In this activity,

In this indoor/outdoor activity, learners will make observations about forces of flight acting up on the Apollo Capsules that returned to Earth during the Apollo project of 1969-1972.

Ideas to Explore

Three astronauts would be inside of the Apollo Capsule as it dropped into our atmosphere and hurtled toward the ground. The main force acting upon the capsule is known as gravity. In order to slow the capsule down and help the astronauts to land safely, the force of drag was introduced. This force was created by the parachute that was attached to the capsule. Once the parachute was opened, it created drag by catching lots of air as it moved toward the ground slowing the capsule down. This allowed for a soft splashdown in the ocean.

Words to Know:

Observation – to look very closely at something and notice things about it.
Describe – to represent or give an account of a thing using words.
Identify – to know or name what something is.
Drag – the backward force created as an object moves through the air.
Gravity – the downward force of the Earth on an object.
Stuff You’ll Need:

- Apollo Capsule Template (included)
- Scissors
- Tape
- Large paper clips

- String
- Markers
- Plastic Bag

Make It!

Step One
Cut the capsule pattern out of the template sheet. Make sure you do not cut the two circles apart! Save the scraps from the template sheet; you’ll use them in a later step.

Step Two
Decorate and design your capsule. What special features will you add? Who is riding inside? What space program built your capsule?
**Make It! (continued)**

**Step Three**
On each of the two circles, cut the solid line bordering the shaded area from the outside to the center point.

(A) Pinch the spots marked A and B, on either side of the line cut in step 3. (B) Bring spot A above the shaded area and spot B below the decorated area until spot A reaches the dotted line. This will force the center point of the circle to rise up from the edge and become a three-dimensional, mountain-like cone. Place a piece of tape on the seam to hold your cone closed.

**Step Four**

(C) Repeat with the smaller half of the pattern, which will form the bottom of the capsule. (D) Make sure that this cone goes in the same direction as the other one.
Make It! (continued)

Step Six
Complete the capsule by closing the two halves together, open side to open side. Crumple up the scraps of your template sheet and put them inside to add some weight for stability. Then, tape the two sides together to hold them closed.

Step Seven
Tape one of the four strings in your bundle to each of the four corners of your parachute material.

Step Eight
Tape the knot end of your string bundle to the pointy tip of your capsule.

Want More?

During your next visit to The Museum of Flight, make sure to visit our Apollo Gallery to learn more about the story of the Apollo Program. Also visit the Charles Simonyi Space Gallery to explore what it’s like to live in space.
Apollo Splashdown!