

Make a Lung Model Lab

Materials:

- 20-32 FL Oz plastic bottle (with base cut off)*
- 2 round balloons (30 cm diameter)
- 2 rubber bands

*Safety: An adult should cut the base from the plastic bottle.

Procedure:

1. Take one of the balloons and cut off the bottom part, leaving you with only the top as shown:

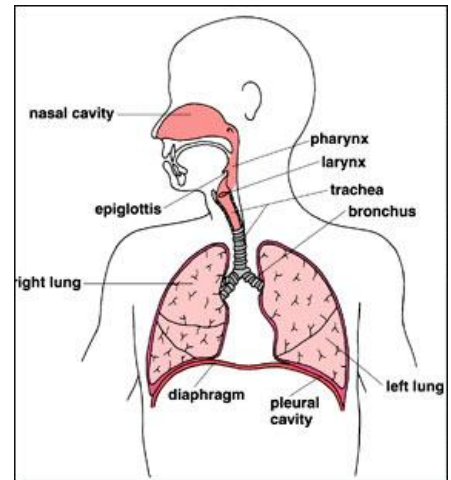


2. Stretch the balloon to fit it over the bottom of the bottle. Use a rubber band to secure the edge of the balloon to the side of the bottle.
3. Take the other balloon and put it inside the bottle. Then fold the mouth of the balloon around the rim of the bottle so the balloon hangs from the top. Secure this balloon with your second rubber band. You have completed your model of a lung!



Analyze:

1. Which parts of the model lung represent the lungs, chest cavity, rib cage, and diaphragm?



2. Pinch and pull the diaphragm (bottom balloon) down (away from the lung). Watch the balloon inside the bottle. What do you observe? Sketch a picture of your observation.

Why do you think this happens?

Do you think this demonstrates inhaling or exhaling? Explain.

3. Push the diaphragm (bottom balloon) up (towards from the lung). Watch the balloon inside the bottle. What do you observe? Sketch a picture of your observation.

Why do you think this happens?

Do you think this demonstrates inhaling or exhaling? Explain.

4. While pushing and pulling on the diaphragm, hold the opening of the bottle near your face. What do you feel?

5. What do you think would happen if the chest cavity was punctured?