

Essential Question: What are the characteristics & structures of living things?

Activity 7: Photosynthesis and Cellular Respiration

Purpose: I can explain the processes of photosynthesis and cellular respiration to others.

Background: Photosynthesis and Cellular Respiration are critical processes for life as we know it. Plants (Producers) are the key however, as they produce oxygen, sugars and starches that provide the basis of just about all food webs on Earth.

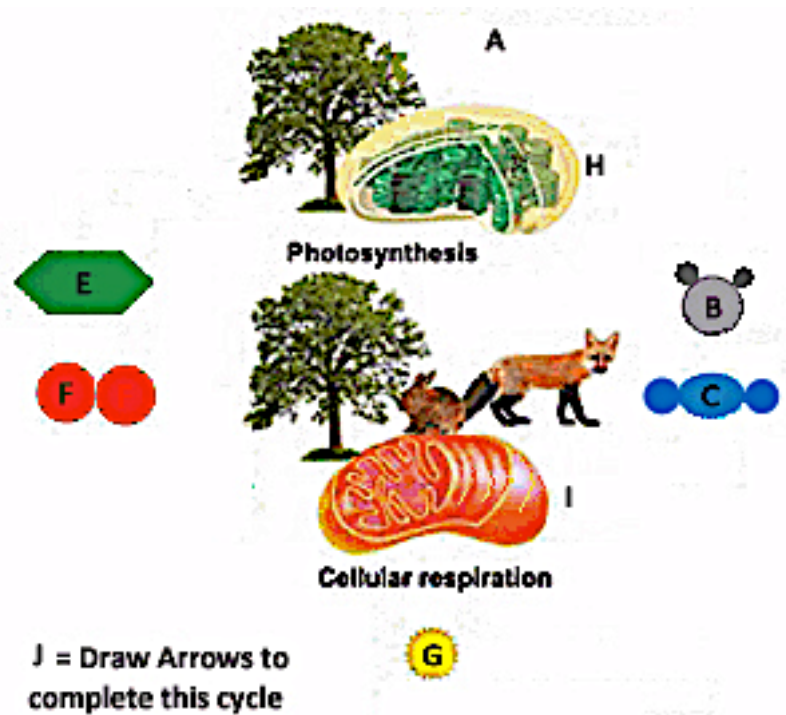
Part A. Instructions:

1. Go over the process of Photosynthesis and Respiration in these videos. While completing these videos:
 - a. Complete the data table below
 - b. Draw Arrows on the figure to complete the cycle shown.
 - c. Answer the questions that follow.

<https://www.youtube.com/watch?v=eo5XndJaz-Y>

<https://www.youtube.com/watch?v=JUmT24R8CyA>

<https://www.youtube.com/watch?v=3XlyweZg6Sw>



Data Table 1 – The Key Elements of Photosynthesis and Respiration

Element	Structure (What it is)	Function (What it does)
A		
B		
C		
D		
E		
F		
G		
H		
I		
J	Draw Arrows on Figure	

Photosynthesis is the single most important chemical process on the Earth.
Photosynthesis is affected by temperature, light intensity, light wavelength and carbon dioxide level.

Student Review: 1-Below Standard, 2-Approaching Standard, 3-Standard, 4-Above Standard
 Use the scale to evaluate completeness & correctness of the job. Put score, Initial & date in boxes.

Score

Initial/Date

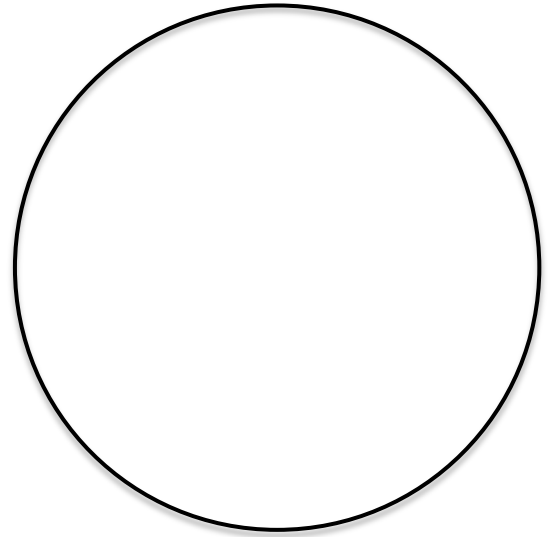
Figure 1 – Spinach Floats!

A.



Figure 2 – Leaf Guard Cells & Stoma

A.



A. Draw what happened. B. Explain what occurred in this demo	A. Draw & Label. B Tell what Guard Cells do
B.	B.

Photosynthesis Questions

1. In what part of the leaf do gases go in and out of?
2. Write the equation for Photosynthesis.
3. Where does photosynthesis occur?
4. Write the equation for Respiration.
5. In what cell organelle does respiration occur?
6. When a plant stores energy the plant stores the energy as _____.
7. In respiration _____ are broken down to create energy.
8. What key element(s) do all plants and animals need to live?