

Ecosystems Notes

1. An ecosystem is made up organisms interacting with one another and with non-living factors to form a working unit.
 - a. A frog eating an insect is an example of two living things interacting in an ecosystem.
 - b. A frog using a stream as shelter is an example of a living thing interacting with a non-living thing.
2. Ecology is the study of the interactions that take place among the living organisms and the non-living parts of any ecosystem.
 - a. Ecologists spend a lot of time outdoors observing ecosystems up close.
 - b. They also conduct experiments in laboratories.
3. The biosphere is the part of Earth where living things can live and the largest ecosystem on Earth.
 - a. Examples include: deserts, mountains, rivers, prairies, wetlands, forests, plains, oceans.
4. The organisms that make up the living part of the ecosystem are called biotic factors.
 - a. Organisms depend on other biotic factors for food, shelter, protection, and reproduction.
 - b. Ecologists organize the biotic factors into groups to make it easier to study the ecosystems.
 - c. The first category is population which is a group of the same type of organism living in the same place at the same time. All populations that live in a particular area make up a community.
 1. The important thing to remember is that all organisms compete for resources.
 2. Populations do not have enough resources to grow larger and larger forever.
 - a. Things that can limit the size of a population are called limiting factors.
 - b. EX: food, water, living space, etc.
5. The non-living things found in an ecosystem are called abiotic factors.
 - a. The abiotic factor soil is made of minerals, water, air, and organic matter.
 - b. The abiotic factor temperature determines which organisms live in a particular place.
 - c. Another important abiotic factor is water.
 1. Some organisms are adapted for life in water.
 2. Water helps all living things carry out processes, such as digestion.
 3. Water can also serve as shelter and a way to move from place to place.
 - d. The abiotic factor sunlight is also essential to an ecosystem.
 1. The sun is the main source of energy for most organisms on Earth.
 2. Energy from the sun is used by green plants to produce food.
 3. Humans get energy by eating plants and other organisms that have fed on plants.
6. It is very important for ecosystems to stay in balance. Biotic and abiotic factors work together to keep the system in balance, but many events can affect the system which causes change over time.
 - a. Example: drought

