

# Respiratory System NOTES



The function of the respiratory system is to \_\_\_\_\_  
\_\_\_\_\_.



Respiration is \_\_\_\_\_.



We breathe in \_\_\_\_\_ through our nose. We breathe out \_\_\_\_\_,  
\_\_\_\_\_ and \_\_\_\_\_ as waste.

## Structures and Functions of the Respiratory System In Order

1. Air enters the \_\_\_\_\_ through the nostrils. The nasal cavities located behind the nose \_\_\_\_\_, \_\_\_\_\_, and \_\_\_\_\_ the air.
2. The \_\_\_\_\_, \_\_\_\_\_, and \_\_\_\_\_ air then goes through the throat to the larynx. If something irritates the nose it results in a \_\_\_\_\_.
3. The \_\_\_\_\_ is a flap of skin that makes sure that no food can enter the respiratory system when swallowing.
4. The larynx houses structures called the \_\_\_\_\_, which are flaps of tissue responsible for producing sound when air is forced through them.
5. The \_\_\_\_\_ is small tube that is built from rings of cartilage. The cartilage is held together by smooth muscle which allows the trachea to increase or decrease in size. If dust particles make it past the nose to irritate the trachea, then you will \_\_\_\_\_.
6. The trachea branches into two tubes just before it enters the lungs. These tubes are called the left and right \_\_\_\_\_. These branch out even more into smaller tubes called \_\_\_\_\_.
7. These branches finally end in grape-like structures called the \_\_\_\_\_.
8. These are the **functional unit of the lung**. The \_\_\_\_\_ is where gas exchange actually occurs!!!

# ALVEOLI STRUCTURE

As you can see from the diagram, the alveoli are surrounded by tiny blood vessels called \_\_\_\_\_.

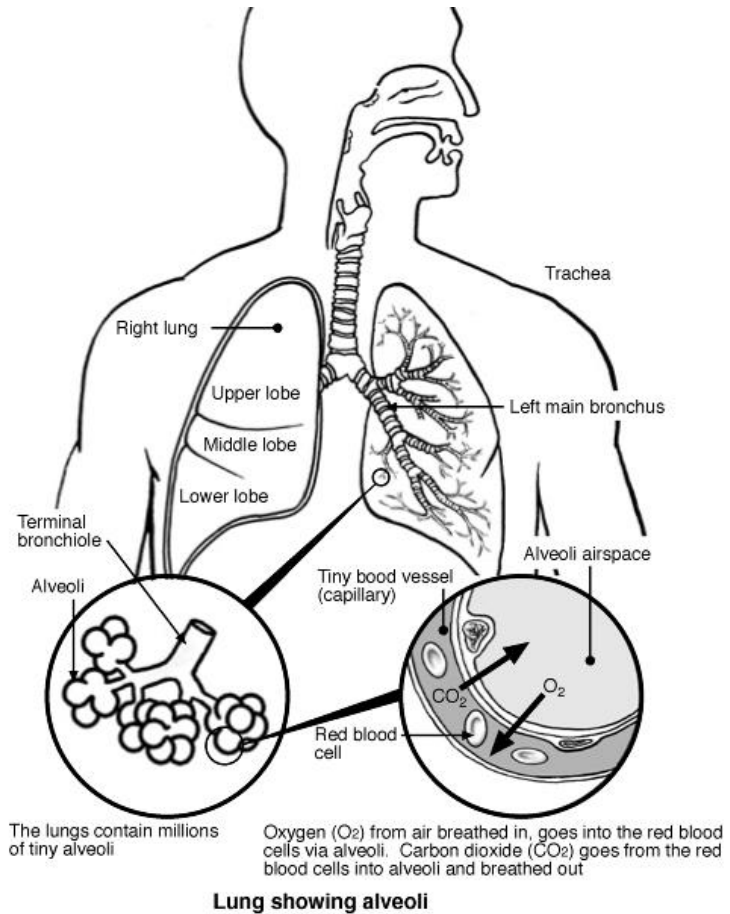
In our last unit, we learned that capillaries \_\_\_\_\_

\_\_\_\_\_ arteries and veins. We also learned that arteries carry oxygen \_\_\_\_\_

\_\_\_\_\_ blood and veins carry oxygen \_\_\_\_\_

\_\_\_\_\_ blood, or blood that has lots of carbon dioxide in it. The \_\_\_\_\_ surround the \_\_\_\_\_

\_\_\_\_\_ and exchange the carbon dioxide from veins for oxygen. These capillaries connect back up with the Pulmonary vein so the heart can pump oxygenated blood to the rest of the body.



**Extension Question:** How are your respiratory system and your circulatory system related?

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## *Fun Facts:*

1. You breathe in about **6 liters** of air **every minute!**
2. The nose produces a fresh batch of mucus **every 20 minutes!** That's **twice** per class period! Where does the OLD mucus go???? \_\_\_\_\_

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# Respiratory System NOTES



The function of the respiratory system is to get get O<sub>2</sub> into the blood and get rid of CO<sub>2</sub>, H<sub>2</sub>O, & heat.



Respiration is the energy releasing process fueled by oxygen.



We breathe in oxygen through our nose. We breathe out heat, carbon dioxide and water as waste.

## Structures and Functions of the Respiratory System In Order

1. Air enters the nose through the nostrils. The nasal cavities located behind the nose warms, filters, and moistens the air.
2. The warmed, filtered, and moistened air then goes through the throat to the larynx. If something irritates the nose it results in a sneeze.
3. The epiglottis is a flap of skin that makes sure that no food can enter the respiratory system when swallowing.
4. The larynx houses structures called the vocal chords, which are flaps of tissue responsible for producing sound when air is forced through them.
5. The trachea is small tube that is built from rings of cartilage. The cartilage is held together by smooth muscle which allows the trachea to increase or decrease in size. If dust particles make it past the nose to irritate the trachea, then you will cough.
6. The trachea branches into two tubes just before it enters the lungs. These tubes are called the left and right bronchi. These branch out even more into smaller tubes called bronchioles.
7. These branches finally end in grape-like structures called the alveoli.
8. These are the **functional unit of the lung**. The alveoli is where gas exchange actually occurs!!!

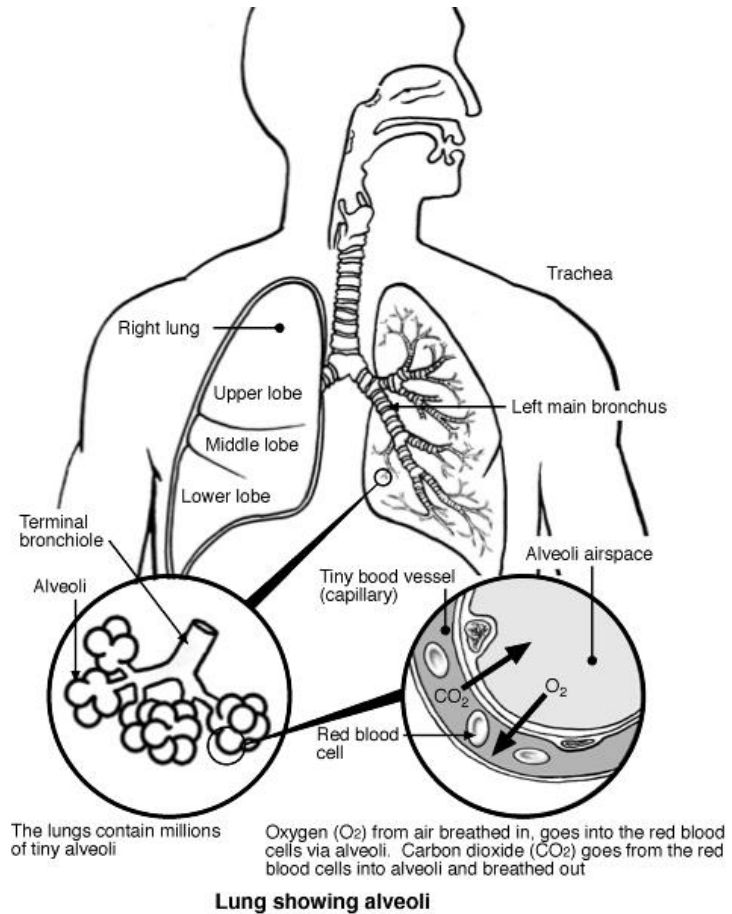
## ALVEOLI STRUCTURE

As you can see from the diagram, the alveoli are surrounded by tiny blood vessels called

### capillaries.

In our last unit, we learned that capillaries

connect arteries and veins. We also learned that arteries carry oxygenated blood and veins carry deoxygenated blood, or blood that has lots of carbon dioxide in it. The capillaries surround the alveoli and exchange the carbon dioxide from veins for oxygen. These capillaries connect back up with the Pulmonary vein so the heart can pump oxygenated blood to the rest of the body.



**Extension Question:** How are your respiratory system and your circulatory system related?

**The respiratory system brings O<sub>2</sub> to the blood & gets rid of CO<sub>2</sub> wastes. The circulatory system carries O<sub>2</sub> to cells & brings CO<sub>2</sub> to the lungs to be exhaled.**

### *Fun Facts:*

1. You breathe in about **6 liters** of air **every minute!**
2. The nose produces a fresh batch of mucus **every 20 minutes!** That's **twice** per class period! Where does the OLD mucus go???? **Down the back of the throat to the stomach or out the nose into a tissue.**