

Virtual Science Adventure Lab (VSAL)

Catch Your Breath Lesson Summary

Grade Levels: This virtual lesson is appropriate for students in grades K-6

Time Required: 20 minutes

Outcomes and Objectives

Learning Targets

- To introduce students to the lungs and normal respiratory function.
- To expose students to authentic equipment used by scientists and physicians for measuring lung function.

Assumptions of Prior Student Knowledge

- Students will understand that we need to breathe to survive.

Description

In this virtual lesson, students will learn about the lungs and how physicians assess how well the respiratory system is working. They will view a demonstration of equipment used to measure lung function.

Vocabulary

- **Alveoli:** Tiny air sacs at the ends of the bronchioles where gas exchange occurs between the lungs and blood.
- **Bronchial Tubes:** Tubes that branch off from the trachea and into the lungs.
- **Bronchioles:** Small tubes that branch off from the bronchial tubes in the lungs.
- **Carbon Dioxide:** A waste gas produced by cells that we get rid of by exhaling.
- **Lung Volume:** How much air the lungs can hold.
- **Oxygen Saturation:** How full of oxygen the blood is.
- **Oxygen:** An essential element needed for survival that helps all cells to function properly.
- **Peak Flow Meter:** Measures peak flow.
- **Peak Flow:** How fast air can be blown out of the lungs.
- **Pulse Oximeter:** Measures oxygen saturation and heart rate.
- **Respiratory System:** The group of organs that moves oxygen into the body and carbon dioxide out of the body.
- **Spirometer:** A device that measures air flow (in this case, volume).
- **Trachea/Airway/Windpipe:** The hard tube in the throat that allows air to pass from the nose and mouth to the lungs.