

HOOP GLIDER



GOAL

Learn about aerodynamics by constructing and flying a hoop glider.

MATERIALS

Drinking straw
Index card
Tape
Scissors

TO DOs

1. Cut the index card vertically into three equal strips.
2. Take one of the strips and form a hoop with it, overlapping the two ends and taping them together.
3. Take the other two strips and tape them together at one end, forming one long strip.
4. Form another hoop with the longer strip, taping the two ends together. You should now have two paper hoops, one slightly larger than the other.
5. Tape one end of the straw to the inside of one of the hoops. Tape the other end of the straw to inside of the other hoop.
6. Fly it! Hold the straw in the middle with both hoops facing up. Tilt the hoop glider up and throw it the way you would throw a dart.

HOW DOES IT WORK?

The hoops work like wings of an airplane. Their curved shape creates differences in air pressure which cause the air to push them up, achieving lift. The little hoop helps the glider maintain direction, and the big hoop in the back creates air resistance (or drag) which helps keep the straw level.

If the hoops are heavier than the straw, why doesn't the glider turn over? That's the nature of gravity! Lighter and heavier objects fall at the the same speed. So when the hoops are above the straw, they will remain above the straw because both are falling at the same time.

