

BREWING UP SOME STEAM COAT HANGER CATAPULT

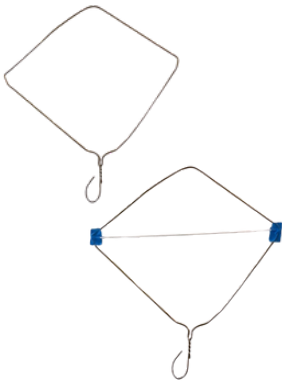
Make a catapult from an old wire coat hanger.

Materials You Will Need:

- a wire coat hanger
- elastic cord (about 18 in.)
- a couple small pieces of masking tape to anchor the elastic cord in place
- scissors
- pompoms in varying sizes
- a paper cup with 2 holes punched on opposite sides, near the top
- a length of ribbon long enough to tie a sash around your shoulder

DIRECTIONS

**See the instructional video on the
York Public Library YouTube Channel**



1. Bend the coat hanger into a "diamond" shape and fold the hooked edge inwards so it doesn't stick out dangerously.

2. Tie a piece of elastic cord across the center of your coat hanger. Secure the ends with a small piece of masking tape so your cord doesn't slide.



3. Tie a length of ribbon long enough to go around your shoulder comfortably through the holes at the top of the cup. This will be a handy carrying cup for your pompoms.

Coat Hanger Catapult (cont.)

4) Fill your cup with pompoms and start launching!

Note: While pompoms are soft, this is a toy best used outside or in a wide open space. **NEVER** launch anything other than pompoms with your catapult and never aim at other people.

Take this further:

Catapults have been used for thousands of years and can be as simple as a slingshot (like our coat hanger) or as complex as a trebuchet. Most catapults are a form of a simple machine called a lever but many are a combination of simple machines. The 6 basic simple machines are the lever, pulley, wheel and axle, incline, wedge, and screw. The farther the elastic is stretched, the more potential energy is stored. When it's released, the potential energy becomes kinetic energy which causes motion!

Try this:

What happens when you change the angle of your launch?

What happens when you pull the elastic back farther?

When pulled back the same amount, which flies farther- a big pompom or a small pompom?

How far can you get a pompom to fly?

Parent Connection

This activity combines physics, engineering, and math through play!

