



AFNR Plants and Horticulture
Photosynthesis

How important is sunlight to a plant?

Plants use photosynthesis to create food from carbon dioxide and sunlight. This reaction occurs because of the chlorophyll within plants, and is what gives them their green color. This experiment will answer two questions: Why are plants green? Why do plants need sunlight to remain green?

Materials:

- Plant with broad leaves
- Black construction paper
- Transparent material (plastic bag)
- Scissors
- Tape

Methods:

1. Cut a piece of black construction paper large enough to cover the broad leaf.
2. Wrap the construction paper around the leaf and use the tape to secure it.
3. Wait at least a week before removing the construction paper from the leaf. When the experiment is finished, compare your leaf to the other leaves on the plant.

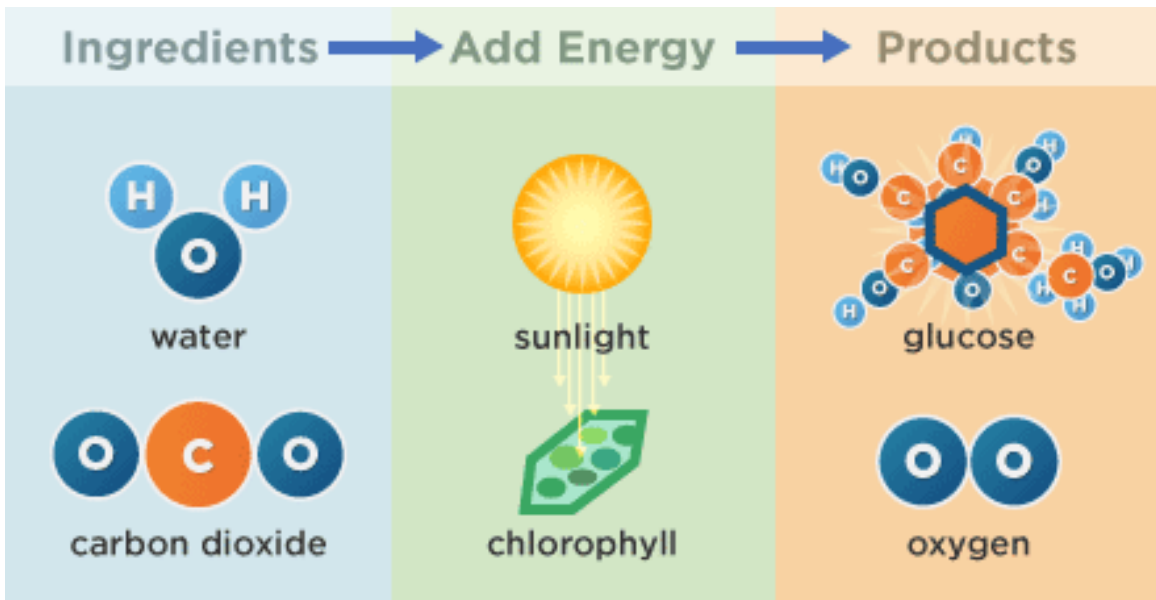
While you are waiting for the experiment to conclude, use a Biology textbook or the internet to research the process of photosynthesis in order to answer the following questions.

1. What is the balanced chemical equation for photosynthesis?
2. What are the two types of reactions that take place during photosynthesis?
3. Where does sunlight play a role in photosynthesis? (Which of the two types of reactions?)
4. What does sunlight do and why is chlorophyll important in this process?



GROW
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5. Explain the diagram below. What are the requirements necessary for photosynthesis to occur? What are the products and byproducts of photosynthesis?



Ref: <http://www.tv411.org/science/tv411-whats-cooking/photosynthesis-sciencelesson/activity/1/9>

Conclusion Question:

1. What happened to the leaf that was under cover of the construction paper? Why do you think this happened?