

Energy and the Food Chain

Just like cars need gas to drive and phones need charged batteries to function, plants and animals need energy to survive. Where do plants and animals get their energy? All living things get their energy from the sun. Plants get energy directly from the sun. Animals get energy indirectly from the sun.

Producers

Plants are known as producers because they use the sunlight to produce their own energy. Green plants (and some other organisms) absorb sunlight and turn it into energy that allows them to grow. This process is called photosynthesis.

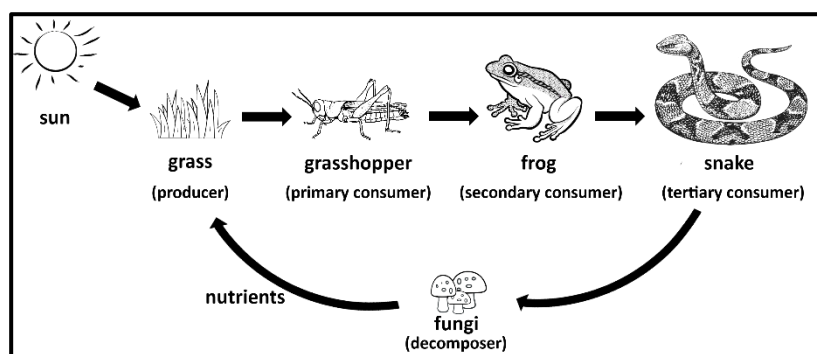
Consumers

Consumers get their energy from other living things; they do not produce their own. Animals are consumers. They eat plants and other animals and take their energy. Animals that eat only plants are called herbivores. Herbivores are primary consumers. Primary consumers get their energy directly from producers. Animals that eat herbivores are called secondary consumers. Animals that eat other animals are called carnivores. Tertiary consumers get their energy by eating other carnivorous animals. Omnivores are animals that eat plants and animals. These animals can switch between the different orders of consumers.

Decomposers

Decomposers such as worms, bacteria and fungi, get their energy from eating dead plants and animals. It is because of decomposers that dead organisms begin to rot or decompose. Decomposers can be thought of as recyclers. They recycle by allowing the nutrients trapped in the dead organisms to release back into the soil. These nutrients allow plants to grow.

Food chains show single ways that energy moves through an ecosystem. The arrow shows the direction the energy moves.



The example above shows that grass uses the sunlight to produce its own energy. The grass is eaten by the grasshopper and its energy is passed on. The grasshopper is a primary consumer as it gets its energy directly from a producer. The energy is then passed to the frog. The frog is a secondary consumer as it gets its energy from a herbivore. The tertiary consumer, the snake, eats the frog, taking its energy. When the snake dies, decomposers such as fungi help return the nutrients to the soil so the food chain can start all over again.