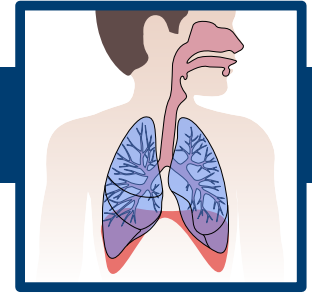


LESSON 2: RESPIRATORY EXPLORATORY

Exploratory Laboratory 2A: *Expansion and Contraction*



In this lab, you will consider the problem: what makes my chest expand and relax during breathing? You will create a model, test it, and record the results.

Materials:

- › 1 soda bottle (20 ounces)
- › 2 balloons (10-inch circumference)
- › Scissors
- › Tape and/or rubber band



Safety Precaution:

Cut edges of soda bottle will be ***SHARP!*** Use caution when handling the cut bottle.

Procedure:

1. Measure 15 cm up from the bottom of the bottle. Using the scissors, carefully cut off the bottom 15 cm of the bottle.
2. Insert one of the balloons into the narrow mouth of the bottle, stretching the balloon opening over the top of the bottle. Once the top of the balloon is secured around the rim of the bottle, the balloon should hang down into the bottle. If necessary, use tape to secure the balloon to the rim.
3. Cut off the top of the second balloon. Stretch the rest of the balloon across the cut portion of the soda bottle. Use tape or a rubber band to secure the balloon in place.
4. To test your lung model, pull down gently on the balloon secured to the bottom of the bottle. Then release. Notice what happens to the balloon inside the bottle. Repeat.
5. Record your observations.

Observations: