The Age of Aerospace

**NAVIGATION:** <http://ageofaerospace.com/boeing/home>

**AERIAL VIEW:** The last 100 years have seen more changes in the way we live than any previous century in human history. There has been no greater driver of this transformation than the cascade of invention inspired by the Wright Brothers that brought us air travel, the Jet Age, space exploration, and satellites. *The Age of Aerospace* is a multipart documentary series that tells the story of how this happened through the lens of The Boeing Company, which acquired or merged with many of the most important aerospace companies of the last century: McDonnell, Douglas, North American Aviation, Rockwell, Piaseki/Vertol and Hughes Satellites Systems.

**DESTINATION:** AIAA (American Institute of Aeronautics and Astronautics)

**NAVIGATION:** <https://www.aiaa.org/> and <https://www.aiaa.org/get-involved/students-educators/k-12-teacher-resources/aerospace-micro-lessons>

**AERIAL VIEW:** AIAA is the world's largest technical society dedicated to the global aerospace profession. The AIAA Foundation awards annual grants to K-12 classroom teachers. The AIAA "Aerospace Micro-Lessons" focus on aerospace principles and are divided into grade-level content.

**DESTINATION:** Airline & Airport Code Search

**NAVIGATION:** <https://www.iata.org/en/publications/directories/>

**AERIAL VIEW:** Search engine for airline 2-letter codes and for airport/city 3-letter codes from the International Air Transport Association.



**DESTINATION:** Airport Acronyms and Abbreviations

**NAVIGATION:** <https://www.faa.gov/airports/resources/acronyms/>

**AERIAL VIEW:** A website of the Federal Aviation Administration.

**DESTINATION:** Airport Diagrams

**NAVIGATION:** [https://www.faa.gov/airports/runway\\_safety/diagrams/](https://www.faa.gov/airports/runway_safety/diagrams/)

**AERIAL VIEW:** Searchable web page for airport diagrams.

**DESTINATION:** Air Safety Institute

**NAVIGATION:** <https://www.aopa.org/training-and-safety/air-safety-institute>

**AERIAL VIEW:** Safety education resources from the AOPA.

**DESTINATION:** AMA Model Aviation Activities

**NAVIGATION:** <https://www.amaflightschool.org/programs/member-club-outreach>

**AERIAL VIEW:** Instructional videos from the Academy of Model Aeronautics.

**DESTINATION:** The American Rocketry Challenge

**NAVIGATION:** <https://rocketcontest.org/>

**AERIAL VIEW:** The American Rocketry Challenge is the world's largest rocket contest. The contest gives middle and high school students the opportunity to design, build and launch model rockets and hands-on experience solving engineering problems.

**DESTINATION:** AOPA Foundation Curriculum

**NAVIGATION:** <https://www.facebook.com/groups/1882545528719793>

**AERIAL VIEW:** Facebook group for teachers using AOPA curriculum.

**DESTINATION:** AOPA High School STEM Curriculum

**NAVIGATION:** <https://youcanfly.aopa.org/high-school/high-school-curriculum>

**AERIAL VIEW:** The Aircraft Owners and Pilots Association (AOPA), the world's largest aviation community, has created an aviation STEM curriculum for high schools. The AOPA High School Aviation STEM Curriculum offers students comprehensive four-year aviation study options that are aligned to Common Core State Standards and Next Generation Science Standards. AOPA created these courses as part of two pathways: Pilot and Unmanned Aircraft Systems (drones). Each pathway is four years in length. Schools can implement one or more complete pathways or select individual courses to use as standalone electives. All courses are offered to high schools at no charge (schools are subject to selection by AOPA). Teacher professional development required.

**DESTINATION:** At-Home STEM Activities

**NAVIGATION:** <https://www.starhop.com/blog/category/At-Home+STEM+Activity>



**AERIAL VIEW:** STEM activities designed for at-home learning from the McAuliffe-Shepard Discovery Center. Lessons include:

- Folding a Paper Cargo Plane
- How Birds Use Their Wings
- Build and Test Your Own Parachute
- Types of Flight
- Bernoulli vs Coanda
- Landing On Another Planet
- Baking in Space
- Weather, Weather Everywhere

**DESTINATION:** Aviation 101 Course

**NAVIGATION:** <https://erau.edu/aviation101>

**AERIAL VIEW:** Free online course from Embry-Riddle Aeronautical University.

Anyone with an interest in aviation can enroll. The course includes the following nine video lessons:

- Aircraft Systems
- Aerodynamics
- Flight Instruments
- Airports
- Airspace
- Radio Communication & ATC
- Aeromedical
- Aviation Weather
- Performance and Navigation

**DESTINATION:** Aviation Education Grant Program

**NAVIGATION:** <https://oac.ok.gov/aviation-education/aviation-education-grant-program>

**AERIAL VIEW:** The Oklahoma Aeronautics Commission's aerospace and aviation education funding supports the Oklahoma Works initiative that aims to address the skills gap and connect students to programs that will help build Oklahoma's aerospace and aviation workforce.

**DESTINATION:** Aviation & Space Education (AVCED)

**NAVIGATION:** <https://www.faa.gov/education/>

**AERIAL VIEW:** Curriculum, activities, and videos for teachers and students from the Federal Aviation Administration and its partners.

**DESTINATION:** Aviation Career Education (ACE) Academy

**NAVIGATION:** [https://www.faa.gov/education/ace\\_academy/](https://www.faa.gov/education/ace_academy/)

**AERIAL VIEW:** The ACE Academy provides unique summer aviation education programs for elementary, middle, and high school students who are interested in aviation and aerospace. The program provides students with a wide range of aviation career exploration experiences and focuses on Science, Technology, Engineering and Mathematics (STEM). These summer programs expose students to the following activities: lessons in flight planning, aviation history, and the physics of flight; field trips to aviation-related sites; instruction on aircraft design and maintenance; and flight simulations and, in some locations, flights in aircraft. Dates, locations, cost, and age requirements vary according to sponsoring organizations. ACE Academies are cosponsored by the FAA and various other host organizations.

**DESTINATION:** Aviation Careers

**NAVIGATION:** <https://www.thebalancecareers.com/aviation-careers-4161706>

**AERIAL VIEW:** Profiles, training, education tips, and more resources from The Balance Careers.

**DESTINATION:** Aviation Careers Podcast

**NAVIGATION:** <https://podcasts.apple.com/us/podcast/aviation-careers-podcast/id544473518>

**AERIAL VIEW:** Apple podcasts from Carl Valeri.

**DESTINATION:** Aviation Handbooks & Manuals (FAA)

**NAVIGATION:**

[https://www.faa.gov/regulations\\_policies/handbooks\\_manuals/aviation/](https://www.faa.gov/regulations_policies/handbooks_manuals/aviation/)

**AERIAL VIEW:** Complete reference handbooks from the Federal Aviation Administration, available for free download. Titles include the following:

- Airplane Flying Handbook
- Aviation Maintenance Technician Handbook—General
- Aviation Maintenance Technician Handbook—Airframe
- Aviation Maintenance Technician Handbook—Powerplant
- Balloon Flying Handbook
- Glider Flying Handbook
- Helicopter Flying Handbook
- Pilot’s Handbook of Aeronautical Knowledge
- Weight & Balance Handbook

**DESTINATION:** Aviation Organizations

**NAVIGATION:** <https://oac.ok.gov/media-outreach/aviation-organizations>

**AERIAL VIEW:** A web page of organizations with website and email addresses, from the Oklahoma Aeronautics Commission.

**DESTINATION:** Aviation Terminology

**NAVIGATION:** <https://epicflightacademy.com/aviation-terminology/>

**AERIAL VIEW:** Terms and definitions provided by Epic Flight Academy.

**DESTINATION:** AvLearn

**NAVIGATION:** <https://www.gleimaviation.com/university-services/>

**AERIAL VIEW:** From GLEIM Aviation, AvLearn is a testing management solution for universities, flight schools, training centers, and high schools. Instructors can create custom quizzes by selecting specific subject matter topics from each of the Gleim FAA Knowledge Test Prep databases - Sport through Airline Transport Pilot, Remote Pilot, and AMT (General, Airframe, Powerplant, IA). Instructors can create exams that can be administered online or can print quizzes for classroom use.

## B

**DESTINATION:** Bangor Activity Pages

**NAVIGATION:** <https://flybangor.com/welcome-to-the-kidszone/>

**AERIAL VIEW:** Printable activities for kids that relate to airports and aviation.

**DESTINATION:** *Baylor Aviation Sciences Activity Booklet*

**NAVIGATION:** <https://www.baylor.edu/aviation/index.php?id=940526>

**AERIAL VIEW:** This booklet was designed by Baylor Institute for Air Science in collaboration with professors and graduate students from Baylor's School of Education. It features activities developed with a strong STEM focus for grades K-5. Available as a free PDF download.

**DESTINATION:** Beginner's Guide to Aerodynamics

**NAVIGATION:** <https://www.grc.nasa.gov/www/k-12/BGA/BGAindex.html>

**AERIAL VIEW:** A variety of aerospace activities and lesson plans developed by teachers, educators, and NASA engineers and scientists. For grades 7-12.

**DESTINATION:** Best Drones for Agriculture and Farming

**NAVIGATION:** <https://www.dronefly.com/blogs/news/how-are-drones-used-for-agriculture/>

**AERIAL VIEW:** Article from Dronefly blog.

**DESTINATION:** "The best free flight simulators"

**NAVIGATION:** <https://www.digitaltrends.com/gaming/best-free-flight-simulators/>

**AERIAL VIEW:** Review from Digital Trends.

**DESTINATION:** Boeing and Teaching Channel Partnership

**NAVIGATION:** <https://learn.teachingchannel.com/boeing-engineering-curriculum>

**AERIAL VIEW:** The Boeing Company and Teaching Channel created problem-based curricula inspired by the science and engineering innovations at Boeing and informed by globally competitive science, math, and literacy standards.

## C

**DESTINATION:** Center for Unmanned Aircraft Systems in Public Safety

**NAVIGATION:** <https://www.uaspublicsafety.org/what-is-uas/>

**AERIAL VIEW:** This website is intended as a resource to help law enforcement agencies make an informed decision on whether to acquire small unmanned aircraft systems, and if they do, how to develop policies and procedures that will help garner public support, avoid pitfalls, and build community trust.

**DESTINATION:** Center of Gravity science snacks

**NAVIGATION:** <https://www.exploratorium.edu/snacks/center-gravity>

**AERIAL VIEW:** Activities from Exploratorium.

**DESTINATION:** Challenge of Flight (interactive)

**NAVIGATION:** <https://oeta.pbslearningmedia.org/resource/aeroeng-sci-eng-flight/challenge-of-flight/>

**AERIAL VIEW:** Produced by WGBH and The Documentary Group. The first part of the interactive uses videos, still images, and diagrams to explain the four forces of flight (lift, thrust, drag, and weight) and the three motions an airplane experiences in flight (roll, pitch, and yaw). The second part explores the four primary steps of the design process and the tools today's aerospace engineers use in their work.

**DESTINATION:** Civil Air Patrol

**NAVIGATION:** <https://www.gocivilairpatrol.com/>

**AERIAL VIEW:** A public service organization that supports communities with emergency response, diverse aviation and ground services, youth development and promotion of air, space, and cyber power. Civil Air Patrol serves adults and youth in pre-K through 12th grades with hands-on Aerospace/STEM lessons and materials. Offers free K-12 STEM kits and free K-6 Aerospace Connection in Education (ACE) student materials (with annual teacher registration). Also offers free Teacher Orientation Program (TOP) flights where teachers can fly with a CAP pilot.

**DESTINATION:** *Classified: The Secret Career of Mary Golda Ross, Cherokee Aerospace Engineer*

**NAVIGATION:** <https://www.curiouscitydpw.com/2021/03/25/classified-stem-choerokee/>

**AERIAL VIEW:** The picture book biography (Millbrook Press) introduces students to a STEM heroine. Website includes free downloadable Cherokee Values Poster, STEM Aerospace and Cherokee Language & Culture Activities, and a Teaching Unit & Event Toolkit.

**DESTINATION:** Commercial Crew A to Z Activity and Coloring Booklet

**NAVIGATION:** <https://www.nasa.gov/stem-ed-resources/commercial-crew-a-to-z-activity-and-coloring-booklet.html>

**AERIAL VIEW:** Download this printable coloring, writing and activity book. Work puzzles and learn new words about NASA's Commercial Crew Program that launches astronauts to space on American rockets. For grades K-4.

**DESTINATION:** Competency Model—Aerospace

**NAVIGATION:** <https://www.careeronestop.org/competencymodel/competency-models/aerospace.aspx>

**AERIAL VIEW:** In collaboration with the Aerospace Industries Association and the National Defense Industrial Association, the Employment and Training Administration worked with industry leaders to develop a comprehensive competency model for the aerospace industry. The model is designed to evolve along with changing skill requirements.

**DESTINATION:** Controllers Save Lives

**NAVIGATION:** <https://www.faa.gov/tv/?mediaId=394>

**AERIAL VIEW:** A video from the FAA.

**DESTINATION:** A crash course on indoor flying robots

**NAVIGATION:** <https://www.khanacademy.org/partner-content/mit-k12/mit-k12-science/mit-k12-physics/v/indoor-flying-robots>

**AERIAL VIEW:** How quadrotors fly and how they can fly themselves without human help.

**DESTINATION:** CyberPatriot

**NAVIGATION:** <https://www.uscyberpatriot.org/>

**AERIAL VIEW:** CyberPatriot is the National Youth Cyber Education Program created by the Air Force Association to inspire K-12 students toward careers in cybersecurity or other science, technology, engineering, and mathematics disciplines critical to the nation's future. At the core of the program is the

National Youth Cyber Defense Competition, the nation's largest cyber defense competition that puts high school and middle school students in charge of securing virtual networks. Other programs include AFA CyberCamps, an elementary school cyber education initiative, a children's literature series, and CyberGenerations—a cyber safety initiative geared toward keeping senior citizens safe online.

## D

**DESTINATION:** DACUM Charts for UAS Technician Training

**NAVIGATION:** <https://ncatech.org/digital-resource-library/>

**AERIAL VIEW:** The National Center for Autonomous Technologies and partners produced several DACUM reports to support technician-level education and workforce development.

**DESTINATION:** Designing Drones

**NAVIGATION:** <https://tryengineering.org/teacher/designing-drones/>

**AERIAL VIEW:** This lesson explores how helicopter flight is possible and how drones (or quadcopters) have impacted our world. Students explore the forces that make helicopter flight possible and learn about how material choice and shape can also have an impact on flight. Students work in teams to design, build, and fly a simple rotor using basic materials that drops the slowest from a height of ten feet. For ages 8-12. Includes lesson plan, student handouts, and completion certificate.

**DESTINATION:** Directory of Aviation Museums and Exhibits by State

**NAVIGATION:** <https://www.airplanemuseums.com/list-of-air-museums-exhibits-airparks.htm>

**AERIAL VIEW:** List of aviation museums by state.

**DESTINATION:** Distance Learning Module: Types of Flight

**NAVIGATION:** <https://www.starhop.com/blog/2020/6/2/distance-learning-module-types-of-flight-zysyt> and <https://www.starhop.com/blog/category/Distance+Learning+Module>

**AERIAL VIEW:** Learning module for at-home learning, including an activity, from the McAuliffe-Shepard Discovery Center.

**DESTINATION:** DroneBlocks

**NAVIGATION:** <https://www.droneblocks.io/> and <https://learn.droneblocks.io/p/droneblocks-curriculum-4th-8th-grade>

**AERIAL VIEW:** DroneBlocks teaches STEM and the real-world applications of drone technology through online curriculum, professional development, and a free app.

**DESTINATION:** Drones in Agriculture

**NAVIGATION:**

<https://oeta.pbslearningmedia.org/resource/stn15.sci.eng.drones/drones-in-agriculture/>

**AERIAL VIEW:** A video about drone applications in agriculture. Includes links to teacher support materials.

**DESTINATION:** “Drones Take Their Place in the K-12 Classroom”

**NAVIGATION:** <https://edtechmagazine.com/k12/article/2019/03/drones-take-their-place-k-12-classroom>

**AERIAL VIEW:** Article from EdTech.

## E

**DESTINATION:** EAA Youth & Young Adult Engagement

**NAVIGATION:** <https://www.eaa.org/ea/youth> and <https://www.eaa.org/ea/ea-chapters/ea-chapter-resources/chapter-programs-and-activities/young-eagles-and-youth-activities>

**AERIAL VIEW:** EAA (Experimental Aviation Association) offers Young Eagles flights, internships, scholarships, aviation camps, and more. The *Aviation Activities for Youth* is a compilation of successful activities that have been used nationwide. (The publication is available with an EAA.org member account.)

**DESTINATION:** *E-Agriculture in Action: Drones in Agriculture*

**NAVIGATION:** <http://www.fao.org/e-agriculture/news/fao-itu-e-agriculture-action-big-data-agriculture>

**AERIAL VIEW:** E-book from the Food and Agriculture Organization of the United Nations.

**DESTINATION:** Earth’s Atmosphere (video)

**NAVIGATION:** <https://4hlnet.extension.org/earths-atmosphere/>

**AERIAL VIEW:** Video and text from the 4-H Learning Network.

**DESTINATION:** *Education World* Lesson Plan Library

**NAVIGATION:** [https://www.educationworld.com/a\\_lesson/archives/](https://www.educationworld.com/a_lesson/archives/)

**AERIAL VIEW:** A searchable lesson plan library. Includes “aviation” lessons such as the following:



- Aviation Firsts Scavenger Hunt
- Aviation Pioneers Hall of Fame
- Design a Paper Airplane
- Those Magnificent Flying Machines: Past, Present and Future
- Wind and Wings

**DESTINATION:** The Encyclopedia of Oklahoma History and Culture

**NAVIGATION:** <https://www.okhistory.org/publications/encyclopediaonline>

**AERIAL VIEW:** From the Oklahoma Historical Society. Browse by topic or by letter of the alphabet. "Aviation" entries include the following:

- |                                   |                                   |
|-----------------------------------|-----------------------------------|
| • Apollo Soucek                   | • Oklahoma Flying Farmers         |
| • Braniff International Airways   | • Roy Orlando Hunt                |
| • Clarence Edgar Page             | • Shannon Lucid                   |
| • Clarence Leonard Tinker         | • Spartan Aircraft Company        |
| • Clyde Vernon Cessna             | • Thomas Stafford                 |
| • Geraldyn M. Cobb                | • Transcontinental Air Transport  |
| • James Herman Banning            | • War Production Training Centers |
| • Leroy Gordon Cooper, Jr.        | • Wiley Post                      |
| • Oklahoma Aeronautics Commission | • William Penn Adair Rogers       |
| • Oklahoma Air Tour of 1928       | • Winnie Mae                      |

**DESTINATION:** Endless Skyway: The Early Days of Aviation in Oklahoma

**NAVIGATION:** [https://www.travelok.com/article\\_page/endless-skyway-the-early-days-of-aviation-in-oklahoma](https://www.travelok.com/article_page/endless-skyway-the-early-days-of-aviation-in-oklahoma)

**AERIAL VIEW:** Content and related links from TravelOK.com.

## F

**DESTINATION:** Find an Airport (Oklahoma)

**NAVIGATION:** <https://oac.ok.gov/airports>

**AERIAL VIEW:** A website of the Oklahoma Aeronautics Commission.

**DESTINATION:** FlightAware

**NAVIGATION:** <https://flightaware.com/>

**AERIAL VIEW:** A hub of digital aviation data.

**DESTINATION:** Flight Night Drone Institute

**NAVIGATION:** <https://tulsastem.org/flight-night-drone-institute/>

**AERIAL VIEW:** Teacher professional development from the Tulsa Regional STEM Alliance.

**DESTINATION:** *Flight Training Magazine*

**NAVIGATION:** <https://www.aopa.org/training-and-safety/flight-training-magazine>

**AERIAL VIEW:** The AOPA magazine.

**DESTINATION:** “Fly By” Video Lessons

**NAVIGATION:** <https://www.evergreenmuseum.org/evergreen-museum-tv>

**AERIAL VIEW:** Evergreen Museum original videos, aligned with Next Generation Science Standards and featuring the amazing artifacts around the museum.

**DESTINATION:** Four Forces on an Airplane (includes a video)

**NAVIGATION:** <https://www.grc.nasa.gov/www/k-12/airplane/forces.html>

**AERIAL VIEW:** An interactive explanation of the four forces on an airplane from NASA.

**DESTINATION:** “The future of farming is using drones and sensors for efficient mapping and spraying”

**NAVIGATION:** <https://www.businessinsider.com/agricultural-drones-precision-mapping-spraying>

**AERIAL VIEW:** Description of applications and technologies from businessinsider.com.

**DESTINATION:** The Future of the Aerospace Industry

**NAVIGATION:** <https://www.youtube.com/watch?v=7iQPpI4US9A>

**AERIAL VIEW:** A video from Siemens Software.

**DESTINATION:** Future U Ready-to-Go STEM Activities

**NAVIGATION:** <https://www.boeingfutureu.com/for-employees> and <https://www.boeingfutureu.com/for-educators/aviation-careers>

**AERIAL VIEW:** Boeing and Discovery Education have launched FUTURE U to inspire and equip the next generation of STEM professionals in aerospace. FUTURE U offers hands-on learning experiences to help students in grades 6–12 embrace their potential to make an impact and innovate for the future.

## H

**DESTINATION:** Helicopter Association International

**NAVIGATION:** <https://www.rotor.org/home>

**AERIAL VIEW:** HAI represents all aspects of the Vertical Take-off & Landing (VTOL) industry.

**DESTINATION:** History of Aircraft

**NAVIGATION:** <https://www.dkfindout.com/us/transportation/history-aircraft/>

**AERIAL VIEW:** An interactive guide from Dorling Kindersley.

**DESTINATION:** How Birds Use Their Wings

**NAVIGATION:** <https://www.starhop.com/blog/2020/6/3/at-home-stem-activities-how-birds-use-their-wings>

**AERIAL VIEW:** Blog feature from McAuliffe-Shepard Discovery Center.

**DESTINATION:** How Jet Engines Work

**NAVIGATION:** <https://www.youtube.com/watch?v=L24WfOVITE0>

**AERIAL VIEW:** Animation from Animagraffs.

**DESTINATION:** How Things Fly

**NAVIGATION:** <http://howthingsfly.si.edu/>

**AERIAL VIEW:** *How Things Fly* is a companion website to the physical exhibition at the Smithsonian National Air and Space Museum.

**DESTINATION:** How to Build a Model Airport

**NAVIGATION:** <https://www.wikihow.com/Build-a-Model-Airport>

**AERIAL VIEW:** A step-by-step plan, with illustrations, co-authored by wikiHow staff.

## J

**DESTINATION:** JetStream

**NAVIGATION:** <https://www.weather.gov/jetstream/>

**AERIAL VIEW:** Online school for weather from the National Weather Service. The information contained in JetStream is arranged by subject; beginning with global and large-scale weather patterns followed by lessons on air masses, wind patterns, cloud formations, thunderstorms, lightning, hail, damaging winds, tornados, tropical storms, cyclones, and flooding. Interspersed in JetStream are "Learning Lessons" which can be used to enhance the educational experience.

**DESTINATION:** The Journey of Drone Integration

**NAVIGATION:** <https://www.faa.gov/tv/?mediaId=1998>

**AERIAL VIEW:** A video from the FAA.

## L

**DESTINATION:** Lakeshore Learning

**NAVIGATION:** <https://www.lakeshorelearning.com/>

**AERIAL VIEW:** A teacher supply store that also offers aviation-related products, including the following:

- Airplane Puzzle (Preschool-Pre-K)
- Airplanes Counting Box (Pre-K to Kindergarten)
- Design & Play STEAM Planes Kit (Pre-K to Grade 3)
- I Can Build It! Construction Planks (Pre-K to Grade 1)
- Plane Designer STEM Learning Lab (Grades 2-3)
- Solar-Powered Plane Mobile STEM Kit (Grades K-10)
- Things That Go Board Book Library (infant to preschool)

**DESTINATION:** Layers of the Atmosphere

**NAVIGATION:** <https://www.weather.gov/jetstream/layers>

**AERIAL VIEW:** An explanation from the National Weather Service.

**DESTINATION:** Letters and Articles Written by WASPs and WAFs

**NAVIGATION:** <https://www.pbs.org/wgbh/americanexperience/features/flygirls-letters-and-articles-written-wasps-and-wafs/>

**AERIAL VIEW:** A resource from the WGBH Educational Foundation.

## M

**DESTINATION:** Mike Monroney Aeronautical Center

**NAVIGATION:** <https://www.faa.gov/tv/?mediald=1669>

**AERIAL VIEW:** A video about the FAA's Mike Monroney Aeronautical Center in Oklahoma City.

**DESTINATION:** Most Influential Women in the Aviation and Aerospace Industry

**NAVIGATION:** <https://www.wai.org/pioneers/100womenscript>

**AERIAL VIEW:** Women in Aviation International pays tribute to 100 Women Who Made a Difference in the first 100 years of aviation.

**DESTINATION:** Museum in a Box Series

**NAVIGATION:** <https://www.nasa.gov/aeroresearch/resources/museum-in-a-box>

**AERIAL VIEW:** From NASA, Museum in a Box provides exciting hands-on/minds-on lessons with an aeronautics theme to inspire future scientists, mathematicians

and engineers. The lessons are tied to national science and math standards. Lesson categories include the following:

- Dressing for Altitude
- History of Flight
- Parts of an Airplane
- Principles of Flight
- Structures and Materials
- Propulsion
- Future Flight
- Careers in Aeronautics
- Airspace

**DESTINATION:** The Museum of Flight

**NAVIGATION:** <https://www.museumofflight.org/>

**AERIAL VIEW:** The largest independent, non-profit air and space museum in the world. Offers virtual and remote programs.

## N

**DESTINATION:** NASA Aero Infographics

**NAVIGATION:** <https://www.nasa.gov/aero/infographics.html>

**AERIAL VIEW:** Data-packed infographics from NASA.

**DESTINATION:** NASA Materials for the Classroom

**NAVIGATION:**

<https://www.nasa.gov/offices/stem/centers/marshall/classroom/index.html>

**AERIAL VIEW:** Search hundreds of resources by subject, grade level, type, and keyword. These lesson plans and teaching materials support STEM curriculum.

**DESTINATION:** National Agricultural Aviation Association

**NAVIGATION:** <https://www.agaviation.org/>

**AERIAL VIEW:** NAAA supports the interests of small business owners and pilots licensed as professional commercial aerial applicators who use aircraft to enhance food, fiber, and bio-energy production, protect forestry and control health-threatening pests. The NAAA website includes a “100 Years of Agricultural Aviation” timeline and a related video.

**DESTINATION:** National Association of High School Aviation Clubs

**NAVIGATION:** <http://nahsac.org/>

**AERIAL VIEW:** Website of the national organization.

**DESTINATION:** National Flight Academy Mobile App

**NAVIGATION:** <https://www.nationalflightacademy.com/nfa-mobile-app/>

**AERIAL VIEW:** Fly the high-performance X-12 Triad on your mobile device! Take off from NAS Pensacola, zoom to 50,000' at over Mach 2, then trap aboard the carrier *Ambition* or make a vertical landing using the X-12's advance vectored thrust engines and variable geometry wings. After that, take a virtual tour of the ship or examine an interactive model of the X-12!

**DESTINATION:** National Girls Collaborative Project

**NAVIGATION:** <https://ngcproject.org/>

**AERIAL VIEW:** The vision of the National Girls Collaborative Project® (NGCP) is to bring together organizations throughout the United States that are committed to informing and encouraging girls to pursue careers in science, technology, engineering, and mathematics (STEM). NGCP offers many resources to strengthen girl-serving STEM programs, partner networks and Collaborative networks and advance STEM education for girls. These resources include mini-grants, webinars, exemplary practices, newsletters, a *Collaboration Guide*, and more.

**DESTINATION:** National Institute for Women in Trades, Technology & Science

**NAVIGATION:** <https://www.iwitts.org/>

**AERIAL VIEW:** Offers bootcamps for educators and a *Women in Technology Outreach Kit*.

**DESTINATION:** National Museum of the United States Air Force

**NAVIGATION:** <https://www.nationalmuseum.af.mil/Education/>

**AERIAL VIEW:** Website includes lesson plans and resource guides.

**DESTINATION:** NBAA (National Business Aviation Association)

**NAVIGATION:** <https://nbaa.org/>

**AERIAL VIEW:** The NBAA is the leading organization for companies that rely on general aviation aircraft to help make their businesses more efficient, productive and successful. The association represents more than 11,000 companies and professionals and provides more than 100 products and services to the business aviation community, including the NBAA Business Aviation Convention & Exhibition (NBAA-BACE), the world's largest civil aviation trade show. NBAA also offers a free student edition of the Business Aviation Insider magazine, a Career Guide to Business Aviation, business aviation career posters, a mentoring network, scholarships, and more.

**DESTINATION:** Newton's Laws of Motion

**NAVIGATION:** <https://www1.grc.nasa.gov/beginners-guide-to-aeronautics/newtons-laws-of-motion/>

**AERIAL VIEW:** Interactive explanation from the NASA Glenn Research Center.

**DESTINATION:** Newton's Laws of Motion

**NAVIGATION:** <https://www.teachengineering.org/populartopics/newtonslaws>

**AERIAL VIEW:** Tutorial and curriculum links from TeachEngineering.

**DESTINATION:** NextGen 101: The Passenger Experience

**NAVIGATION:** <https://www.faa.gov/tv/>

**AERIAL VIEW:** A video from the FAA explaining how NextGen has modernized flight.

**DESTINATION:** The Ninety-Nines Museum of Women Pilots

**NAVIGATION:** <https://www.museumofwomenpilots.org/>

**AERIAL VIEW:** Museum website includes free online training modules.

**DESTINATION:** NTSB Aviation Accident Reports

**NAVIGATION:**

<https://www.nts.gov/investigations/AccidentReports/Pages/aviation.aspx>

**AERIAL VIEW:** List from the National Transportation Safety Board. The reports listing is sortable by the event date, report date, city, and state.



**DESTINATION:** Oklahoma Aerospace: Building on a Rich Tradition

**NAVIGATION:** <https://www.okcareertech.org/business-and-industry/aerospace-and-aviation>

**AERIAL VIEW:** Pathway resources from the Oklahoma Department of Career and Technology Education, including videos, industry outlook data, career success stories, and program location information.

**DESTINATION:** Oklahoma Museums Association

**NAVIGATION:** <https://www.okmuseums.org/oklahoma-museums/>

**AERIAL VIEW:** List of all museums in Oklahoma.

**DESTINATION:** *Oklahoma Today* Archives

**NAVIGATION:** <https://dc.library.okstate.edu/digital/collection/OKToday>

**AERIAL VIEW:** Digital searchable archive of *Oklahoma Today* magazine, beginning in 1953.



**DESTINATION:** Organization of Black Aerospace Professionals

**NAVIGATION:** <https://obap.org/>

**AERIAL VIEW:** Founded in 1976, the Organization of Black Aerospace Professionals is a nonprofit organization dedicated to the encouragement and advancement of minorities in all aviation and aerospace careers. OBAP outreach and programs include Aerospace Professionals in Schools, Aerospace Career Education (ACE) Academies, scholarships, collegiate chapters, the Aerospace Professional Development Program, and more.

**DESTINATION:** Out of This World

**NAVIGATION:** <https://www.worldbook.com/nasa/out-of-this-world.htm>

**AERIAL VIEW:** This series is a collaboration between World Book and NASA's Innovative Advanced Concepts program. Scientists tell how they grew from students to inventors and now tackle some of NASA's biggest challenges. Useful for STEM/STEAM instruction and independent reading.

## P

**DESTINATION:** Paper Airplane Activity

**NAVIGATION:** <https://www.grc.nasa.gov/www/k-12/aerosim/LessonHS97/paperairplaneac.html>

**AERIAL VIEW:** A simple activity from the NASA Glenn Research Center.

**DESTINATION:** PBS LearningMedia

**NAVIGATION:** <https://oeta.pbslearningmedia.org/>

**AERIAL VIEW:** **Free**, standards-aligned videos, interactives, lesson plans, and more for teachers. For example, search for “aviation” in the search window and see 94 resources, including:

- Aviation: The Limited Sky
- Future of Aviation
- Buzz the Tower: How Bees Influence Aviation
- Plane Crazy
- Willa Brown Chappell
- Meet a Test Pilot
- Female Pioneers of the Sky
- Bessie Coleman
- My First Balloon Ascent
- Alaska Native Pilots

**DESTINATION:** Pearl: The Life of Pearl Carter Scott

**NAVIGATION:** <http://www.pearlthemovie.net/>

**AERIAL VIEW:** Website of the film with link to related curriculum from the Chickasaw Nation.

**DESTINATION:** Pitsco Education

**NAVIGATION:** <https://www.pitsco.com/>

**AERIAL VIEW:** A leading provider of K-12 STEM solutions, Pitsco offers products at various grade levels, including the following:

- For grades K-2, Pitsco offers whole-class, hands-on STEM Units that enable lower-elementary students to make connections among the four areas of STEM. Students work in teams to brainstorm and solve problems, beginning to develop those transferable future-ready skills necessary in college and careers and creating an awe for hands-on exploration at an early age. Units can be implemented individually or grouped into two themes: Structures and Air. The Air Theme introduces students to the importance of air and how air is used by living and nonliving things. Children learn about the role of air in technology and engineering and apply concepts across life science, Earth science, physical science, and math.
- For grades 3-5, Pitsco offers the STREAM Missions program. Delivered in a cloud-based platform with accompanying hands-on projects, STREAM Missions appeal to all types of learners as they combine structured and guided inquiry with student-centered technology and interdisciplinary instruction. Through the Missions, students are also introduced to a variety of potential careers.
- For grades 6-9, Pitsco offers the STEM and Career Expeditions programs. With Expeditions, students are immersed in a collaborative experience, seeking to answer an Essential Question through hands-on discovery and experimentation. Expeditions are flexible and hands-on, blending teacher-led instruction with student-directed activities through a cloud-based learning content management system.
- For grades 11-12, Pitsco partnered with CrossFlight Sky Solutions, developer of a goal-based and student-driven drone curriculum with drone training software to use as a part of a STEM/STEAM program. This curriculum culminates with students being prepared to pass the FAA Part 107 Aeronautical Knowledge Test.

**DESTINATION:** Popular Aviation Careers

**NAVIGATION:** <https://www.avjobs.com/careers/>

**AERIAL VIEW:** Job descriptions for flying and non-flying careers in aviation from Avjobs, the leading aviation jobs site.

**DESTINATION:** Project Lead The Way (PLTW)

**NAVIGATION:** <https://www.pltw.org/our-programs>

**AERIAL VIEW:** PLTW students engage in hands-on activities, projects, and problems that are reflective of real-world challenges. This compelling, real-world approach empowers students to learn essential, in-demand skills validated by the world's leading companies, while also providing an invaluable connection between what students are learning in the classroom today and how it applies to the paths they'll take in the future. Curriculum topics (within different program levels) include the following:

- Aerospace Engineering
- Cybersecurity
- Flight and Space
- Principles of Engineering
- Stability and Motion: Science of Flight
- Weather: Factors and Hazards

## R

**DESTINATION:** Real Women of Air Traffic Control

**NAVIGATION:** <https://www.faa.gov/tv/?mediald=1593>

**AERIAL VIEW:** A video from the FAA.

**DESTINATION:** Redbird Virtual STEM+ Lab

**NAVIGATION:** <https://learning.redbirdflight.com/courses/redbird-virtual-stem-lab/>

**AERIAL VIEW:** Learn about aeronautics and experience aviation from home with an expert teacher.

**DESTINATION:** Rise Above Resource Kits

**NAVIGATION:** <https://cafriseabove.org/resource-kit/>

**AERIAL VIEW:** From the Commemorative Air Force, these free, downloadable kits provide users access to posters featuring the Six Guiding Principles, PowerPoint files, classroom activities and a wealth of material about the Tuskegee Airmen and the WASPs (Women Airforce Service Pilots).

**DESTINATION:** Rise of the Rockets

**NAVIGATION:** <https://www.pbs.org/wgbh/nova/video/rise-of-the-rockets/>

**AERIAL VIEW:** NOVA explores the latest rocket technologies and the growing role private citizens may have in space.

**DESTINATION:** Rockets

**NAVIGATION:**

[https://www.teachengineering.org/curricularunits/view/cub\\_rockets\\_curricularunit](https://www.teachengineering.org/curricularunits/view/cub_rockets_curricularunit)

**AERIAL VIEW:** STEM curriculum for K-12 from TeachEngineering.org. Includes the following standards-aligned lessons and activities:

- Keep in Touch: Communications and Satellites (lesson)
- I'm Not in Range: Acting Out Cellular Phone Service (activity)
- Newton Gets Me Moving (lesson)
- Newton Rocket Car (activity)
- Using Thrust, Weight & Control: Rocket Me Into Space (lesson)
- Strawkets and Thrust (activity)
- Strawkets and Weight (activity)
- Strawkets and Control (activity)
- Blast Off: Generating Rocket Thrust with Propellants (lesson)
- Fuel Mystery Dis-Solved! (activity)
- Aqua-Thrusters! (activity)
- Pop Rockets (activity)
- Learn to Build a Rocket in Five Days or Your Money Back (lesson)
- Constraints: Pop Rockets on a Shoestring Budget (activity)
- Where Am I: Navigation and Satellites (lesson)
- Find It! (activity)

**DESTINATION:** Rockets Activities

**NAVIGATION:** <https://www.jpl.nasa.gov/edu/teach/tag/search/Rockets>

**AERIAL VIEW:** Searchable website of activities from the NASA Jet Propulsion Laboratory.

**DESTINATION:** "The Role of Drone Technology in Sustainable Agriculture"

**NAVIGATION:** <https://www.precisionag.com/in-field-technologies/drones-uavs/the-role-of-drone-technology-in-sustainable-agriculture/>

**AERIAL VIEW:** Article from *PrecisionAg*.

# S

**DESTINATION:** Science Education Resources

**NAVIGATION:** <https://www.airbus.com/company/sustainability/airbus-foundation/discovery-space/downloads.html>

**AERIAL VIEW:** Free resources from Airbus, including toolkits and animations.

**DESTINATION:** Scientists in School

**NAVIGATION:** <https://www.scientistsinschool.ca/resources/teacher-resource-packages/>

**AERIAL VIEW:** Offers a free downloadable teacher resource package in air and flight with background information, hands-on activities, and teacher and student resources (grades 5-6). Scientists in School is the leading science education charity in Canada.

**DESTINATION:** Sector 33 App

**NAVIGATION:** <https://www.nasa.gov/centers/ames/Sector33/iOS/index.html>

**AERIAL VIEW:** The Sector 33 app is a companion app to the Smart Skies classroom product, LineUp With Math; an air traffic control game designed to interest students in aeronautics-related careers; and designed to connect mathematics and problem solving to the real world. Its features include the following:

- 35 problems featuring two to five airplanes
- Speed and route controls
- Weather obstacles
- Four levels of controller certification
- In-game introduction, hints, and help section
- Extra videos

**DESTINATION:** Smart Skies

**NAVIGATION:** <https://smartskies.nasa.gov/>

**AERIAL VIEW:** Distance-rate-time investigations in air traffic control for grades 5-9 from the NASA Ames Research Center.

**DESTINATION:** Smithsonian National Air and Space Museum

**NAVIGATION:** <https://airandspace.si.edu/learn>

**AERIAL VIEW:** Explore aerodynamics through hands-on activities, discover the science behind spy planes, earthquakes, or volcanoes in a STEM in 30 episode or listen to stories of achievement, failure, and perseverance on our AirSpace podcasts.

**DESTINATION:** Start with a Book: Flight

**NAVIGATION:** <https://www.startwithabook.org/summer-reading-learning/flight>

**AERIAL VIEW:** A collection of books, activities, apps, and websites for learning all about flight. From WETA Public Broadcasting.

**DESTINATION:** STEM Aviation-Related Instructional Videos

**NAVIGATION:** <https://mapsairmuseum.org/lesson-plans-for-teachers/stem-instructional-videos/>

**AERIAL VIEW:** Instructional support materials relating to aviation topics from the Military Aviation Preservation Society.

**DESTINATION:** The STEM Gap: Women and Girls in Science, Technology, Engineering and Math

**NAVIGATION:** <https://www.aauw.org/resources/research/the-stem-gap/>

**AERIAL VIEW:** Research and data from the American Association of University Women.

## T

**DESTINATION:** Tardigrade Teaching Aids

**NAVIGATION:** <https://aerospace.org/tardigrades>

**AERIAL VIEW:** The tardigrade, also known as a water bear (or a moss-piglet), can be found in extreme environments across the world, from the extreme depths of the ocean to frozen Arctic tundra...and even in space! In this lesson plan, students will become familiar with extremophiles and the small but mighty tardigrade. By taking on the role of an astrobiologist, students will use the experimental science process to investigate the effect of temperature, hydration, or space vacuum on tardigrade survival. They will draw their own conclusions on tardigrade space resiliency and model ways to advance human space exploration.

**DESTINATION:** Technovation Families Design Challenges (formerly Curiosity Machine)

**NAVIGATION:** <https://www.curiositymachine.org/challenges/>

**AERIAL VIEW:** Free design challenges that explore a range of science, technology, and engineering topics through fun, hands-on activities that promote creativity and problem-solving to find unique solutions.

**DESTINATION:** Think Bigger

**NAVIGATION:** <https://www.aia-aerospace.org/report/think-bigger-uas-infographic/>

**AERIAL VIEW:** Infographic from the Aerospace Industries Association about the potential for Large Unmanned Systems.

**DESTINATION:** “The Top 5 Best Educational Drones for Students, Beginners, and Kids”

**NAVIGATION:** <https://www.uavadviser.com/top-5-best-educational-drones/>

**AERIAL VIEW:** Reviews from *UAV Adviser*.

**DESTINATION:** To the Moon & Beyond

**NAVIGATION:** <https://playbook.tulsastem.org/programs/to-the-moon-and-beyond>

**AERIAL VIEW:** From the Tulsa Regional STEM Alliance, students use the engineering design process as they learn about humans' endeavors to return to the Moon and visit Mars.

**DESTINATION:** TryEngineering

**NAVIGATION:** <https://tryengineering.org/>

**AERIAL VIEW:** TryEngineering offers a variety of lesson plans that align with education standards to allow teachers and students to apply engineering principles in the classroom. Lesson plans include the following topics:

- Engineering Air Traffic
- Failure: Seeds of Innovation
- Find It with GPS!
- Folding Matters
- Measuring the Wind
- Playing with Parachutes
- Take Flight
- Water Rocket Launch

## U

**DESTINATION:** Up, Up and Away!—Airplanes

**NAVIGATION:**

[https://www.teachengineering.org/activities/view/cub\\_airplanes\\_lesson03\\_activity1](https://www.teachengineering.org/activities/view/cub_airplanes_lesson03_activity1)

**AERIAL VIEW:** STEM curriculum for K-12 from TeachEngineering.org. Includes the following standards-aligned lessons and activities:

- Can You Take the Pressure? (lesson)
- Fun with Bernoulli (activity)
- Air Pressure (activity)
- May the Force Be with You: Lift (lesson)



- Windy Tunnel (activity)
- May the Force Be with You: Weight (lesson)
- Bend That Bar (activity)
- Physics Tug of War (activity)
- May the Force Be with You: Thrust (lesson)
- Equal & Opposite Thrust in Aircraft: You're a Pushover! (activity)
- May the Force Be with You: Drag (lesson)
- What a Drag! (activity)
- Take Off with Paper Airplanes (lesson)
- Building-Testing-Improving Paper Airplanes: Head's Up! (activity)
- Airplane Tails & Wings: Are You in Control? (lesson)
- Better By Design (activity)
- Airplanes Everywhere: Land! Water! Sky! Oh, My! (lesson)
- Let's Get It There Fast (activity)
- Will It Fly? (lesson)
- Balsa Glider Competition (activity)
- Future Flights: Imagine Your Own Flying Machines! (lesson)
- Design a Flying Machine (activity)

## V

**DESTINATION:** Virtual Storytime: Planes Fly!

**NAVIGATION:** <https://www.starhop.com/blog/2020/6/3/virtual-storytime-planes-fly>

**AERIAL VIEW:** Virtual book reading from the blog of the McAuliffe-Shepard Discovery Center.

## W

**DESTINATION:** Weather Experiments

**NAVIGATION:** <https://www.ou.edu/nwc/learn/experiments>

**AERIAL VIEW:** Five fast experiments from Science Museum Oklahoma.

**DESTINATION:** Weather Wiz Kids

**NAVIGATION:** <https://www.weatherwizkids.com/weather-experiments.htm>

**AERIAL VIEW:** Dozens of weather experiments.

**DESTINATION:** With You When You Fly—Aeronautics for Pre-K

**NAVIGATION:** <https://www.nasa.gov/stem-ed-resources/with-you-when-you-fly.html>

**AERIAL VIEW:** Based on principles within popular children's books, each of the STEM lesson plans in this guide helps preschool children learn about the science of aeronautics. The six themes are Gliders in Nature, Balloons, Parachutes, Kites, Helicopters and Airplanes, and World Flyers.

**DESTINATION:** “What Does MRO Stand for in Aviation?”

**NAVIGATION:** <https://aerocorner.com/blog/mro-in-aviation/>

**AERIAL VIEW:** Article in the Aero Corner blog.

**DESTINATION:** Wings Over Indiana (video)

**NAVIGATION:** <https://www.youtube.com/watch?v=3f-SOdvDTC8&list=PL5BBD7645952791B6>

**AERIAL VIEW:** The Emmy® award-winning documentary is an Indiana Expedition hosted by Rick Crosslin. Thirteen YouTube videos are linked together and will transition from one to the next automatically. The content in this series will motivate students to explore related material and the fascinating world of aircraft development.

**DESTINATION:** Women in Aviation International

**NAVIGATION:** <https://www.wai.org/resources>

**AERIAL VIEW:** Women in Aviation International is dedicated to the encouragement and advancement of women in all aviation career fields and interests. Their website includes hands-on aviation education materials, a Pioneer Hall of Fame, and scholarship information.

**DESTINATION:** “Women in Aviation: Past, Present and Future”

**NAVIGATION:** <https://www.flyaeroguard.com/blog/women-in-aviation/>

**AERIAL VIEW:** Blog feature from AeroGuard.

## Y

**DESTINATION:** Youth Aviation Adventure

**NAVIGATION:** <https://www.youthaviationadventure.org/>

**AERIAL VIEW:** Modular aerospace education activities organized by volunteers using local airports.



Produced as a Cooperative Effort Between  
the Oklahoma Aeronautics Commission  
and the Oklahoma Department  
of Career and Technology Education

