**BIOL 112 Lab Questions – 11 – Animal Digestive Systems**

1. What other types of animals did you examine? What was different about their digestive systems?
2. Examine the external morphology of your rat, and describe every single thing you see from a structure-function perspective. Use the instructions and questions on page 37 as a guide.
3. Again using your manual as a guide, open your rat and dissect the digestive system. Be sure to note the other structures that you expose, if they are not part of the systems we’ll be dissecting later. **It is absolutely essential to dissect with care!** Don’t cut too deep – you can always deepen a cut. Don’t rip anything, or disrupt other structures. You only get one rat! Describe each part of the digestive system, and comment on the structure-function relationships. Use the instructions in the lab manual and the table on page 45 as a guide.
4. Remove the digestive system as intact as possible – cut the esophagus right where it passes through the diaphragm and the rectum right where it enters the anus. If you can, trim the diaphragm away from the esophagus, and cut the esophagus at the top.
5. Carefully trim away the membranes and attempt to stretch the entire tube its full length – how long is it?
6. Make cross sections of the esophagus, the stomach, the small intestine and the large intestine. Examine under the dissecting microscope.
7. Try to make a thin enough section of the small intestine to examine under the compound microscope. Can you see the epithelial cells? The villi and microvilli?
8. Did the dissection help you to understand the 2-hole tube digestive system? Did it help you gain a better understanding of structure-function relationships?
9. Was this handout, along with your lab manual, helpful in understanding the digestive system of your rat? Would you prefer more directed questions? If so, offer some examples.