

PAPER ROCKETS

Description:

Each team will build and fly a paper rocket using materials, which will be provided.

Number of Participants: 2

Approximate Time: 45 minutes

The Competition:

The team will have 20 minutes to build a rocket and practice launching it. This will be followed by the official launching. The winner will be the team closest to the target. The following materials will be provided:

- Large plastic soda straws (the kind used in fast food restaurants). One per student.
 - Sharpened pencils (same size as straws). One per student.
 - Paper (8.5 x 11). Two sheets per team.
 - Cellophane tape. One roll per team.
 - Scissors - one per team.
 - A ruler - one per team.
1. Cut a strip of paper about 8.5 inches long and 1 to 2 inches wide.
 2. Roll the paper strip around the pencil lengthwise to form a tube. Tape the paper so that the tube slides easily off the pencil but is not too loose.
 3. Make several pointed cuts at one end of tube. See Figure A.
 4. Slide the sharpened end of the pencil toward the pointed cuts. Fold the points around the sharpened end of the pencil and tape to form the nose cone. DO NOT TAPE THE PAPER TO THE PENCIL. See Figure B.

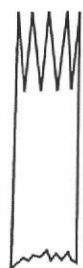


Fig. A

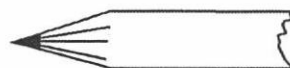
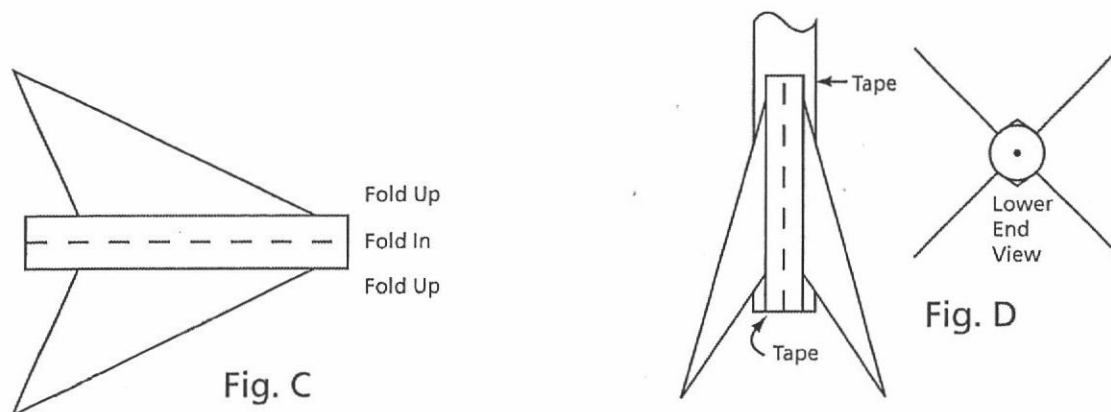
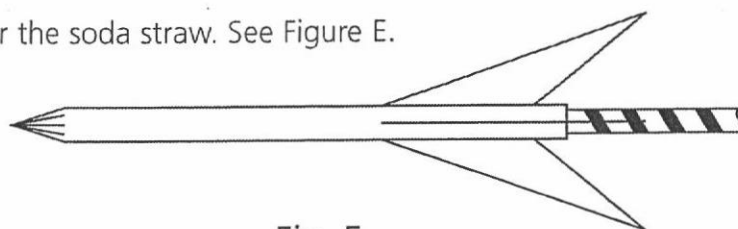


Fig. B

5. Cut out two sets of fins. Use the pattern in Figure C. Fold the fins on the dashed lines in the manner shown in Figure C.
6. Using two pieces of tape, fix the fins to the opposite end of the tube from the nose cone. Insert the pencil for support in taping. See Figure D.



7. Place the rocket over the soda straw. See Figure E.



8. During competition students will launch the rocket from one end of the classroom toward a designated target. Each team member will launch the team's rocket one time.
9. Launch the rocket by blowing sharply on the straw. Be sure to aim rockets in the desired direction.

Scoring:

1. After each launch the distance will be measured from the center of the target to the nose of the rocket where it comes to rest. The distance from the target will become the participant's score. The target will be placed 3 to 8 meters from the launching site.
2. Each teammate will fly the rocket once. The score will be determined by measuring the distance in centimeters the rocket is from the target for each launch and adding the two scores.
3. The lowest score will be the winner.

