

The Science Corner – January 2008

Balloon-Mobile

Build and test a race car that uses a balloon as it's only energy source!

What you need:

- 2-Liter milk carton
- Scissors
- Large Balloon
- 2 Drinking Straws
- 4 Styrofoam or plastic spools (like the ones used for thread)
- 4 straight pins
- Parents! Always fun to do something with your mom and dad!

Don't forget to use the Scientific Method during all your experiments!

What you do:

- Cut off the top of a 2 Liter milk carton
- Cut the milk carton in half, the long way. This will form the body of your car.
- Cut a small hole in the middle of the end of the carton. The hole should be big enough so that the end of a deflated balloon can be placed into it with ease. Note: If the hole is too big or too small, there won't be enough air force to move the car!
- Make 2 holes, close to the bottom, at opposite ends of one side of the carton. Do the same thing on the other side of the carton. These holes are for the wheel axles of your car. Stick the drinking straws through these holes.
- Slide the spools onto the straws and use your straight pins to secure the straws to the spools (i.e. stick the pins through the straws on either side of the spools to prevent them from sliding one way or another). Get mom or dad to help here so that you don't stick your finger! In science we have to keep safety first!
- Blow up the balloon (don't tie the end) and let the air in the balloon out so that it pushes your car forward!

The Science Behind It:

The air rushing out of the balloon pushes the balloon in the opposite direction from the airflow. This is called propulsion. The racecar is propelled along the floor according to the principle stated in Newton's Third Law of Motion: "Every action has an equal and opposite reaction." The escaping air is the action and the movement of the car in the opposite direction is the reaction! Pretty cool! Race with your friends and OBSERVE how far your cars will go on different amounts of air just for fun!



Mad Science of N.E. Central Florida sparks the imagination and curiosity of children everywhere by providing fun, interactive and educational activities in schools or in your home! Call us at 800-976-0980 for more information on our programs!