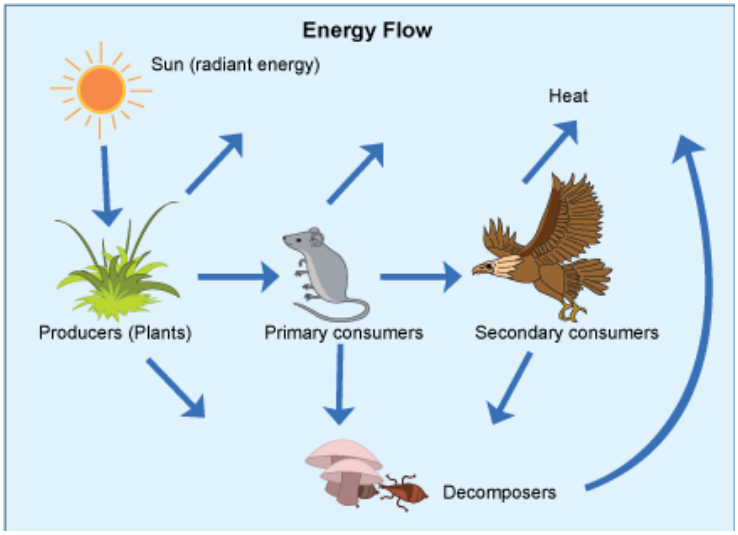
Name_____Class period___

Ecosystems---DAY 13

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.

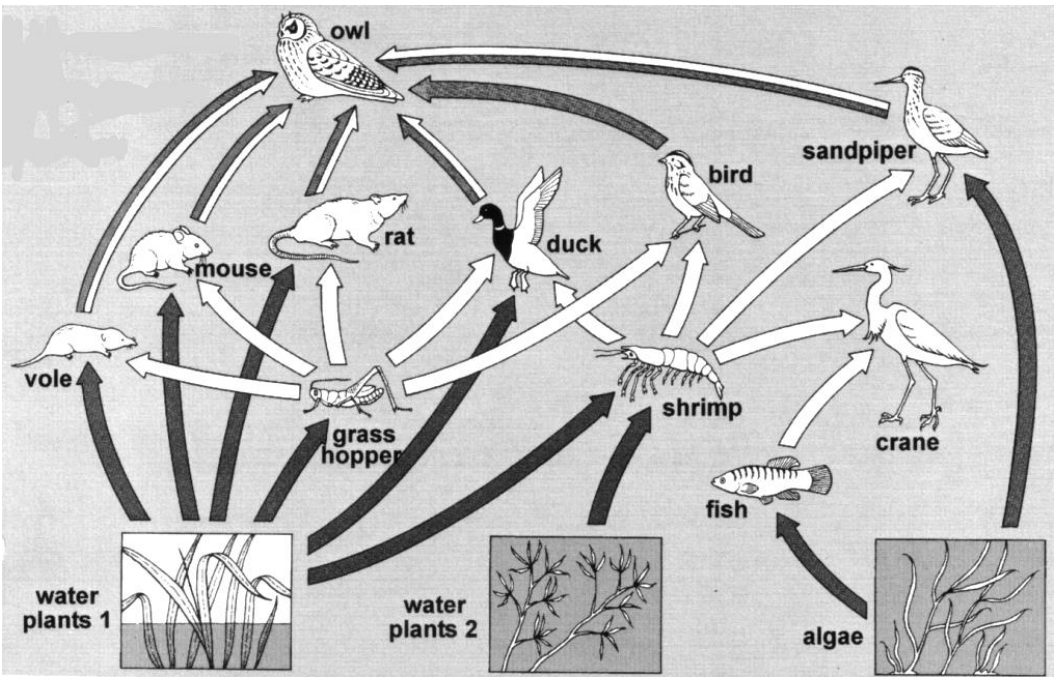
The source of energy and nutrients in ecosystems, whether terrestrial or aquatic, begins with **producers.** A **producer**, or autotroph, is an organism that can store chemical energy in food. Most producers use light energy as their initial source of energy in a process known as photosynthesis. They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