PAPER ROCKET LESSON PLAN

Objective:
To design, construct, and fly paper rockets.

Description:
In this activity, students construct small flying rocket out of paper and propel them by blowing air through a straw (or with a bicycle pump if available).

The Science Behind: Aerodynamics (flight), Stability, Weight, and Physics

Material:
Paper
Tape
Scissor
Straw
Pencil (has to be the same size as the straw)

Instructions:

1. Cut one piece of paper into four smaller rectangles, by cutting it in half lengthwise and widthwise. This will allow you to make four rockets.
2. Wrap one of the paper rectangles around a pencil to form a cylinder, with the long edge of the paper along the length of the pencil.
3. Tape the cylinder closed so it does not unravel (but do not tape it to the pencil).
4. Slide the cylinder off the pencil. Pinch one end of the cylinder shut and seal it with tape. (This is the "front" end of your rocket.) Leave the other end open.
5. Fold the other piece of paper in half and cut out a right triangle (with a 90-degree angle in one corner) from the side that is connected together (folded center line is the center of the two wings). The long sides of the triangles should be about three inches.
6. The result should be two triangles sticking up in the air (the fins), with a flat part connecting them in between.
7. Tape the flat part to the side of your cylinder, toward the open end (the base, or bottom, of your rocket).
8. Slide the rocket onto the drinking straw and launch it by blowing into the straw as hard as you can.

Extras:
Let the student be creative by:

- Adding more than two fins to the rocket, or using no fins.
- Using a different shape than triangle for the fins.
- Placing the fins at different locations on the rocket.
- Making a different shaped fairing.
- Using two pieces of papers to make the rocket thicker.