

WIND-POWERED CAR ACTIVITY

Introduction

Have you ever watched a car race before? When you watch competitions like Nascar or Le Grand Prix, you can see cars go over 100 miles per hour as they race! In this activity, try designing your own wind-powered car and see how fast you can make it go!

Learning Objectives

1. Understand how mixing colors with light is different from mixing colors with paint.
2. Learn how different colors mix together!

Materials

1. Cardboard
2. Scissors
3. Paper
4. 2 Plastic Straws
5. 2 Wooden Skewers
6. 4 Bottle Caps or Large Beads
7. Tape
8. Fan

Step-by-Step

1. Cut the cardboard into a rectangular shape. This should not be any wider than the length of the wooden skewers. This will be the body of your car!
2. Tape 2 plastic straws to the bottom of the cardboard. They should be parallel to each other, and should have some space between them.
3. If you want to use beads for the wheels, try just sliding them on the straws! If you want to use bottle caps, ask a parent, teacher, or friend to cut a “+” sign into the middle of the caps using a hobby knife. Then slide one end of the wooden skewer through the “+” sign, and slide the other through one of the straws. Once through the straw, attach another bottle cap to the other end of the skewer.
4. Repeat step 3 so that you have four wheels!
5. Ask for help to poke a small hole in the middle of the cardboard. Once the hole is made, insert either a wooden skewer or a straw! Don't insert it all the way – just enough so that it's upright.
6. Use tape to secure the straw to the cardboard.
7. Now cut your sail out of paper – you can make it whatever shape you want, but we recommend a square or a rectangle.
8. If you used a wooden skewer, just poke it through 2 different spots on your sail to attach it. If you used a straw, you will need to poke two holes in your paper to slide the straw through.
9. Decorate your car however you like and you're done! Place it in front of a fan and see how fast it goes!

Conclusion Qs

1. How can you change your design to make your car go even faster?
2. What worked well with your first design? What did you have problems with?