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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. Our museum educators guide young learners through the links between flight, transportation, and communication. The students will also learn about how planes fly and how new technologies solved pilots’ problems.

An animatronic Wilbur Wright will transport your students to 1909 and share the story of the founding of College Park Airport, now the world’s oldest continuously operating airport. Professional museum educators will use historic aircraft and interactive projects to introduce new vocabulary, lead hands-on exploration, and help students understand how life in Maryland has changed over the last century. Your students will also operate the controls of several aircraft, dress like an airmail pilot, and learn how a small airport works (weather permitting).

All activities at the museum and in this packet are linked to Common Core and state curriculum standards. The museum uses inquiry-based tours to encourage students to develop their deductive reasoning skills and form educated responses to museum subject matter, all while in a fun and unique environment.

This teacher’s guide features pre-visit and post-visit educational activities designed to enhance your students’ learning experience at the museum. These activities and demonstrations are tied to museum subject matter and were developed to engage the students in a variety of disciplines. This packet also contains important information about your museum trip and additional resources you can use in your classroom.

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

Cheers,

Amanda M. Elliott
Education and Interpretation Manager
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.

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

LUNCH FACILITIES
The museum does not have an indoor eating facility. You are welcome to bring your lunches and eat outside in our designated lunch area overlooking the airport.

Please be mindful that there is NO FOOD OR DRINK ALLOWED INSIDE THE MUSUM.

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.
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 travel through time, from the early years of the Wright Brothers’ airplanes through today, and experience how and why airplanes have changed. They will enjoy the hands on experience of becoming a pilot, and see how flight clothing changed as airplanes improved. Students will also have a chance to fly our imagination plane and learn how flying controls have changed through the years. Weather allowing, they will also get to venture outside to see up close how the oldest continuously operating airport in the world is still operating today.

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. A discussion of pilots in the past and in the present.
   - Students will observe and be questioned about changes in pilots’ clothing from the Wright brothers, to airmail pilots, to modern pilots.
   - Students will gain an understanding of how clothing was directly related to the changes in aircraft through time.
   - This may include a “dress-up” component, with students dressing up like pilots throughout history to learn about these changes.

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 permitting)
   - 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.
   - Students will learn about navigational aides, the orientation of airports, and why pilots land in certain directions on runways.
MATH (Maryland State Curriculum Standards)

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<tr>
<td>2.A.1. Recognize and use the attributes of plane geometric figures</td>
<td>2.A.1. Recognize and describe the attributes of plane geometric figures</td>
<td>2.A.1. Recognize and apply the properties/attributes of plane geometric figures</td>
<td>2.A.1. Recognize and apply the properties/attributes of plane geometric figures</td>
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MATH (Core Curriculum Standards)

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<tbody>
<tr>
<td>PK.CC.1. Count verbally to 10 by ones.</td>
<td>K.CC.4. Understand the relationship between numbers and quantities; connect counting to <strong>cardinality</strong>. K.CC.4a. K.CC.4b. K.CC.4c.</td>
<td>1.MD.4. Organize, represent, and interpret data with up to three categories; ask and answer questions about the total number of data points, how many in each category, and how many more or less are in one category than in another.</td>
<td>2.MD.1. Measure the length of an object by selecting and using appropriate tools such as rulers, yardsticks, meter sticks, and measuring tapes (optional math activity)</td>
</tr>
<tr>
<td>PK.CC.4. Understand the relationship between numbers and quantities to 5, then to 10; connect counting to cardinality. PK.CC.4a PK.CC.4b PK.CC.4c</td>
<td>K.CC.6. 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 (Include groups with up to ten objects).</td>
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<tr>
<td>PK.CC.7. Explore relationships by comparing groups of objects up to 5 and then 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>
<td>K.MD.1. Describe measurable attributes of objects, such as length or weight. Describe several measurable attributes of a single object.</td>
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<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>
<td>K.MD.2. Directly compare two objects with a measurable attribute in common, to see which object has “more of”/“less of” the attribute, and describe the difference.</td>
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<tr>
<td>PK.MD.3. Sort objects into self-selected and given categories.</td>
<td>K.MD.3. Classify objects into given categories; count the number of objects in each category and sort the categories by count (Limit category counts to be less than or equal to 10.).</td>
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<tr>
<td>PK.MD.4. Compare categories using words such as more or same.</td>
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<tr>
<td>PK.G.4. Describe three-dimensional objects using attributes.</td>
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### READING AND LANGUAGE ARTS (Maryland State Curriculum Standards)

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<tbody>
<tr>
<td><strong>1.D.3.</strong> Understand, acquire, and use new vocabulary</td>
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<tr>
<td><strong>4.A.2.</strong> Compose oral and visual presentations that express personal ideas</td>
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<tr>
<td><strong>6.A.1.</strong> Demonstrate active listening strategies</td>
<td><strong>6.A.1.</strong> Demonstrate active listening strategies</td>
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<td><strong>6.A.1.</strong> Demonstrate active listening strategies</td>
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### READING AND LANGUAGE ARTS (Core Curriculum Standards)

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</thead>
<tbody>
<tr>
<td><strong>SL1.</strong> Participate in collaborative conversations with diverse partners about pre-kindergarten topics and texts with peers and adults in small and larger groups.</td>
<td><strong>SL1.</strong> Participate in collaborative conversations with diverse partners about Kindergarten topics and texts with peers and adults in small and larger groups.</td>
<td><strong>SL1.</strong> Participate in collaborative conversations with diverse partners about grade 1 topics and texts with peers and adults in small and larger groups.</td>
<td><strong>SL1.</strong> Participate in collaborative conversations with diverse partners about grade 2 topics and texts with peers and adults in small and larger groups.</td>
</tr>
<tr>
<td><strong>SL2.</strong> Confirm understanding 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>
<td><strong>SL2.</strong> Confirm understanding of text read aloud or information presented orally or through other media by asking and answering questions about key details and requesting clarification if something is not understood.</td>
<td><strong>SL2.</strong> Ask and answer questions about key details in a text read aloud or presented orally or through other media.</td>
<td><strong>SL2.</strong> Recount or describe key ideas or details from a text read aloud or information presented orally or through other media.</td>
</tr>
<tr>
<td><strong>SL3.</strong> Ask and answer questions in order to seek help, get information, or clarify something that is not understood.</td>
<td><strong>SL3.</strong> Ask and answer questions in order to seek help, get information, or clarify something that is not understood.</td>
<td><strong>SL3.</strong> Ask and answer questions about what a speaker says in order to gather additional information or clarify something that is not understood.</td>
<td><strong>SL3.</strong> Ask and answer questions about what a speaker says in order to clarify comprehension, gather additional information, or deepen understanding of a topic or issue.</td>
</tr>
<tr>
<td><strong>SL4.</strong> Describe familiar people, places, things, and events with modeling and support.</td>
<td><strong>SL4.</strong> Describe familiar people, places, things, and events and, with prompting and support, provide additional detail.</td>
<td><strong>SL4.</strong> Describe people, places, things, and events with relevant details, expressing ideas and feelings clearly.</td>
<td><strong>SL4.</strong> Tell a story or recount an experience with appropriate facts and relevant descriptive details, speaking audibly in coherent sentences.</td>
</tr>
<tr>
<td><strong>SL5.</strong> Add drawings or visual displays to descriptions as desired to provide additional detail.</td>
<td><strong>SL5.</strong> Add drawings or visual displays to descriptions as desired to provide additional detail.</td>
<td><strong>SL5.</strong> Add drawings or other visual displays to descriptions when appropriate to clarify ideas, thoughts, and feelings.</td>
<td><strong>SL5.</strong> Create audio recordings of stories or poems; add drawings or other visual displays to stories or recounts of experiences when appropriate to clarify ideas, thoughts, and feelings.</td>
</tr>
<tr>
<td><strong>L6.</strong> Use words and phrases acquired through conversation, being read to, and responding to text.</td>
<td><strong>L6.</strong> Use words and phrases acquired through conversation, reading and being read to, and responding to text.</td>
<td><strong>L6.</strong> Use words and phrases acquired through conversations, reading and being read to, and responding to texts, including using frequently occurring conjunctions to signal simple relationships.</td>
<td><strong>L6.</strong> Use words and phrases acquired through conversations, reading and being read to, and responding to texts, including using adjectives and adverbs to describe.</td>
</tr>
</tbody>
</table>
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 Changes in Transportation tour and activities:

**SOCIAL STUDIES (Maryland State Curriculum Standards)**

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<tr>
<td>3.C.1. Identify the role of transportation in the community</td>
<td>3.C.1. Describe how transportation and communication link people and places</td>
<td>3.C.1. Explain how transportation and communication link people and places by the movement of goods, messages, and people</td>
<td>3.C.1. Explain how transportation and communication link places by the movement of people, goods, and ideas</td>
</tr>
<tr>
<td>5.A.2. Compare daily life and objects of today and long ago</td>
<td>5.A.2. Compare people and objects of today and long ago</td>
<td>5.A.2. Describe people, places and artifacts of today and long ago</td>
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**SCIENCE (Maryland State Curriculum Standards)**

<table>
<thead>
<tr>
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<tbody>
<tr>
<td>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.</td>
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<td>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.</td>
</tr>
<tr>
<td>1.C.1b. Describe and compare things in terms of number, shape, texture, size, weight, color, and motion.</td>
<td>1.C.1b. Describe and compare things in terms of number, shape, texture, size, weight, color, and motion.</td>
<td>1.C.1b. Describe and compare things in terms of number, shape, texture, size, weight, color, and motion.</td>
<td>1.C.1b. Describe and compare things in terms of number, shape, texture, size, weight, color, and motion.</td>
</tr>
<tr>
<td>1.D.3. Examine a variety of physical models and describe what they teach about the real things they are meant to resemble.</td>
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<td>1.D.3. Examine a variety of physical models and describe what they teach about the real things they are meant to resemble.</td>
<td>1.D.3. Examine a variety of physical models and describe what they teach about the real things they are meant to resemble.</td>
</tr>
<tr>
<td>4.A.1. Use evidence from investigations to describe the observable properties of a variety of objects.</td>
<td>4.A.1. Compare the observable properties of a variety of objects and the materials they are made of using evidence from investigations.</td>
<td>4.A.1. Cite evidence from investigations that most things are made of parts.</td>
<td></td>
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</tbody>
</table>
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-NCPCC) 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.
In this activity students will be introduced to the names for the different parts of an airplane. They will further learn the ways in which these airplane parts work during flight.

OBJECTIVES
Students will develop the vocabulary necessary to talk about changes in airplane technology, and will gain a deeper understanding of how airplane parts work.

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

INSTRUCTIONS
1. Introduce the different parts of an airplane, using the enclosed labelled diagram, a picture, or a model.
2. Distribute photocopies of the definitions of the airplane parts and the worksheet with the unlabeled airplane parts to the students.
3. Ask the students to work individually or in groups, and correctly match the names to the airplane parts.
4. Come together and discuss their answers, and reinforce the function of each airplane part in flight.
5. Distribute the labelled diagram worksheet (if desired).
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
Label each airplane part, using the following words.

fuselage  propeller
cockpit    aileron
landing gear  elevator
wings     rudder
In this activity students will be identifying aircraft that they viewed at the museum and placing them in a historical timeline.

OBJECTIVES
Students will identify aircraft located at the College Park Aviation Museum in order to compare and contrast the past and the present.

SKILLS AND STANDARDS
Engages math (identify and describe non-numeric patterns), reading and language arts, science, and social studies standards.

INSTRUCTIONS
1. Warm-Up: Have students write or discuss three facts they learned at the museum.
2. Have students share their facts and discuss.
3. For this activity, make a copy of the timeline for each student. Pictured on the timeline are the aircraft that the students viewed at the museum along with the year that it flew at College Park.
4. Put a word bank of the plane names on the board and have the students fill-in the appropriate name for each of the planes
   - Wright Model B
   - Curtiss “Jenny”
   - Berliner Helicopter
   - Taylorcraft
5. Have students choose one of the planes and write a description of the plane. With younger grades the students may need sentence starters or the writing might have to be done as a whole class. The older students should be able to write a couple of sentences that describe their plane.
6. Have students share their descriptions as time allows and have the other students guess which plane they are describing.
TEACHER INSTRUCTIONS

In this activity students will use the information that they gained at the museum and also through a reminder handout to compare and contrast the differences and similarities between planes long ago and planes of today. They will construct a Venn diagram outlining these similarities and differences.

OBJECTIVES
Students will compare and contrast aircraft in order to explain the similarities and differences between those in the past and present.

SKILLS AND STANDARDS
Engages reading and language arts, science, and social studies standards.

INSTRUCTIONS
6. Warm-Up: Have students write about their trip to the museum.
7. Have students share which of the planes at the museum they enjoyed the most. Talk about why they enjoyed that specific plane. If time permits, have students make a graph of the planes that were the most popular among their classmates.
8. Have students get into pairs and discuss what their favorite planes from the museum have in common and how they are different. If possible, have students discuss why they think those planes are different (technology, function, etc.).
9. Come back together as a class and have some of the students share. Possible items discussed could include: color, size, shapes, material made out of, etc.
10. Distribute photocopies of the Compare and Contrast Planes worksheet, and the handout which compares the Wright 1903 Flyer and a Modern propeller airplane. Depending on the abilities of your students, this activity can be done with students working individually, in pairs, or as an entire class.
11. Have the students list inside the Venn diagram the differences and similarities between aircraft of today and aircraft of the past.
12. Ask students to share their answers to the Venn diagram.
A comparison of the Wright B and a modern propeller airplane show how much the design has changed. However the major methods for controlling the airplane while in flight have remained the same. There is still an elevator and rudders, and ailerons do the job of wing warping.
Planes of today and planes of long ago are very different. Use the handout with the parts of the planes and what you learned at the museum and during the class discussion to fill-in the Venn Diagram.

Tell in sentences what planes long ago and planes today have in common.

____________________________________________________________________________________________________

____________________________________________________________________________________________________

____________________________________________________________________________________________________

____________________________________________________________________________________________________

____________________________________________________________________________________________________
TEACHER INSTRUCTIONS

In this activity students will use the information that they gained at the museum about airplanes and pilots in the past and present to talk about the technological changes that accompanied new technologies and how these affected pilot dress.

OBJECTIVES
Students will compare and contrast pilot clothing, in order to explain the similarities and differences between those in the past and present. Students will further tie these changes in dress and uniform to their corresponding historical periods, and changes in aircraft technology.

SKILLS AND STANDARDS
Engages reading and language arts, science, and social studies standards.

INSTRUCTIONS
1. Warm-Up: Have students write about the different things pilots wore in the different planes that they saw at the Museum, and how pilot dress changed through time.
2. Have students discuss the different challenges faced by pilots in each historical time period (for example no seatbelts, social conventions like skirts for women, open cockpits, no navigation systems, tight schedules) and how these safety, comfort, and social factors affected the ways that the different pilots dressed.
13. Distribute the worksheet. Depending on the abilities of your students, this activity can be done with students working individually, in pairs, or as an entire class.
14. Ask students to share their answers to the worksheet.
15. For older students, the worksheet can be used as a prewriting assignment for a project about early aviators. Students can even choose a specific aviator, and the challenges of his or her life, to write or present on.
Some of the earlier pilots in aviation were required to wear clothing that pilots today are not required to wear.

1. What clothing did pilots long ago wear?
   
   ________________________________________________________________
   
   ________________________________________________________________

2. Why did pilots long ago have to wear that clothing?
   
   ________________________________________________________________
   
   ________________________________________________________________
   
   ________________________________________________________________

3. What clothing do pilots today wear?
   
   ________________________________________________________________
   
   ________________________________________________________________

4. Why is the clothing that pilots long ago wore different from what pilots today wear?
   
   ________________________________________________________________
   
   ________________________________________________________________
   
   ________________________________________________________________
   
   ________________________________________________________________
   
   ________________________________________________________________
   
   ________________________________________________________________
   
   ________________________________________________________________
Harriet Quimby, first woman to fly across the English Channel in 1912 and first woman in the US to get a pilot’s license.

Max Miller, Airmail Pilot, 1918

Charles Lindbergh, first person to make a non-stop flight across the Atlantic Ocean in 1927

World War II Women Airforce Service Pilots (WASPS), c. 1942-1944

Commercial airplane pilots today
In this activity students will discuss things that are in the sky (animals, clouds, airplanes, etc.) and construct simple sentences about these things.

OBJECTIVES
Students will practice their writing, sentence composition, and art skills, as they discuss things that fly and other things they see in the air.

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

INSTRUCTIONS
1. Warm-Up: If possible, have students look out the window or walk outside to look at the sky for a few minutes.
2. Distribute the Up In the Clouds worksheet. There are two worksheets, the first is geared towards younger students, who might have difficulty writing their own sentences. The second worksheet is for students who can write their own sentences.
3. Have students answer Question 1 of the worksheet. Once they have completed the first question individually, come together and discuss all the different types of items that can be found in the sky. You may also ask them questions like “Does it fly?” or “Is it always in the sky?” to further explore their answers.
4. Have students complete the rest of their worksheets.
5. Ask students to share their sentences with the rest of the class.
Name______________________________________________________

1. What are four things that you might see in the sky?
   ____________________  ____________________
   ____________________  ____________________

2. Use each of the words that you wrote above in a sentence.
   I can see ____________________ in the sky.
   Up in the sky is a ____________________.
   Look, I see a ____________________ in the sky.
   Do you see the ____________________ in the sky?

3. Draw a picture illustrating one of your sentences.
1. What are four things that you might see in the sky?

__________________________________________  ______________________________________

__________________________________________  ______________________________________

2. Use each of the words you wrote about in a sentence. Remember to use descriptive words!

1. ____________________________________________

   ____________________________________________

2. ____________________________________________

   ____________________________________________

3. ____________________________________________

   ____________________________________________

4. ____________________________________________

   ____________________________________________

3. Draw a picture illustrating one of your sentences.
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/.

For a **math extension activity** related to the Wright brothers, the National Air and Space Museum (NASM) recommends looking up the dimensions of the 1903 flyer and the length of the various flights the Wright brothers made on December 17, 1903. Then have students answer the following questions:

- How big was the 1903 Wright Flyer? Use chalk to lay out the dimensions on the playground.
- How far did the 1903 Wright Flyer fly? Starting from your drawing, measure how far the airplane would have flown.
- How much did the 1903 Wright Flyer weigh? Have the children record their weight on chart paper. Then begin adding number until you reach 605 pounds, the weight of the Wright Flyer.

Source: http://airandspace.si.edu/exhibitions/wright-brothers/online/classroomActivities/K-3_teacher_instructions.cfm

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.”