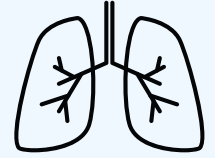


8. Adventures in Climate and Health: Lung Legends: Journey into the Marvelous World of Breathing



Student Objectives:

- The student will be able to identify the lungs from a picture.
- The student will be able to cite what the functions of the lungs are.
- The students will be able to identify the lungs as one of the body's major organs.
- The student will be able to list several ways to keep your lungs healthy

Lesson Plan:

The student will be able to learn about their lungs, how their lungs work, and how they breathe. This can be done by instructing the children to build lung models.

Materials required:

Long straws, scissors, tape, plastic bags (sandwich bags), glue, NH DES materials on asthma, bubbles

Key vocabulary:

Air quality: how clean or polluted your air is

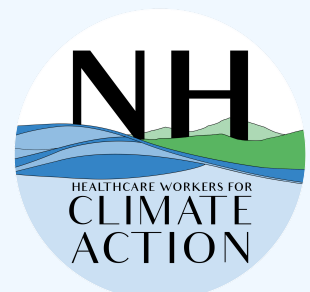
Breathing: the process of taking air into and expelling it from the lungs

Asthma: a chronic condition that affects the airways in the lungs

Respiratory system: the network of organs and tissues that help you breath



**Climate and Health Initiative
for Children
in Kearsarge & Sunapee**



Background Information:

The lungs and respiratory system allow us to breathe. They:

- Bring oxygen into our bodies (called inspiration, or inhalation).
- Send carbon dioxide out (called expiration, or exhalation).
This exchange of oxygen and carbon dioxide is called respiration.

Air pollution is when unwanted chemicals, gasses, and particles enter the air and the atmosphere causing harm to animals and damaging the natural cycles of the Earth.

Some sources of air pollution come from nature. These include eruptions of volcanoes, dust storms, and forest fires.

Human activity is a major cause of air pollution, especially in large cities. Human air pollution is caused by things such as factories, power plants, cars, airplanes, chemicals, fumes from spray cans, and methane gas from landfills.

Air pollution can also make people sick. It can make it difficult to breathe and cause diseases such as lung cancer, respiratory infections, and heart disease.

Sources:

Health Smart Virginia: Grade 1 Sample Lesson Plan: Unit 4 - My Lungs

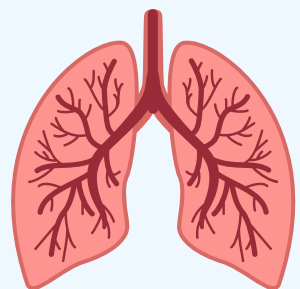
<https://healthsmartva.org/uploads/rteeditor/file/gr1-bod-4-my-lungs.pdf>

Ducksters: The Environment - Air Pollution

https://www.ducksters.com/science/environment/air_pollution.php

Nemours KidsHealth: Your Lungs & Respiratory System

<https://kidshealth.org/en/kids/lungs.html>



Procedure:

1. Fill out K and W of the KWL chart.
2. Talk with the students about lungs and the impact of low air quality. Demonstrate how the air that we breathe fills our lungs.
3. “Have students stand up and take 3 deep breaths while putting their hand on their chest. Have them feel their rib cage expand as they inhale and deflate as they exhale. Explain that oxygen goes into your blood and is carried around your body. Why do you think doctors ask you to take deep breaths when they examine you? Inhaling and exhaling can help us do what activities? Possible answers: Blow up balloons. Blow bubbles, blow out candles, talk, sing, hold our breath underwater, and relax.” (Source)
4. Build lung models:
 - a. Print and cut out lung templates
 - b. Trim the tops of the straws
 - c. Tape straws together at the bottom
 - d. Glue the nose and lips to the straws
 - e. Cut the zippers of the sandwich bags out
 - f. Tape the lung images to the back of the straws
 - g. Tape the sandwich bag to each lung
5. Instruct the students to begin blowing bubbles, then running to pop them, to demonstrate how lungs are used for blowing and running.
6. Complete L of the KWL chart.