## Hoop Flyers



## WHAT YOU'LL NEED:



This activity is perfect to help your little one learn about air resistance. In the hoop flyer lab, the hoops add an area for air resistance to push against. The straw is sleek on its own and does not experience much air resistance, so it falls to the ground quickly without flying very far. The flat spots of the large hoop create room for air to push against, which helps the straw fly further. Air resistance is the force that helped the hoop flyer to fly better and further than a simple straw.

## **DIRECTIONS:**



## **EXTENSION ACTIVITIES:**

- 1. Try throwing a straw like a dart. Measure how far it can fly. Do you think you can make the straw fly further by adding paper to it?
- **2.** Cut three strips out of the cardstock. Use the ruler to measure to ensure they are all the same size. A good starting point might be 1 inch x 4 inches.
- **3**. Make a loop out of one of the strips and tape it together.
- **4**. Tape the two remaining strips together and make them into a larger loop.
- **5**. Position the loops around the straw so that there is one hoop on each end, then tape them in place.
- **6**. Make a prediction will the straw fly further now than it did with out the hoops?
- **7**. Throw the straw as if you were throwing a dart and measure how far it flies. Compare it to how far the straw flew without the hoops.

Try changing one variable, or aspect of the experiment, at a time to see if you can make the straw fly even further.

Here are some ideas:

- Make two loops of the same size.
- Make the big loop out of three strips of paper instead of just two.
- Make three loops.
- Try a different type of paper, like printer paper or construction paper.
- Tape the loops closer to the middle of the straw instead of the ends.
- Cut the straw shorter.
- Tape two straws together to make it longer.

We want to see your at home lab experiments!
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Thanks for exploring with us!