Field Trip
Planning Guide

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Welcome!

The love of aerospace/science, technology, engineering and math begins early. When young students are supported and encouraged in their exploration of these and other critical STEM disciplines, they are far more likely to continue seeking out more information, laying the groundwork for an in-demand, technologically-fueled career. The Aerospace Center for Excellence connects with K-12 educators, community organizations, and local event organizers to share their knowledge and demonstrate how aerospace/science, technology, engineering, and math (STEM) matter in their lives.

The Aerospace Center for Excellence facilitates communication between the K-12 educational community and the aerospace/STEM industry. Educational entities often partner with the Aerospace Center for Excellence for efforts such as:

• Requesting guest speakers for Aerospace and STEM-related events

• Judging science and engineering fairs

• Requesting exhibitors for educational and community Aerospace and STEM events

• Participating in our Outreach and Field Trips

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

Kimberly D. Brewer, MEd
Education Director, Aerospace Center for Excellence

AEROSPACE™ Center For Excellence | RAMUS SKYLAB INNOVATION CENTER

Field Trip Program Options

Select Interested Experiences See table at end of guide	**Minimum # of Students** 15	**Maximum # of Students** 60
Duration 40-minute Experiences depending on the size of your school group	**Cost** $15.00 per student $10.00 per adult	**Groups** Max of 3
Florida Air Museum ONLY – No special programming **Cost** $8.00 per student $10 per adult		

Note: We allow one chaperone per 10 students to participate for FREE. For example, if you have 40 students, you get four free adults. (Teachers are always free and do not count against your free adults.) The price above reflects the cost of additional adults who want to participate.

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 groups based on the number of students. In order to ensure that every person gets the most from their experience, students must participate in activities within their appropriate grade level.

Choosing Your Experience | Each school group should select all of the experiences appropriate to the suggested grade levels of the students that you are interested in. The experiences you will be scheduled for will depend on the total number of students, time, and staff and facility availability. A detailed summary of programs is listed at the end of this guide.

School Coordinator Planning Details

Field Trip Request | Requests must be made a minimum of six weeks before your requested field trip date(s).

> **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 but may not be offered educational programs in the SkyLab Innovation Center.

Group Size | A minimum number of 15 students is required. There must be one chaperone/teacher per ten students.

Payment | After your request has been received and the date is confirmed, you will receive an email with your invoice.

We require a **$50 non-refundable reservation fee** (which will be deducted from your final payment) within three days of receiving the initial invoice.

The remainder of the payment will be collected on the day of your field trip at the Museum Front Desk. Payment is required for the number of students confirmed upon arrival. **ONLY** credit cards are accepted. **IF** you need to pay before your arrival, please notify the ACE team.

Late Arrival Policy | Your school field trip reserves time with our education staff. Considering this, we cannot guarantee staff or content for late arrivals. A 30-minute grace period will be observed. We recommend arriving 15 minutes before 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.

Contact | Please contact our education team at educate@flysnf.org

Media Release Form | A Media Release Form will be provided to the school coordinator via email. The Media Release Form must be signed by all participating students' parents/legal guardians. All forms need to be scanned and emailed to our team no later than three days before the planned field trip, and the hard copies must be provided for the team upon arrival.

Field Trip Procedures/Policies

Arrival:

- Buses will use the Rocky Road entrance, make an immediate right turn, and park under the trees next to the open Aerospace Pavilion to drop off students.
- After the buses drop off students, they will need to follow the attached map to locate bus parking while they wait until your school/organization is ready to depart.
- Upon arrival, ACE Staff will meet you at the picnic tables under the Aerospace Pavilion unless otherwise communicated.
- Please arrive 15 minutes ahead of scheduled program time to unload students, make payments, and use the restroom.

Lunches:

- If you are bringing lunch, place coolers on the Stage under the Pavilion upon arrival.
- Lunches will 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. One adult per 10 students is required.
- 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. Students are to remain on the first floor to use the bathrooms.

Field Trip Program Summaries

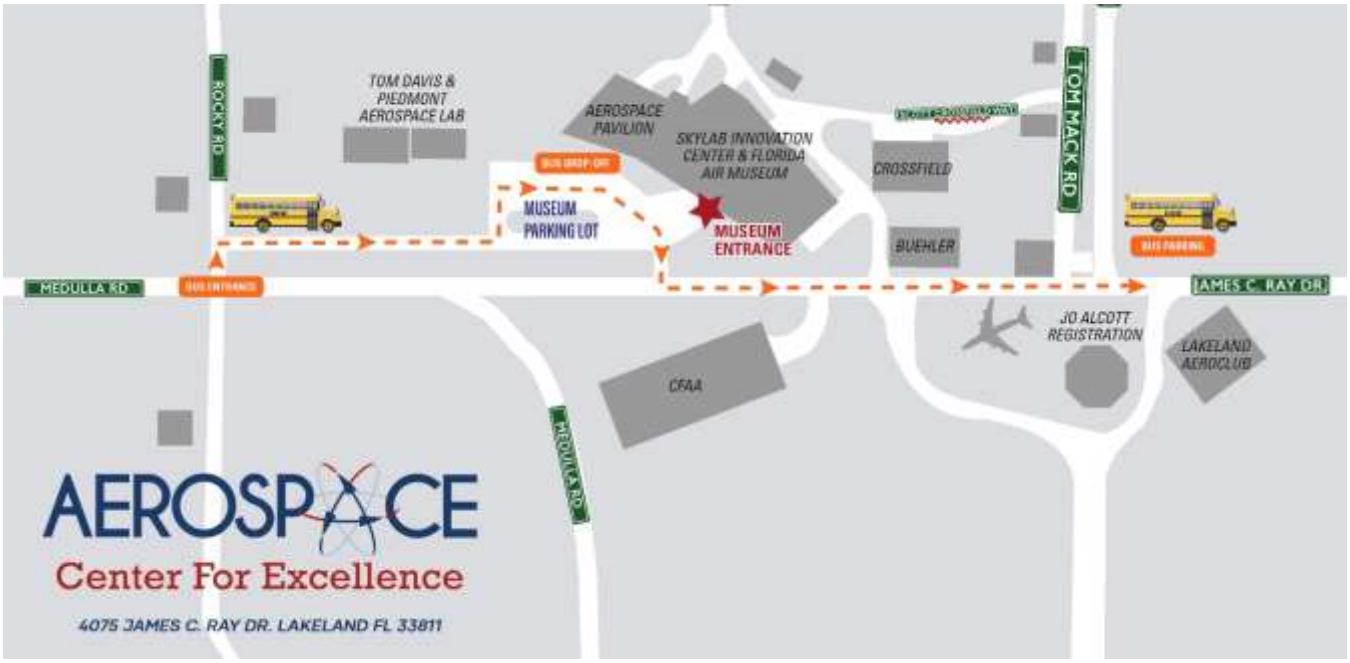
Below are summaries of each program the Aerospace Center for Excellence offers.

Florida Air Museum	Program	Grade Level
Exploring the Florida Air Museum (Special Programming)	**Explore the History of Flight** Students complete interactive activities that takes students throughout the museum and its grounds enabling students to engage with over 30 aircraft and other displays including a NOAA Hurricane Hunter P3 Orion and NASA displays.	**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 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.	**6-12**
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	**3-5**

	mass, force and distance as applied to space travel by manipulating straw rockets.	
	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	**3-5**

	Stars and how these movements impact space exploration.	
	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 hurricane hunters, and how climate change is impacting severe weather formation.	**6-8**
	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**

Map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