



Before Your Bay Day!

Pre-Visit Materials designed by the Chesapeake Bay Maritime Museum

Chesapeake Bay Food Pyramid: Who Eats Who?

Materials

“Chesapeake Bay Food Pyramid” worksheet
Answer Key & Teacher Tips

Grade Level

4th-8th grade

Time

30-45 minutes

Goal

To gain an understanding of the Chesapeake Bay’s ecosystem through determining the level of various species in the bay on a food pyramid.

Assessment

Collect or look over completed food pyramid activity worksheet.

Procedure

1. Introduce food pyramids with an ecosystem example that your students are familiar with. Have them help you create it on a large sheet of paper or a board. Make sure to explain the role of each level of the pyramid.
2. Distribute the food pyramid worksheet (pages 2 & 3) and have students complete.
3. As students finish, have answer keys for them to check their answers and then discuss as a class.



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Chesapeake Bay Food Pyramid: Who Eats Who?

On your visit to the Chesapeake Bay Maritime Museum, you will learn about and see many different plants and animals. All plants and animals in the Chesapeake Bay are connected because of what they eat. A food web diagrams these connections by showing who eats what in an ecosystem. A food pyramid is a simple way to show these different levels of consumption; the organisms on each level are eaten by the organisms on the level above.

Activity

Read the information below about plants and animals of the Chesapeake. On the next page, draw a line from each picture to the correct level on the food pyramid. Be sure to read the explanations of each level. Then, see if you can figure out where **humans** belong on the pyramid!

Phytoplankton: the major producers of food and oxygen in the Bay's water, phytoplankton produce their own food to survive

Zooplankton: tiny animals that flow with the current of the water; most get their nutrients by eating phytoplankton

Great blue heron: a large, wading bird which lives in the marshes of the Chesapeake Bay, herons primarily feed on fish that they capture from the Bay's waters

Oystercatcher: a shorebird with a long, pointed beak; the beak is used to pry open and eat oysters

Oyster: a bivalve with two rough shells that gets its nutrients by filter feeding plankton out of the water

Submerged aquatic vegetation (SAV): plants that grow underwater; these plants must grow in areas that get enough sunlight but are not too salty

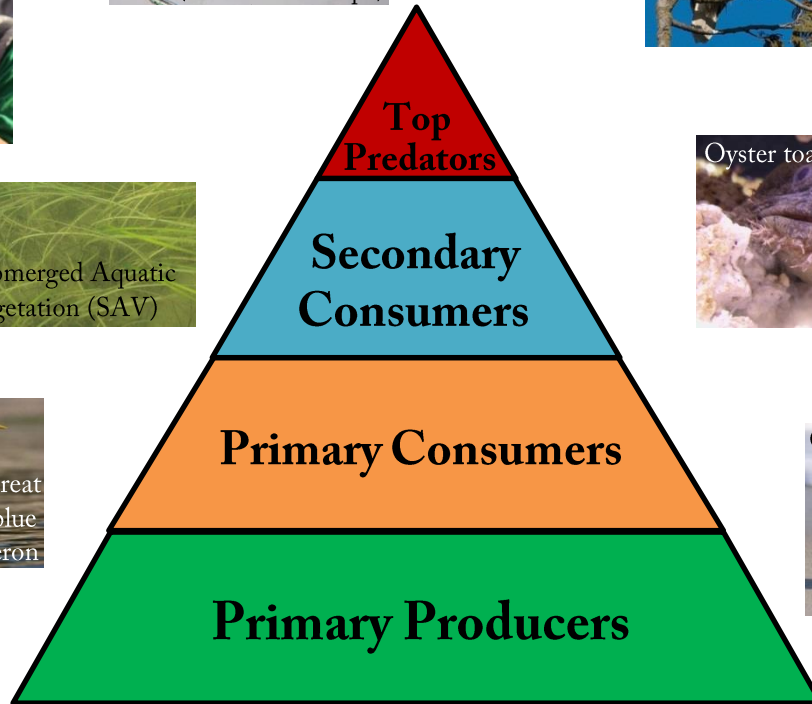
Oyster toadfish: a large fish which feeds on oysters, small fish, and crustaceans

Mummichog: small, minnow-like fish that feeds on a variety of items, such as phytoplankton and insects

Bald eagle: large, predatory bird that feeds mostly on fish; also eats smaller birds, waterfowl, & mammals

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Primary producers: plants that produce their own food using sunlight, air, and water

Primary consumers: animals that eat mostly plants and fungus

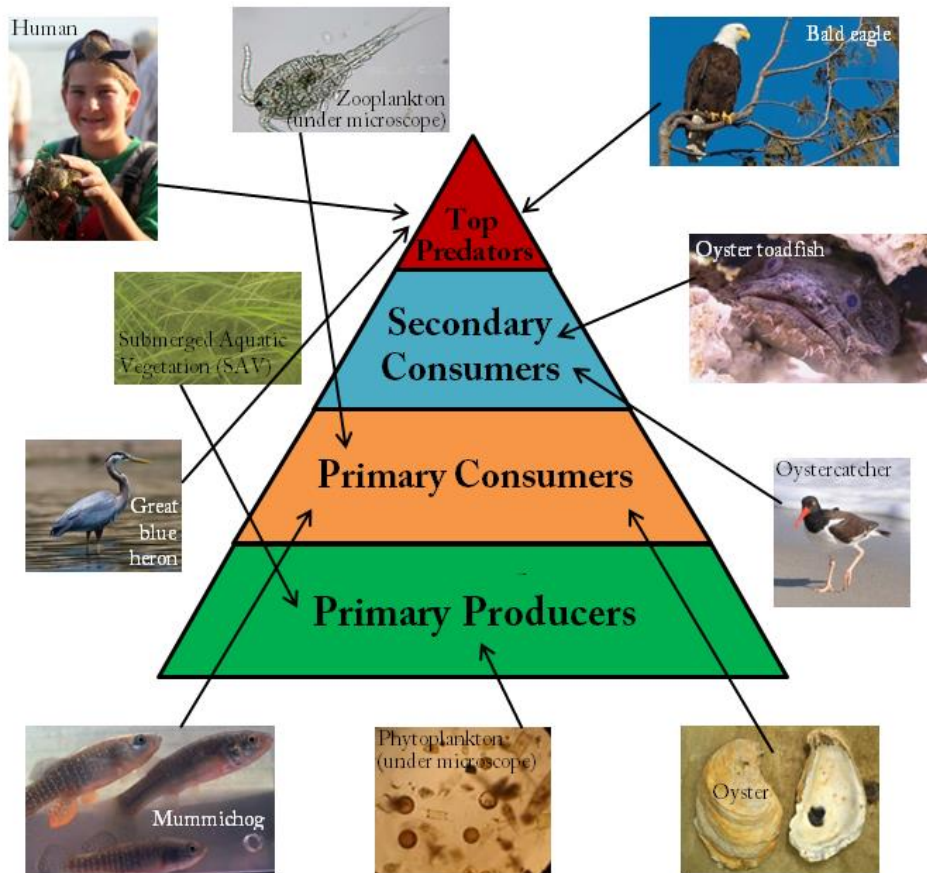
Secondary consumers: animals that typically eat other animals

Top predators: animals that have no natural predators and eat plants and animals on all other levels of the food pyramid

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Chesapeake Bay Food Pyramid: Who Eats Who? **Answer Key**



Teacher Tips

- Begin with the primary producers- which organisms produce their own food? Hint: organisms that photosynthesize (phytoplankton and submerged aquatic vegetation)
- Primary Consumers- which organisms rely on eating plants? Hint: organisms that do not have abilities to consume larger organisms. (zooplankton, mummichogs, oysters)
- Secondary Consumers- which organisms eat small fish, crustaceans, and mollusks but still have predators of their own? Hint: organisms that are capable of cracking an oyster shell, swallowing a fish, etc. (oyster toadfish, oystercatcher)
- Top Predators- which organisms are not typically preyed on by others? Hint: larger organisms (bald eagle, great blue heron, humans)