



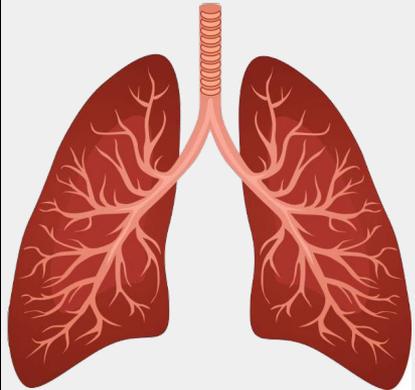
Related Standards:

4-LS1-1

Lungs: Catch Your Breath!

Lungs and COVID 19

The coronavirus is a novel (new) virus that attacks your lungs. Your lungs help you breath, which is why many people experience shortness of breath when they get the coronavirus.



Materials:

- | | |
|--|---|
| <input type="checkbox"/> 1 Empty Water Bottle w/ Top (16 oz or larger) | <input type="checkbox"/> 3 Small Rubber Bands |
| <input type="checkbox"/> 3 Balloons | <input type="checkbox"/> Tape |
| <input type="checkbox"/> 2 Straws | <input type="checkbox"/> Cardboard |
| | <input type="checkbox"/> Scissors |

For safety precautions, we ask that parents prepare the 3 listed items prior to the start of the session:

1. The Plastic Bottle - Cut off the bottom of the bottle (about 1 inch)
2. The Cardboard - For a 16oz bottle, cut a strip of cardboard that is roughly 1 inch wide and 9 inches long. If your bottle is larger than a 16oz bottle you may need to make your cardboard a little wider and longer, increase each measurement from 0.5 inches to 2 inches.
3. The Bottle Cap - Poke 2 holes in the top, make sure the holes are big enough for your straws to fit through. You can do this using scissors.

Instructions:

1. Cut off the tip of the balloon about an inch down, the side opposite from where you blow into the balloon.
2. Take the prepared piece of cardboard (about 1 inch wide) and insert it into the bottom of the bottle so that it lines the perimeter of the bottle. This is to provide support.



Related Standards:

4-LS1-1

Lungs: *Catch Your Breath* continued!

Instructions continued:

3. Stretch the cut balloon around the bottom of the bottle and tape it.
4. Wrap tape around the straws about halfway down, and slide the straws through the holes until the taped portion of the straw fits snugly into the holes.
5. On the bottom of each straw, use your rubber bands to attach the balloons. Make sure it is not too tight and air can go in and out.
6. At the top of your straws, use a rubber band to bring both straws together. Make sure it is not too tight and air can go in and out.
7. Lastly, stuff the balloons through the top of the bottle and twist the cap to close the bottle.
8. To make your lungs work, pull the bottom balloon and watch the two balloons inside expand.



What's the science behind it?

The two balloons inside of the bottle are a representation of your lungs and the balloon at the bottom is your diaphragm. So, when your diaphragm contracts (pull the balloon down) your lungs fill with air (inhale) and when your diaphragm relaxes (let go of the balloon) your lungs release air (exhale).