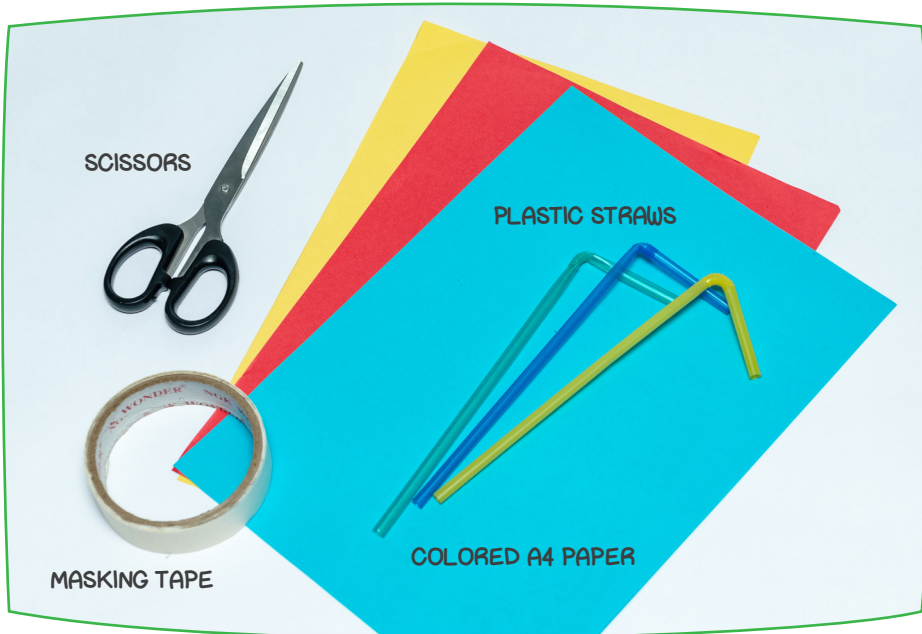# Hoop Glider

Some of the most fun toys are the ones that fly, and in this lesson we will make one of them. It is known as the hoop glider. A hoop glider is a simple device made of paper and straw that glides on air.

WE WILL NEED THESE MATERIALS

SCISSORS

PLASTIC STRAWS

MASKING TAPE

COLORED A4 PAPER

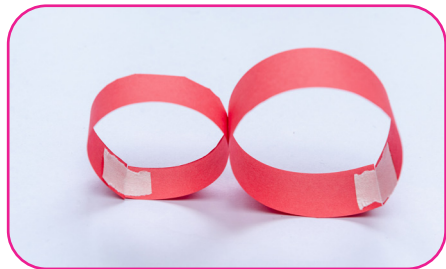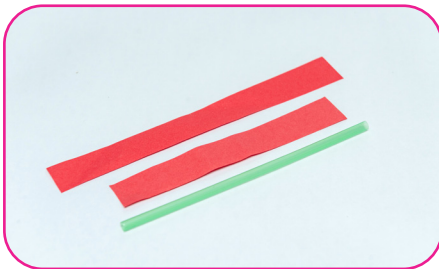## YOU CAN BUILD A SIMPLE GLIDER BY FOLLOWING THESE INSTRUCTIONS.

1 We don't want the straw in our glider to bend. So if your straw has a flexible neck, cut it just below the neck.
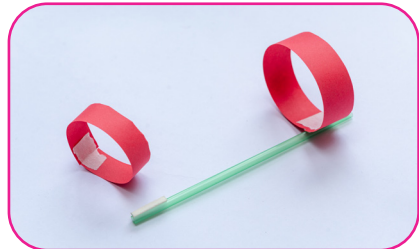

2 Cut two paper strips, one longer than the other, and roll them to make hoops. Use masking tape to stick the two ends of the strips.
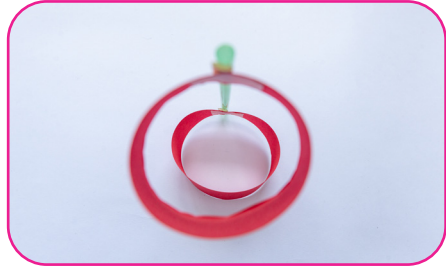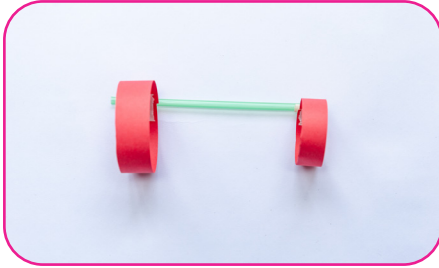

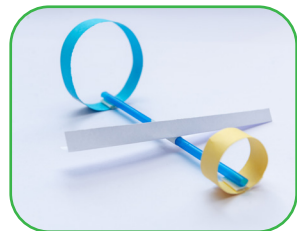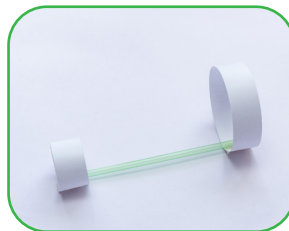**3** Secure hoops to straw using masking tape.

4

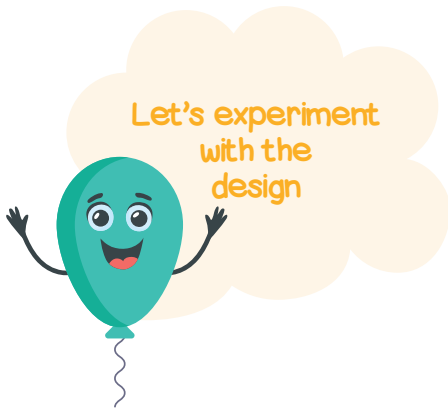Make sure the hoops are properly aligned to the straw and with each other.

LET'S FLY IT.
LAUNCHING THE GLIDER IN THE RIGHT WAY
IS EQUALLY IMPORTANT FOR A GOOD FLIGHT.
DON'T WORRY, YOU'LL FIGURE IT OUT SOON.

LET'S MAKE A GLIDER WITH A DIFFERENT DESIGN. HERE ARE SOME SAMPLES TO HELP YOU GET IDEAS.

Let's experiment with the design

- What happens if you add a wing to your glider? Or an extra hoop? Or change the shape of hoops? How does the distance between the hoops affect the flight?

- How can you get your glider to move slowly and smoothly? Or take a turn as it glides? Or move fast while wobbling?

WE FOUND THESE TIPS HELPFUL WHILE BUILDING A HOOP GLIDER.

It's good to test the glider frequently after each small change, such as adding a wing, or changing the hoop position. Making multiple changes at once might confuse you while trying to identify the cause and effect relations.

Think like an engineer

What might be the function of wings in an airplane?

Think like a physicist

The glider doesn't fly properly when launched with the larger hoop at the front. Why might it be so?

Reflection

- Tell us about the challenges you faced while building your glider. How did you overcome them?
- Which glider design worked best for you? What makes you say so?