Notes- Ecosystems and Energy Pg. \_\_\_\_\_\_\_\_\_\_

**What are energy roles in an ecosystem?**

* An **\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_** is a community of organisms that live in a particular area, along with their nonliving environment. An ecosystem is a living system.
* In an ecosystem, an organism’s \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ role is determined by how it obtains food. Each \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ fills the role of producer, consumer or decomposer.
* A **\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_** is an organism that can make its own food. Most producers make their food by using the sun’s energy in the process of photosynthesis.
* A **\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**is an organism that obtains energy by feeding on other organisms.
* A **\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_** is an organism that obtains energy by breaking down once-living material, such as the bodies of dead organisms.

**What is a food chain?**

A **\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_** is a series of events in which one organism eats another and obtains energy. The diagram below shows one food chain.

* The first organism in a food chain is always a \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ such as algae or phytoplankton.
* The second organism, such as the flagfish, feeds on the producer and is called a \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.
* A \_\_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_, such as the largemouth bass, eats the primary consumer.
* A \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_consumer, such as the Anhinga, eats the secondary consumer.
* In most food chains, the \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ is the original source of energy. Producers capture the energy in photosynthesis and make food.
* In a food chain, energy flows from a producer to a primary consumer to secondary consumer to tertiary consumer. Food chains can also have a fourth-level consumers.
* A **\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_** consists of many overlapping food chains in an ecosystem.
* An organism may play more than one role in a food web. For example, a first-level consumer may also be a second-level consumer, depending on its food sources.

What is an energy pyramid?

* A diagram called an **\_\_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_** shows the amount of energy that moves from one feeding level to another in a food web. Energy is measured in kilocalories (kcal).
* Organisms use energy to perform life functions, such as \_\_\_\_\_\_\_\_\_\_\_\_ and \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_. Only some of the energy an organism obtains will be available to the next organism in the food web.
* The most energy is available at the producer level of the pyramid.
* As you move up an energy pyramid, each level has less energy available than the level below.
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