**Fetal Pig Organs and Systems Discovery Std 2/Obj 6 Structure and Function of Life**

1. Ventricle Walls – left and right, labeled
   1. Do you see any differences between the left and right ventricle walls?
   2. Why do you think there is a difference? What function do they each serve that would explain this difference?
2. Lungs – tissues
   1. Do you see or feel any difference between the tissue at “A”, compared to other tissues of the fetal pig?
   2. What is this organ? What is its purpose? Why would the tissue of this organ need to be different than other tissues?
3. Diaphragm – muscle tissue
   1. What type of tissue does this appear to be? Why is it located at that position? What is its purpose?
4. Stomach – smooth muscle tissue
   1. Keeping in mind where this is located and what other structures its attached to, what organ do you think this is?
   2. Feel the tissue. What does that tell you about its function?
5. Small Intestine – location
   1. What does the location of this organ tell you about its function?
   2. This is a very long organ – why does it need to be so long?
6. Large Intestine – location
   1. What does the location of this organ tell you about its function?
   2. Where does this organ end? Why does it end there?
7. Spine – shape and tissues
   1. This organ has more than one tissue type. Can you see the different tissues?
   2. Why would it need more than one tissue type? What is the function of each tissue type?
8. Gender
   1. What gender is this fetal pig? How do you know?
9. Muscle – identify
   1. What types of muscle are there?
   2. Label the areas that are muscle tissue.
10. Digestive System – identify
    1. Where does the digestive system begin? Where does it end?
    2. Use the pins to follow the pathway of the digestive system, beginning to end.
11. Mulberry Disease – identify affected tissues
    1. Mulberry heart disease results from a deficiency of Vitamin E in the ration, exacerbated by low methionine and cysteine levels and high levels of dietary fat. Clinical signs of the disease occur in the hepatocytes, skeletal muscle and cardiac muscle cells. The syndrome develops as a result of congestive heart failure, coupled with hydropericardium. Affected pigs are anorexic and depressed and may show cyanosis, lethargy, and/or dejection. Muscle tremor may occur, especially at the shoulders. There may be stiffness, a limp or recumbency. Mortality is usually 100%. Sudden death is common.
    2. Identify the tissues and organs that would be affected by this disorder and mark them with the pins.
12. Porcine Reproductive and Respiratory Syndrome (PRRS) – identify tissues
    1. PRRS virus targets macrophages in the lungs, leaving the respiratory system highly susceptible to common viral and bacterial pathogens. The virus is spread by nasal secretions, saliva, feces, urine, semen, movement of carrier pigs, airborne transmission (up to 2 miles) and contaminated boots and clothing. Pigs infected with PRRS virus show systemic signs of disease, including fever and reduced appetite. Their respiratory rate may increase, but coughing is not typical. A decrease in thriftiness and increase in mortality is common.
    2. Identify the tissues and organs that would be affected by this disorder and mark them with the pins.

