Discovery Tour
Student Packet

7th Grade

Name: _____

Lauritzen Gardens

Photosynthesis

photo (light) + synthesis (putting together) = using light to put things together; it's how plants eat

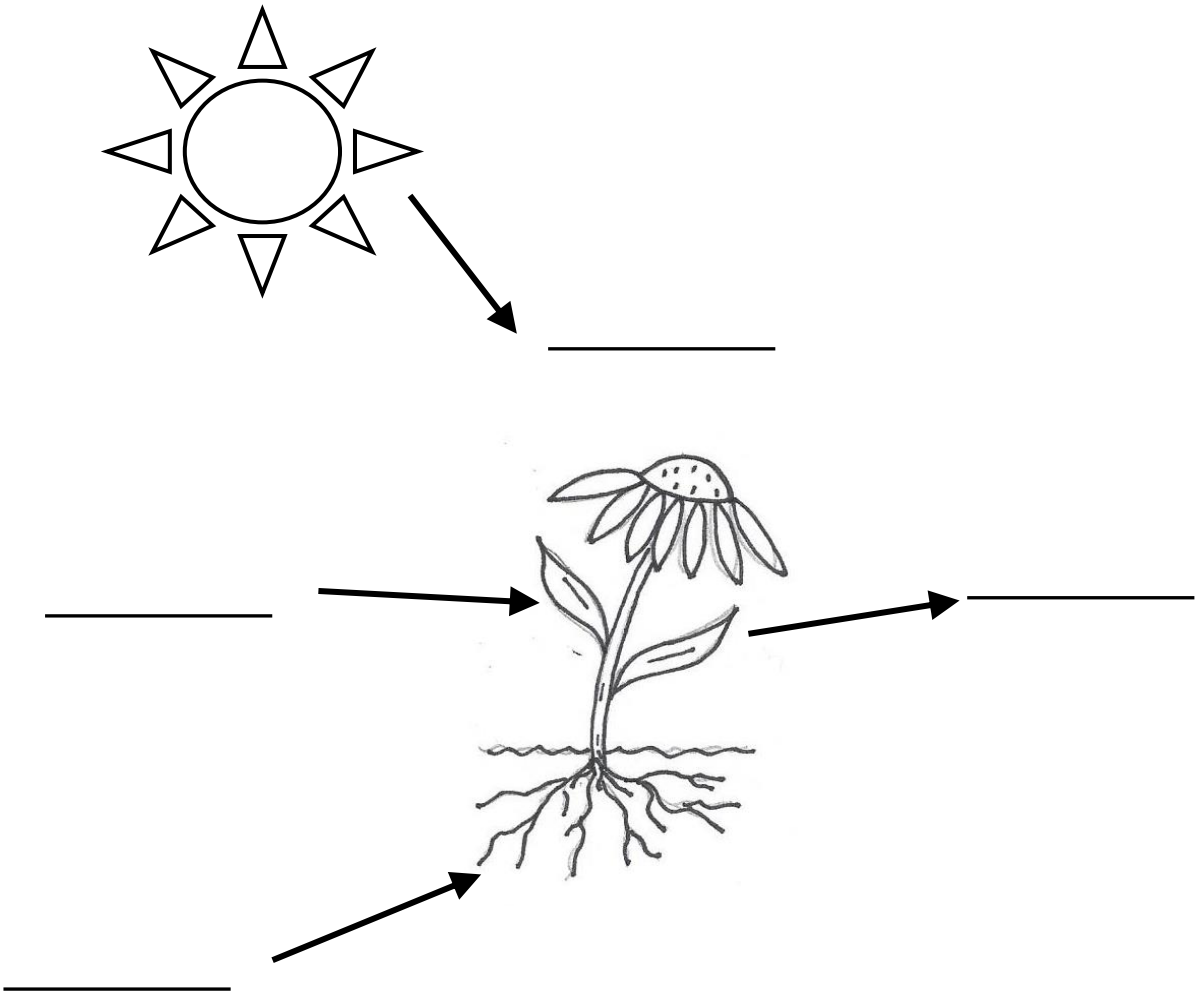
Plants need three things to make their food: **carbon dioxide**, **water** and **light**. (Carbon dioxide is a chemical in the air along with oxygen.) Plants breathe and drink, just like us; although humans want to breathe in oxygen and plants want carbon dioxide. They breathe through their leaves and drink through their roots.

Once plants have both carbon dioxide and water, they just need light to make food (sugar).
Plant leaves are made up of tiny little cells where the plant makes its food. Inside these cells are tiny things called chloroplasts, which is what makes leaves green. They also are what takes carbon dioxide, water and light and turns them into sugar and oxygen. The sugar is used as food by the plant and the **oxygen** is breathed out into the atmosphere.

http://photosynthesisforkids.com/

Photosynthesis in Action

Fill in the blanks with appropriate key words from the explanation above.



Photosynthesis (continued)

Jason planted a vegetable garden in his yard about a month ago. He planted tomatoes, peppers, lettuce, onions and a few flowers. All of the plants looked healthy and strong when Jason planted them, but they don't seem to be growing. As a matter of fact, some of the plants are starting to look weak and are not getting any new leaves or producing vegetables. Based on what you know about photosynthesis, what might be causing Jason's garden problems? In what ways could Jason experiment to determine what's wrong?

Marsh Ecosystem

An **ecosystem** is defined as any community of living and non-living things that work together. Ecosystems do not have clear boundaries, and it may be difficult to see where one ecosystem ends and another begins. In order to understand what makes each ecosystem unique, we need to look at the biotic and abiotic factors within them. **Biotic factors** are all of the living organisms within an ecosystem. These may be plants, animals, fungi, and any other living things. **Abiotic factors** are all of the non-living things in an ecosystem.

Both biotic and abiotic factors are related to each other in an ecosystem, and if one factor is changed or removed, it can affect the entire ecosystem. Abiotic factors are especially important because they directly affect how organisms survive.

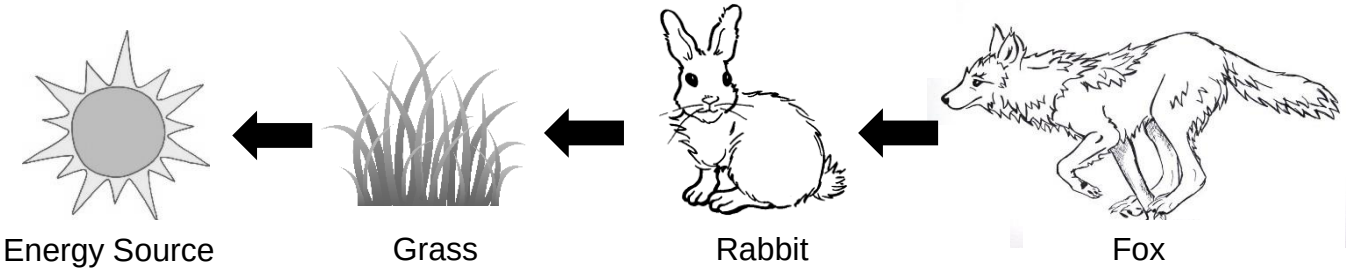
http://study.com/academy/lesson/abiotic-factors-of-an-ecosystem-definition-examples-quiz.html

Can you identify the factors of a marsh habitat?

Biotic	Abiotic

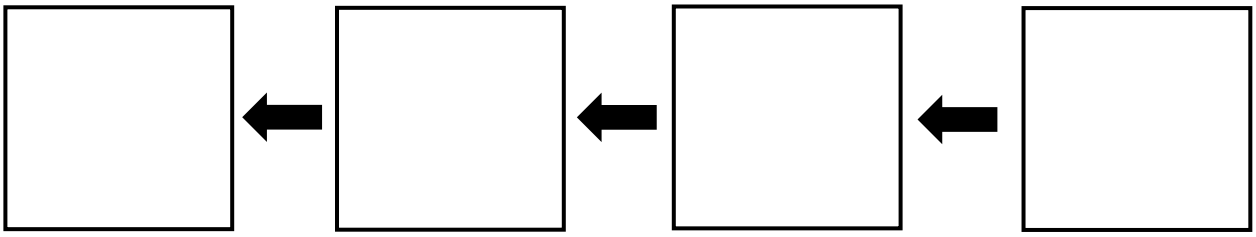
Food Chains

All living things need energy to survive. Plants get energy from photosynthesis. Humans and animals get energy from the things they eat (plants and animals). A simple food chain might look like this:



Energy Source → Grass (Producer) → Rabbit (Herbivore) → Fox (Carnivore)

Can you think of a different food chain?



What do you think would happen if one of the elements of a food chain disappeared?