

UNIT 9 - RESPIRATORY SYSTEM

ACTIVITY – Lung Capacity

Objective:

Students will demonstrate lung capacity by measuring the amount of air that can be forced out of the lungs.

Materials:

- Plastic dish pan
- 2 feet (61 cm) of aquarium tubing
- 1 gallon (4 liters) plastic milk jug w/cap
- masking tape

Strategy:

1. Place a strip of masking tape down the side of the milk jug from the top to the bottom.
2. Fill the jug with water using a cup to measure amount of water it takes to fill the jug. Mark each cup on the tape (these measurements will serve to show the amount of water exhaled) and screw on the cap.
3. Fill the dish pan about 1/2 full with water.
4. Place the jug upside down in the water, and remove the cap.
5. Have a helper hold the jug. DO NOT allow air bubbles to enter the milk jug.
6. Place one end of the aquarium tubing inside the mouth of the jug.
7. Take a normal breath and exhale through the tubing. Mark the water level on the tape.
8. Refill the jug with water and return it to the dish pan.
9. Breathe in deeply and make an effort to exhale all of the air in your lungs through the tubing. Mark the water level on the tape.

Discussion:

What is lung capacity?

What happens in the plastic bottle as you exhale into the rubber tubing?

What effect does exercise have on the volume of air? Explain.