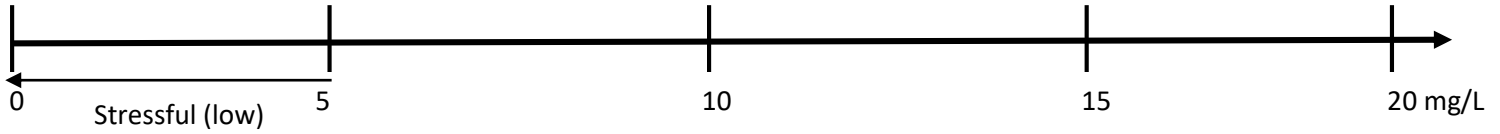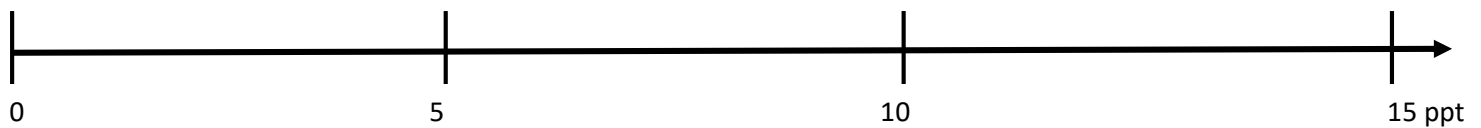# What lives in the harbor?

Plot your data on the parameter scales below. Is the water healthy?
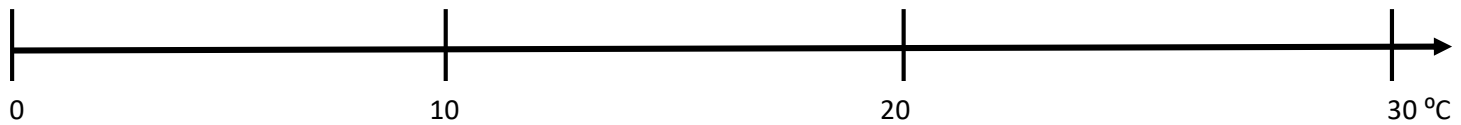
1. *Dissolved oxygen* (DO) is needed for aquatic animals to breathe. Levels below 5 mg/L can be stressful. Fish kills can happen when levels are under 1 mg/L.
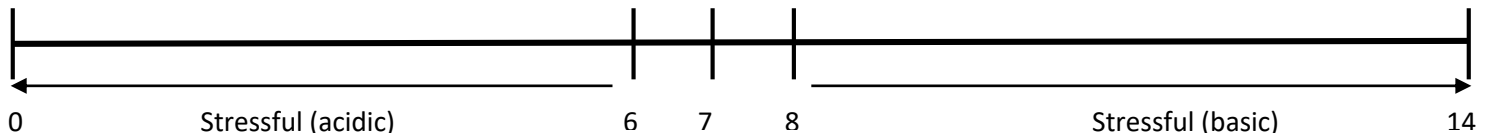
| 0 | | 5 | | 10 | | 15 | | 20 mg/L |

Stressful (low)

2. *Salinity* is the level of dissolved salt in the water. Rain, drought, and the seasons affect salinity.
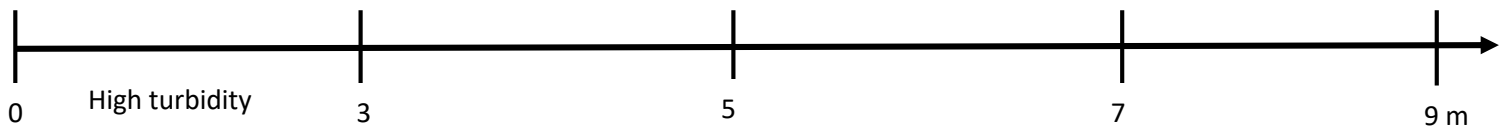
| 0 | | 5 | | 10 | | 15 ppt |

3. Organisms need a specific temperature to survive. Temperature can affect the amount of DO in the water, and hot water can be a pollutant.
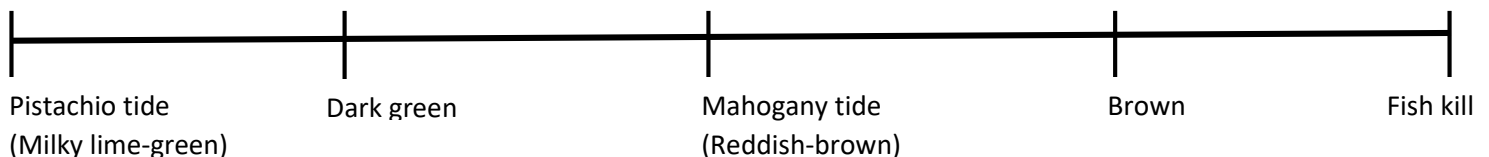
| 0 | | 10 | | 20 | | 30 °C |

4. *pH* measures whether a substance is an acid or a base. Water is neutral and has a pH of 7. An ideal pH level for most organisms is between 6 and 8.

| 0 | Stressful (acidic) | 6 | 7 | 8 | Stressful (basic) | 14 |

5. *Turbidity* is the clarity of the water. Less than 50 cm prevents sunlight from reaching underwater grasses, which decreases the amount of DO in the water, making it hard for aquatic animals to breathe.

| 0 | High turbidity | 3 | | 5 | | 7 | | 9 m |

6. The color of the harbor can be influenced by harmful algal blooms (HABs), which are a major concern in the Chesapeake Bay and the Inner Harbor.

Pistachio tide (Milky lime-green) — Dark green — Mahogany tide (Reddish-brown) — Brown — Fish kill

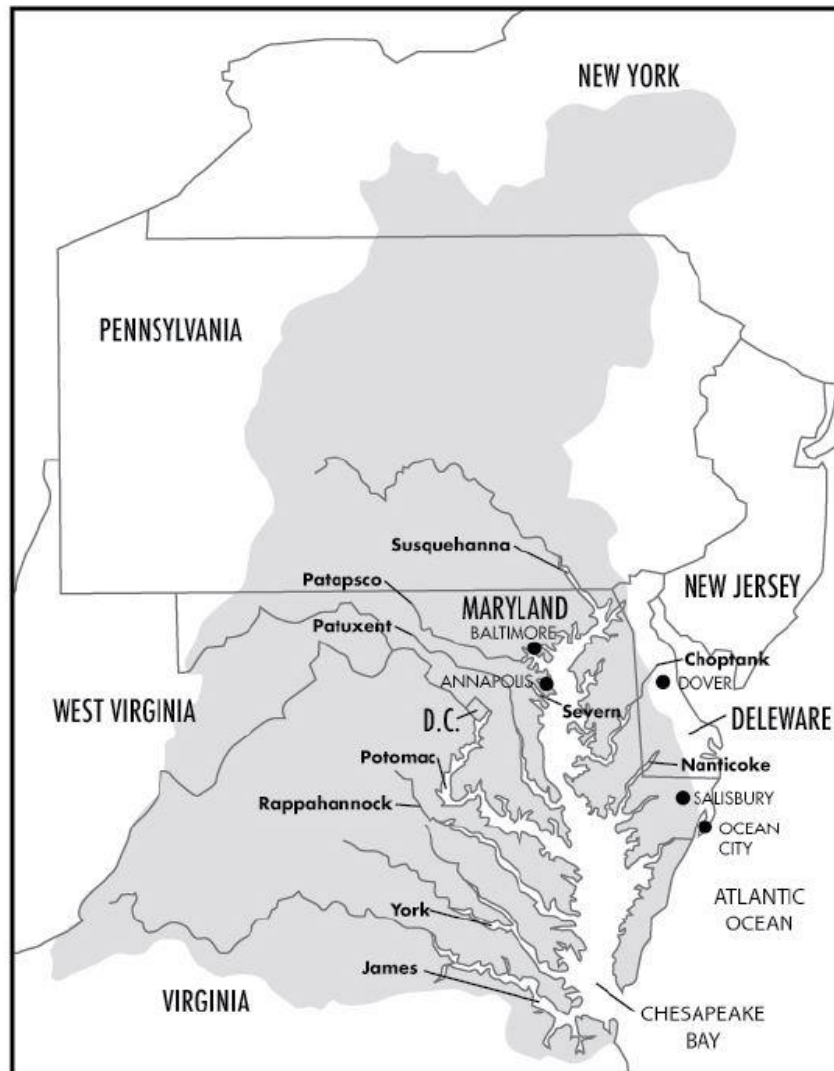# Which species would you expect to find in the Inner Harbor based on the water quality data you collected?

Under each parameter, **write your data with units**. For each species, place a check or an X under each parameter showing whether your data match the species' requirements.

Species	Dissolved oxygen (surface)_____ (deep) _____	Salinity _____	Temperature _____	pH _____	Turbidity _____
	✓ or x	✓ or x	✓ or x	✓ or x	✓ or x
American eel					
Atlantic sturgeon					
Blue crab					
Bull shark					
Comb jelly					
Common grass shrimp					
Dark false mussel					
Horseshoe crab					
Lionfish					
Mummichog					
Northern pipefish					
Striped bass					
Striped killifish					
White barnacle					
White-fingered mud crab					

1. Based on your data, list the animals that you think you would see in the harbor.

2. After you looked through the habitat cages, what animals did you find?

3. Were they the same or different from what you predicted?

4. What do you think is the biggest water quality issue facing animals in the harbor? (What factors would make it difficult for living things to survive in the harbor?)

5. How can you make a difference?

A *watershed* is an area of land over which water drains to the lowest point. Watersheds follow natural borders, not state borders. Runoff pollution travels over land when it rains, through storm drains, and ends up as debris in a body of water, such as the Chesapeake Bay.

The Chesapeake Bay's watershed is home to more than 17 million people (including you!) and 2,700 species of animals, all of which depend on a healthy bay for survival. The Chesapeake Bay is the largest estuary in the United States and one of the largest in the world.

Circle your current location (Baltimore).

What are the major rivers on the Chesapeake Bay watershed map? Which rivers are in Maryland? Baltimore?

Underline the six states and the district that is included in the Chesapeake Bay watershed.