

## Gummy Bear Lab: Organization of the Body

**INTRODUCTION:** This activity will help you to learn the vocabulary describing the human body. This vocabulary consists of directional terms, body sections and planes and body cavities. All the terms are used relative to the anatomical position, which provides us with reference for describing the body. This means the person is standing and facing the observer. The arms are at the sides of the body with the palms facing forward.

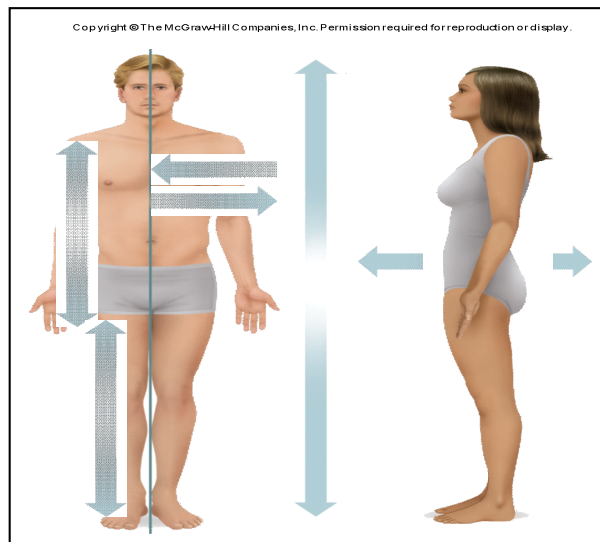
**PURPOSE:** To learn and understand the terminology used to describe the organization of the human body.

**MATERIALS:** gummy bears, razor or knife, note cards for labeling, anatomical structures

### PROCEDURE:

**PART I: Directional terms.** This vocabulary consists of directional terms named because they point out the location of a body part. There are six pairs used, each term in a pair is the opposite.

- FILL IN** the diagram onto your paper and label each diagram with the appropriate directional terms given above. Include the **midline**.

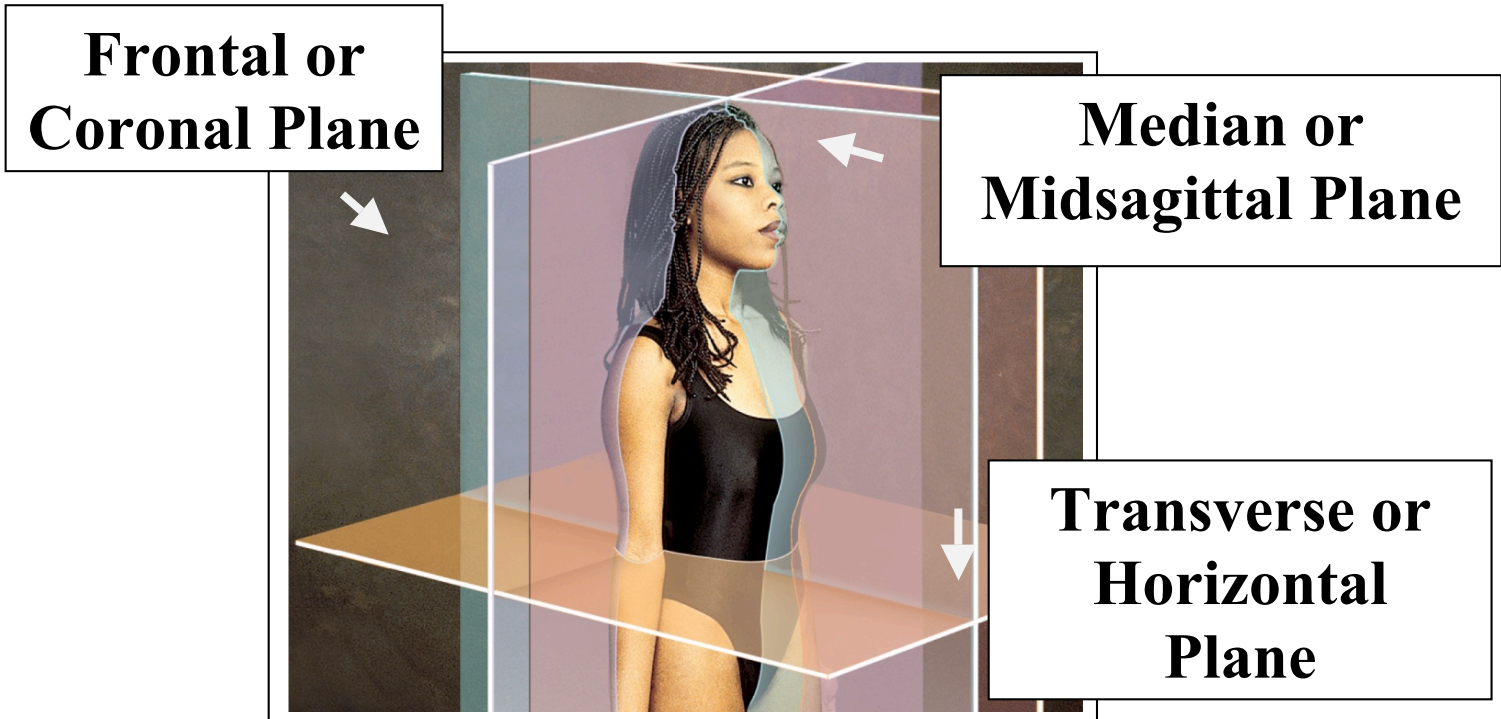


- Write a statement** for each of the six pairs of directional terms. The statements should show the relationship of each pair.

<b>Proximal-Distal</b>	<b>Example:</b> "The wrist is <i>distal</i> to the elbow, but the shoulder is <i>proximal</i> to the elbow."
<b>Ventral-Dorsal</b>	
<b>Medial-Lateral</b>	
<b>Anterior-Posterior</b>	
<b>Superior-Inferior</b>	
<b>Right-Left</b>	

**PART II: Body sections and planes.** The word anatomy is derived from the Greek prefix “meaning to cut up”. The sections are planes produced in the body to reveal its internal anatomy. There are three main sections:

**Median/Midsagittal      Frontal or Coronal      Transverse or Horizontal**

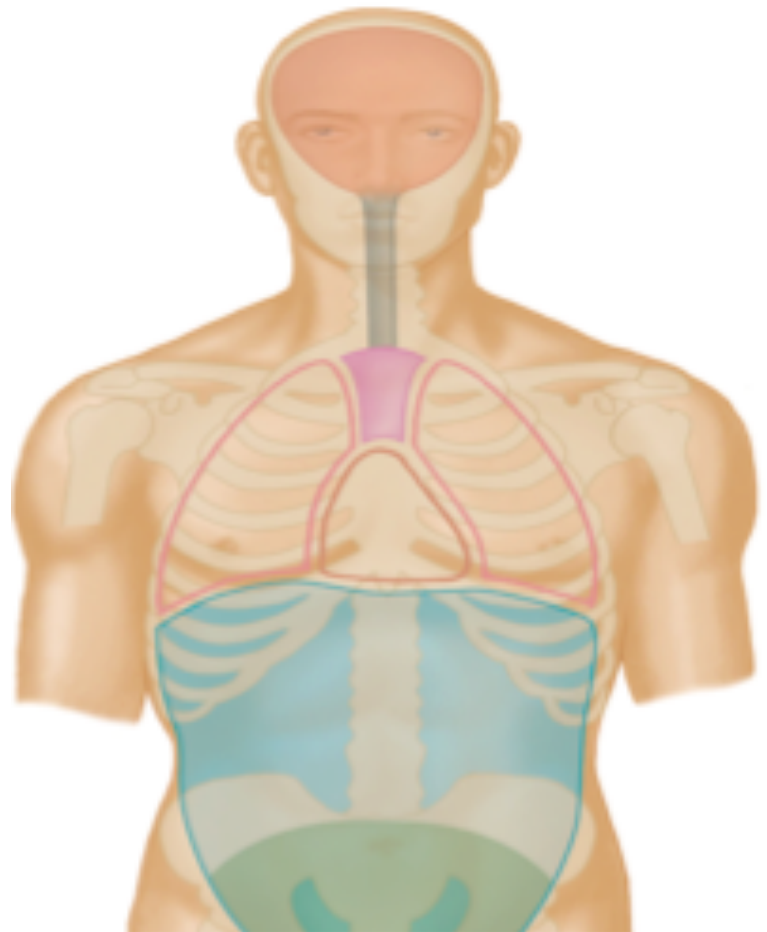
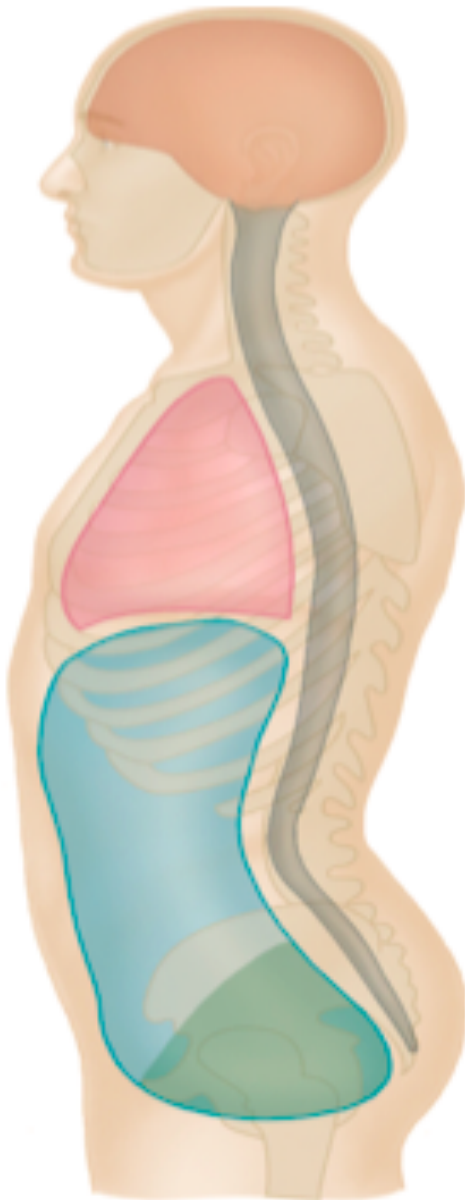


<p>Take one gummy bear and a blade. <b>Cut</b> through the midsagittal plane of the bear. <b>Draw</b> a picture of the two parts of the gummy bear after it has been cut and <b>label</b> and <b>describe</b> cut</p>	<p style="text-align: center;"><b>Diagram A-Median/Midsagittal.</b></p> <p><b>Describe a Median/Midsagittal Dissection:</b></p>
<p>Take a second gummy bear. Now make a <b>cut</b> through the frontal or coronal plane. <b>Draw</b> this diagram and <b>label</b> and <b>describe</b> cut</p>	<p style="text-align: center;"><b>Diagram B-Frontal/Coronal.</b></p> <p><b>Describe a Frontal/Coronal Dissection:</b></p>
<p>Take a third gummy bear and cut a transverse or horizontal plane. <b>Draw</b> this diagram and <b>label</b> and <b>describe</b> cut</p>	<p style="text-align: center;"><b>Diagram C-Transverse/Horizontal</b></p> <p><b>Describe a Transverse/horizontal Dissection:</b></p>

**PART III: Body Cavities.** There are two principle body regions and these are broken up into smaller cavities.

1.) Axial portion	2.) Appendicular portion
<ul style="list-style-type: none"> <li>• Cranial cavity</li> <li>• Spinal (vertebral) cavity</li> <li>• Thoracic cavity                             <ul style="list-style-type: none"> <li>▪ Right and left pleural cavities</li> <li>▪ Pericardial cavity</li> </ul> </li> <li>• Abdominopelvic cavity                             <ul style="list-style-type: none"> <li>▪ Abdominal cavity</li> <li>▪ Pelvic cavity</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>• Limbs                             <ul style="list-style-type: none"> <li>○ Arms</li> <li>○ Legs</li> </ul> </li> </ul>

2.) Label each using the terms above. You should also include the **diaphragm**



2. Write the names of each structure below and **identify** which principle body cavity each would be found in and which sub cavity each would be found in.

	<b>Principle Body Direction</b> (Choose axial or appendicular)	<b>Cavity</b>
<b>Trachea</b>	<i>axial portion</i>	<i>thoracic cavity</i>
<b>Brain</b>		
<b>Stomach</b>		
<b>Lungs</b>		
<b>Liver</b>		
<b>Bladder</b>		
<b>Spinal cord</b>		
<b>Heart</b>		
<b>Ovary</b>		
<b>Uterus</b>		
<b>Esophagus</b>		
<b>Small intestines</b>		
<b>Pancreas</b>		

**PART IV: Practice**

1. **FILL OUT EACH** of the following statements on your own paper and fill in the appropriate word choice.

**Superior or Inferior**

- a. Abdomen \_\_\_\_\_ vs. pectoral region \_\_\_\_\_
- b. Oral region \_\_\_\_\_ vs. nasal region \_\_\_\_\_
- c. Cervical region \_\_\_\_\_ vs. tail bone \_\_\_\_\_

**Anterior/ventral or posterior/dorsal**

- d. Nose \_\_\_\_\_ vs. ear \_\_\_\_\_
- e. Knuckles \_\_\_\_\_ vs. palm \_\_\_\_\_
- f. Heel \_\_\_\_\_ vs. toes \_\_\_\_\_

**Medial or Lateral**

- g. Middle toe \_\_\_\_\_ vs. big toe \_\_\_\_\_
- h. Orbital region \_\_\_\_\_ vs. ear \_\_\_\_\_

**Proximal or Distal**

- i. Fingers \_\_\_\_\_ vs. carpal region \_\_\_\_\_
- j. Upper arm \_\_\_\_\_ vs. clavicle \_\_\_\_\_
- k. Lower leg \_\_\_\_\_ vs. thigh \_\_\_\_\_

**PART V: Write a summary conclusion** about the organization of the human body and anatomical terminology. Describe what you learned and how these terms will be important in your study of anatomy and physiology. – **TYPE UP!**