GARFIELD COUNTY
COLORADO STATE UNIVERSITY EXTENSION

Drinking Straw Rockets

****YOUR MISSION: BUILD AND LAUNCH A ROCKET USING REGULAR COPY PAPER. BE SURE TO INCLUDE EACH OF THE 3 MAJOR ROCKET PARTS: NOSE CONE, BODY, AND FINS.****

What you need:

- Rocket Pattern
- Unsharpened pencil
- Straw
- Tape
- Scissors
- Sharpened pencil

What you will do:

1. Cut out one of the rectangles (the rocket body) and two sets of rocket fins. Be sure to cut only along the outside, do not cut into the fins.
2. Wrap the rectangles around your unsharpened pencil lengthwise, forming a long, narrow tube. Use tape to secure it into a tube.
3. Attach a set of fins to each side of the tube at one end.
4. Make a small nose cone for the end of your rocket. Twist the end of the tube closed around the sharpened end of a pencil to form the nose cone. Secure the nose cone with tape. Remove the pencil.
5. Repeat steps 1-3 with the other rectangle and fins. Instead of using a nose cone, place tape over the open end of the rocket, opposite of the fins.
6. Launch each of the rockets using your soda straw. Record the distance that each rocket travels.

Talk about it:

- Which rocket travelled farther? Why?
- What could change about your rocket to make it travel farther?
- What variables affected the rocket's flight? Why did each variable have this effect?

Why did that work?

- Rockets have 3 parts: a nose cone, body, and fins. Even in large rockets used by NASA, these elements are always present.
- Each essential element of the rocket helps the rocket in a different way.
  - The nose cone cuts through the air to make the rocket more aerodynamic.
  - The fins help the rocket stay steady and travel in the same direction.
  - The body houses the engine and the fuel tank.
- Drag is the force of air that slows down your rocket.
- Gravity pulls the rocket back down to the ground.
- The lighter you can make your rocket (with less paper and less tape), the less drag it will have and the farther it will fly!