Projectiles: 2. Straw projectile

(Ireland)

Background

Air in a straw can be used to propel a paper projectile.

You will need:

- ✓ a sheet of paper
- ✓ a straw
- ✓ scissors
- ✓ pencil (of approximately the same diameter as the straw)
- ✓ sticky tape
- ✓ measuring tape

Follow these steps:

1. Starting at one end of the pencil, hold the paper at an angle of approximately to 45˚ the pencil.
2. Roll the paper strip around the pencil fairly tightly until you get to the other end.
3. Tape the tube at the outside of each end and at the middle of the projectile.
4. Cut off both ends of the tube.
5. Fold the upper end firmly and tape it.
6. Design the projectile's nose and fins. (For the nose: draw and cut out a circle, then remove a segment from the circle. Overlap the straight edges and tape down. Alternatively draw and cut out a rocket shape. Stick this to the tube you have made.)

So what happened?

Launch the projectile be inserting the straw in the open end and blow.

What next?

Try repeating this exercise several times varying fins and the tip of the projectile. How will each of these changes affect the height the projectile rises? Try adding measured quantities of modelling clay inside the nose of the projectile and make a graph of weight and height/distance travelled.

http://www.sfi.ie/site-files/primary-science/media/pdfs/col/dpsm_paper_rocket.pdf