

Agenda for Thursday, December 3rd 2015

Agenda	Homework
1. SDRO Life Cycle Project	- All data, graphs, and scripts must be completed for the Fast Plant by tomorrow.

Which NGSS practices, DCIs, and CCs are we meeting?

<p>Science and Engineering Practices</p> <ul style="list-style-type: none"> • Conduct explanations supported by multiple sources of evidence consistent with scientific knowledge, principles, and theories. • Use an oral and written argument supported by evidence to support or refute an explanation or a model for a phenomenon • Develop and use models to describe systems. • Obtain, evaluate, and communicate information. <p>Crosscutting Concepts</p> <ul style="list-style-type: none"> • Cause and effect • Structure and Function • Energy and Matter • Systems and Systems Models 	<p>Disciplinary Core Ideas</p> <ul style="list-style-type: none"> • LS1.B: All organisms grow, develop, and reproduce. • LS1.C: All organisms obtain and use the matter and energy they need to live and grow. • LS1.D: Sense receptors respond to different inputs. • LS2.A: Organisms are dependent on their environmental interactions both with other living things and nonliving factors. • LS2.B: Matter and Energy move through an ecosystem. • PS3.D: Chemical reactions in plants produce complex food molecules; plants and animals release energy stored in food.
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Why are we doing this?

We have spent considerable time studying our Fast Plants and cabbage white butterflies. Today we begin a 2-week long project closely examining three characteristics of these organisms: how they have grown and developed, how they have obtained and used energy, and how they have reproduced. This project will show us that these organisms, like all others, have the same characteristics; albeit, they meet these characteristics in different ways.

A Few Answers to Questions

- **Where can I find a list of the graph requirements?** Visit the SDRO project page on 7bscience.com. There is a file that lists the requirements for your graphs, including what should be in the scripts.

Today's General Plan

Today your goal is to research photosynthesis and understand its role in plants (and, in a broader context, life). You will read and annotate a few pages from a textbook to learn about photosynthesis and answer a few questions to check your understanding. Once you finish reading, you will decide how to incorporate this information into your presentation: what graphics will you use and what will you say?

Today's Procedure

Part 1: Learning About Photosynthesis

1. Download the Cells and Energy reading on the SDRO project page.
2. Read (and annotate) through the information on photosynthesis (pp. 47-49). (There is also a short reading on pp. 142-143 in the SDRO textbook if you need more information.)
3. Questions you should be able to answer about photosynthesis:
 - 3.1. What is chemical energy?
 - 3.2. From what substance do cells obtain chemical energy?
 - 3.3. What is the ultimate source of energy for all organisms?
 - 3.4. What is photosynthesis?
 - 3.5. What is/are the role(s) of chloroplasts and chlorophyll?
 - 3.6. Summarize the process of photosynthesis. (What is needed for photosynthesis to occur? What are the products, or results, of photosynthesis?)
4. If you need more resources or if you are confused, please see Mr. Ower. He has additional readings you can review and I can help you answer questions.

Part 2: Incorporating Photosynthesis into your Project

1. Work with your partner(s) to decide which graphics you will use in your presentation. The graphics you use from your presentation may come from the reading resource, the SDRO textbook, or you can make your own. If you use anything other than your own graphics, be sure to give credit to the original author.
2. Prepare a script that describes what happens in photosynthesis and explains the role it has for organisms. Remember to connect this back to the guiding question of how organisms obtain and use energy (e.g. *"Now we will discuss how the Fast Plant obtained its energy to grow and develop."*)