

MAKE YOUR OWN MODEL LUNG

You've learned that lungs aren't muscles that move themselves. Instead, they depend on air pressure in your chest cavity and movement from your diaphragm and chest muscles to inflate and deflate. Here's how you can see this in action.

1. Cut the bottom from the bottle. Put the small balloon on the end of the straw, and secure it with the rubber band. This is going to act as one of your lungs.

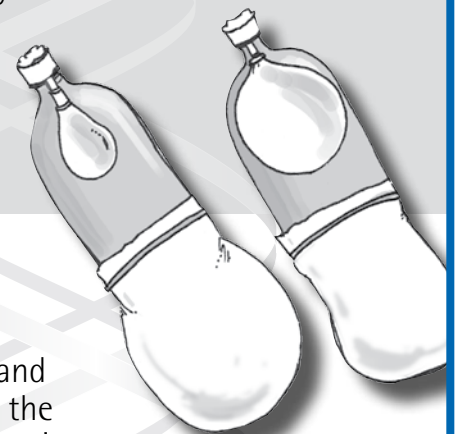
2. Poke a hole in the cap, and push the straw through it up through the open bottom of the bottle. Use the modeling clay around the top to seal where the straw comes out the cap on top.

3. Cut the neck off the larger balloon, then stretch it over the bottom opening of the bottle. Secure it in place with a rubber band. This balloon will work as your diaphragm.

4. Look at the small balloon (the "lung"). It's hanging, empty, like your lungs before you breathe in. Then, gently pinch the diaphragm balloon to get a good grip, and pull down slowly. The lung balloon fills with air. When you release the diaphragm balloon, the lung deflates.

SUPPLIES

- scissors
- a two-liter plastic bottle, with cap on
- straw
- one small balloon (like a water balloon)
- rubber bands
- modeling clay
- one large balloon (like a party balloon)



5. Your lungs fill with air because your diaphragm contracts, and goes down, increasing the volume of your chest cavity. This decreases the air pressure inside you, and air is pulled in from the outside to fill the extra space—filling your lungs. When your diaphragm relaxes, that extra air has to go somewhere, so it's forced back out of your lungs.