LA COUNTY LIBRARY

# Activity Idea

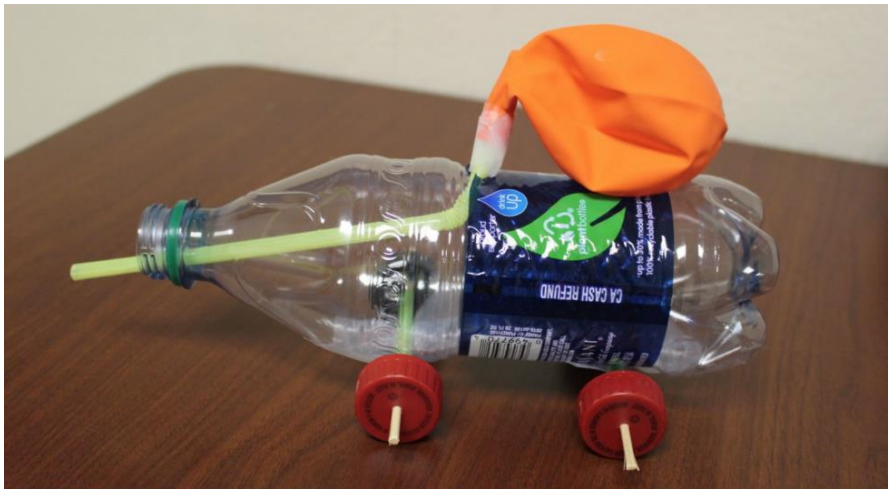
## BUILD A BALLOON POWERED CAR

A STEM ACTIVITY

*Recommended for Ages 8 – 12*

**Turn a Pile of Trash into a Toy Car**

The majority of material involved in this activity are recycled materials. You will learn physics concepts related to kinetic energy, conservation of energy, and Newton's laws of motion all while saving the earth.




**Supplies Needed:**

- Empty Plastic Bottle 16oz
- Four plastic bottle caps
- Two Wooden skewers
- Two straws
- Balloon
- Tape
- Scissors or sharp knife
- An adult helper

**Instructions:**
Before you begin building some preparation needs to be done. First, cut two of the straws in half and set those pieces aside. Take the straw that has not been cut yet and tape the balloon around one end, use a lot of tape to make sure the balloon is secure on the straw. Now you will begin forming the car. Take the cap off the water bottle and make sure your adult helper is close. You will need your adult helper to cut a hole in the top of the water bottle when the bottle is laying on its side. It does not have to be a big hole, but big enough so that the straw with the balloon can go in the top of the hole and come out of where the cap should be. Tape this in place so that it does not move.

Take one set of the straws that was cut in half and tape them to the bottom of the bottle opposite to where the balloon is. These will form the distance between wheels so space them accordingly. Have your adult helper poke holes in the bottle caps and make sure the skewer fits through the hole. Only stick one bottle cap on one skewer at a time. Place the skewer through the straw on the bottom and add another bottle cap. Do this to both of the straws so that you have four wheels. Try spinning the wheels and move then as close or as far from the bottle as you like. Make sure everything is taped in place. The straw with the balloon should be secure so it does not move.

To fuel you balloon powered car blow in the straw by the opening of the bottle. You can pinch the balloon at the top, so it takes in the air. When you are ready to race, place the car on a flat surface, and let go of where you are pinching. This should propel your car.

.