

Straw Gliders

Concepts Illustrated:

Stabilization of flight, center of mass, and forced air flight.

Time Requirements: 15 minutes

Grade Level of Audience:

This activity is primarily suited for kids in grades K-8.

I. Materials and Equipment

Materials needed for a group of 20 students:

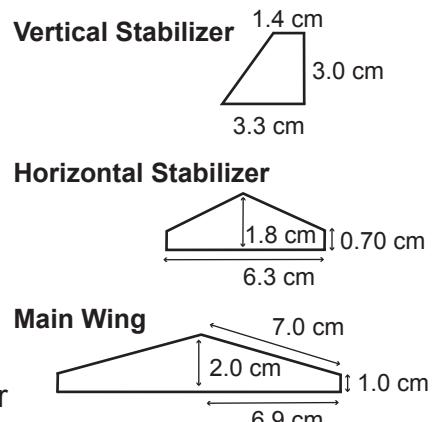
1. 5 rolls of scotch tape
2. 20 pairs of two different sizes of drinking straws
3. 20 sets of wing and stabilizer patterns (See detailed photograph to the right)
4. 10 pairs of scissors



II. Description of Set-up

1. Wrap about a 3-inch piece of tape around the front end of the straw, such that the opening is closed.
2. Use scissors to carefully cut out the wings and stabilizers. Students may design their own if they like.
3. Fold the main wing and horizontal stabilizer along the dashed line.
4. Using two inch pieces of tape, attach the main wing near the center of the straw and the horizontal stabilizer near the back of the straw.
5. Using two pieces of tape, attach the vertical stabilizer above the horizontal stabilizer.
6. Place the smaller diameter straw into the larger straw and blow the smaller straw.

Specifications for straw glider



III. Details of Student Implementation

1. What makes the straw glider move? How is this related to Newton's 3rd law?
2. If the straw does not fly level, students may add some tape near the front of the glider or just in front of the horizontal stabilizer.
3. The gliders may be launched for air time, distance, or accuracy.