Homeschool Field Trip Planning Guide

Welcome!

Come experience the world of Aviation, Aerospace, and STEM with a visit to the Florida Air Museum and the SkyLab Innovation Center at the Aerospace Center for Excellence!

Your students will be immersed in aviation and aerospace history, museum exhibits, and scavenger hunts. You can request educational programs featuring hands-on and inquiry-based learning ranging from 3D printing, drones, weather, and flight simulation. A list of the options is provided below including maximum number of students, time, and cost. A detailed summary of each program is listed at the end of this guide.

We sincerely appreciate your interest in our facility, and we look forward to welcoming you and your students very soon!

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Education Director, Aerospace Center for Excellence

AEROSPACE™ Center For Excellence | RAMUS SKYLAB INNOVATION CENTER

Field Trip Program at a Glance

Choose Two Experiences See table at end of guide	**Minimum # of Students** 15	**Maximum # of Students** 40
Duration 2 hours	**Cost** $15.00 per student $10.00 per adult	**Groups** Max of 2 Split by age group

Note: Groups may be split by age, however there must be at least five students and no more than 20 students in each group.

How it Works

Grouping | In order for students to get the most out of their experience, the programming has been divided into suggested grade levels. Field trips may be split into two groups with a minimum of five students and a maximum of 20 students per group. This will allow parties with students of varying ages to divide up and select programming based on the appropriate age range. In order to ensure that every person gets the most from their experience, students must participate in activities within their appropriate age range.

Choosing Your Experience | Each group may choose two experiences appropriate to the suggested grade levels of the participating students. A detailed summary of programs is listed at the end of this guide.

Coordinator Planning Details

Field Trip Request | Requests must be made a minimum of six weeks prior to your requested field trip date(s). Please provide our education team with three preferred dates for your field trip.

> **Important Note** | Please note that pre-registration for Field Trips is required. Groups that come to the Museum without pre-registration may pay regular admission fees and take a self-guided tour, but may not be offered educational programs in the SkyLab Innovation Center.

Field Trip Availability | Field Trips are available Monday - Friday between 9:00 am – 2:00 pm.

Group Size | A minimum number of 15 students is required. Field Trips are limited to 40 students per day. There must be one chaperone per ten students.

Lunch | No food or drink is permitted in the facilities throughout the Aerospace Center for Excellence. If you plan to bring your lunch, there are tables available for your convenience in the open-air Aerospace Pavilion. The tables are first come first serve. The area is covered in case of rain. Please clean up after eating by utilizing trash cans in the Aerospace Pavilion.

Payment | After your request has been received and the date is confirmed with you by the education team, you will receive an email from our account's department. At this time, you will be asked to provide the **$50 non-refundable reservation fee** (which will be deducted from your final payment). Payments can be processed via credit card or cash. The remainder of the payment will be collected on the day of your field trip at the Museum Front Desk. No refunds for weather or special circumstances will be provided; we will instead reschedule your field trip for another date. Payment is required for the number of attendees confirmed at the time of arrival.

Sibling Policy | Due to the interactive nature of our programs, non-participating parents and siblings are not permitted. However, a reduced rate of $10/adult and $8/child for entry into the Museum may be purchased at the Front Desk. Entry to the Museum for children 10 and under is free.

Late Arrival Policy | Your field trip reserves time with our education staff, with this in consideration, we cannot guarantee staff or content for late arrivals. A 30-minute grace period will be observed. We recommend arriving 15 minutes prior to the beginning of your field trip to check in, pay, and use the facilities.

Refunds | A full refund will be provided if the field trip is canceled within 72 hours of the scheduled trip. No refund will be provided if less than 72 hours.

Media Release Form| The Media Release Form will be emailed to you and must be signed by all participating students' parents/guardians. All hard copies will need to be provided for the team upon arrival.

Field Trip Procedures/Policies

Arrival:

- Parking is available in the lot next to the Florida Air Museum and SkyLab Innovation Center. Parents and students will wait inside the Aerospace Pavilion for the field trip to begin.
- Upon arrival, the coordinator will go to the Museum Front Desk to finalize payment. The ACE Staff will meet the group at the picnic tables under the Aerospace Pavilion unless otherwise communicated.
- Please plan to arrive 15 minutes ahead of scheduled program time to make payments, and use the restroom. The tour will begin on time and late arrivals may miss some programming.

Lunches:

- There are no dining options available on site, however vending machines are located in the Museum Gift Shop.
- If you are bringing lunch, place coolers on the Stage under the Pavilion upon arrival.
- Lunches may be eaten at the picnic tables in the Aerospace Pavilion.

During Programs:

- Due to the interactive nature of our programs, students must be supervised at all times by an adult chaperone. A minimum of one adult per 10 students is required. Please note our sibling policy listed above.
- Food, candy, gum and drinks are not allowed in the Museum and SkyLab Innovation Center.
- Due to other tours, field trips, and possible events taking place at the Aerospace Center for Excellence, groups are asked to keep the volume at a minimum using their indoor voices.
- No running in the facilities.
- Bathrooms are available inside the Aerospace Center for Excellence. Visitors are to remain on the first floor to use the bathrooms.

Field Trip Program Summaries

Below are summaries of the programs the Aerospace Center for Excellence offers.

Florida Air Museum	Program	Grade Level
Exploring the Florida Air Museum	**Explore the History of Flight** Explore the Florida Air Museum by completing a scavenger hunt that takes students throughout the museum and its grounds. This scavenger hunt enables students to engage with over 30 aircraft on display. Younger students can engage in our Discovery Zone; a collection of interactive exhibits and learning toys designed to expose students to concepts such as altitude change, pitch and yaw, critical thinking and situational awareness. Students can explore the Piedmont Aerospace Experience, the only fully operational Boeing 727 classroom in the world. A variety of other activities such as paper airplane competitions, stomp rockets, and more!	**K-12**
Skylab Laboratory	**Program**	**Grade Level**
Redbird Flight Simulation Lab	**Flying Fundamentals** Students will orient themselves with the layout and function of the major structural components of a modern-day airplane. They will then apply this knowledge as they learn and understand how the physics (aerodynamics) of flight work to get an airplane off the ground and help it maintain control as it flies. Students will be introduced to the "four fundamentals" through flight simulation: straight-and-level flight, turns, climbs, and descents. They will fly in the	**6-12**

	airplane in various attitudes and configurations to develop a true appreciation for the dynamic nature of flight and the scope of the pilot's ability to control the airplane. Students will apply these skills to learn the steps necessary to complete normal takeoffs and landings in the simulation environment.	
Siemen's Engineering Lab	**Built for a Hurricane** Hurricanes impact structures in Florida each year. Students will use the engineering design process to build a tower that withstands wind from a fan in order to understand how engineers work to improve a structures ability to withstand strong winds.	**K-2**
	Rocketing to Space Sending satellites and other vehicles into space using rockets is becoming a competitive business. Investigate the relationship between mass, force and distance as applied to space travel by manipulating straw rockets.	**3-5**
	Energy Efficient Engineering With fuel costs on the rise, it is important for propellers to be efficient. Learn how prop pitch placement effects efficiency during flight. Students will engineer different propellers to understand how the blade design and pitch impacts the speed of rotation and thus efficiency.	**6-8**
	Lift Your Wings Wings are an important part of flight, used for lifting, turning, landing and controlling an airplane. Students will build a wing and use their understanding of contact and non-contact forces to understand how the wing design helps in flight.	**9-12**

Drone Lab	**Drones: Learn to Fly!** Come learn to fly a drone! Students will learn basic aviation terminology and practice simple controls using a mock flight simulator and then work as a team (pilot, controller, and signaler) to demonstrate their knowledge and perform a drone flight.	**3-5**
	Drones: Drone Search Come explore drone photography! In small groups students will use aerial photography to assess a model of a disaster zone. Students will learn how drones can help people in disaster situations.	**6-8**
	Drones: Deliver Disaster Relief Supplies Teams will use a drone to conduct a simulated disaster relief mission.	**9-12**
NOAA Science on a Sphere	**Observing the Sky** Patterns are found everywhere in nature. Investigate patterns that can be found in the sky and on Earth.	**K-2**
	Objects in the Solar System When Engineers at NASA are planning a space launch, they have to take into account the movement of the Earth. Explore Earth's rotation and revolution compared to the Sun, Moon, and Stars and how these movements impact space exploration.	**3-5**
	Hunting Hurricanes Part of NOAA's mission is to understand and predict changes in climate, weather, ocean and coasts and to share that knowledge and information with others. Explore how hurricanes are formed, the work of the	**6-8**

	hurricane hunters, and how climate change is impacting severe weather formation.	
	Climate Change Part of NOAA's mission is to understand and predict changes in climate, weather, ocean and coasts and to share that knowledge and information with others. Explore evidence of climate change and how it is impacting our planet Earth.	**9–12**