#### Goals:

- 1. Students will understand the structure and function of the lungs and respiratory system.
- 2. Students will understand their responsibility for their healthy lungs.
- 3. Students will understand the importance making healthy decisions like taking precautions that help keep their lungs healthy.

## **Objectives:**

- 1. Students will be able to locate the lungs and identify the parts of the respiratory system.
- 2. Students will be able to define alveoli, bronchi, airways, and oxygen as they relate to the lungs.
- 4. Students will be able to describe what happens to the respiratory system when it is impaired due to asthma and allergies.
- 5. Students will be able to name at least three ways to keep their lungs healthy (e.g. exercise, avoid pollutants, cigarettes, and asthma triggers).

#### **Benchmarks:**

The student will

The student will		
HE.5.C.1.1	describe the relationship between healthy behaviors and personal health.	
HE.5.C.1.4	compare ways to prevent common childhood injuries and health problems.	
HE.5.C.2.1	predict how families may influence various health practices of children.	
HE.5.C.2.2	predict how friends/peers may influence various health practices of children.	
HE.5.C.2.4	give examples of school and public health policies that influence health	
	promotion and disease prevention.	
HE.5.B.3.3	compile resources from home, school, and community, technologies that	
	provide valid health information.	
HE.5.B.4.1	illustrate techniques of effective verbal and nonverbal communication skills to	
	enhance health.	
HE.5.B.4.2	discuss refusal skills and negotiation skills that avoid or reduce health risks.	
HE.5.B.5.1	describe circumstances that can help or hinder healthy decision making.	
HE.5.B.5.2	summarize healthy options to health-related issues or problems.	
HE.5.B.5.3	compare the potential short-term impact of each option on self and others when	
	making a health-related decision.	
HE.5.B.5.4	select a healthy option when making decisions for yourself and/or others.	
HE.5.B.6.1	specify a personal health goal and track progress toward achievement.	
HE.5.P.7.1	model responsible personal health behaviors.	









HE.5.P.7.2 illustrate a variety of healthy practices and behaviors to maintain or improve personal health and reduce health risks. persuade others to make positive health choices. HE.5.P.8.1 SC.5.L.14.1 identify the organs in the human body and describe their functions, including the skin, brain, heart, lungs, stomach, liver, intestines, pancreas, muscles and skeleton, reproductive organs, kidneys, bladder, and sensory organs. SC.5.L.14.2 compare and contrast the function of organs and other physical structures of plants and animals, including humans, for example: some animals have skeletons for support -- some with internal skeletons others with exoskeletons -- while some plants have stems for support. LAFS.5.RI.1.2 determine two or more main ideas of a text and explain how they are supported by key details; summarize the text. write informative/explanatory texts to examine a topic and convey ideas and LAFS.5.2.1.2 information clearly. LAFS.5.SL.1.1 engage effectively in a range of collaborative discussions (one-on-one, in groups, and teacher-led) with diverse partners on grade 5 topics and texts building on others' ideas and expressing their own clearly. LAFS.5.SI.1.3 summarize the points a speaker makes and explain how each claim is supported by reasons and evidence. LAFS.5.L.3.4 determine or clarify the meaning of unknown and multiple-meaning words and phrases based on grade 5 reading and content, choosing flexibly from a range of strategies. recognize the benefits of maintaining a healthy body composition. PE.5.L.2.10

develop strategies for improving selected fitness components.

PE.5.L.2.11

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## **Pre-Visit Activities**

- 1. Review the enclosed vocabulary. Students do not need to have a working knowledge of the terms, rather a beginning familiarity.
- 2. Create a writing activity for your students asking them to research the respiratory systems of different mammals, fish, reptiles, or insects. They could compare and contrast the different systems (i.e. the respiratory system of the largest and smallest mammal bumble bee bat/great blue whale).
- 3. Read the book <u>Your Respiratory System</u> by Judith Jango-Cohen.

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## **Suggested Post-Visit Activities**

- 1. Have students complete the respiratory system diagram. It will serve as a review of the lesson.
- 2. Conduct an experiment to show that oxygen is necessary for burning to occur. Put a candle in a dish. Light it and put a jar over it. The candle will go out when all the oxygen is used up. The candle uses the oxygen to burn. In the same way, the body uses oxygen to burn its food.
- 3. Physical education teacher or classroom teacher can have students measure and record their breathing rate while resting. Have students place hand on upper chest and feel one breath (in and out). Count the number of breaths over a 30 second period of time. Multiply by two to determine the number of breaths per minute. Repeat after students have run in place for 2-4 minutes. (P.E. teacher can have students run track, etc.)
- 4. Have your students research different illnesses and diseases that can cause distress to the lungs. Their research can include the illness, whether it is genetic or environmental, and if there is a cure or treatment to help with the systems.

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## **Vocabulary**

1.	airways n	tunnels for air that travel from the nose or mouth to the lungs
2.	allergies n	bad reactions to certain things, such as animals, pollen or food.
3.	alveoli n	microscopic air sacs in the lungs
4.	asthma n	a lung disease that affects the breathing tubes by narrowing them.
5.	bronchi n	the two large airways of the lungs
6.	bronchial tubes n	the smaller breathing tubes of the lungs, that look like tiny tree branches.
7.	carbon dioxide n	gas found in the air, exhaled by lungs.
8.	diaphragm n	a large muscle under the ribs that separates the lungs from the other
9.	inflamed adj	organs. sore or swollen
10.	inhaler n	something that has medicine in it to help people breathe easier.
11.	larynx n	the voice box, airway between the throat and the trachea.
12.	lungs n	an organ of a person that takes in air and supplies oxygen to the blood.
13.	mucus n	a thick, slimy substance that is produced in the airways and nose.
14.	oxygen n	what we breathe in with our lungs and is essential for life.
15.	pollution n	human-made waste that harms the earth's air, land or water.
16.	trachea n	the windpipe, a firm breathing tube between the larynx and the bronchi.
17.	triggers n	something that causes something else to happen.

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