

Pre-field Trip Activities

What do scientists study at SERC?

Unscramble the words to list some of the topics studied.

RATEW _____

SIFH _____

IAR _____

SLDTEWAN _____

STAPLN _____

RETEP**O**NACY _____

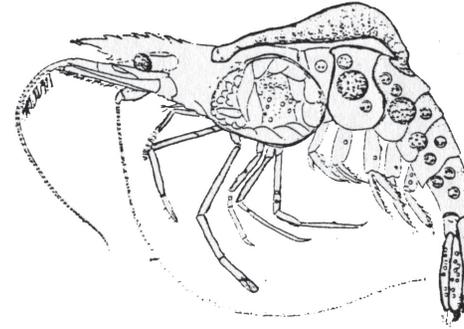
EGALA _____

SIVEN _____

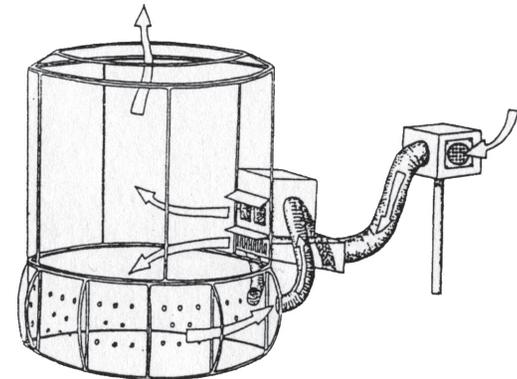
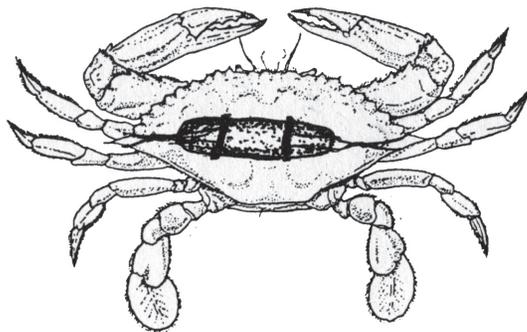
THEREWA _____

BRA**C**S _____

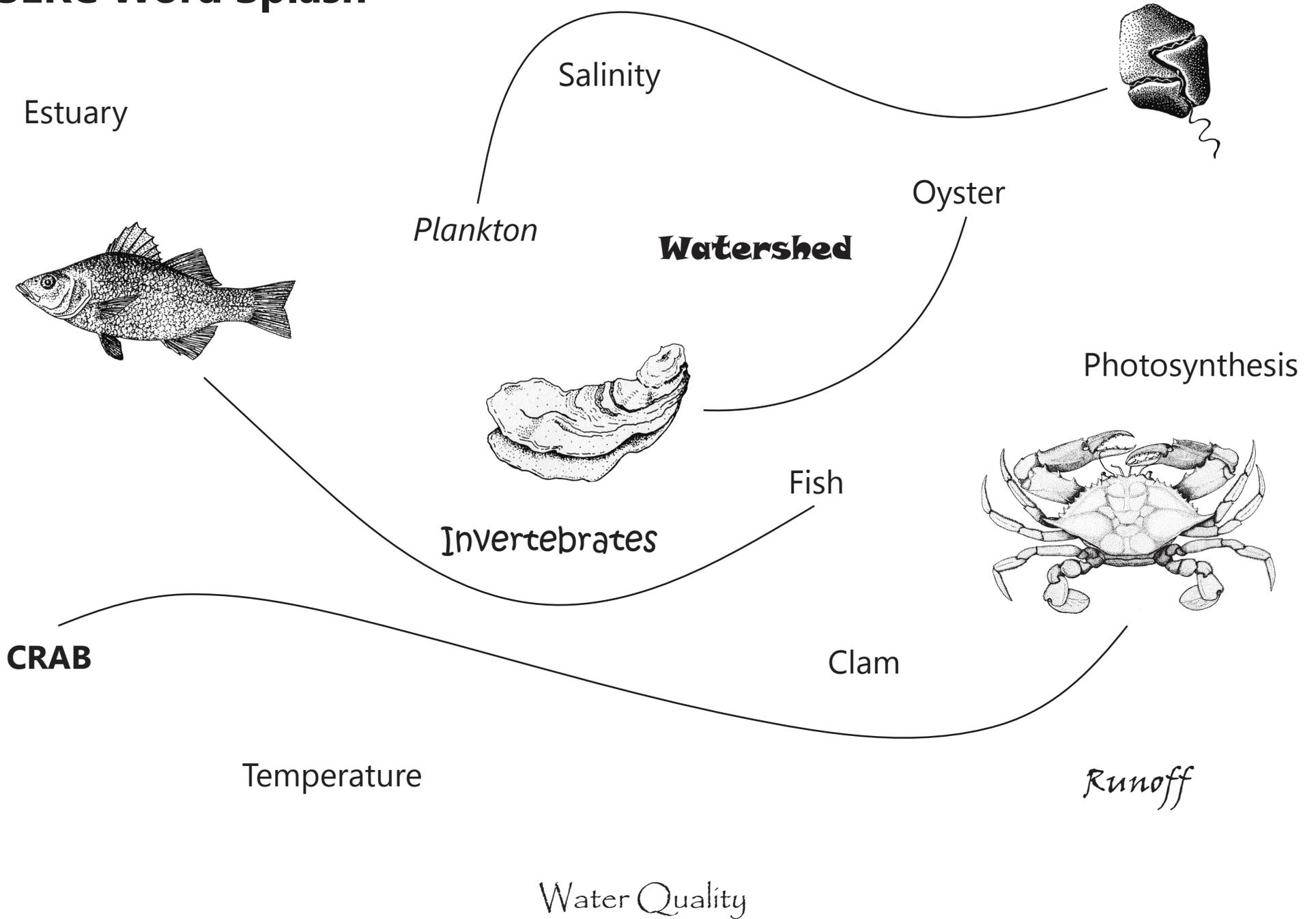
TR**O**SSEF _____



Take the bold and underlined letters on the left and make a word that sums it up!



SERC Word Splash



Field Trip Scavenger Hunt for the Bus

As you ride the bus today, look out the window and see if you can find and check off the following items on your trip.

When there is an * write the name, place or number if you can.

Hay bale _____

Sign that is red _____

Mailbox _____

Airplane _____

Motorcycle _____

Flowering tree _____

Dog _____

Sailboat _____

License plate from Canada _____*

Double tandem truck _____

Hotel _____*

Barn _____

Cow _____

Sign that is green _____*

Weather vane _____

Bridge _____*

Fast food place _____*

School bus _____

Person riding a mower _____

House being built _____

Men working sign _____

Bank _____

Doghouse _____

Seafood restaurant _____*

Camper/RV _____

River _____*

Moving truck _____*

Coke or Pepsi truck _____

Ruins of an old house _____

Firehouse or fire truck _____

License plate for a state west of the Mississippi
_____*

Tanker truck _____

Church, synagogue, temple, or mosque _____

Sheep _____

Grocery store _____

Gas station _____

SERC sign _____

Post-field Trip Activities

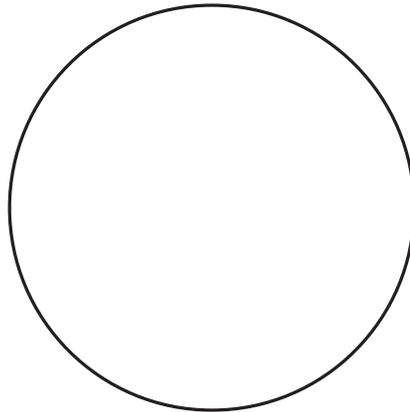
PLANKTON REVIEW

List below the plankton you saw under a microscope in the Investigating Plankton Station.

_____	_____
_____	_____
_____	_____

Name three plankton that remain microscopic their entire lives:

Draw one of the
three you listed above



WATER TESTING REVIEW

Now you can answer some questions about the quality of water in the Rhode River on the day you visited SERC.

1. How salty was the water? Give your answer in ppt. _____

2. What causes salinity to change?

3. What was the pH reading? _____

4. Can acid rain that falls on the watershed change the pH in the Rhode River? _____

5. How deep was the river? _____

6. Will the depth of the river change throughout the day? _____

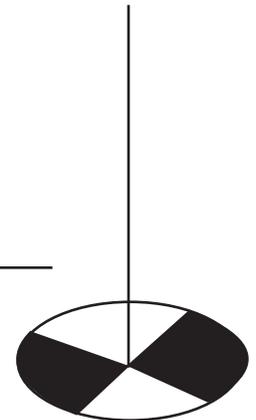
7. You measured the turbidity or how far down light can travel.

What measuring device did you use? _____

8. What was your reading when you used this tool? _____

9. Did any light go down to the bottom where you were standing on the dock? _____

10. What was the temperature of the water? _____



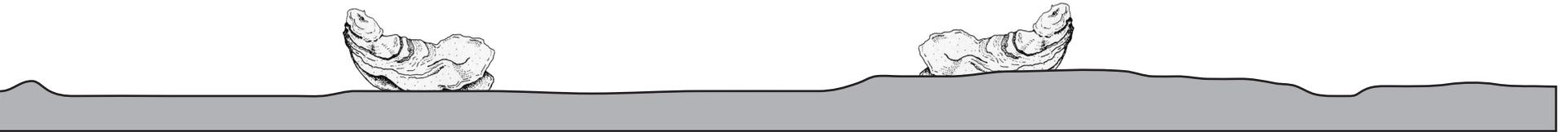
11. Explain why you think the Rhode River is a healthy place for plants and animals to live.

FISH REVIEW



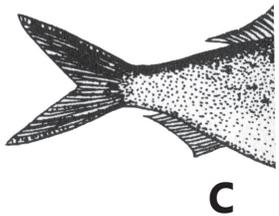
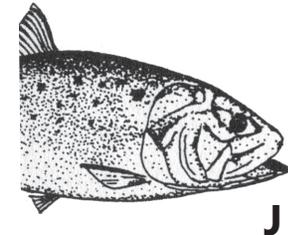
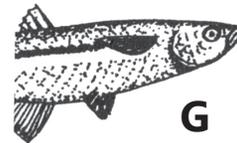
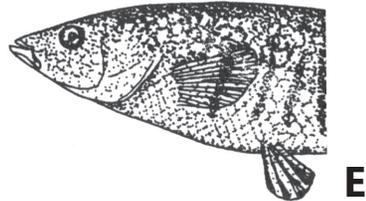
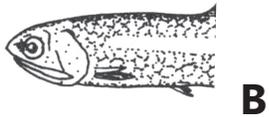
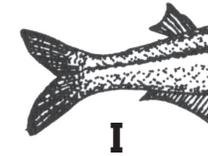
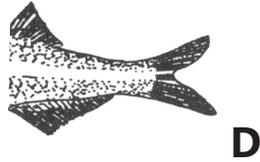
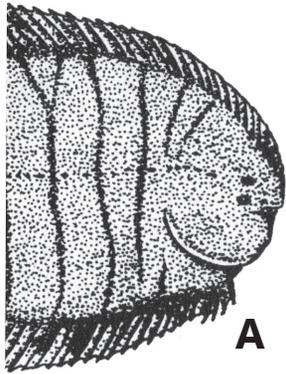
The depth in the Rhode River is fairly shallow, around 5-12 feet. The shallow depth makes the river a nice place for fish and other aquatic organisms to seek shelter when they are small.

Draw some of the fish you saw in the Rhode River during seining at the Going Fishing station or the Oyster Bar Community Station. Underneath each fish write its common name. Explain what you learned about the food chain.

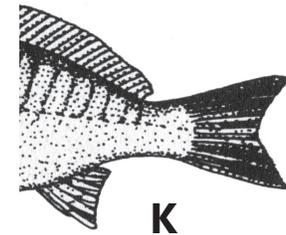
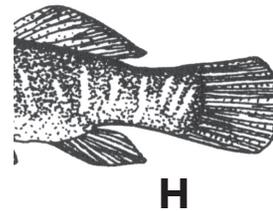


FISH HEADS AND TAILS

Try to match the heads and tails of these fish with the names listed below. Some names have more than one answer.

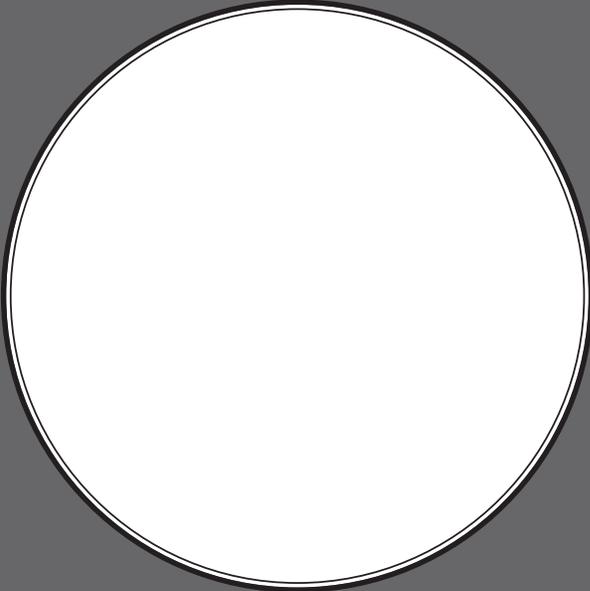
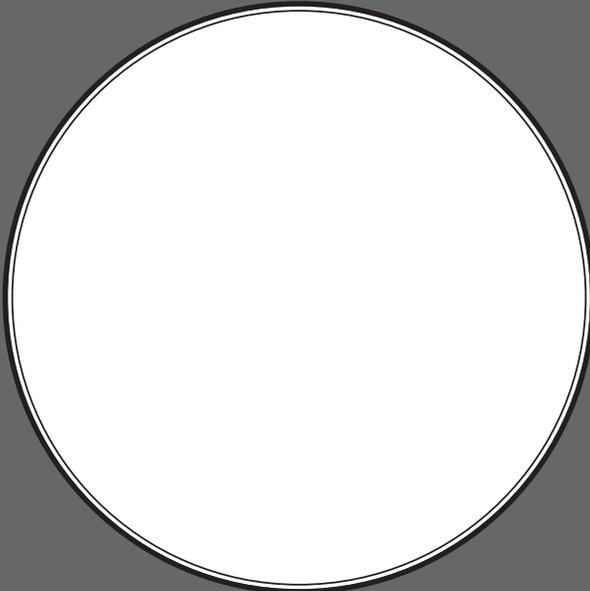
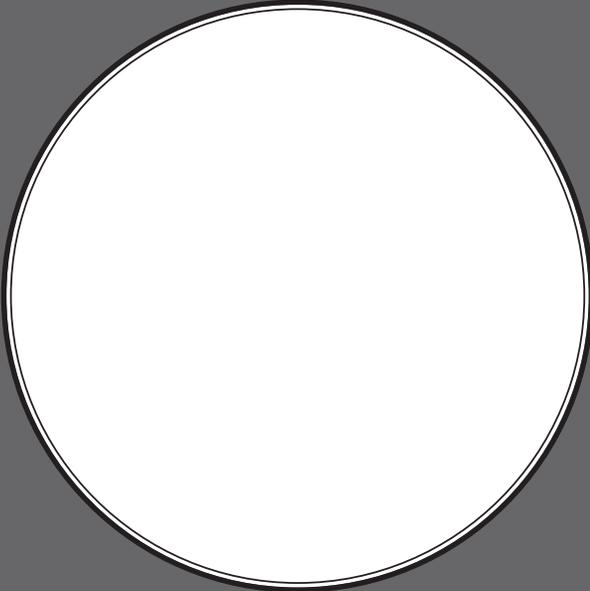
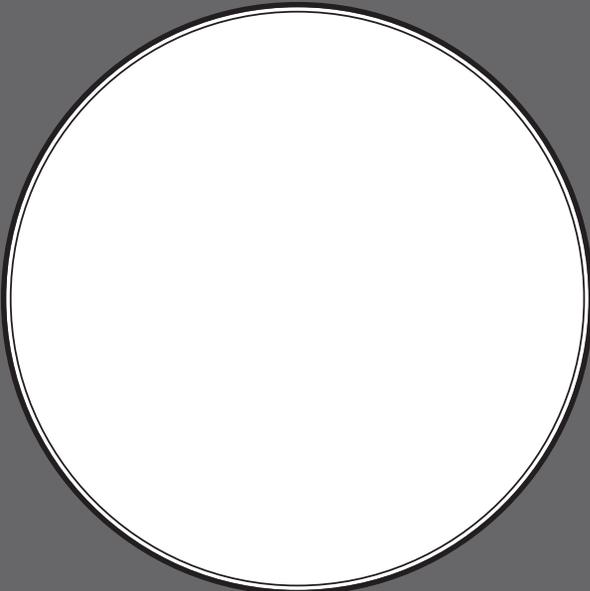
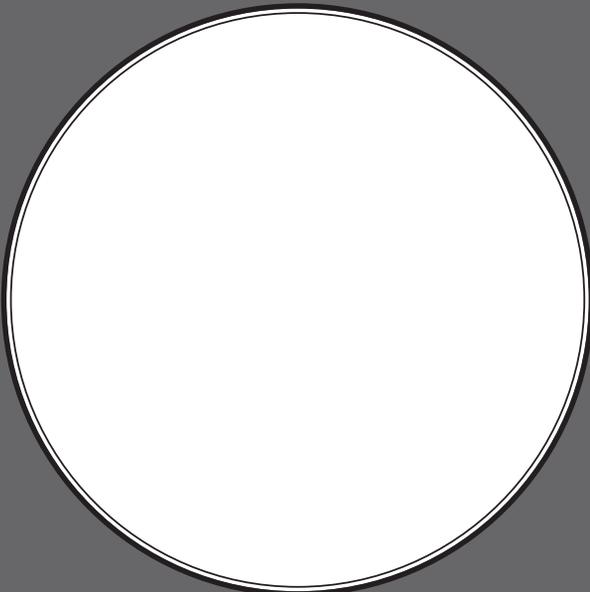


- _____ Anchovy
- _____ Menhaden
- _____ Spot
- _____ Hogchoker
- _____ Silverside
- _____ Mummichog
- _____ Killifish



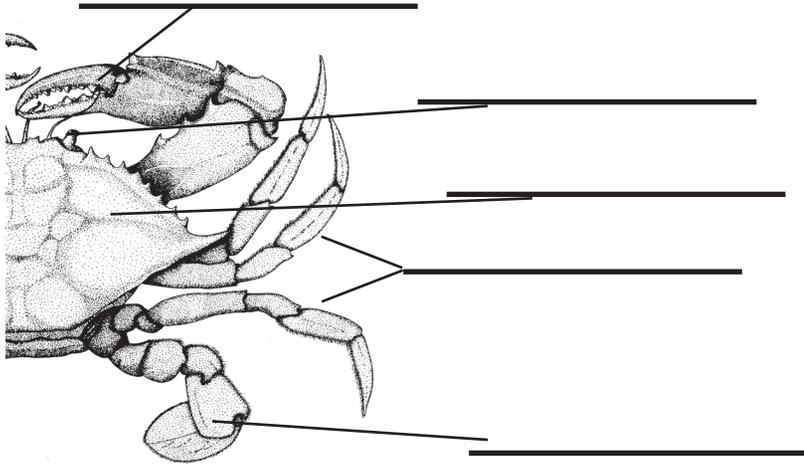
INVERTEBRATE REVIEW

Draw as many different invertebrates as you can from the Oyster Bar Community Station. Use these "petri dishes" to contain your animals. Label each specimen.

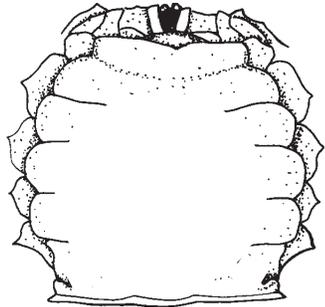


BLUE CRAB REVIEW

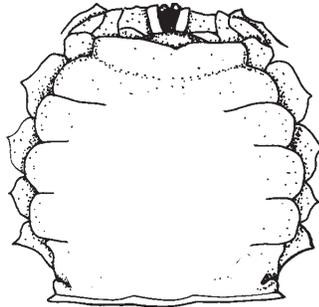
Identify parts of the crab



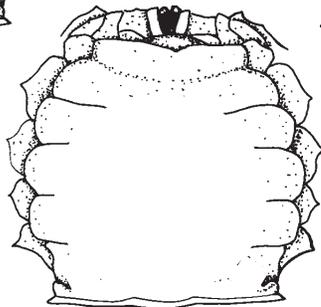
Draw my abdomen



MALE



IMMATURE FEMALE



MATURE FEMALE

Write the word on the line that correctly matches the phrase.

Claws

Megalopa

Scavenger

Eyestalks

Zoea

Molting

Crustaceans

Waterman

Decapod

Shell

Outer covering of crab _____

Person who crabs for a living _____

Group of animals having an exoskeleton

First larval stage of blue crabs _____

Eyesight structure in blue crabs _____

Second stage in blue crab life cycle _____

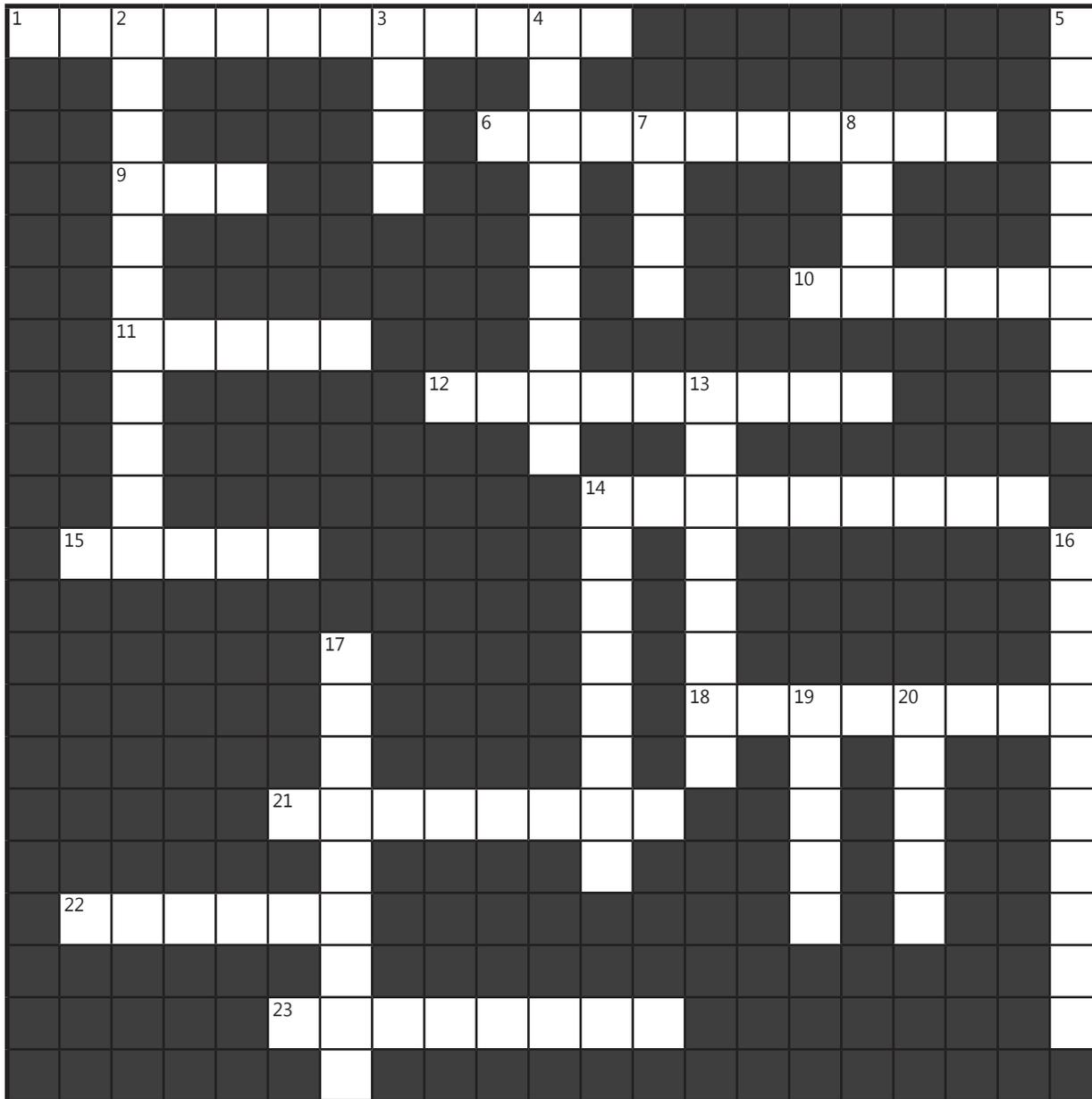
Equivalent to "growing" for crabs _____

Means "ten-legged" _____

One that feeds on dead or decaying material

Used by crabs for catching prey _____

WATER AND WORD TESTING



ACROSS

1. Temperature, pH, turbidity and salinity, will tell you about the _____ (2 words).
6. Describes a body of water with salinity of zero ppt.
9. "Parts per thousand" abbreviated.
10. Disk used to measure turbidity.
11. Phytoplankton that may cause blooms.
12. Land surrounding a lake, river, pond, or bay.
14. Has a salinity of 34 ppt.
15. Neutral on the pH scale.
18. Parts per _____.
21. Describes a substance with a pH greater than 8.
22. What you use to determine the acidity of a liquid (2 words).
23. Highest point on the pH scale.

DOWN

2. Celsius scale is used to measure this.
3. A liquid very low on the pH scale.
4. Measured by a Secchi disk.
5. A mixture of saltwater and freshwater.
7. Initials of the Smithsonian Center.
8. Either ebb or flood.
13. Measured in ppt.
14. When this is stirred up, light cannot penetrate to the bottom of the Bay.
16. Where scientists conduct aquatic research at SERC (2 words).
17. This can be made by humans or nature. Either way, it can destroy the water, land, or air.
19. Source of saltwater for the Chesapeake Bay.
20. A list of numbers measuring something.

Name that Animal!

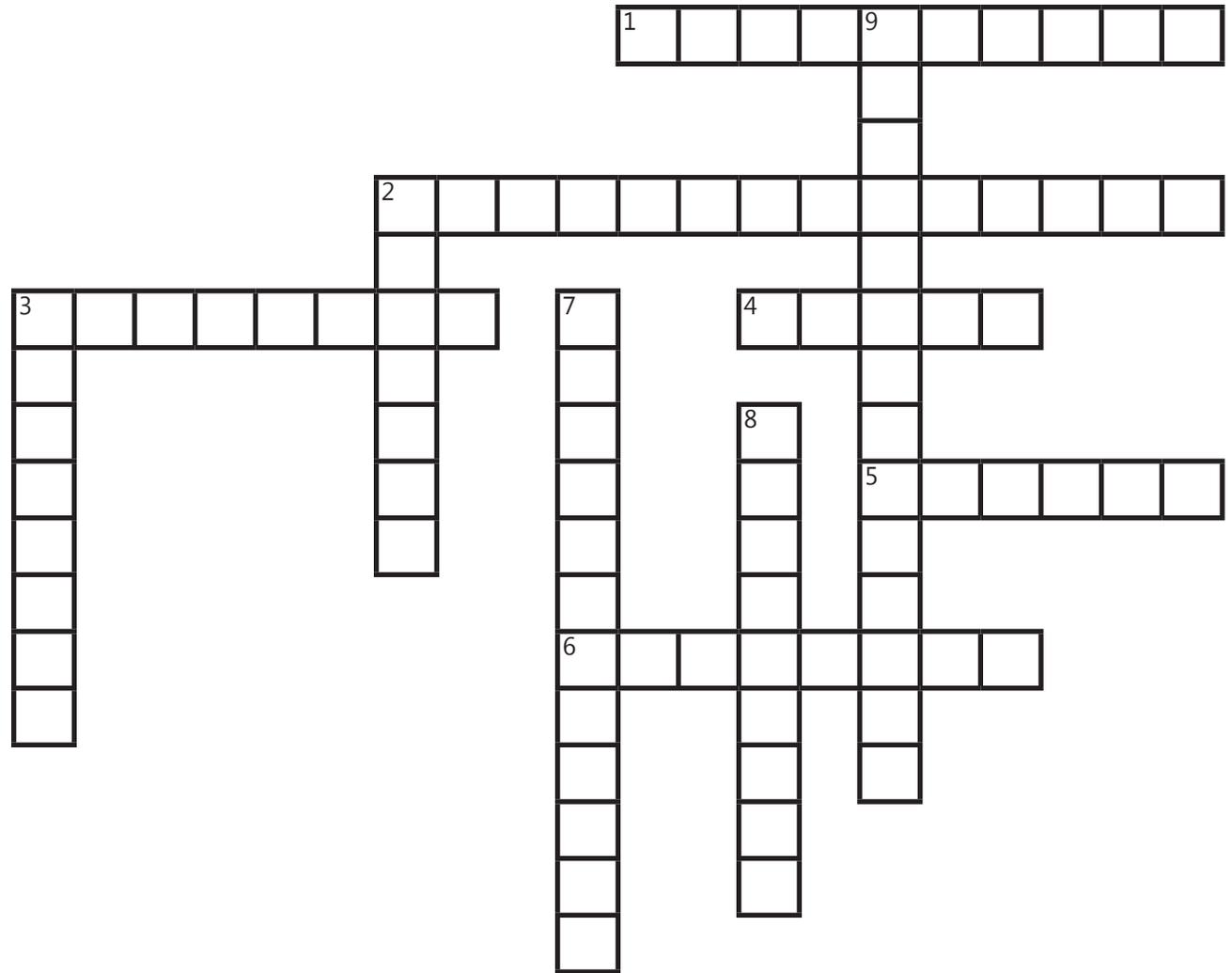
Using the hints provided, can you name the animal described? Your choices are: **blue crab, oyster, egret, bluefish, winter flounder, hooked mussel, periwinkle, menhaden, blue heron, seagull, and snapping turtle.**

Across:

1. Crawl along rocks and seaweed, scraping off algae with their file-like tongues.
2. Bury themselves in bottom mud or sand.
3. Crustacean like its cousins, the shrimp and crayfish; has ten legs.
4. White with S-shaped neck.
5. Once harvested in millions of bushels.
6. Found eating algae in large schools near water's surface.

Down:

2. Found almost all over the world nesting, hovering, and flying along shorelines.
3. Predator with a jaw full of piranha-like teeth.
7. Found attached to rocks.
8. Blue with wingspan over six feet.
9. Flat with two eyes on one side.



WHAT I LIKED MOST ABOUT THE ESTUARY CHESAPEAKE TRIP

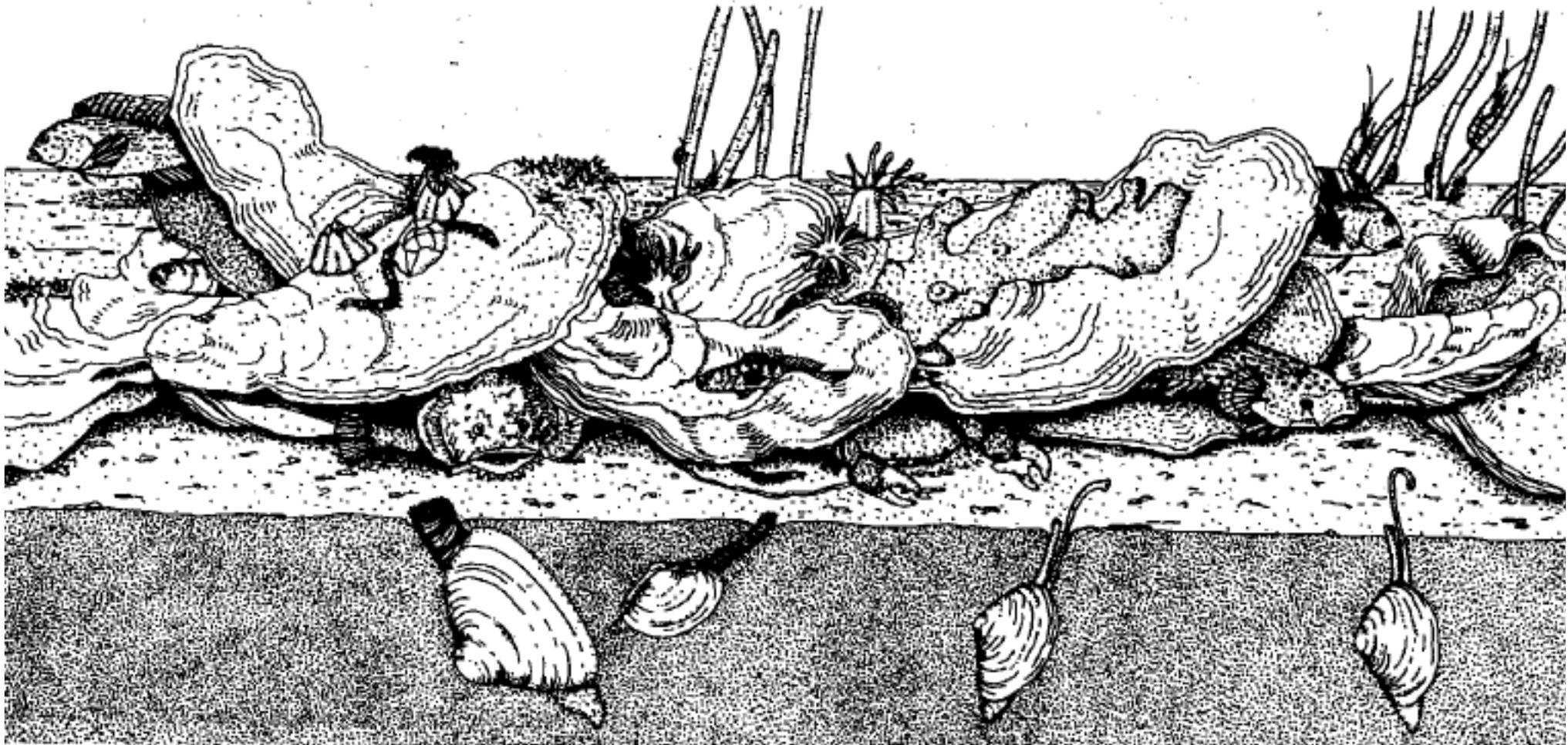
Test your Bay I.Q.! **Circle your best guess.**

1. The Bay is home to more than (1,700 or 2,700) plant and animal species.
2. The Bay is also home to more than (100 or 600) toxic substances.
3. Approximately (100,000 or 500,000) Canada geese spend winter by the Bay.
4. (More or less) coal is shipped from harbors in the Bay than is shipped from any other harbor in the U.S.
5. The average depth in the Bay is about (25 or 75) feet.

(Answers on the back cover)

Oyster Bar Community

Circle and label at least ten organisms you see in this oyster bar community.



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p. 36 Answers

1. 2700. This is due to the many different habitats within the Bay, the length of its shoreline, and the abundance of nutrients flowing into the Bay.
2. 600. People have historically dumped waste products into the Bay.
3. 500,000. Many species of waterfowl winter on the Bay. Many more use the Bay for resting, nesting, and feeding at various times of the year.
4. More. The ports of Baltimore, MD and Hampton Roads, VA are important to commercial shipping.
5. 25. One of the important characteristics of the Bay is that it is very shallow.