



Try This **EXPERIMENT** @ Home!

POP & CATCH - Transfer and transform energy

You will need:

- 2 soft plastic cups
- A 30cm round balloon
- Tape (any type will do!)
- Scissors
- A small pom-pom, cotton-ball or scrunched up ball of paper/aluminium foil

Step 1: Cut the base carefully out of each cup.

Step 2: Cut off the nozzle of the balloon and throw away. Stretch the bulb of the balloon around the mouth of one cup so that it is taut and there are no dimples on the flat surface. Fasten the balloon in position with masking tape. *This step is tricky! It may help to have another person hold the cup while you stretch the balloon.*

Step 3: Tape the two cups together base-to-base to make an hourglass shape. Make sure that there are no sticky surfaces poking through gaps on the inside the Catcher.

TO PLAY POP & CATCH:

STEP 4: Drop your pom-pom or 'ball' into the catcher.

STEP 5: Pinch the middle of the balloon surface, pull it firmly down and then LET GO! The ball should PoP into the air!

STEP 6: Catch the ball back in the catcher if you can. Then pull back the balloon for another PoP! Experiment with how tightly you pull back on the balloon to change the flight path of your ball.

What is happening? The Science explained.

Stretching the balloon stores up energy in the form of potential energy. When you let go, the balloon changes back to its original shape as potential energy is TRANSFORMED into kinetic energy. Some of this kinetic energy is TRANSFERRED to the 'ball', making it PoP out of the catcher!

