

Name _____ Date _____

Exploring Anatomy: Respiratory System Worksheet

Directions: Complete this worksheet as you view the Respiratory System Tile in Exploring Anatomy.

1. Click the Explore Pathway icon to take a virtual journey through the respiratory system. For a molecule of oxygen to get from the air to our bloodstream, it must pass through numerous structures in the respiratory system. Using the following terms, fill in the blanks below to show the correct order of structures the oxygen moves through from the nose to the blood.

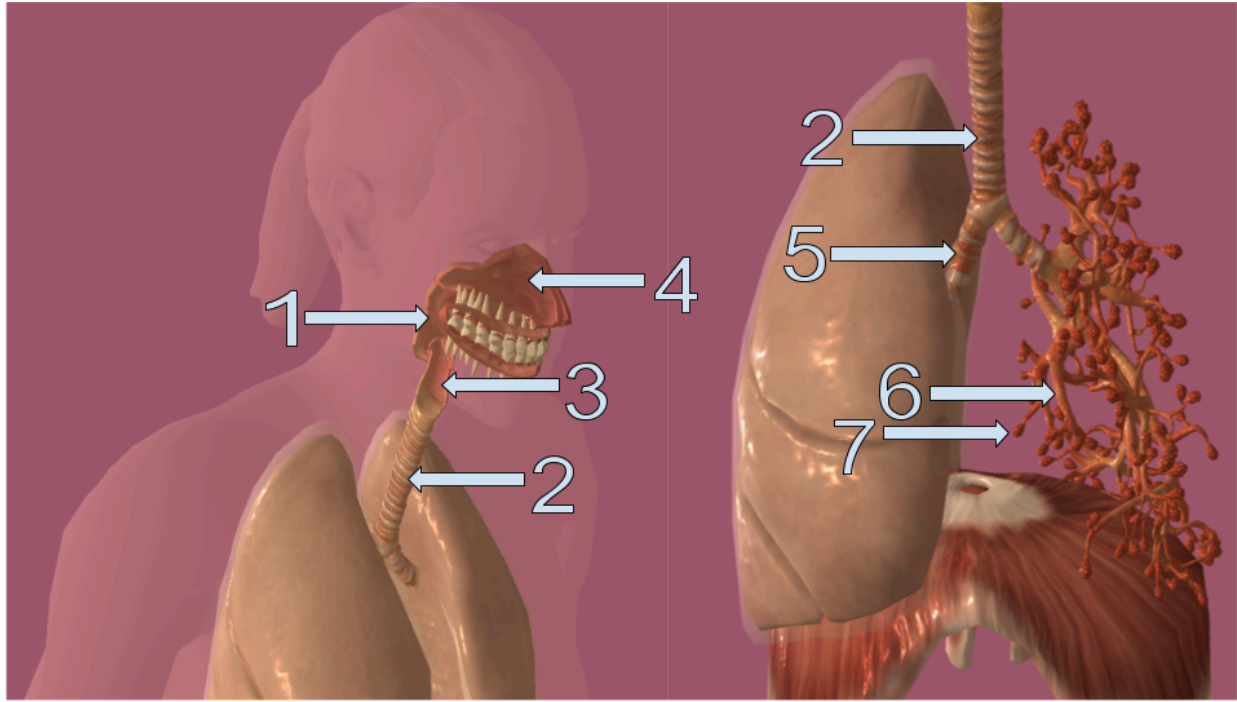
Alveoli
Bronchi
Bronchiole
Larynx
Nasal cavity
Pharynx
Trachea

An oxygen molecule enters the nose and passes through the _____. It then travels through the _____ and _____ and then enters the long tube known as the _____. The oxygen then enters one of two branches known as _____. As these branches become smaller they are called _____. At the end of the smallest branch, the oxygen enters sacs called _____. This is the location at which gas exchange occurs and the oxygen molecule can enter the bloodstream.

2. Which structure from the list above is covered in cartilaginous rings?

3. The cartilage tissue provides a flexible structure and support. Why do you think it is important for this part of the respiratory system to have that feature?

4. After exploring the respiratory pathway, use the following diagram and table to identify its main structures and their functions.



	Name of structure	Function of structure
1		
2		
3		
4		
5		
6		
7		

5. In the Systems View, click on the Add Systems icon. Add the circulatory system by clicking on the heart icon.

Where is the heart located in relation to the lungs?

What is the benefit of the heart's location?

6. Click on the lung. Notice that the covering called the *pleura* becomes highlighted. Click on the Description icon at the bottom-left and write the function of the *pleura* in your own words.
7. Contrary to popular belief, the lungs are not structured like giant balloons. As you explored the respiratory pathway you saw their structure. In your own words, describe the structure of a lung to someone who has never studied anatomy.

Making Connections

8. According to the National Safety Council, choking is the fourth leading cause of unintentional injury death. Now that you know the function and structure of the respiratory system, explain why choking is deadly, using a minimum of three vocabulary words you have learned in this activity.

9. There are numerous respiratory disorders/diseases that can cause a patient to have low blood oxygen levels. Choose one disorder and do a quick search. List your disorder and the structure of the respiratory system that is not functioning properly in those with this disorder.

10. A spirometer is a piece of medical equipment that can help a doctor diagnose respiratory issues. Research the spirometer and explain how it is used and how the results relate to respiratory disorders.

Respiratory Careers Discussion

Ask students: “Are you interested in a career related to pulmonology?” Introduce and encourage students to explore the following careers:

Pulmonary function technicians assist in performing diagnostic tests to evaluate lung function under the supervision of pulmonologists or respiratory therapists.

Pulmonary function technologists conduct diagnostic tests to assess lung function and assist pulmonologists in diagnosing respiratory conditions.

Pulmonologists specialize in the diagnosis and treatment of respiratory system disorders, such as asthma, COPD, and lung cancer.

Respiratory therapists assist patients with breathing difficulties, administer respiratory treatments, and manage ventilator support.

