

Build your own Freshwater Ecosystem

PENNSSTATE



Freshwater Ecosystems

Freshwater ecosystems include lakes and ponds, rivers, streams and springs, and wetlands. They can be contrasted with marine ecosystems, which have a larger salt content.

How plants and animals are distributed along a river is determined by the slope of the land and how fast the water is flowing. Faster moving, turbulent water typically contains more dissolved oxygen, which supports greater **biodiversity** than the slow moving water of pools. Biologists call the area along the edge of a river the **riparian zone**. Trees live in this riparian zone and provide shelter and food for the animals that live in and near the river and are therefore a very important part of freshwater ecosystems.

What is an Ecosystem?

An **ecosystem** is a community of living organisms that interacts with non-living things in the surrounding environment. These non-living things are the air, soil, water and sunlight which are important for the survival of the plants and animals the ecosystem supports.

Ecosystems can be as large as an ocean or a desert, or as small as a tree or a pond. Examples of ecosystems are rainforests, tundra, coastal waters, wetlands, streams and open ocean.

Instructions

How to build your own freshwater ecosystem:

1. Choose some **primary producers** for your river and use the velcro to attach it to the poster.
2. Choose some **primary consumers** and place them in your river ecosystem.
3. Choose some **secondary and tertiary consumers** and place them in your ecosystem.

Well done! You have built your own freshwater ecosystem!

Food Chains

All living things need energy from their food so that they can move and grow. A **food chain** shows how each living thing gets its food. The chain starts with a **primary producer**, such as a plant or algae, which uses light from the sun to produce energy. Next in the chain is a **primary consumer** such as a small insect or animal that feeds on the plant. The final links in the food chain are the **secondary and tertiary consumers** which feed on other animals to get energy.

