

# Big Lab

## Pre-Visit Activity Wind Power

Soon, your class will be visiting the Big Lab and testing energy and investigating design by using sailboats in the Water Works pool. In this activity, you'll get an idea of how wind creates energy to move an object and how different designs affect how the object moves.

### Materials (quantities for one group)

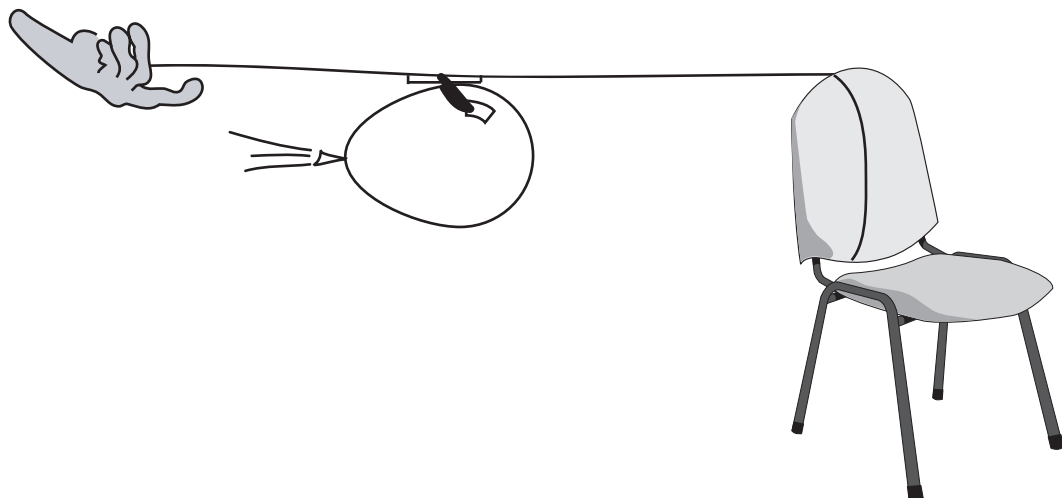
#### For Balloon Set-Up

- 4 yards of String (preferably a fishing line or kite string)
- Something to tie the string to such as a chair or doorknob
- Any variety of balloons, which may include a:
  - Party balloon
  - Long, twisting balloon typically used to make animals
  - Water balloon
  - Rocket balloon
- As many straws as there are balloons
- Scotch tape

#### For Recording Data

- Ruler
- Pencil/ pen
- Paper

In the Big Lab, giant fans will blow a sailboat of your own design across the Water Works pool. We'll see how wind power works in this activity although it will work slightly different from what you do in the Big Lab since the wind will be coming from your vehicle instead of from an outside source.



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### Steps

1. Tie one end of the string to something such as a chair or doorknob
2. Blow up a balloon to about full size but don't tie the end; just pinch it so air doesn't come out.
3. Record the type of balloon and its characteristics, such as shape, in the Balloon Recording Sheet.
4. Tape a straw to the side of the balloon.
5. Put the other end of the string through the balloon's straw. Keep the balloon at the end.
6. Hold the string tight and level with the ground. Let the balloon go!
7. Record how far the balloon went.
8. Blow up the balloon to just around halfway this time. The same person who blew the balloon earlier should blow this balloon again. Then, let it go on the string again and record how far it went this time.
9. Repeat steps 2 through 8 with the other types of balloons.

### Consider the following:

1. How did wind make the balloon move?

2. Which balloon went the farthest distance and what might have made it go farther than the other balloons?

3. Which balloon went the least distance and what might have made it go not as far as the other balloons?

