



Plankton Power

Classroom Program for Grades 3-5



What do the largest whales in the ocean have in common with the smallest mussels in a river? All depend on plankton as a food source. Students explore a variety of interesting adaptations that help plankton survive as they participate in the Great Phytoplankton Race. Who can build the slowest sinking plankton? Join us for your chance to compete!

Lesson: Learn more about plankton and their role in the ocean.

Conservation Message: All life on Earth exists as part of an ecosystem.

Curriculum Objectives:

Tennessee students will apply the following **Science Curriculum Performance Indicators:**

- Determine how plants and animals compete for resources such as food, space, water, air, and shelter.
- Investigate an organism's characteristics and evaluate how these features enable it to survive in a particular environment.
- Determine how a physical or behavioral adaptation can enhance the chances of survival.
- Identify factors that influence the motion of an object.

Georgia students will apply the following **Performance Science Standards:**

- Students will use tools and instruments for observing, measuring, and manipulating objects in scientific activities utilizing safe laboratory procedures.
- Students will identify factors that affect the survival or extinction of organisms such as adaptation, variation of behaviors (hibernation), and external features (camouflage and protection).
- Students will relate how microorganisms benefit or harm larger organisms.

Alabama students will apply the following **Science Course of Study Content Standards:**

- Identify how organisms are classified in the Animalia and Plantae kingdoms.
- Describe the interdependence of plants and animals.
- Describe the relationship of populations within a habitat to various communities and ecosystems.

Common Core Connection: Extend the learning experience by adding any of the following non-fiction literature to your lesson.

- *Sea Soup: Phytoplankton*, Mary Cerullo, ISBN — 0884482081
- *Sea Soup: Zooplankton*, Mary Cerullo, ISBN — 0884482197
- *Far from Shore: Chronicles of an Open Ocean Voyage*, Sophie Webb, ISBN — 0618597291

Visit the Tennessee Aquarium Education Department's website

<http://www.tnaqua.org/Education>

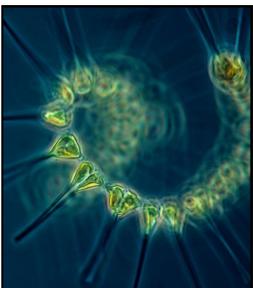


Plankton Power Activity Sheet

Fill in the blanks using the work bank to complete the sentences below.

1. _____ are water movements that result in the horizontal transport of water masses.
2. The transfer of food energy from the source in plants through a series of animals is called a _____.
3. A _____ is an interlocking pattern of food chains.
4. _____ describes the relationships of plants and animals with one another and with the various elements of their environment.
5. _____ are very tiny plants.
6. _____ is the mechanism by which plants, with the aid of chlorophyll, convert sunlight energy, water and carbon dioxide into carbohydrates, oxygen and water.
7. Very small organisms that are free-floating or drifting in the open water of the oceans are called _____. They can move only short distances without the aid of the motion of water.
8. _____ are very tiny animals, including larval fish and other marine organisms.
9. _____ is the surface to volume ration of an object.
10. If an animal is _____, it is capable of movement.

<p><u>WORD BANK</u></p> <p>CURRENTS</p> <p>PHYTOPLANKTON</p> <p>FOOD CHAIN</p> <p>MOTILE</p> <p>PHOTOSYNTHESES</p> <p>PLANKTON</p> <p>ZOOPLANKTON</p> <p>FOOD WEB</p> <p>INTERDEPENDENCE</p> <p>SURFACE AREA</p>
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Answers can be found on the Tennessee Aquarium Education Department's website

<http://www.tnaqua.org/Education>