

Plant Processes

Chapter 11

Understanding photosynthesis and respiration in plants will help you understand how life is maintained on Earth.

In this unit, you will work independently for the most part. Below you will find a list of the assignments. While there are some whole class activities, most of the assignments are individual work. In many cases you will have an opportunity to choose from a number of assignments. You may cooperate with other students, however you are responsible for your own learning. Remember, it is not what you did for the assignment, but what you learned that counts. You will present oral defense of the assignments, that is answer my questions about the material.

Every day you will put the date next to the assignment on which you are working that day. Suggested time frame is indicated next to each assignment. I will check off the assignments after you have completed them and answered several questions to show what you have learned. Other types of assessment are listed as well. The dates for the whole class activities and for the test will be announced later.

Objectives:

Science TEKS 7.5: Matter and Energy. The student knows that interactions occur between matter and energy. The student is expected to:

(A) recognize that radiant energy from the Sun is transformed into chemical energy through the process of photosynthesis;

Science TEKS 7.13: Organisms and environments. The student knows that a living organism must be able to maintain balance in stable internal conditions in response to internal and external stimuli. The student is expected to:

(A) investigate how organisms respond to external stimuli found in environment such as phototropism

Chapter 11, Section 1: Photosynthesis and respiration

Whole Class Activities:

- Listen to the presentation on section 1. Take notes
- Photosynthesis performance

Select one of the following assignments. You will need to orally defend the assignment upon completion (be able to answer questions about the material). Have to complete in 1-2 class periods.

1. Read the text. Make vocabulary flashcards. The definitions must be in your own words (not copied out of the glossary).
2. Listen to the section while reading the text. Record the main ideas.
3. Read the section and create a diagram of all the material in the section: a picture with labels and a short explanations for each concept
4. Read the text and create a concept map
5. Read the text and complete worksheets p. 18, 25

Everyone will complete:

- Versatile “The Leaf - A Major Food Factory”. Oral defense upon completion - 1 class period
- Stomata lab - 1 class period
- Create a tutorial on photosynthesis and respiration (a product of your choice) - 3 class periods

Chapter 11, Section 2: Plant Responses

Whole Class Activities:

- Listen to the presentation on section 2. Take notes

Select one of the following assignments. You will need to orally defend the assignment upon completion (be able to answer questions about the material). Have to complete in 1-2 class periods.

1. Read the text. Make vocabulary flashcards. The definitions must be in your own words (not copied out of the glossary).
2. Listen to the section while reading the text. Record the main ideas.
3. Read the section and create a diagram of all the material in the section: a picture with labels and a short explanations for each concept.
4. Read the text and create a concept map.
5. Read the text and complete worksheets p. 19, 26

Everyone will complete:

- Versatile “Plant Tropism”. Oral defense upon completion - 1 class period
- Tropism in Plants activity will be conducted as demonstration. We’ll start it at the beginning of the unit and make and record observations periodically.

Final assignment (typed) - work mostly at home:

Conduct research and form an opinion of the following issue:

Does the current administration’s energy policy encourage or discourage use of biomass as an energy source? Is it good or bad for the economy of US?

- Find 3 recent (less than 3 years old) articles on this issue.
- Read the articles. Cite them in MLA format.
- Write a 3-5 sentence summary for each in your own words.
- Write 2 good paragraphs (5-7 sentences) of your opinion.

Points for this assignment:

Citations correct: 8 points each.

Adequate article summary (no points if summary is not in your own words): 8 points each

Opinion section:

- 10 points for each good paragraph
- 5 points for each author’s opinion you mention in your reflection
- 10 points for supporting arguments
- 7 points for lack of misspelled words and grammatical mistakes.

Not graded, but available for the review for the test:

- Video quiz
- Online quiz
- Chapter Review w.s.p.33-34
- Practice test p.35-38

Test date will be announced later