

## Pig Dissection

You will watch 4 videos in preparation for this Dissection. You will watch 1) Securing Pig to Tray, 2) Cuts for the Thoracic Cavity, 3) Removal of Connective Tissue, and 4) Cardiovascular System Identification

Complete the Lab Write Ups by filling in blanks within the procedure.

**Title:** The Cardiovascular System Lab

**Materials:** shirt, gloves, paper towels, scalpel, forceps, scissors, probes, pig, colored pencils, rubber bands, dissection pins

### Securing Pig to the Tray

**Procedure:**

1. Take the pig out of your bag.
2. Begin securing the pig to the tray by wrapping and tying string around one \_\_\_\_\_ . (Wrap the string around the forelimb a few times)
3. After tying one forelimb, wrap the string underneath the \_\_\_\_\_ .
4. Spread apart the chest cavity of the pig and wrap and tie string around the opposite forelimb. (Spread the chest cavity as wide as you can before tying the last forelimb)
5. Repeat Steps 2-4 for securing the hind legs of the pig.

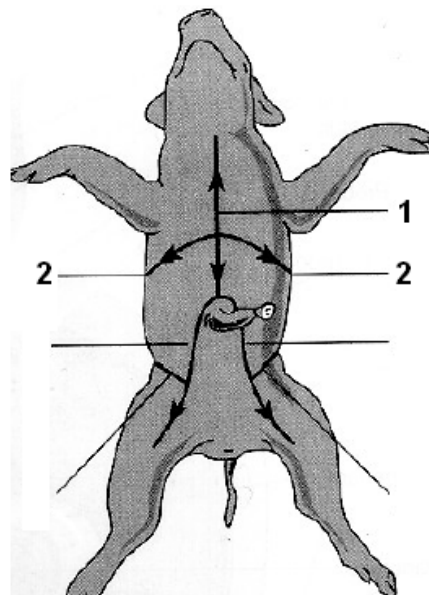
**\*\*Note- DO NOT CUT THE STRING WHEN TIME TO PUT AWAY THE PIG**

### Cuts for the Thoracic Cavity

**Procedure:**

1. Secure the fetal pig to the tray with the ventral side (belly side) up.
2. Locate the \_\_\_\_\_ **process** of the sternum by tracing the bottom of the rib cage towards the head of the pig until you come to where the ribs meet. You should be able to feel a bump or point.
3. Locate a \_\_\_\_\_ spot just below the xiphoid process and use the pointed end of your scissors to puncture the soft spot. **DO NOT PUSH THE SCISSORS TO DEEP OR YOU WILL DAMAGE INTERNAL ORGANS.**
4. Once you have punctured the soft spot, lift and cut through the sternum to just below the \_\_\_\_\_ (1).

**It is important to lift and cut so you do not damage internal organs.**



5. Carefully spread apart the walls of the thoracic cage and, with your pinky, locate the \_\_\_\_\_, which is a dome-shaped muscle.
6. Make a cut through the ribs, just superior to the diaphragm, laterally and posteriorly toward the \_\_\_\_\_ column on both sides (2). As you are cutting, look inside the thoracic cavity and make sure you are not cutting the \_\_\_\_\_, which are the primary organs of the respiratory system. Protect the lung from being cut by using your \_\_\_\_\_ to cover the lung. Make small cuts towards the vertebral column. Be sure to \_\_\_\_\_ and cut.
7. Repeat Steps 5 and 6 for the other side of the rib cage.

### Removal of Connective Tissue

#### Procedure:

1. Use a tool called the \_\_\_\_\_ probe to help you begin removing connective tissue. Connective tissue will be clear and flimsy. **YOU DO NOT WANT TO JUST PULL THE THORACIC CAVITY APART!!**
2. Remove circular structures that are \_\_\_\_\_ nodes.
3. Carefully cut and remove the muscle that surrounds the \_\_\_\_\_, which is the structure of the respiratory system that houses the vocal cords.
4. Using your forceps, carefully remove the \_\_\_\_\_ gland, which is a gland that is part of the lymphatic system, that sits on top of the heart.
5. To begin the removal of the pericardial sac, lift the pericardial sac with your \_\_\_\_\_ and make a small cut through the sac using scissors.
6. Carefully cut the pericardial sac towards the \_\_\_\_\_ of the heart, where blood vessels enter and exit the heart, and then towards the apex of the heart.
7. Next, peel the pericardial sac off of the heart posteriorly.
8. Completely remove the pericardial sac by lifting the sac with your forceps and cutting the sac off of the back side of the heart with scissors using small \_\_\_\_\_.  
**DO NOT CUT BLOOD VESSELS LOCATED ON THE BACK SIDE OF THE HEART!!**
9. Continue removing connective tissue to isolate blood vessels, such as the aorta.

### Identification of Structures of the Heart

#### Procedure:

1. Use the illustration manual to aid in identifying the structures of the pig cardiovascular system.
2. Once you have removed the pericardial sac from the heart, identify the following structures
3. Identify the following structures externally:
  - **right and left atria\***
  - **right and left ventricle\***
  - **superior and inferior vena cava\***
  - **ascending aorta, aortic arch, descending aorta\***
  - **brachiocephalic artery\***
  - **subclavian artery\***
  - **internal and external jugular vein\***
  - **pulmonary trunk\***
  - **common carotid artery\***
  - **pulmonary artery (may not be visible)**
  - **pulmonary vein (may not be visible)**

(Note- arteries and veins have been color coded for you)

4. Using your pig images manual, pin the structures from procedure #2. Before you will be allowed to move on to the next system, your pinning will need to be checked by the teacher.

