



Name: \_\_\_\_\_

Date: \_\_\_\_\_

Pd: \_\_\_\_\_

Tray #: \_\_\_\_\_

## Sea Star Dissection Lab

### I. Purpose

The purpose of this lab is to observe the structure and function of internal organs of sea star through dissection.

### II. Materials

- 1 sea star
- 1 ruler
- 1 dissection tray
- 1 piece of paper towel
- 1 pair of dissection scissors
- 1 pair of gloves
- 1 pair of forceps
- 1 pair of safety glasses
- 1 bent probe

### III. Procedure

1. Measure the length of the longest arm in centimeters \_\_\_\_\_
2. Look at the ventral side and draw a picture of what you see. Title your diagram "External Starfish Structures" and label the following structures:
  - **tube feet**
  - **mouth**
  - **gills**
3. With the starfish dorsal side up, note the sieve plate.
4. Use scissors to cut off the tip of each arm (about 1.5cm)
5. Cut along the sides of these five arms. Use care not to injure any internal organs!
6. Lift and carefully remove the surface of each arm, loosening the tissue that attaches the soft organs inside.
7. Cut around the "arm pits" and separate the top and bottom layers of the starfish.
8. Draw both halves of your specimen and title them "Internal Starfish Structures" and label the following structures:
  - **stomach** – pouch in the middle of the starfish
  - **digestive glands** – large, dark brown "feathery" looking tissue
  - **gonads** – may be small; under the digestive glands
  - **nerve ring** – under the ring canal
  - **radial nerves** – under the ridged parts along each arm called the ambulacral ridges
  - **ring canal** – just around the mouth
  - **radial canals** – under the ridged parts along each arm called ambulacral ridges
  - **ampulla** – reddish colored tiny bulbs along the sides of each arm

\*\* The nervous system follows the water vascular system. It will be hard to tell them apart, but your diagram can note where they are located.

IV. Data

A. Diagrams - See attached diagrams

B. Observations

Length of the longest arm: \_\_\_\_\_ cm

C. Data Table – n/a

D. Graph – n/a

E. Analysis Questions

1. What is the purpose of the water vascular system?
2. How do the ampulla and tube feet act to make the starfish move?
3. How do the tube feet serve in food taking?
4. How do the tube feet used when sticking to solid objects?

V. Conclusion

*Follow the format from your pink sheet as usual*