What’s Tops at the National Air and Space Museum?
Guidelines for Teachers/Team Leaders

- Use this guide with small groups or as an individual activity to investigate four aircraft and two spacecraft.

- Let students know that all of the artifacts in the activity are the real thing, not replicas.

- Instruct students to look carefully at each artifact. They will find the answers by examining the airplanes and spacecraft, not the labels.

- Ask students to pick their favorite, based on achievement and interesting features. Turn to the back cover for the mission map and ballot.

Check below for answers:

**1903 Wright Flyer**
A: The wings are covered with lightweight muslin cloth.
B: There are two large propellers on the back.

**Spirit of St. Louis**
A: The wings are flat on the bottom and curved on top. Large, curved wings like these increase an airplane’s lifting ability.

**Douglas DC-3**
A: There are two engines.
B: Like engine cowlings and retractable wheels, the lack of struts is a streamlining feature.
C: There are only 14 windows, seven on each side—not enough for 21 passengers.

**North American X-15**
A: There are eight rocket ports in all to steer the airplane in space: two rockets on either side of the nose; two on the top and two on the bottom
B: The X-15 tested the ability of an aircraft to fly up to seven times the speed of sound, reach space, and reenter Earth’s atmosphere.
D: The wings sweep backward. Wings like these, along with the skinny shape and pointy nose, help this airplane fly so fast by minimizing shock waves at supersonic speeds.

**Apollo 11 Command Module**
A: There are 12 ports for the rockets that steer the spacecraft.
B: Three astronauts: Neil Armstrong, Buzz Aldrin, and Michael Collins

**Apollo Lunar Module**
A: Two astronauts, Neil Armstrong and Buzz Aldrin climbed out of a module like this.
C: Have students look at the top of the module to find ports for the rockets.