

**Student Page - Grade 5 Prompt for Informative Writing.**

## **Photosynthesis**

Name: \_\_\_\_\_

**Directions:** Using what you have learned from reading the articles, viewing the video, and from discussing and answering the questions, you are going to write an informative text. You can use any notes you created when working with your partner(s).

***How do plants use photosynthesis to survive? Write an informational article, using information from the video and articles to explain how plants use the process of photosynthesis.***

For a good informative piece, you will:

- ☐ Write about how plants use photosynthesis to survive.
- ☐ Write a **clear introduction**.
- ☐ Provide a **focus and group related information logically**. Include headings and other formatting when helpful.
- ☐ Develop the topic with **facts, definitions, examples**, and **details** from the provided sources.
- ☐ Use **linking words and phrases to connect ideas and information**
- ☐ Provide a **concluding statement or section related to your information**.
- ☐ **Proofread** for spelling, punctuation, and grammar.

**Now, independently draft your informative.**

# Photosynthesis

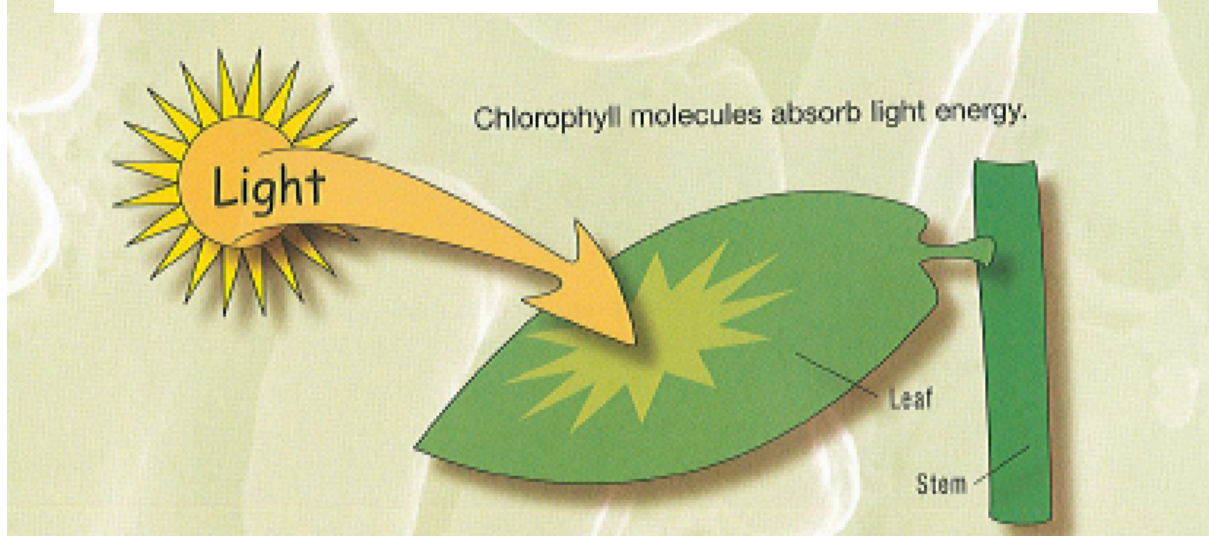
Plants produce their own food. The food is energy-rich sugar. The sugar is used by all plant cells. The cells use the energy in the sugar to do the things they do.

Plants use a process called **photosynthesis** to make sugar. The raw materials are water and carbon dioxide. The water and carbon dioxide combine with solar energy. Sugar and oxygen are the products.

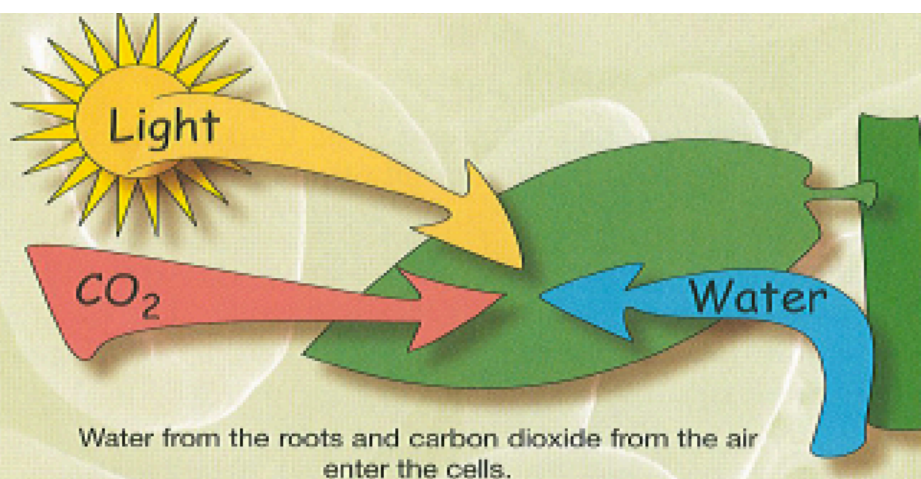
## Where Does Photosynthesis Happen

Most plants are green. Or at least they have a lot of green leaves. Leaves look green because the leaf cells contain the molecule **chlorophyll**. Chlorophyll can absorb red and blue light. It reflects green light. That's why chlorophyll looks green.

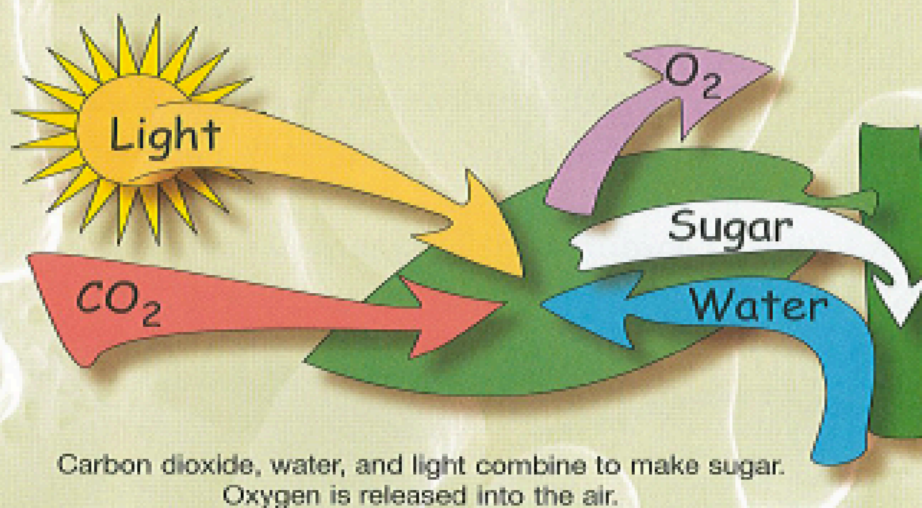
The important part is that chlorophyll absorbs blue and red light. The energy from the absorbed blue and red light is then ready to put into the sugar molecules during photosynthesis.



The green leaf cells make sugar out of two raw materials. They are carbon dioxide ( $\text{CO}_2$ ) and water ( $\text{H}_2\text{O}$ ). Carbon dioxide comes from the air. Water comes through xylem tubes from the roots. The carbon dioxide and water enter the green cells.



The carbon dioxide, water, and energy from the Sun combine to make sugar molecules in the plant's cells. Oxygen molecules are also produced. The oxygen is released into the air.



So where is food produced? In the green parts of the plant. Every cell that contains the light-absorbing molecule chlorophyll is making sugar.

2014-2015 LAUSD INTERIM ASSESSMENTS – ELEMENTARY LITERACY-GRADE 5

Question	Evidence from text or paragraph number
Reread the first 2 paragraphs. Define the photosynthesis process in your own words.	
Define chlorophyll. Explain why it is an important part of the photosynthesis process. Use evidence from the text.	
Reread page 2. Using the text and illustrations, describe other essential factors necessary for the photosynthesis process to happen.	



# Photosynthesis



When you get hungry, you might decide to raid the cookie jar or ask your mom to make you a sandwich. You do this because humans and animals get energy from the foods they eat.

Plants use light energy from the sun to produce the food they need to survive. This process is called photosynthesis.

## INGREDIENTS

**Light energy**  
Rays from the sun



**Carbon dioxide**  
From the air



**Water**  
Gathered by plant's roots in the soil

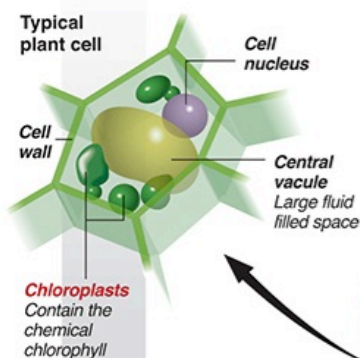


**Chlorophyll**  
Present in cells of green plants



## 1 SUNLIGHT

Light shining down from the sun is absorbed by the plant's cells. These tiny cells are what make up the plant and its leaves.



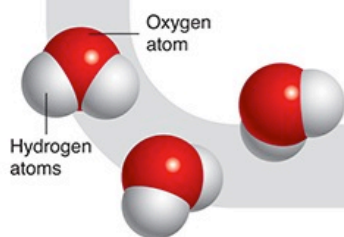
## 2 CHLOROPHYLL

Inside some of these cells is a special ingredient called chlorophyll. This is the compound that traps the sun's light to start the process of photosynthesis.

## 3 WATER

Water and carbon dioxide are two of the main ingredients needed for photosynthesis. These two substances are made of many smaller parts called molecules.

### Water molecules



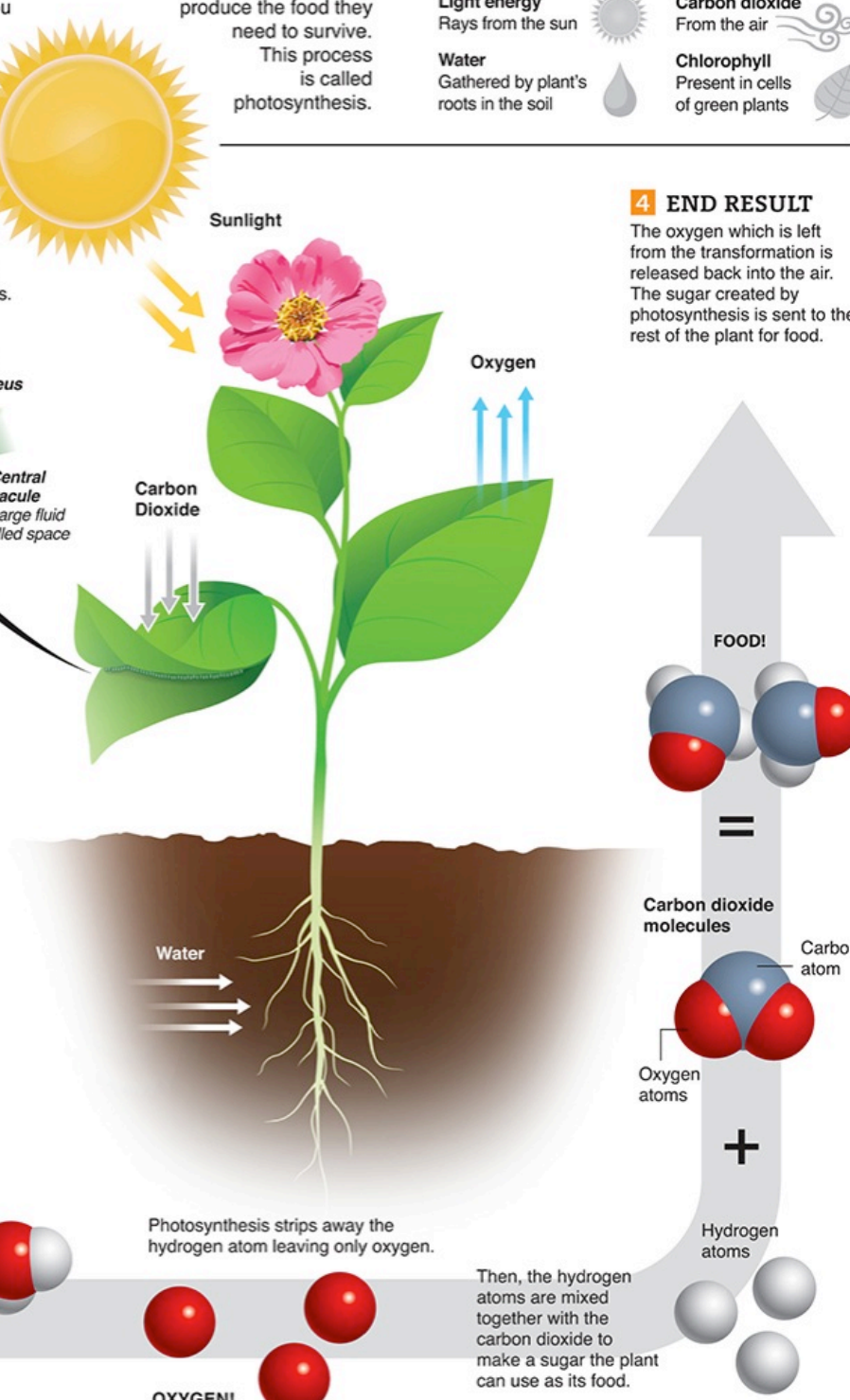
Photosynthesis strips away the hydrogen atom leaving only oxygen.

**OXYGEN!**

Then, the hydrogen atoms are mixed together with the carbon dioxide to make a sugar the plant can use as its food.

## 4 END RESULT

The oxygen which is left from the transformation is released back into the air. The sugar created by photosynthesis is sent to the rest of the plant for food.



Sources: BBC, Science aid, University of Arizona

Question	Evidence from text or paragraph number
<p>Reexamine the chart. Compare the aspects of the chart that are similar to the article 1 you read about photosynthesis.</p>	
<p>Add any new information you learned from examining this chart of the photosynthesis process.</p>	

Name\_\_\_\_\_Date\_\_\_\_\_

## Listening Closely Note Catcher

**Video/Text Title: PHOTOSYNTHESIS**

(<https://www.youtube.com/watch?v=3pD68uxRLkM>)

## How do plants use photosynthesis to survive?

<b>What are the essential factors necessary for photosynthesis to take place?</b>	
<b>New Vocabulary</b>	
<b>Word</b>	<b>Definition</b>
photosynthesis	
xylem	
stomata	
glucose	
carbohydrates	
<b>Describe new information you have learned about photosynthesis.</b>	

Explain in your own words what this video was about:

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