**Lesson 4: Energy Flow in Ecosystems**

**Energy**

* All living things need \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ to grow and to carry out their activities.
* They get this energy from their food or directly from the \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.
* This energy is passed from one organism to another in an ecosystem.

**Producers**

* \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ are living things that can make their own food by using energy in sunlight.
* Plants are one kind of producer and they make their food through \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.

**Consumers**

* A \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ is an organism that gets its energy by feeding on other organisms.
* Animals, fungi, some protists, and some bacteria are consumers.

**Herbivores**

* Herbivores are consumers that only eat \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.
* They are called \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_, or first level consumers.
* Primary consumers eat \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.

**Carnivores**

* Carnivores are consumers that eat \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.
* Most are predators, but some are \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ that eat the meat of dead animals.
* They can be secondary (second-level) consumers, which means they eat the primary consumers, or \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ (third-level) consumers, which means they eat the secondary consumers.

**Omnivores**

* Omnivores eat both \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ and \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.
* Humans are omnivores.

**Decomposers**

* Decomposers are consumers that get energy by breaking down \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ plants and animals.
* They return materials stored in dead plants and animals to the \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_, water, and air. Then, green plants use the materials to make food.

**Food Chains & Food Webs**

As organisms eat other organisms, they get energy. Food chains and food webs show us how that energy moves from one organism to another in an ecosystem.

**Food Chain** (see diagram)

* A food chain is a model that shows how \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ flows from one organism to another.
* The \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ show how energy flows from the plant to the mouse, from the mouse to the snake, and so on.
* But, mice are not the only organisms that get their energy from plants, and snakes are not the only organisms that get their energy from eating mice.

**Food Web** (see diagram)

So, we have food webs to show us more of these relationships.Food webs show \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ food chains in an ecosystem.



