FLYING THROUGH BOOKS! TOUR

TEACHER’S GUIDE

NURSERY SCHOOL-PRE-K

College Park Aviation Museum | MNCPPC
1985 Cpl. Frank Scott Drive | College Park, MD 20740
www.CollegeParkAviationMuseum.com
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Tours Available: Monday – Friday 10am to 3pm
Education tours must be scheduled in advance by calling 301-864-6029.

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Dear Educators,

The College Park Aviation Museum will immerse your students in the science and history of flight through an interactive tour and hands-on activities. During the Flying through Books! Tour, museum educators will engage your students with our museum collections through children’s fiction books to address curricula outcomes appropriate for Nursery School through Pre-Kindergarten.

Prior to your visit, you may select one of three topics to focus on while at the museum. Overviews of the Wright Brothers, airmail, and helicopter themes are listed on page 3 of this packet. During the tour, your students will learn about the museum’s airplanes, how planes fly, and how airplane technology has changed over time.

Students will learn about the history and science of flight through stories and hands-on exploration. Our museum educators present inquiry-based tours, encouraging students to ask and answer questions, learn new vocabulary, and develop their deductive reasoning skills. Highlights of the tour include an animatronic Wilbur Wright introducing groups to the College Park airfield, learning about the Wright Brothers, airmail, or helicopters through an age-appropriate storybook, and the opportunity to dress up as a pilot and to fly one of our flight simulators.

All activities at the museum and in this packet are linked to Common Core and state curriculum standards. This packet also contains important information about your visit to the museum and educational resources you can use in your classroom. It features pre-visit and post-visit educational activities designed to build and retain student knowledge. These activities were designed to actively engage students and are tied to museum subject matter.

The College Park Aviation Museum staff looks forward to hosting your group and exploring this fascinating aspect of American and local history.

Cheers,

Rob Verbsky, PhD
Assistant Director
FIELD TRIP INFORMATION

REGISTRATION REQUIREMENTS

- Advanced registration is required for all group tours and programs.
- Group reservations require a minimum of 10 people.
- Groups larger than 100 will be scheduled over multiple time slots or days.
- Tentative dates must be confirmed within 5 business days. Afterwards, unconfirmed dates can be offered to other groups.

To schedule a tour:
By Phone - Contact the Education Department at 301-864-6029
By Fax - fax the registration form to 301-927-6472
By Email - CPAM.Educators@pgparks.com

CANCELLATION AND CHANGE POLICY

48 hours notice is required for cancellations or schedule changes. We will be glad to reschedule your program for a later date. In the case of inclement weather or school closures, we will gladly contact you to reschedule.

ADMISSION FEES

Museum admission is $2.00 per student. School staff are free. We require a student to adult ratio of 10:1, in order to ensure a healthy and safe learning environment for your group. All adults over this requirement will be charged the group rate of $3.00 each.

ARRIVAL & DEPARTURE

Please arrive 15 minutes before your scheduled program to allow time for restroom use and check in. Upon arrival, please check in with the front desk. If you are running late, please contact the museum at 301-864-6029.

Because of construction, arrival and departure procedures have changed. Buses should load and unload at the far end of the old 94th Aero Squadron Restaurant parking lot (5240 Paint Branch Parkway), which is next to the museum. A museum representative will meet your group there.

PAYMENT

Payment is required on the day of your visit. The museum accepts cash, checks, Mastercard, and Visa.

LUNCH FACILITIES

Because of construction, our eating facilities are in flux. If your group wishes to eat lunch at the museum, please let us know so we can determine if we can accommodate your group. Please be mindful that there is NO FOOD AND DRINK ALLOWED INSIDE THE MUSEUM. We apologize for the inconvenience.

SPECIAL NEEDS

To better prepare our educators for your students and to best facilitate the learning process, please list any special needs that we should be aware of. For our hearing impaired guests, the museum is able to provide a sign language interpreter with at least 72 hours of notice.

PHOTOGRAPHY

Taking photographs of your experience is greatly encouraged. Feel free to bring a camera with you.
FIELD TRIP INFORMATION

SCHOOL GROUP BEHAVIOR EXPECTATIONS

Teachers: Please review these expectations with your students and chaperones.

Museums are fragile environments and school groups are larger than typical museum groups. Following museum behavior expectations is essential to the success and enjoyment of the learning experience. We reserve the right to ask a school group to leave the Museum due to behavior issues.

- **No food, drink, or gum in museum galleries.** The Museum provides plenty of food for thought as well as a feast for the eyes.
- **Large bags are not allowed in the galleries.** For the safety of the objects, visitors should leave backpacks and other large bags in the museum lobby.
- **Running, pushing, and roughhousing are not allowed in the museum.** Appropriate museum behavior is necessary to avoid bumping into or damaging artifacts.
- **Keep a safe distance between you and the objects.** This helps to avoid accidentally touching or bumping artifacts.
- **Do not touch.** Your touch may not seem like much, but even the slightest contact can damage the surface of objects, rust metal, or leave fingerprints.
- **Only use pencils while writing or sketching.** If an accident should occur, a pencil mark is easier to remove than pen or marker. Please avoid pointing at museum objects while holding a pencil or other items in your hand.
- **No leaning on walls or cases** (either to write or for physical support). This helps keep pictures on the walls and objects secure in their display case. Please feel free to sit on the benches or on the floor as you talk, write, or draw.
- **Use quiet voices in the museum.** We want to respect other groups or visitors.
- **Stay with your group at all times.** This is for teachers, chaperones, and students. We require adult supervision at all times and all we encourage adult participation during field trips.
- **Limit cell phone usage.** Please set a good example by not using your cell phone during programming. Make sure your cell phone is off or silenced during your visit.
- **Chaperone small groups in the Museum Store.** To best serve you and other visitors, we ask that you break into groups of 15 or fewer when visiting the store.
- **We rely on the cooperation of teachers and chaperones** to maintain appropriate behavior and keep students together during your museum experience. Please make sure that all adults accompanying your group are aware of their responsibilities.

Thank you for observing these rules to help keep our museum safe for everyone! Enjoy your visit!
Students will learn about how airplanes have changed from the early years of aviation through today. They will enjoy the hands-on experience of becoming a pilot, and enjoy interactive activities in our hands-on room and instructional space. Students will also have a chance to fly our imagination plane and learn how flying controls have changed through the years. They will also get to venture outside to see up close how the oldest continuously operating airport in the world is still operating today, if time and weather allow.

Your classroom visit to the museum will include the following components:

1. A tour of the museum’s collections, including the history of the College Park Airport. During this portion of the tour, we will discuss the following topics:
   - The Wright Brothers, their first flight, and how the Wrights came to fly at College Park.
   - The major features of the Wright B airplane, the airplane that the Army purchased from the Wright Brothers for training at College Park.
   - The major features of the Curtiss JN-4D “Jenny”, its differences from the Wright B, and its role during WWI and the first airmail deliveries.
   - Other airplanes in the College Park Aviation Museum collection, their major features, and how and why improvements were made on earlier aircraft.

2. During the tour, you can choose to focus on one of three different topics, each with a corresponding storybook, activities, and crafts.
   - **The Wright Brothers**: the story reading takes place in front of the Wright B airplane, and the story and activities focus on the Wright Brothers and their first flight.
   - **Airmail Pilots**: the story reading takes place in front of the Curtiss “Jenny”, and the story and activities focus on air mail and the lives of air mail pilots.
   - **Helicopters**: the story reading takes place in front of the 1924 Berliner helicopter, the first helicopter to make a controlled flight, and the story and activities focus on the use of helicopters and their differences from airplanes.

3. The opportunity to experience the controls of different airplanes, from the Wright brothers’ early airplanes to the small planes that fly at the College Park Airport today, highlighting the differences in how these different types of airplanes fly.
   - Students can climb inside of our imagination plane, a real 1939 Taylorcraft airplane, and experience its controls.
   - We also have simulators that let students learn the controls of the Wright B (dependent on availability) and modern airplanes.

4. A tour of the College Park Airport, the world’s oldest continuously operating airfield (weather allowing)
   - Students will learn about changes to the airfield since its founding in 1909.
   - Students will observe and discuss the current buildings and other features of the airfield.
THE FLYING THROUGH BOOKS! TOUR

- Students will learn about navigational aides, the orientation of airports, and why pilots land in certain directions on runways.
The Flying Through Books! tour is appropriate for Nursery School, Preschool, and Pre-Kindergarten children. Pre-Kindergarten standards that will be engaged include:

**READING AND LANGUAGE ARTS (Common Core Curriculum Standards)**

<table>
<thead>
<tr>
<th>Pre-Kindergarten</th>
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</thead>
<tbody>
<tr>
<td>RL1. With modeling and prompting, answer questions about details in a text.</td>
</tr>
<tr>
<td>RL3. With modeling and support, identify characters, settings and major events in a story.</td>
</tr>
<tr>
<td>RL4. With modeling and support, answer questions about unknown words in stories and poems.</td>
</tr>
<tr>
<td>RL7. With modeling and support, tell how the illustrations support the story</td>
</tr>
<tr>
<td>RL9. With modeling and support, compare adventures and experiences of characters in familiar stories.</td>
</tr>
<tr>
<td>W8. With modeling and support from adult, recall information from experiences or information from provided sources to answer a question.</td>
</tr>
<tr>
<td>RF1. Demonstrate understanding of basic features of print.</td>
</tr>
<tr>
<td>SL1. Participate in collaborative conversations with diverse partners about pre-kindergarten topics and texts with peers and adults in small and larger groups.</td>
</tr>
<tr>
<td>SL2. Confirm understand of text read aloud or information presented orally or through other media by asking and answering questions about key details with modeling and support.</td>
</tr>
<tr>
<td>SL3. Ask and answer questions in order to seek help, get information, or clarify something that is not understood.</td>
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<tr>
<td>L1. Demonstrate beginning understanding of the conventions of standard English grammar and usage when engaged in literacy activities (e.g. Interactive Read Alouds, shared writing, developmentally appropriate writing, oral language activities, etc.</td>
</tr>
<tr>
<td>L5. With modeling and support from adults, explore word relationships and nuances in word meanings.</td>
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**READING AND LANGUAGE ARTS (Maryland State Curriculum Standards)**

<table>
<thead>
<tr>
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<tbody>
<tr>
<td>1.D.3. Understand, acquire, and use new vocabulary</td>
</tr>
<tr>
<td>4.A.2. Compose oral and visual presentations that express personal ideas</td>
</tr>
<tr>
<td>6.A.1. Demonstrate active listening strategies</td>
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**MATH (Common Core Curriculum Standards)**

<table>
<thead>
<tr>
<th>Pre-Kindergarten</th>
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</thead>
<tbody>
<tr>
<td>PK.CC.1. Count verbally to 10 by ones.</td>
</tr>
<tr>
<td>PK.CC.4. Understand the relationship between numbers and quantities to 5, then to 10; connect counting to cardinality.</td>
</tr>
<tr>
<td>PK.CC.4a</td>
</tr>
<tr>
<td>PK.CC.4b</td>
</tr>
<tr>
<td>PK.CC.4c</td>
</tr>
<tr>
<td>PK.CC.7. Explore relationships by comparing groups of objects up to 5 and then to 10. Identify whether the number of objects in one group is greater than, less than, or equal to the number of objects in another group, e.g., by using matching and counting strategies</td>
</tr>
<tr>
<td>PK.MD.2. Directly compare two objects with a measurable attribute in common, using words such as longer/shorter; heavier/lighter; or taller/shorter.</td>
</tr>
<tr>
<td>PK.MD.3. Sort objects into self-selected and given categories.</td>
</tr>
<tr>
<td>PK.MD.4. Compare categories using words such as more or same.</td>
</tr>
<tr>
<td>PK.G.4. Describe three-dimensional objects using attributes.</td>
</tr>
</tbody>
</table>
MATH (Maryland State Curriculum Standards)

Pre-Kindergarten
1.A.2. Identify, copy, and extend non-numeric patterns
2.A.1. Recognize and use the attributes of plane geometric figures
6.A.1. Apply knowledge of whole numbers
6.A.2d. Follow a set of two- or three-step directions

Common Core incorporates Social Studies and Science into Reading and Language Arts standards through Grade 6. Below are the Maryland State Curriculum Standards satisfied by the Flying Through Books! tour and activities:

SOCIAL STUDIES (Maryland State Curriculum Standards)

Pre-Kindergarten
3.C.1. Identify the role of transportation in the community
4.A.3. Explain how technology affects the way people live, work, and play
5.A.1. Distinguish among past, present, and future time

SCIENCE (Maryland State Curriculum Standards)

Pre-Kindergarten
1.A.1. Raise questions about the world around them and be willing to seek answers to some of them by making careful observations and trying things out.
1.C.1b. Describe and compare things in terms of number, shape, texture, size, weight, color, and motion.
1.D.3. Examine a variety of physical models and describe what they teach about the real things they are meant to resemble.
4.A.1. Use evidence from investigations to describe the observable properties of a variety of objects.
The College Park Aviation Museum is located on the grounds of the College Park Airport, the oldest continuously operating airport in the world.

On December 17, 1903, the Wright brothers made their first successful flight in Kitty Hawk, North Carolina. The United States government did not show interest in their airplane until five years later. In 1908, the Wright brothers flew their improved airplane at Fort Myer, Virginia. The Wright Military Flyer had everything that the government wanted in an airplane, and the government asked the Wright brothers to teach two army officers how to fly. Needing a better place to train pilots, the government found College Park, Maryland.

Daily crowds, newspaper writers, and people from the government all came to watch Wilbur Wright teach Lt. Frederic Humphreys, Lt. Frank Lahm, and Lt. Benjamin Foulois how to fly. Their flights were front page news.

The College Park Airport was the first military training field and soon other “firsts” happened here. These included the first woman to fly as a passenger in the United States (Mrs. VanDeman flew with Wilbur), and the first Naval officer to fly in a plane (Lt. Lahm, U.S. Army flew Lt. George Sweet, U.S. Navy).

Between 1910 and 1912, civilian airplane companies also came to the College Park airfield. The airport became home to the Rex Smith Airplane Company, the National Aviation Company, and the Washington Aviation Company.

In 1911, our nation’s first military flying school was opened at the College Park Airport. During training, pilots flew two types of airplanes. One type of plane was designed by the Wright brothers, and the other type of plane was designed by Glenn Curtiss, an important airplane maker.

In 1918, the College Park airfield was picked to be part of the first scheduled U.S. Postal Airmail Service route. Planes flew with the mail from College Park, to Philadelphia, to New York City. In 1921, airmail service from College Park ended. The airmail hangar and compass rose used by the airmail pilots are still at the College Park Airport today.

In 1924, a father and son team, Emile and Henry Berliner, were the first people to make a controlled flight in a new type of aircraft, the helicopter. They tested their helicopter at the College Park airfield.

From 1927 until 1933, the Bureau of Standards developed and tested the first radio navigational aids at the College Park airfield, so that pilots could fly at night or in all types of weather.

George Brinckerhoff ran the airfield beginning in 1927. Many pilots learned how to fly at the College Park Airport during this time. There were also airshows, where pilots showed off their flying skills.

The Maryland-National Capital Park and Planning Commission (M-NCPNC) purchased the Airport in 1973 and it was added to the National Register of Historic Places in 1977. Today it is run as both a historic site and operating airport.
TEACHER INSTRUCTIONS

In this activity students will use their counting skills to connect the dots to form an airplane. Then they will color in the airplane and add details from the planes that they have seen in the museum or in their own experience.

OBJECTIVES
Students will develop their knowledge of counting and whole numbers, and will discuss some characteristics of airplanes.

SKILLS AND STANDARDS
Engages math, language arts, and science standards.

Instructions:
Distribute photocopies of the connect the dots worksheets to the class.
1. Instruct students to use their counting skills to connect the dots from numbers 1 through 27.
2. Once their airplanes are complete, discuss their trip to the College Park Aviation Museum and talk about the different parts of the airplanes they saw and how they work. You can use the attached worksheets for reference.
3. Ask students to color and decorate their connect the dots airplanes. Also, instruct them to draw other airplane parts that they know about onto their connect the dots pictures (for example, a propeller).
4. Come together and discuss their drawings, and reinforce the function of each airplane part in flight.
AIRPLANE
An airplane is a vehicle heavier than air, powered by an engine, which travels through the air by reaction of air passing over its wings.

FUSELAGE
The fuselage is the central body of an airplane, designed to accommodate the crew, as well as the passengers and/or cargo.

COCKPIT
In “general aviation” airplanes, the cockpit is usually the space in the fuselage for the pilot and passengers; in some aircraft it is just the compartment where the pilot flies the plane. On commercial airliners, this area is called the “flight deck”.

LANDING GEAR
The landing gear includes the wheels underneath the airplane and supports it while on the ground.

PROPELLER
A propeller is a rotating blade on the front or back of the airplane. The engine turns the propeller, which moves the airplane through the air.

WINGS
Wings are the part of the airplane that provide lift, and support the entire weight of the aircraft and its contents while in flight.

FLAPS
Flaps are the moveable sections of an airplane’s wings that are closest to the fuselage. They are moved in the same direction on both wings at the same time and enable the airplane to fly more slowly.

AILERONS
Ailerons are the outward moveable sections of an airplane’s wings. They move in opposite directions (one up, one down). They are used in making turns.

RUDDER
The rudder is the moveable vertical section of the tail, which controls lateral (side-to-side) movements.

ELEVATOR
The elevator is the moveable horizontal section of the tail, which controls vertical (up and down) movements.

TAIL
The rear portion of the fuselage of an aircraft.
DIRECTIONS: Connect the dots from 1 to 27. You will find something that Wilbur and Orville Wright invented.
COLLEGE PARK AVIATION MUSEUM

Parts of an Airplane
In this activity students will identify objects that can be seen in the sky, illustrate four of those objects, and create a mobile of sky related objects. Students will learn more about the range of things (animals, people, objects) that can be found in the sky.

OBJECTIVES
Students will create a mobile depicting sky related words and pictures, using their observation, drawing, and writing skills (if they have developed their writing skills to the necessary level to label their drawings).

SKILLS AND STANDARDS
Engages reading and language arts and science standards.

MATERIALS
Hole punch, string, crayons or markers, and cardstock paper.

INSTRUCTIONS
1. Warm-Up: Have students brainstorm a list of words that describe objects that can be seen in the sky.
2. Write the list on the board.
3. Have each student trace and cut out one large cloud to be the main part of the mobile (or if students are too young, have the clouds pre-cut).
4. Ask each student to choose four of the things that can be seen in the sky to draw on pieces of colored cardstock. If they have developed writing skills, instruct them to write the name of each object below their drawing.
5. With a hole punch, punch four holes in the bottom of the cloud, and one hole at the top of each picture of an object you can see in the sky.
6. Hang each picture with a string from the cloud.
7. Attach a piece of string to the top of the cloud to hang the cloud.
8. Ask students to share and discuss their mobiles (time allowing).
CLOUD MOBILE

CLOUD TEMPLATE
**TEACHER INSTRUCTIONS**

In this activity students will learn about what types of events, people, and things are commemorated on postal stamps, and will draw their own postal stamp.

**OBJECTIVES**

Students will discuss what types of events, people, and things are remembered and celebrated on postage stamps. They will also use their art skills to draw their own stamp, celebrating an event, person, or thing that they think is historically or culturally important.

**SKILLS AND STANDARDS**

Engages reading and language arts standards.

**INSTRUCTIONS**

1. **Warm-Up:** Ask students about whether they have seen a lot of stamps on letters that their family receives. Have them discuss the people, things, or events that they have seen drawn on postage stamps.

2. **Show students additional examples of postage stamps** (you can use photocopy the worksheet provided or bring up examples on a classroom projector or smart board). Further discuss why the U.S. government or any government would choose to put certain things on its postage stamps.

3. **After they have seen real examples of postage stamps,** distribute the draw your own airmail stamp worksheet, and encourage students to draw their own postage stamp. Who or what would they celebrate on a stamp?

4. **Bring the class together to discuss the stamps that the class created.** Are there any common themes? What do they think is important to celebrate or remember on stamps as a class?
DRAW YOUR OWN AIRMAIL STAMP

Name: ____________________________________

Some examples of US Postal Stamps
COLOR AN AIRPLANE

TEACHER INSTRUCTIONS

In this activity students will color in an airplane and then draw themselves as the pilot of the airplane. They will use information they learned at the museum about what pilots wore in the past to inform the pictures they will draw of themselves as pilots.

OBJECTIVES
Students will use their reading skills and knowledge of colors to color in the airplane, and then will draw themselves as the pilots of their airplanes. They will use their knowledge of what pilots in the past wore to inform their pilot drawings.

SKILLS AND STANDARDS
Engages reading and language arts standards.

INSTRUCTIONS
1. Distribute the worksheets and read the directions as a class.
2. Ask students to follow the directions in the key, coloring each part of the plane in the appropriate color.
3. Encourage students to discuss the different clothing that pilots that they talked about at the museum wore.
4. Ask students to draw themselves as pilots in their airplanes, instructing them to add things (for example goggles, scarves, hats, etc.) that pilots wear or wore in the past.
5. Come back together as a class and share the airplane drawings.
**DIRECTIONS:** Color the airplane using the key and then draw yourself as the pilot of the plane.
HOW THINGS FLY
Learn about the principles of flight through information and activities created by the Smithsonian’s National Air and Space Museum.
Find it at: http://howthingsfly.si.edu/.

THE WRIGHT BROTHERS & THE INVENTION OF THE AERIAL AGE
Learn more about the Wright brothers through information and activities created by the Smithsonian’s National Air and Space Museum.
Find it at: http://airandspace.si.edu/exhibitions/wright-brothers/online/.

COMMON CORE EXEMPLAR TEXTS RELATED TO MUSEUM TOPICS (FLIGHT AND WEATHER)
- Lobel, Arnold. Owl at Home.
- Giovanni, Nikki. “Covers.”
- Merriam, Eve. “It Fell in the City.”
- Langstaff, John. Over in the Meadow.
- Hughes, Langston. “April Rain Song.”