



BUILDING A MODEL OF THE RESPIRATORY SYSTEM



In this activity, you will build a model to see how your lungs work when you breathe in and out.

QUESTION

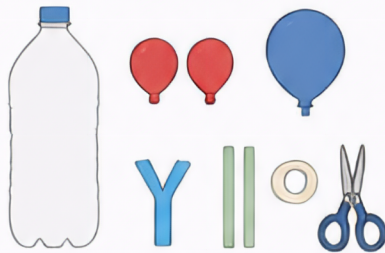
How does the movement of the diaphragm help your lungs take in and release air?

HYPOTHESIS

I think that _____

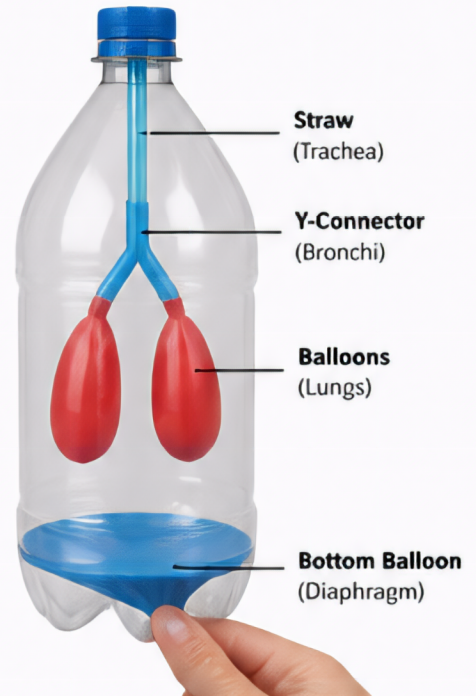
MATERIALS

- 1 clear plastic bottle (1–2 liter)
- 2 small balloons
- 1 large balloon
- 1 Y-shaped straw connector
- 2 drinking straws
- Tape
- Scissors



WHAT EACH PART REPRESENTS

- Straws (top) = Trachea (windpipe)
- Y-Connector = Bronchi (the two main branches that go to the lungs)
- Small Balloons = Lungs
- Large Balloon (bottom) = Diaphragm
- Bottle = Chest cavity (rib cage)



PROCEDURE

1. Cut off the bottom of the plastic bottle.
2. Attach the Y-connector to the top of the bottle cap.
3. Insert one straw into each side of the Y-connector.
4. Attach a small balloon to the end of each straw.
Use tape to make sure the balloons are sealed tightly.
5. Stretch the large balloon over the cut bottom of the bottle.
Make sure it is sealed tightly.
6. Hold the bottle with one hand.
7. Gently pull down on the bottom balloon (diaphragm), then push it up.

OBSERVATIONS

What happens to the “lungs” (balloons) when you:

Pull the bottom balloon down?

Push the bottom balloon up?

CONCLUSION

Use your observations to answer the question.



THINK FURTHER

How does exercise affect your breathing?
What happens when you run or play hard?