

STRAW ROCKETS

Source: Jerry Brenden, Modified for the EAA

Concepts Illustrated:

(1) Stabilization of flight, center of mass, and forced air flight.

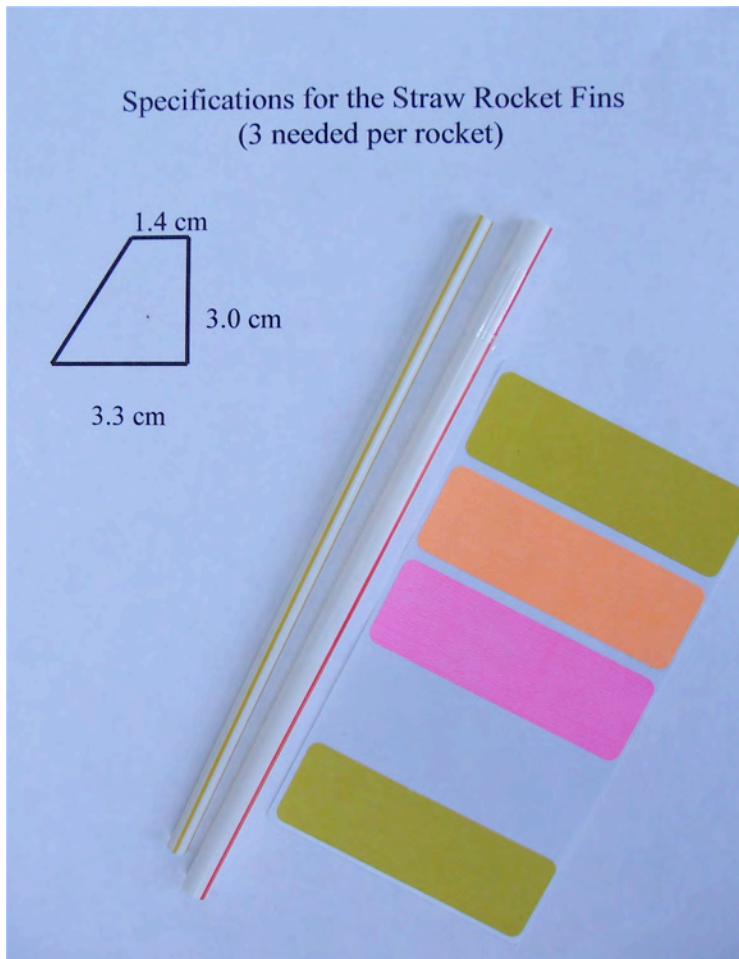
Time Requirements: 15 minutes

Grade Level of Audience: This activity is primarily suited for kids in grades K-8.

I. Materials and Equipment Utilized

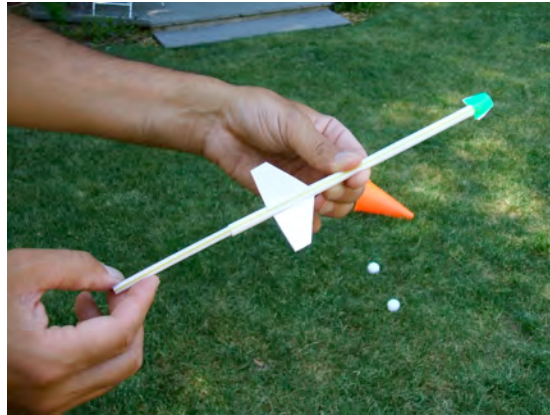
(Materials needed for a group of 20 students)

1. 5 rolls of scotch tape
2. 20 pairs, of two different sizes of drinking straws:
3. 1 sheet of Label stickers
4. 20 Simple fin patterns (See detailed photograph below)
5. 10 Scissors



II. Description of Set-up and/or Construction of Apparatus

1. Wrap a label sticker or about a 3-inch piece of tape around the front end of the straw, such that the opening is closed.
2. Carefully cut out the three fins using the scissors provided.
3. Using two pieces of tape approximately $\frac{3}{4}$ " long, tape each fin about 1" from the back opening of the straw.
4. Place the smaller diameter straw into the larger bodied straw rocket and blow into the smaller straw.



III. Details of Student Implementation

1. What makes the straw rocket move?
2. If the straw does not fly level, students may add some tape near the front of the glider or just behind the fins. Under what flight conditions would tape be added (A) to the front? Or (B) to the back?
3. The rockets may be launched for air time, distance, or accuracy. Many presentations have students shoot the straw rockets through hula hoops or other suspended rings.
4. How else could these rockets be modified to increase their times of flight or distance of travel? Brainstorm and make the appropriate modifications.
5. Students should not aim these at each other.