

CKSS Lamb Heart Dissection

Name (s): _____

The heart of a lamb is structurally very similar to human's heart. Dissecting the lambs heart gives you a good idea of what the circulatory systems of humans look like. At the end of the dissection, you will have viewed all of the components of the heart.

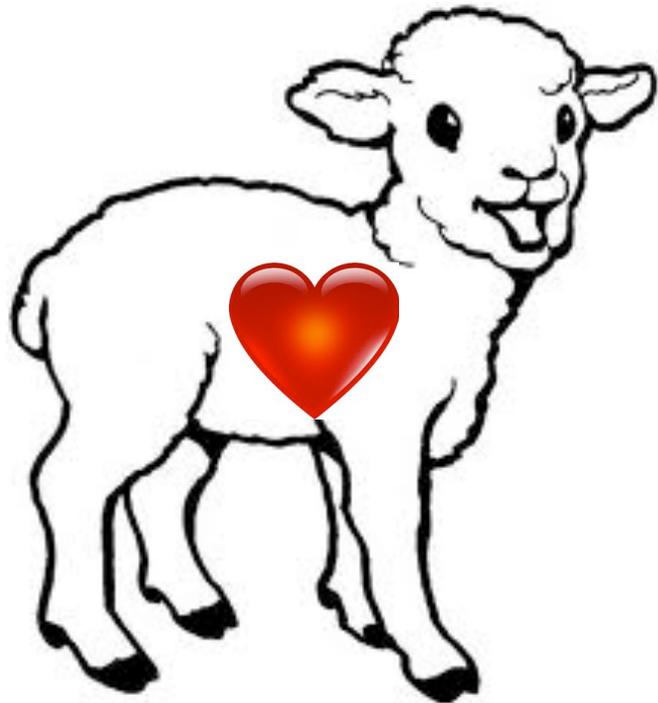
Refer to the appropriate sections of the text book to act as a resource to make your investigation of the heart much richer. (pages 110 -115)

Purpose

To dissect the lambs heart and examine the structures and arrangements of the circulatory system's powerhouse - the heart

Equipment and Materials

- dissection tray
- digital camera / phone with camera
- straws
- scissors
- dissecting pins
- scalpel
- eye protection
- apron
- dissecting gloves
- fresh Lamb's heart



Couple things to keep in mind before we start Dissection

- 1. When using the scalpel or scissors, always cut away from yourself and others.**
- 2. If, at any time, you feel uncomfortable during the dissection, inform your teacher and follow his or her directions.**
- 3. After completing the dissection, dispose of the specimen and other materials as instructed by your teacher. Clean your work area and equipment and return the equipment to its storage area. Wash your hands thoroughly with soap and water after you have finished the dissection.**

Procedure:

1. Dissect the heart to create a cross section that will expose all the parts outlined below to build a power point presentation or a picture documentary of all the components of a heart .
2. This lab will be done in groups of 3 or 4 (Surgeon, Surgeon Assistant, Photographer / Straw Postioner, Scribe/Text Researcher, IT committee (everyone helps put Powerpoint or Keynote presentation)

Part A: Preparation for Dissection

1. Place the heart on the tray in the correct anatomical position - each heart has been pre-sliced to drain the blood. From there is where you begin your dissection and photo shoot using the straws as points to help indicate the specific components of the heart in each slide.
2. Using the probe and forceps, tease away the connective tissue from around the major blood vessels leading to and from the heart. Expose the major blood vessels outside the heart. For the pictures for the major blood vessels put the straw right in the blood vessels (coronary arteries, aorta, pulmonary artery, pulmonary vein, superior vena cava, and inferior vena cava.)
3. Make a diagonal incision through the heart and expose the chambers of the heart. Starting at the right atrium and follow the path of blood through the chambers and major blood vessels attached to the heart. During this dissection you will also expose the tricuspid valve (semi-lunar valve) and bicuspid valve (mitral valve). Indicate each with a straw and take a picture to include in your power-point presentation

Apply and Extend - Preparing Multi-media presentation

For each slide you will have a Title or Question - with a picture or a description (answer to a question) - Content

Slide #1

Title - Lamb Heart's Dissection

Content - Picture of Lamb's heart on dissection tray in correct anatomical position

Slide #2

Title - Pericardium, epicardium and endocardium?

Content - Answer the title question? What is the difference between the pericardium, epicardium and endocardium?

Slide #3

Title - Path blood flows through the heart.

Content- Position the following components of the heart as the blood flows from the vena cava's to the aorta (vena cava, right ventricle, left ventricle, tricuspid valve, bicuspid valve, pulmonary vein, pulmonary artery, lungs, right atrium, left atrium, aorta) - obviously these components are not in the right order except the vena cava and the Aorta

Slide #4

Title - Aorta

Content - Picture of Straw pointing to the Aorta

Slide #5

Title- Superior vena cava and Inferior Vena Cava

Content - With two different color of straws indicate the superior and inferior vena cava - indicate the color of the straws in the title of the slide. Example Inferior Vena Cava (red)

Slide #6

Title - Coronary Artery

Content - Picture of straw pointing to the coronary artery

Slide #7

Title - Myocardial Infarction

Content - Answer the question what is another name for myocardial infarction and how does this phenomenon occur

Slide #8

Title - Arteries, Veins and the exception to the rule

Content - Define what the difference between arteries and vein and also indicate which blood vessels are exception to these definitions

Slide #9

Title - Pulmonary veins and Pulmonary Arteries

Content - Indicate the pulmonary vein and pulmonary artery with 2 different color straws and indicate these colors in the title. Example Pulmonary Vein(red)

Slide #10

Title - Arteries verses Veins

Content - Answer this question - How could you tell the arteries from the veins in the circulatory system?

Slide #11

Title - Right atrium, Right Ventricle, Tricuspid Valve

Content - Indicate the right atrium and ventricle and tricuspid valve with three different color straws. Example Right Atrium (red)

Slide #12

Title - Left atrium, Left Ventricle, Bicuspid Valve

Content - Indicate the left atrium and ventricle and bicuspid valve with three different color straws. Example Left Atrium (red)

Slide #13

Title - Heart Muscle

Content - What is the name of the heart muscle and Which chamber of the heart was most muscular? Explain why.

Slide #14

Title - Final Reflection

Content - Answer the following questions - What did you find during your dissection that was (i) most interesting? (ii) most surprising? (iii) most disturbing?

Either email or bring jump drive to class to hand in assignment - Good Luck and if you have any questions please don't be afraid to ask for help or clarification