LAB 1

EXERCISE 1.6: BASIC DISSECTION TECHNIQUES
EXERCISE 1.7: BODY SYMMETRY, BODY PLANES & BODY REGIONS
EXERCISES 2.1-2.2: CELLS & TISSUES

I. OBJECTIVES AND PREPARING FOR LAB

1. Preparing for Lab:
   a. Carefully read the text associated with the three lab exercises listed above. Be sure to read the introductory pages at the beginning of the chapter as well as the specific experimental procedures.
   b. Familiarize yourself with the terms printed in bold print in the introductory pages and in each specific exercise.

2. Objectives: At the end of this lab, you should be able to do the following:
   a. Demonstrate familiarity with basic dissection tools & techniques
   b. Demonstrate familiarity with terminology used to describe body symmetry, body planes, and body regions of animals
   c. Describe structure and function of and to distinguish between the different types of animal tissues
   d. Demonstrate familiarity with the parts and use of dissecting and compound microscopes.

HELPFUL HINT: WHILE DOING LAB EXERCISES, ANSWER QUESTIONS YOU ENCOUNTER IN THE LAB MANUAL, RECORDING YOUR ANSWERS IN THE SPACE PROVIDED.

II. EXPERIMENTAL PROCEDURES

1. Obtain a compound microscope from the cabinet. This and the dissecting scope with the corresponding number will be your assigned microscopes for the semester and you will be responsible for the proper care and handling of those microscopes while using them. Record your microscope number inside the front cover of your lab manual and tell your lab instructor the number of your microscope so he/she can make a record of that number.

2. With the guidance of your instructor, review the basic dissection techniques listed in Ex. 1.6. When you have reviewed those techniques, complete Ex. 1.7 to familiarize yourself with the terminologies that are typically encountered in dissection instructions to describe body planes and regions.

3. Following the instructions for Ex. 2.1, examine the prepared slides of sea star eggs. You should be able to identify the structures indicated in Fig. 2.1.

4. Following the instructions provided by your instructor, prepare a slide of your cheek cells.

5. Following the instructions for Ex. 2.2, examine the prepared slides of the various types of animal tissues listed below. You should be able to identify the cells and their structures as indicated.
   a. ground bone & components as shown in Fig. 2.7
   b. adipose tissue & components as shown in Fig. 2.8
   c. mammalian blood smear: you should be able to distinguish between red blood cells and white blood cells and know the function of red blood cells and each of the four types of white blood cells shown in Fig. 2.12
   d. skeletal and smooth muscle: you should be able to distinguish between the 2 different muscle types & the components as shown in Fig. 2.13A and Fig. 2.13B
   e. cardiac muscle & components as shown in Fig. 2.13C
   f. nerve cells & components as shown in Fig. 2.15

III. ASSESSMENT

There will not be a quiz on this lab. However, we recommend that you carefully review the terminology, cell types, and cell structures and functions covered during this week’s lab to help you prepare for the upcoming lab practical by attending the Friday open lab session and studying the material outside of class time.