

NAME: _____

The External Anatomy of the Crayfish

Prelab Questions:

1. Crayfish belong to the Kingdom _____, the Phylum _____, and the subphylum _____.
2. List three characteristics that all arthropods share.
3. Name two other animals in the same phylum as a crayfish (related).

The Head:

Place the crayfish ventral side up so the mouthparts can be observed. **(Check each box upon completion)**

4. Locate the 1st, 2nd, and 3rd maxillipeds. These appendages are used for manipulating food. (The 3rd maxilliped is the largest and topmost one, the 2nd is underneath, and the 1st is underneath the 2nd)
5. Locate the mandible which lies underneath the maxillipeds. This structure should be hard and difficult to move. The mandible of arthropods opens differently than the jaws of humans.
Describe the difference. _____
6. Locate the two large antennae and the smaller antennules that branch from the base. The antennae are sense organs (touch, taste, equilibrium)
7. Locate the eyes, which extend from two stalks called pedicles.

The Body

8. The body of the crayfish consists of a fused head and thorax: the cephalothorax. The cephalothorax is covered by a thick armor called a carapace. Extending from the carapace is a pointy structure called the rostrum. Locate the cephalothorax and rostrum.
9. The abdomen of the crayfish is segmented and flexible. Bend the abdomen back and forth and observe how each segment moves.
10. Count the number of segments on the abdomen. Hint: bending it will show you where the segments are separated. How many segments are on your crayfish? _____
Compare this number to other crayfish, are they all the same? _____

The Appendages

11. Locate the chelipeds (the claws). Gently manipulate the cheliped to determine the direction in which the appendage can bend. How many joints are there on a single cheliped? _____
12. Cut the end of the cheliped off and use the forceps to find the connective tissue inside. Pulling on this tissue will make the claw open and close. Try it!
13. Behind the cheliped are four pairs of walking legs. How many joints are on each leg? _____
14. Locate the swimmerets (appendages attached to each segment of the abdomen). Are the swimmerets jointed? _____ How many pairs of swimmerets are there? _____
15. The last segment of the abdomen (the 7th segment) is called the telson, and it is specialized for swimming. Locate the two uropods extend from either side of the telson.

Determining the Sex of Your Crayfish

16. Look at the first pair of swimmerets on your crayfish. If these swimmerets are considerably larger and stiffer than the other swimmerets, you have a male. If the first swimmerets are about the same size as the others, your crayfish is a female. What is the sex of your crayfish? _____

17. Measure the length of your crayfish and compare it to other crayfish in the room to complete the table.

Female Crayfish (length in cm)	Male Crayfish (length in cm)
Average:	Average:

Based upon your data, which sex of crayfish is the largest? _____

18. Label the crayfish picture below.



