

FIELD TRIP GUIDE
American Airlines CR Smith Museum
2016-2017



CR SMITH MUSEUM
www.crsmithmuseum.org



Planning a Field Trip

The CR Smith Museum offers TEKS aligned, grade appropriate self-guided and guided programs.

Groups over 15 qualify for our discounted group rate*.

For all educational programs, please schedule at least 2 weeks in advance.

Funding is available for Title 1 schools.

Please let us know if you are interested in applying for a *Flight Science Workshop Grant* that will help cover the cost of your school's CR Smith Museum admission and workshop fees.

Contact Us!

Website: www.crsmithmuseum.org

Email: info.crsmithmuseum@aa.com

Phone- 817-967-1560

4601 Highway 360 at FAA Rd

Fort Worth, Texas 76155

Self-Guided Field Trip Programs- All Grade Levels

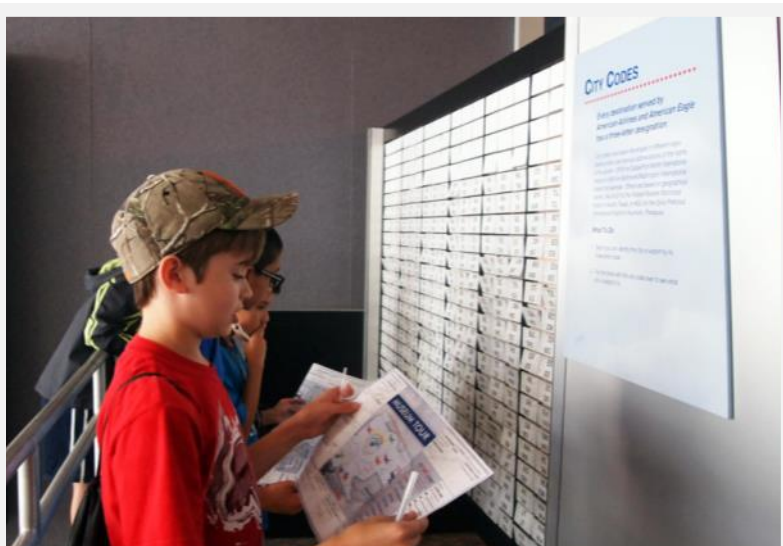
Take your students on a trip this semester! Your journey begins with our high resolution short film, *The Pursuit of Flight*, where students will learn about the inventors and innovators that conquered the skies! The CR Smith Museum's exhibitions share the history and science of American Airlines and the world of aviation. Travel through over 80 years of aviation history, board a 1940's DC-3 aircraft, discover flight science, test wind tunnels and dive deeper into the industry, careers and people that make up American Airlines.

Key Themes: History, Science and Technology, Geography, Force & Motion and Engineering Design

Scavenger & Treasure Hunt Program- All Grade Levels

The Aviator's Scavenger Hunt and Treasure Hunt guides students through permanent exhibitions and allows students to explore all areas of the Museum with your group leader. Questions focus on city airport codes, the forces of flight, the DC-3 aircraft and the history of aviation.

Key Themes: History, Science & Technology, Force & Motion and Geography



GROUP RATE: \$3/person

*** To qualify, groups must have at least 15 people, pay in one transaction & schedule in advance**



CR SMITH MUSEUM

Guided Field Trip Programs

Flagship Knoxville Walk-Around- All Grade Levels

Join Museum Staff and Volunteers on a 20-minute pre-flight maintenance check around the DC-3 aircraft, learn the different parts of this aircraft and discover why it is the most important aircraft in commercial aviation history . Tours are included with your group admission, but must be scheduled at least 2 weeks in advance.

Key Themes: Science & Technology, Engineering Design, Force & Motion, History and Careers
Cost- Included with Museum Admission

Behind the Scenes—Careers at American Airlines— Grades 7-12

Bring your students to go behind the scenes at American Airlines. Learn what it takes to run the largest airline in the world and the faces behind the company. Tour sites may include areas in the American Airlines Flight Academy. All students must be over the age of 12. Group size is limited to 20 participants. Behind the scene tours are subject to availability and will last approximately 60 minutes. Following tours, students will tour through Museum exhibitions.

Key Themes: Science & Technology, Careers in Aviation
Cost- \$5/ person

Flight Science Workshops Grades K-12

Enhance your field trip experience by allowing students to get even more hands-on in our Flight Science Workshops. Museum staff and volunteers will dive deeper into the science, engineering, technology and math of flight. Students will be challenged to put their new knowledge to the test and participate in one of our age-appropriate engineering builds.

- **Limit of 30 students per workshop. 45-60 min program. Larger groups may schedule multiple workshops during their visit.**



Key Themes: Science, Technology, Engineering and Math, Engineering Design. Themes vary based upon workshop build.

Cost- \$5/ participant

Outreach Programs All Grade Levels

Can't make it to the Museum? Would you like for the CR Smith Museum to participate in your school's science night or career day? Many of our Museum programs can be adapted as Outreach Programs!

Please contact Lauren.Giffin@aa.com for more information.



CR SMITH MUSEUM

Available Workshops

Wind Tunnel Testing (grades K-5)**

45 minute program. Students will discover the principles of air, air pressure and the forces that affect flight through an engaging live demonstration, hands-on experiments and an engineering challenge. Also, learn how aerospace engineers use wind tunnels to design and test flight. Students will then be put to the test to design their own hovercraft in our Museum wind tunnels.

Build a Communication Network (grades 2-6)

45 minute program. Introduce your students to sound, signals and sensors! Students will not only learn the science behind sound waves and how it is used to assist pilots communicate, but also the aviation alphabet and language. Students will plan and build a network to send communication signals in multiple directions to multiple people.

Power a Plane Using Stored Energy (grades 5-8)

45-60 minute program. Students will learn the different parts of an airplane and design their own glider. After a short lesson on potential and kinetic energy, students will then be challenged to power their plane using stored energy. Students will also learn about the role of aviation engineers through interactive videos.

Engineer a Long Spanning Wing (grades 4-8)

Students will discover the materials, frame and design needed to engineer a long aircraft wing. While airplanes need to be strong, they also need to be lightweight. Put your students to the test to try and build a durable, yet lightweight wing through this hands-on program.

****Wind Tunnel Testing may not be available as an outreach program.**



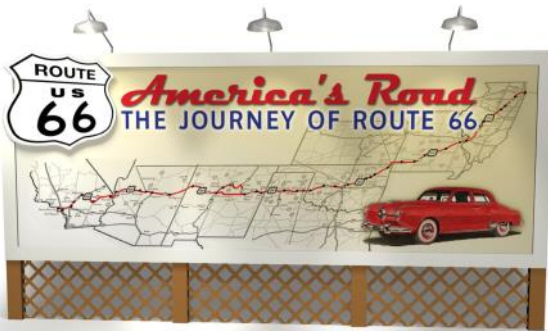
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TEKS Standards Alignment

Workshop Theme	Grade Levels	Scientific Investigation and Reasoning	Matter & Energy	Force, Motion & Energy
Wind Tunnel Testing	K	1AB, 2ABDE, 3ABC, 4A	5 ABC	6 CD
	1	1AB, 2ABDE, 3ABC, 4A	5 ABC	6 CD
	2	1AB, 2ABDE, 3ABDE, 4AB	5 ABC	6 CD
	3	1A, 2AB, 3ACD, 4AB	5B	6 BC
	4	2ABF, 3AD	5A	6AD
	5	2ABF, 3ACD	5A	6AD
Build A Communication Network	2	2ABDEF, 3ABC	5CD	6A
	3	2ADEF, 3ACD		6A
	4	2ABF, 3AD		6AD
	5	2ABF, 3ACD		6A
	6	2ABCE, 3ABCD		9C
Engineer A Long Spanning Wing	4	2AD, 3AD	5A	6D
	5	2ABDF, 3ACD	5A	6D
	6	2ABCE, 3ABCD		8AB
	7	2ABCE, 3ABCD		7A
	8	2ABCE, 3ABCD		6A
Power A Stored-Energy Plane	5	2ABDF, 3ACD	5A	6AD
	6	2ABCE, 3ABCD	7A	8AB
	7	2ABCE, 3ABCD		7A
	8	2ABCE, 3ABCD		6AC



Upcoming Special Exhibitions!



Opens Saturday, October 8, 2016

This exhibition includes the history of Route 66, evolution of automobile travel, innovations, communities and populations, as well as accounts of travelers and more. The objective is to guide visitors to a greater understanding of Route 66 and its role in American history. The narrative travels from 1926 through the present day. Visitors will experience the exhibit through themed displays, interpretive text and graphics, props, artifacts, and activities.

Opens Saturday, January 14, 2017

Hold on tight! Get ready for earthquakes and tsunamis! Jump on the Quake Karaoke platform and match an earthquake seismogram! Build your structure, set it on a "beach," and launch a wave in the 16-ft Tsunami Tank! Then replay the impact in slow-mo and improve your design. Complete Puzzled Earth, the plate tectonic puzzle, before time runs out and the pieces fall! Spin through geologic time to make Earth's continents move and re-form. Be an engineer as you design and build structures to withstand earthquakes on the Shake Table. Find out what engineers do to keep our world safer... When the Earth Shakes!



****Special Exhibitions are included with your group's Museum admission****

Contact us to schedule your field trip today!

<http://crsmithmuseum.org/education-programs/>

4601 Highway 360
Fort Worth, TX 76155
info.crsmithmuseum@aa.com
Phone: 817-967-1560

Hours: Tuesday– Saturday 9AM– 5PM

Admission Prices- \$7 Adults · \$4 Active military, Seniors 65+, Kids 2-17 ·
Discounted Group Rate*- \$3 for groups of 15 or more

All Education Program dates and availability subject to change.

Please contact the CR Smith Museum at least 2 weeks prior to schedule your school's field trip.

*For the discounted rate, groups must schedule ahead of time and pay in one transaction.



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