

Two Looper Airplane

Inventory:

Scissors

Ruler

3x5 index cards

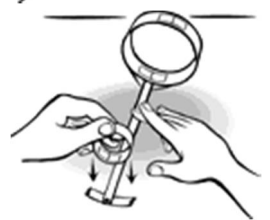
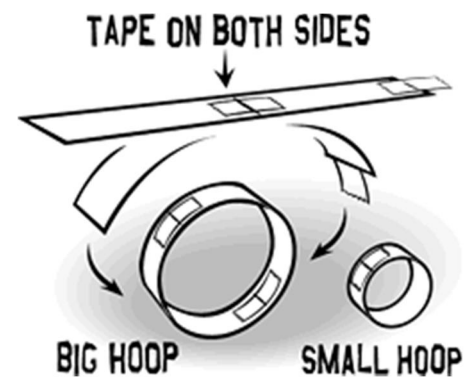
Clear Plastic Tape

Plastic Straws

Directions:

- 1) Cut an index card the long way into three equal strips.
- 2) Put a piece of tape on the end of one strip. Curl the paper into a little hoop and tape the ends together.
- 3) Put the other two strips end to end, so they overlap a little. Tape them together to make one long strip, and put another piece of tape on one end. Curl the strip into a hoop and tape the ends together.
- 4) Cut off the bendy part of the straw if it has one. Put one end of the straw onto the middle of a strip of tape. Put the big hoop on top of the straw and fold the tape up the sides of the hoop.
- 5) Put another strip of tape on the other end of the straw. Press the small hoop very gently onto the tape. Move it around until it lines up with the big hoop, then press the tape down firmly. Your Two Looper Airplane should look like the picture below.
- 6) Hold the Two Looper in the middle of the straw, with the little hoop in front. Throw it like a javelin and have fun flying!

EXTENSIONS: Add a paper clip to different parts of the plane to see how it affects its flight. Try more hoops, hoops of different sizes, more straws, longer straws, shorter straws, and on and on.



Two Looper Airplane - What the heck?

Can we really call that a plane? It may look weird, but you will discover it flies surprisingly well. The two sizes of hoops help to keep the straw balanced as it flies. The big hoop creates “drag” (or air resistance) which helps keep the straw level while the smaller hoop in at the front keeps your super hooper from turning off course. Some have asked why the plane does not turn over since the hoops are heavier than the straw. Since objects of different weight generally fall at the same speed, the hoop will keep its “upright” position.

Activity Source: https://www.exploratorium.edu/science_explorer/hoopster.html

Explanation Source: <https://sciencebob.com/the-incredible-hoop-glider/>