

HOW DO LUNGS WORK?

Here is a science experiment for parents and kids to understand how lungs work and how hard it can be to breathe if you have cystic fibrosis.

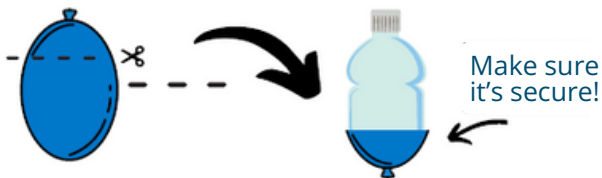
MATERIALS

- 1 clear empty plastic bottle, label removed
- 2 balloons
- 1 straw
- Modeling clay/dough
- Tape or elastic
- Exacto knife or scissors

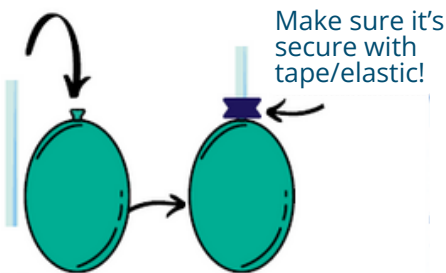
1. Cut off bottom half of bottle



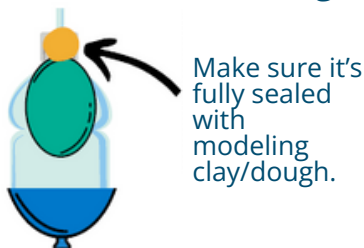
2. Take 1 balloon: tie it (without blowing it up), cut off the bottom part of the balloon. Stretch this over the bottom (cut) part of the bottle so that the knot is pointing down (outside of the bottle).



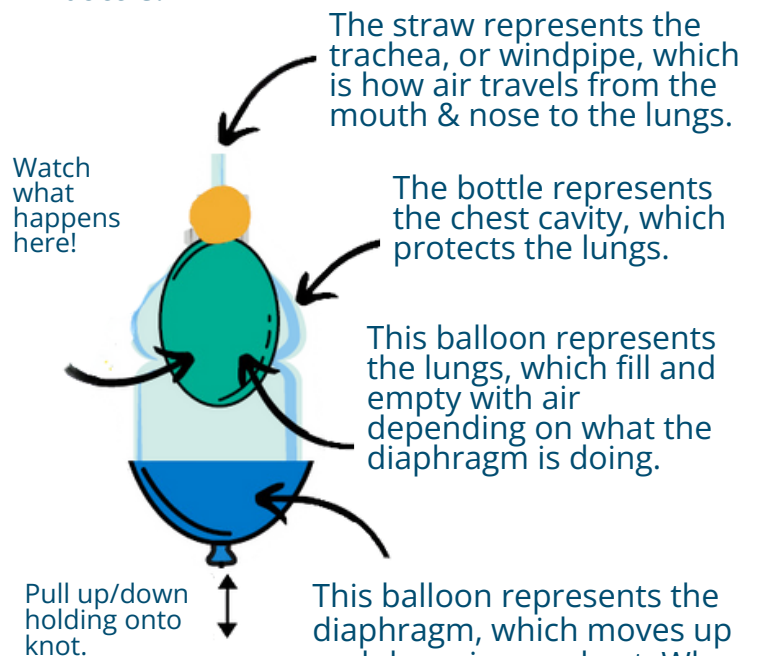
3. Take the second balloon; feed the straw into it, secure it tightly with tape/elastic.



4. Feed second balloon/straw inside the bottle. Secure with modeling clay/dough.



5. Watch your lung in action! Pull down gently on the bottom balloon and watch what happens to the balloon inside the bottle.



This balloon represents the diaphragm, which moves up and down in our chest. When we breathe in, the diaphragm contracts (like when you pull the balloon down). This increases space in the chest cavity (the bottle), which decreases the air pressure in the lungs (the balloon inside the bottle). This causes air to be drawn in through the trachea (straw) into the lungs (inside balloon).