



Pom-Pom Shooters

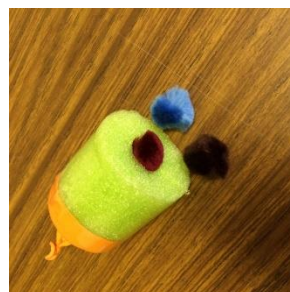
Supplies:

1. Swim Noodle (Cut into 3 inch sections)
2. Clear Packing Tape
3. Large Balloon
4. Pom-Pom
5. Scissors

** You can cut the Noodle with a bread knife. **

Directions:

1. Tie the end of a balloon – do not blow up the balloon.
2. Cut off the end of the balloon.
3. Stretch the balloon over one end of the noodle.
4. Secure with tape. Make sure the edge of the balloon is sealed to the noodle, and there are no open spaces.
5. Load your pom-pom shooter with a pom-pom. Pull back on the balloon using the knot you tied earlier.
6. Watch the pom-poms fly!



Why does it work?

The two main types of energy are:

- *Kinetic Energy*
- *Potential Energy*

Kinetic Energy is energy that is in motion. Moving water and wind are good examples of kinetic energy. Electricity is also kinetic energy because even though you can't see it happen, electricity involves electrons moving in *conductors*.

Potential Energy is stored energy. Examples of potential energy are oil sitting in a barrel, or water in a lake in the mountains. This energy is referred to as potential energy, because if it were released, it would do a lot of work.

Energy can change from one form to another.

When a Roller Coaster is on its way up, it is using *kinetic* energy since the energy is in motion. When it reaches the top it has *potential* (or stored) energy. When it goes down the hill it is using *kinetic* energy again

- Potential energy is energy stored
- Kinetic energy is energy in motion

Think about a yo-yo. Before a yo-yo begins its fall it has stored or *potential* energy due to its position. As it starts to drop the *potential* energy begins to be changed into *kinetic* energy. At the top it has its maximum *potential* energy.

At the bottom its *potential* energy has been converted into *kinetic* energy so that it now has its maximum *kinetic* energy.

Watch what happens when a spring is pinched and released. A spring has *potential* energy when it is pinched and changes to kinetic energy when we let go.

With the Pom-Pom Shooter, you are converting Potential Energy into Kinetic Energy. With the balloon, you have the potential to let it go, and make the pom-pom move, converting the potential to kinetic energy.