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| ***Fetal Pig Dissection*** | http://www.biologyjunction.com/pig2.gif |

***Background:***Mammals are vertebrates having **hair** on their body and **mammary glands** to nourish their young. The majority are **placental mammals** in which the developing young, or **fetus**, grows inside the female's **uterus** while attached to a membrane called the **placenta**. The placenta is the source of food and oxygen for the fetus, and it also serves to get rid of fetal wastes. The dissection of the fetal pig in the laboratory is important because pigs and humans have the same level of metabolism and have similar organs and systems. Also, fetal pigs are a byproduct of the pork food industry so they aren't raised for dissection purposes, and they are relatively inexpensive.

***Objectives: ***

* Identify important external structures of the fetal pig.
* Identify major structures associated with a fetal pig's digestive, respiratory, circulatory, urogenital, & nervous systems.
* Compare the functions of certain organs in a fetal mammal with those of an adult mammal

**\*\*\*Wear your lab apron and eye cover at all times. Watch your time and be sure to clean up all equipment and working area each day before leaving.**

***Day 1 - External Anatomy  ***

1. Lay the pig on its side in the dissecting pan and locate dorsal, ventral,& lateral surfaces. Also locate the anterior and posterior ends.
2. A fetal pig has not been born yet, but its approximate age since conception can be estimated by measuring its length. Measure your pig's length from the tip of its snout to the base of its tail and record this on your hand-in.

The period of gestation for pigs is 112- 115 days and each female may produce a litter of 7-12 . As development proceeds, the pig embryos get longer, so an approximate age can be calculated from the length

11 mm 21 days 17 mm 35 days 2.8 cm 49 days 4.0 cm 56 days 22cm 100 days 30 cm birth

1. Examine the pig's head. Locate the eyelids and the external ears or **pinnae**. Find the external nostrils.
2. Study the pig's appendages and examine the pig's toes. Count and record the number of toes and the type of hoof the pig has.
3. Locate the **umbilical cord**. With scissors, cut across the cord about 1 cm from the body. Examine the 3 openings in the umbilical cord. The largest is the umbilical vein, which carries blood from the placenta to the fetus. The two smaller openings are the umbilical arteries which carry blood from the fetus to the placenta.
4. Lift the pig's tail to find the anus. Study the ventral surface of the pig and note the tiny bumps called **mammary papillary**. These are present in both sexes. In the female these structures connect to the mammary glands.
5. Determine the sex of your pig by locating the urogenital opening through which liquid wastes and reproductive cells pass. In the male, the opening is on the ventral surface of the pig just posterior to the umbilical cord. In the female, the opening is ventral to the anus. Record the sex of your pig.
6. Carefully lay the pig on one side in your dissecting pan and cut away the skin from the side of the face and upper neck to expose the **masseter muscle** that works the jaw, **lymph nodes**, and **salivary glands**. Label these on your hand-in.
7. With scissors, make a 3-cm incision in each corner of the pig's mouth. Your incision should extend posteriorly through the jaw.
8. Spread the jaws open and examine the tongue.
9. Observe the **palate** on the roof of the mouth. The anterior part of the palate is the hard palate, while the posterior part is the soft palate.
10. Locate the **epiglottis,** a cone-shaped structure at the back of the mouth. Above the epiglottis, find the round opening of the **nasopharynx**. This cavity carries air from the nostrils to the **trachea**, a large tube in the thoracic which supplies air to the lungs.
11. Dorsal to the **glottis**, find the opening to the esophagus. Examine the tongue and note tiny projections called **sensory papillae**.
12. Examine the teeth of the pig. **Canine** teeth are longer for tearing food, while **incisor** are shorter and used for biting. Pigs are **omnivores,** eating plants and animals.
13. Label the drawing of the inside of the pig's mouth.
14. Clean up your materials and work area. Wrap the pig in damp paper towels and put it in a zip-lock plastic bag. Obtain a piece of masking tape and label your bag with your names. Return your lab equipment and pig to the supply cart and then thoroughly wash your hands with soap**.**