

Vertebrate Anatomy Pre-lab. Due at the start of lab. (Pages 159-176)

Name _____ GSI & Sect # _____ Station # _____

AT THE END OF EACH LAB IS A REVIEW AND A CHART THAT YOU SHOULD FILL OUT.

1. Define the following terms.

Dorsal:

Bilateral symmetry:

Oral surface:

2. In the following diagram of a rat label the following planes: sagittal, frontal and transverse. Also indicate the following axes: dorsiventral, transverse and longitudinal (see lab manual, p.155-160).



3. For a rat, outline the passage of food from the mouth out to the anus.

4. Does a rat have a closed or open circulatory system? Explain your answer.

Pre-lab continued on the other side.

5. Trace the movement of an oxygen molecule from the lungs of a rat into its left toe. Cellular respiration reduces the O_2 to water (in the mitochondria of the rat's left toe) and during CO_2 becomes produced. Trace the movement of a CO_2 molecule from the left toe to the lungs of a rat. (Note that this movement occurs in the circulatory system). Be sure to include all four heart chambers, all the major blood vessels that enter and leave the heart, and all four heart valves—include correct names.

6. How does the heart obtain its nutrients and oxygen? (hint: capillary beds)

7. Outline the flow of urine from the kidney to the urethra in both a male and a female rat.

8. Name at least two glands found in the neck region of a rat.