8

DepED
DEPARTMENT OF EDUCATION

Learning Activity Sheet for Science

Quarter 1

Lesson

5

Learning Activity Sheets for Science Grade 8
Quarter 1: Lesson 5 of 5 (Week 7)
SY 2025-2026

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LEARNING ACTIVITY SHEET

Learning Area:	Science 8	**Quarter:**	1st Quarter
Lesson No.:	Lesson 5 Subtopic 1	**Date:**	
Lesson Title/ Topic:	Cycles in Nature - Photosynthesis		
Name:		**Grade & Section:**	

I. Activity No.: Activity #1: Word Discovery

II. Objective(s): At the end of the activity, the learners are expected to decode the mystery words.

III. Materials Needed: worksheet, writing materials (ballpen, pencil, etc.)

IV. Instructions: Decode the following mystery words. Use the numbers as clues.

1. The process of converting light energy into chemical energy

16	8	15	20	15	19	25	14	20	8	5	19	9	19

2. A light-dependent process in some plants resulting in the oxidation of glycolic acid and release of carbon dioxide under some environmental condition.

16	8	15	20	15	18	5	19	16	9	18	1	20	9	15	14

3. The green substance in plants that makes it possible for them to make food from carbon dioxide and water.

3	8	12	15	18	15	16	8	25	12	12

4. One of the two crescent-shaped epidermal cells that border and control the opening and closing of a plant stoma

7	21	1	18	4	3	5	12	12

5. Minute openings in the epidermis of a plant organ (as a leaf) through which gaseous interchange takes place

19	20	15	13	1	20	1

6. Pocket of light.

16	8	15	20	15	14

7. End-product of photosynthesis.

19	21	7	1	18

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I. Activity No.: Activity #2: Grandeur of Photosynthesis

II. Objective(s): At the end of the activity, the learners are expected to identify the factors affecting photosynthesis and respiration.

III. Materials Needed: worksheet, writing materials (ballpen, pencil, etc.), three same-sized jars with lid, desk lamp, distilled water, aluminum foil (approximately 30cm x 30 cm), Elodea plant or any water plant, bromothymol blue (BTB) solution, marker.

IV. Instructions:

1. Wash the jars. Number the jars using the marker as 1, 2 and 3.
2. Place the water plant (Elodea) in jars 1 and 2.
3. Fill the three jars with BTB solution.
4. Put the lid on each jar.
5. Cover jar 2 with aluminum foil so that no light can enter it.
6. Place three jars in front of the desk lamp.
7. Check the color of the solution in each jar after an hour.

Guide questions:

1. What is the role of the desk lamp in the experiment?

2. Did the amount of light affect the result? Why do you say so?

3. What is the role of the BTB solution in the setup?

4. What did you prove in this activity?

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Lesson Title/ Topic:	Cycles in Nature - Photosynthesis		
Name:		**Grade & Section:**	

I. Activity No: Activity #3: Presence of Starch in a Leaf

II. Objective(s): At the end of the Activity the learners are expected to test the presence of starch in leaves and understand that the presence of starch indicates that the plant has been able to produce food through photosynthesis.

III. Materials Needed: Gumamela or sampaguita leaves, 500 ml beaker, saucepan, stove or alcohol lamp, ethyl alcohol, white saucer or tile, tweezers, dilute iodine solution (a few drops of providine-iodine to distilled water)

IV. Instructions:

1. Put one of the leaves in the dark for 24 hours, and the other one outside the door of your classroom.
2. After 24 hours, put some ethyl alcohol in a beaker. Place it in the 500 ml beaker full of water. Heat the beaker until ethyl alcohol begins to boil.

NOTE: DO THIS PART UNDER THE SUPERVISION OF YOUR TEACHER

3. Remove from the Heat
4. Use the tweezers to dip the leaves in hot water for 1 minute. Then place them in the beaker of ethyl alcohol for two minutes or until they turn almost white.
5. Set them each in the white dish or tile. Cover the leaves with iodine solution.
6. Observe

Guide Questions:

1. *What is the role of alcohol in the experiment?*

2. *Why should the leaves be immersed in boiling water and ethyl alcohol before testing the starch?*

3. *What happened when iodine solution was added to the boiled leaf?*

4. *Based on your observations, what can you conclude about this activity?*

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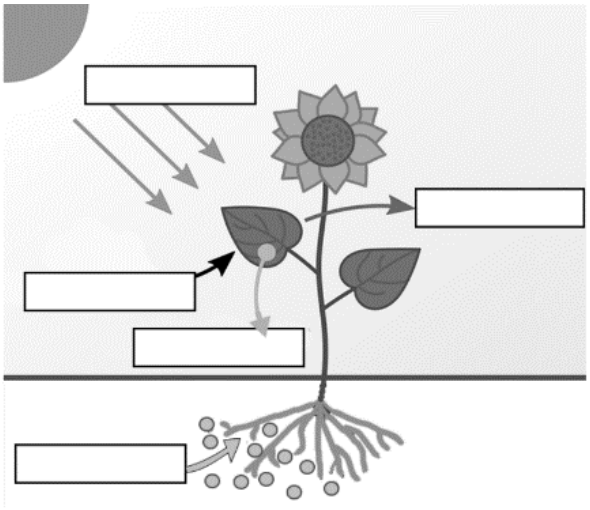
Lesson Title/ Topic:	Cycles in Nature - Photosynthesis		
Name:		**Grade & Section:**	

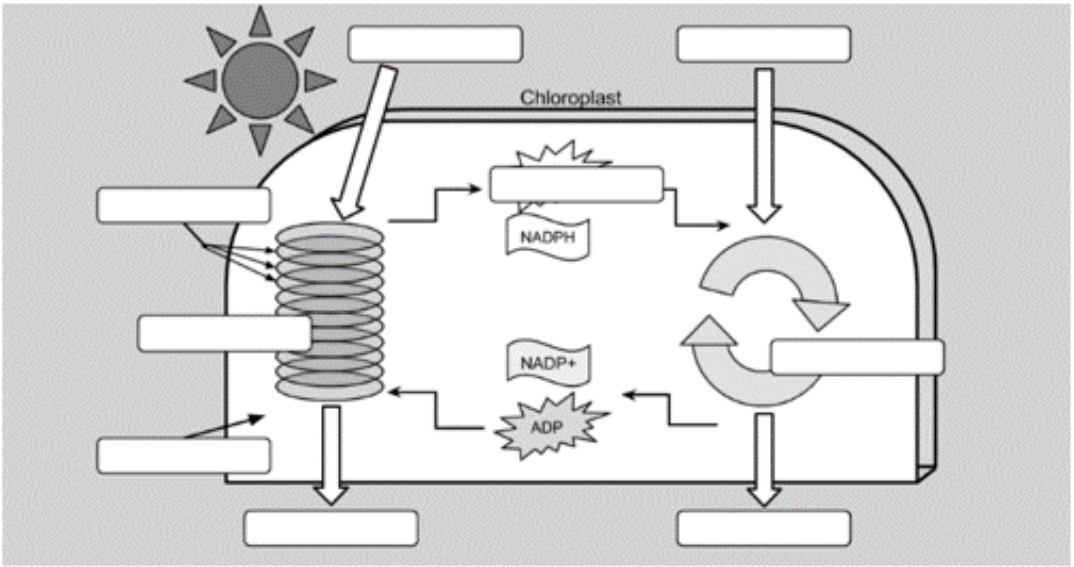
I. Activity No: Activity #4: Deciphering the Green Mystery: The Magic of Photosynthesis

II. Objective(s): At the end of the activity, the learners are expected to identify the stages and byproduct of photosynthesis.

III. Materials Needed: worksheet, writing materials (ballpen, pencil, etc.)

IV. Instruction: Examine the diagram provided. Identify and label the stages and byproducts of photosynthesis.





	What Goes IN	What comes OUT	Where it Occurs
Light Dependent			
Light Independent (Calvin Cycle)			

Guide Questions:

1. *What are the two sequential stages of Photosynthesis?*

2. *What are the end products of Light-dependent reactions?*

3. *What are the end products of Calvin cycle?*