Write It! Station Directions

It is recommended that you have completed at least two of the following stations before working at this station.

- Read It!
- Explore It!
- Watch It!
- Research It!

Answer each of the task card questions on the lab sheet in complete sentences.

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Explain the respiratory system including the structures involved and the function of the system.

How does the respiratory system work directly with the circulatory system?

Plants give off oxygen as part of photosynthesis. Explain the impact of this process to humans.
Assess It! Station Directions

It is recommended that you have completed at least two of the following stations before working at this station.
- Read It!
- Explore It!
- Watch It!
- Research It!

Each member will answer the questions from the task cards on the lab sheet in the Assess It! section.

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Which is not a part of the respiratory system?

A. Alveoli  
B. Lungs  
C. Trachea  
D. Esophagus

How does the diaphragm aide in breathing?

A. When the diaphragm contracts, the lungs expand and allow oxygen to enter  
B. When the diaphragm relaxes, the lungs expand and allow oxygen to enter  
C. The diaphragm does not work with the respiratory system

How do plants benefit from human respiration?

A. Plants need oxygen to survive  
B. Plants need water to survive  
C. Plants need carbon dioxide to survive  
D. Plants need nitrogen to survive
The Respiratory System works directly with the ______ system to exchange oxygen and carbon dioxide in the lungs.

A. Muscular
B. Endocrine
C. Circulatory
D. Digestive
Read It! Station Directions

Each member of the group will read the passage and answer the questions from the task cards on the lab sheet in the Read It! section.

It is important to remember that the answers will come directly from the reading passage.
Bronchitis

Bronchitis is a respiratory disease in which the mucous membrane in the lungs' bronchial passages becomes inflamed. As the irritated membrane swells and grows thicker, it narrows or shuts off the tiny airways in the lungs, resulting in coughing spells that may be accompanied by phlegm and breathlessness.

The disease comes in two forms: acute (lasting from one to three weeks) and chronic (lasting at least 3 months of the year for two years in a row). People with asthma may also have asthmatic bronchitis, inflammation of the lining of the bronchial tubes.

Acute bronchitis may be responsible for the hacking cough and phlegm production that sometimes accompany an upper respiratory infection. In most cases, the infection is viral in origin, but sometimes it's caused by bacteria. If you are otherwise in good health, the mucous membrane should return to normal after you've recovered from the initial lung infection, which usually lasts for several days. Chronic bronchitis is a serious long-term disorder that often requires regular medical treatment.

If you are a smoker and come down with acute bronchitis, it will be much harder for you to recover. Every cigarette damages the tiny hair-like structures in your lungs, called cilia, that are responsible for brushing out debris, irritants, and excess mucus. If you continue smoking, the damage to these cilia prevents them from functioning properly, thus increasing your chances of developing chronic bronchitis.

In some heavy smokers, the mucous membrane lining the airways stays inflamed and the cilia eventually stop functioning altogether. Clogged with mucus, the lungs are then vulnerable to viral and bacterial infections, which over time distort and permanently damage the lungs' airways. This permanent condition is called COPD (chronic obstructive pulmonary disease). Your doctor can perform a breathing test, called spirometry, to see if you have developed COPD. Chronic bronchitis is one of two main types of a COPD. The other main form of COPD is emphysema. Both forms of COPD make it difficult to breathe.

Acute bronchitis is very common. The disorder often can be treated effectively without professional medical assistance. However, if you have severe or persistent symptoms or high fever, or if you cough up blood, you should see your doctor right away.
What does the word ‘acute’ mean from the second paragraph?

A. Extended  
B. Small and cuddly  
C. Very large  
D. Short amount of time

Why do smokers have a more difficult time getting rid of bronchitis?

A. Their lungs shrink over time  
B. They cough more than other people  
C. Smoking damages the cilia in the respiratory system  
D. Smokers are only able to access one lung

What are some symptoms of acute bronchitis?

A. Stomachache and vomiting  
B. High fever and stomach pain  
C. Coughing up phlegm and difficulty breathing  
D. Fever and chills

Which is the most common respiratory issue?

A. Chronic bronchitis  
B. Acute bronchitis  
C. COPD  
D. Emphysema
Watch It! Station Directions

Each member of the group will go to the website listed on task card #1

Complete the task cards in order.

Every student will answer the questions from the task cards on the lab sheet in the Watch It! section of the lab sheet.
1. Click Play on the video.
2. Answer questions from cards #2-4 on your lab sheet.

YouTube: https://goo.gl/ZgR4iw
G Drive: https://goo.gl/KnRLwg
URL is case-sensitive

Explain what the process of respiration is.

List at least 6 of the organs or structures which exist in the respiratory system.

When we exercise why do we breath harder?
Research It! Station Directions

Each member of the group will go to the website listed on task card #1.

Complete the task cards in order.

Every student will answer the questions from the task cards on the lab sheet in the Research It! section.
1. Go to http://goo.gl/CHwpSu

Answer the following questions on your lab sheet.
1. Read the first paragraph and summarize the structure (parts) and function of the Respiratory System.

1. Scroll towards the bottom and summarize the transportation of gases in the human body.
Explore It! Station Directions

One member of the group will read the task cards in order. The group will be responsible for completing each of the tasks that are being read.

Each member of the group will then write their conclusions down on the lab sheet in the Explore It! section.
The **Respiratory System** is responsible for exchanging gases in the body. Oxygen is brought in and carbon dioxide is removed.

Some of the main organs and components are listed on the following cards. Use diagram #2 to locate them.

1. **Lungs** – the main organ in the system. Each lung expands and contracts as gases are brought in and out of the body.
2. **Larynx** – also called the voice box. It allows the body to produce sounds and speech.
3. **Trachea** – 5-inch long tube that allows air to easily enter and exit the lungs.
1. **Bronchi** - these tubes split off from the trachea and head towards each of the two lungs.

2. **Alveoli** - are tiny sacs within our lungs that allow oxygen and carbon dioxide to move between the lungs and bloodstream.

3. **Diaphragm** - muscle below the lungs. When it contracts the lungs expand allowing air to flow into the lungs.
Use the model to answer the following questions.

Pick up the model and **lightly** pull out and push in the large balloon covering the bottom of the cup. **The model is delicate and can break easily if mishandled. Please use care.**

1. What happens as you manipulate the balloon?
2. If these were real lungs what gases would be entering and exiting the system?
3. On your lab sheet describe the part of the model that represents each component from the system.
Illustrate It! Station Directions

Each member of the group will draw a quick sketch on the lab sheet that shows they understand the concept being taught.

Use the colored pencils and markers that are provided.

The directions for the sketch are provided on the task card at the table.
Illustrate It! Station Directions

1. Use the colored pencils to draw a sketch of the Respiratory System.

2. You must label the **lungs, oral cavity, nasal cavity, larynx, trachea, bronchus, bronchioles, and diaphragm.** (You may use the diagram at the table for help)

3. Off to the side of the diagram list the specific function of the respiratory system.
Organize It! Station Directions

It is recommended that you have completed at least two of the following stations before working at this station.
- Read It!
- Explore It!
- Watch It!
- Research It!

Use the 6 labels and place them into pairs at the correct place on the diagram. Use the arrows to point to the part.

Have your teacher check your work and sign off on your lab sheet.

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<table>
<thead>
<tr>
<th><strong>Lungs</strong></th>
<th>The main organ in the respiratory system. Gases are exchanged.</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Alveoli</strong></td>
<td>Tiny sacs that allow oxygen and carbon dioxide to be exchanged in the lungs</td>
</tr>
<tr>
<td><strong>Bronchus</strong></td>
<td>Small tubes that branch off from the trachea</td>
</tr>
<tr>
<td><strong>Trachea</strong></td>
<td>5” tube that allows air to flow clearly to and from the lungs</td>
</tr>
<tr>
<td><strong>Nasal Cavity</strong></td>
<td>Oxygen can enter the human body through this passage</td>
</tr>
<tr>
<td><strong>Diaphragm</strong></td>
<td>Contracts to allow the lungs to expand and let air into them</td>
</tr>
</tbody>
</table>
Respiratory System

Name__________________________

Explore It!

Task Card #1
1. 
2. 

Task Card #6:
2. 
3. Lungs – 
   Bronchi or Bronchus – 
   Trachea – 
   Diaphragm – 

Write It!

Task Card #1:

________________________________________________________________________
________________________________________________________________________
________________________________________________________________________
________________________________________________________________________

Task Card #2:

________________________________________________________________________
________________________________________________________________________
________________________________________________________________________
________________________________________________________________________

Task Card #3:

________________________________________________________________________
________________________________________________________________________
________________________________________________________________________
________________________________________________________________________

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Watch It!

Task Card #2:


Task Card #3:


Task Card #4:


Oxygen and carbon dioxide to be exchanged in the lungs. The main organ in the respiratory system is the lungs, where gases are exchanged. Nasal Cavity allows oxygen to enter the human body through this passage. Trachea is a 5” tube that allows air to flow clearly to and from the lungs. Bronchus are small tubes that branch off from the trachea. Alveoli are tiny sacs that allow oxygen and carbon dioxide to be exchanged in the lungs. Diaphragm contracts to allow the lungs to expand and let air into them.