

## Honors Anatomy Lab- Lung Model

Using the provided materials, you will make a model of the human lung. You will document which parts of your model represent the different structures, organs, and muscles associated with the respiratory system. Finally, you will use your model to demonstrate and explain the 2 parts of ventilation..

Using the information you have gathered through your model, you will create and complete a lab report.

**Materials:**

- 1- 6" plastic tubing, 1-rubber glove, 1-silly putty, 1-T-connector, 1- 2 liter bottle,
- 2 round balloons

**Day 1**

1. Fill out the table indicating which part from your model represents the given structure, organ, or muscle associated with the respiratory system. The list of parts is located in the Materials above.

Structure, Organ, Muscle of the Respiratory System	Part of Model
Diaphragm	
Lungs	
Primary bronchi	
Thoracic cavity	
Trachea	

2. List the steps your group used to assemble your lung model.
3. Take a picture of your lung model and insert it into your group's lab report.

**Day 2**

**Analysis Questions**

1. List the 2 principles that govern air flow during ventilation.
2. Using your model, answer the following question- "**What will happen to the lungs when you contract the diaphragm of your model?**" Create a **CLAIM**. The **EVIDENCE** will come from 2 pictures ( a BEFORE and an AFTER) that you take to support your claim. Finally, based on your knowledge about the process of ventilation, provide the detailed **REASON** as to why your lungs did what they did.

Guiding Question:		
Claim:		
Evidence: (BEFORE)	(AFTER)	Reason / Cause (Knowledge of Ventilation)

3. Name the part of ventilation that you performed by contracting the diaphragm. \_\_\_\_\_
4. Which group of muscles are missing from your model that assists the diaphragm in the part of ventilation from Question 3?
5. Insert your picture of the diaphragm contracting. On this picture, illustrate the 2 principles that govern air flow during **THIS** part of ventilation.
6. Using your model, answer the following question- "**What will happen to the lungs when you relax the diaphragm of your model?**" Create a **CLAIM**. The **EVIDENCE** will come from 2 pictures ( a BEFORE and an AFTER) that you take to support your claim. Finally, based on your knowledge about the process of ventilation, provide the detailed **REASON** as to why your lungs did what they did.

Guiding Question:		
Claim:		
Evidence: (BEFORE)	(AFTER)	Reason / Cause (Knowledge of Ventilation)

7. Name the part of ventilation that you performed by relaxing the diaphragm. \_\_\_\_\_
8. Insert your picture of the diaphragm relaxing. On this picture, illustrate the 2 principles that govern air flow during **THIS** part of ventilation.