

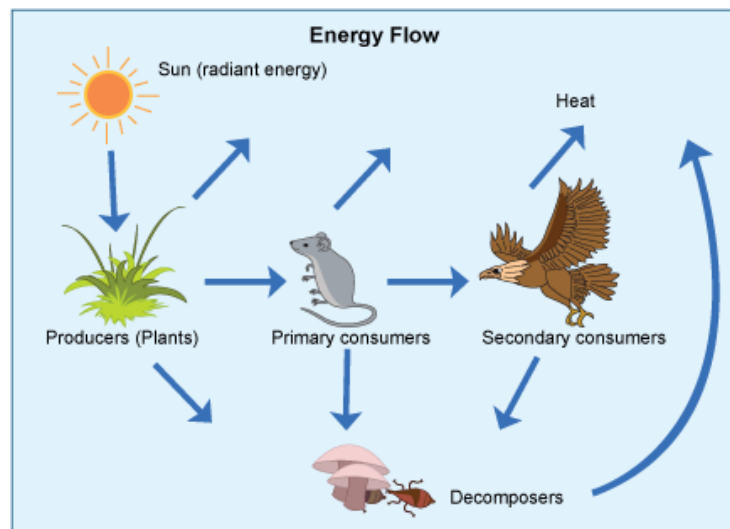
Name _____ Class period _____

Ecosystems---DAY 10

In order for all the organisms within an ecosystem to thrive, a general flow of energy occurs, maintaining a balance in the populations and diversity of species. This flow of energy is depicted in a **food chain**, which is a model that represents the transfer of energy and nutrients between organisms in an environment.

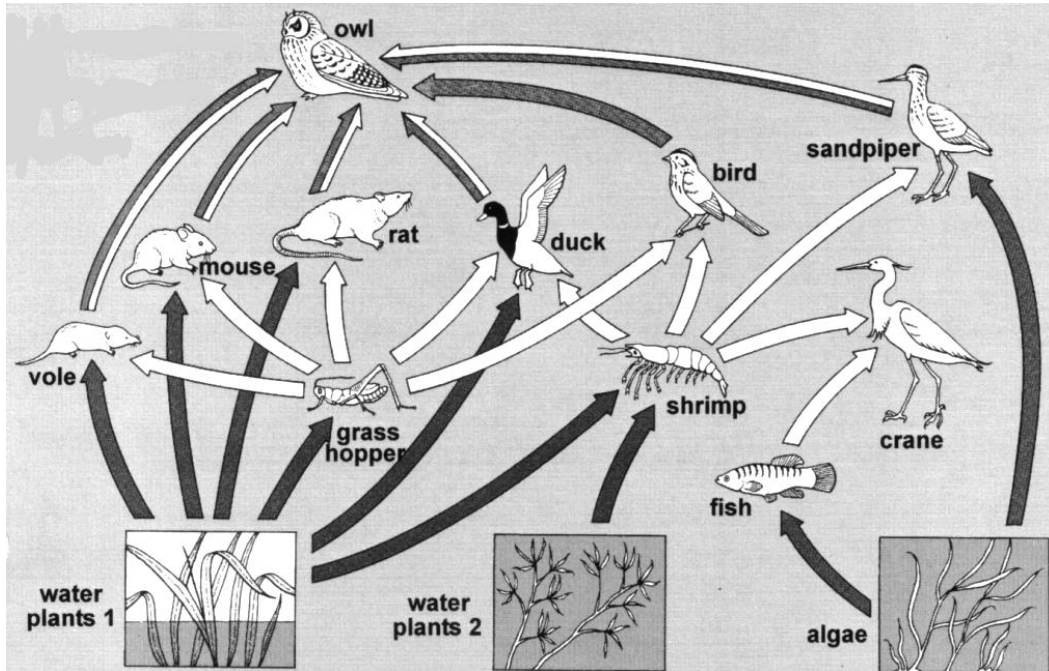
The source of energy and nutrients in ecosystems, whether terrestrial or aquatic, begins with **producers**. A **producer**, or autotroph, is an organism that can store chemical energy in food. Most producers use light energy as their initial source of energy in a process known as photosynthesis. They are therefore known as photoautotrophs. There are also producers use chemical sources of energy and are therefore known as chemoautotrophs.

Producers are eaten by **primary consumers**, which are plant eaters otherwise known as **herbivores**. Primary consumers then become the food for **secondary consumers**. These consumers may be **carnivores** (meat eaters) or **omnivores** that eat both meat and plants. Some food chains contain **tertiary consumers** that eat secondary consumers. When organisms die, their remains are eventually broken down by **detritivores**, or **decomposers**, in a process known as **decomposition**.



Food Webs

Analyze the food web below and answer the following questions. Use colored pencils on the diagram to help you figure out your answers.



- 1) How many food chains is the **rat** connected to? _____
- 2) How many food chains is the **crane** connected to? _____
- 3) How many food chains is the **grasshopper** connected to? _____
- 4) How many **primary consumers** are there in the food web? _____
- 5) How many **secondary consumers** are there in the food web? _____
- How many **tertiary consumers** are there in the food web? _____
- 6) How many organisms are both **primary** and **secondary consumers**? _____
- 7) Name 2 top carnivores in this food web. _____