



# Hoop Glider

## Learn About the Principals of Flight

### INTRO

Animals that fly, like insects, birds, and bats, all have wings. But wings are not all the same shape and size. Different wings can be better for different kinds of flight. A great example are butterfly wings, they come in many different shapes and sizes, and scientists at the Florida Museum are studying how this affects their flight. Your hoop glider also follows the same principals of flight. Fast moving air is flowing on the inside of your hoops, which is creating a low-pressure zone. Air pressure moves from high to low, so the high pressure beneath the What's going on? hoops is moving towards the low pressure zones inside the hoops which provides lift, which helps them glide through the air.

### SUPPLIES

- Straw or piece of carton
- Sheet of Paper
- Tape
- Crayons or markers (*optional for decoration*)



### INSTRUCTIONS

1. Make or place the straw on the table. Use template provided to cut carton into rectangle shape. Make a triangular straw by folding carton piece three times along the long edge and fasten with tape.
2. Take your piece of paper and use template provided to create two strips of paper in the appropriate sizes. Take your long strip of paper and place it under one end of the straw.
3. Move the piece of paper so that the straw is placed at the center of the length of the strip of paper forming a T shape. Add a piece of tape over the straw to fasten the piece of paper.
4. Repeat step 3 on the other end of the straw with the short piece of paper.
5. Grab each end of the long piece of paper and curl them toward each other until the tips overlap to make them into a hoop. Tape the ends together.
6. Repeat step 5 with the short piece of paper. Now you have a big hoop and a small hoop.
7. Hold your Hoop Glider in the middle of the straw, with the small hoop in front. Throw it gently like a spear. It might take some practice to get the hang of it.

#### Video Tutorial



### ADDITIONAL ACTIVITY

Let's do an experiment! What would happen if you changed the size of the straw or hoops? Or, what happens if you add a third hoop? Choose one thing to change (that's a variable), and make a prediction. To see the variety of shapes of butterfly wings scan code



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## Cutting Template

