

# Wildflower Exploration:

## Directions for Phenomenal Photosynthesis Activity

**Materials:** [Phenomenal Photosynthesis](#) posters, [leaf stickers](#), glue if stickers aren't sticky.  
Print the picture called: [pancakes&photosynthesis 3equations.pdf](#)

### Teacher directed questions with discussions:

Do you remember that there are four parts of a flowering plant: roots, stems, leaves and flowers? In this activity, you will learn about one of these parts...LEAVES. What do you already know about leaves? Why are there so many leaves? Why are leaves mostly green, thin and flat? For the answers AND to learn why we should thank a plant every day, we will study Phenomenal Photosynthesis.

Something amazing happens in leaves. Leaves are where plants make their food. (Other green plant parts can carry out photosynthesis, too.) Can we make our own food? Plants can make their own food and, in doing this, they make the food all other animals depend on! Leaves make food in a process called photosynthesis. [a series of steps = a process]  
What does photo mean? >>> light  
What does synthesis mean? >>> make something  
Let's say that big word together: photosynthesis.  
Leaves make their own food using light.

Let's look at a recipe for pancakes and compare it to a recipe for photosynthesis. (use the pdf picture called: [pancakes&photosynthesis 3equations.pdf](#)).

Have you ever helped make pancakes at home? You start with certain ingredients to make pancakes. Similarly, a leaf needs certain ingredients for photosynthesis to occur. The main ingredients for photosynthesis are carbon dioxide and water. Can you guess where a leaf gets carbon dioxide?  
Carbon dioxide is part of the air. Can you guess where a leaf gets water? Water is found in the soil. Some minerals are dissolved in this water and they are also important for plant growth.

Let's think about our pancake recipe again.  
How does liquid batter change into the pancakes you eat? Yes, you cook it. Heat is the kind of energy that changes pancake batter into pancakes. Photosynthesis uses energy to change carbon dioxide and water into new products. Can you guess what that energy source might be? (Think of plants growing in a garden.) Yes, the sun! YOU can feel the heat energy from the sun, but PLANTS capture the sun's light energy to power photosynthesis. Chlorophyll is what catches (absorbs) light energy from the sun. Chlorophyll is green and makes leaves and other parts of plants look green.

Think about our pancake recipe again. When pancake batter is cooked, the ingredients you mixed together change into something new. When light energy from the sun gets captured by chlorophyll inside a leaf, carbon dioxide and water are changed into two new things—food (sugar) and oxygen.

The plant uses some of this food to grow and protect itself and to make flowers. It can also store some of it in underground plant parts for later use. You might have learned about these underground plant parts in another lesson.

What happens to the oxygen produced by photosynthesis?  
Leaves release the oxygen into the air. Think about that! Who breathes oxygen?  
We do! (Other animals do, too.)

**Directions for Phenomenal Photosynthesis activity poster:**

I have a poster for each of you to complete that summarizes photosynthesis. [Pass out poster and stickers] On the stickers, you will find the answers to each of the blanks on the poster. Your job is to put the correct sticker in each of the blanks. Let's do the first sentence together: Something amazing happens in a \_\_\_\_\_. Here are your hints: Where does most photosynthesis happen in a plant? What part of a plant have we been studying today?

**Summary:** Why should we thank a plant every day?

Because plants:

- make the oxygen that we breathe
- make food for themselves
- are food for us
- are food for other animals (that we might eat)

AND it all happens because of photosynthesis in leaves and other green parts of plants.

No wonder we should thank a plant every day!

# PHENOMENAL PHOTOSYNTHESIS

The Recipe for Feeding All Living Things



Something AMAZING happens in a

Energy from the

powers a process called



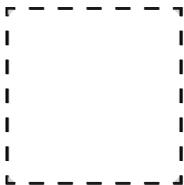
found inside leaves

is green and captures light energy from the sun.

Leaves take in

from the air.

From the soil, plant roots take up  
which move to the leaves through stems.



use photosynthesis to

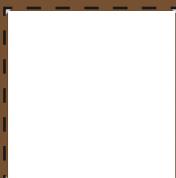
make the food they need to grow, reproduce, and protect themselves.

Light energy from the sun changes carbon dioxide and water into

and

## WHY SHOULD YOU THANK A PLANT EVERY DAY?

You and all other



could not survive without the oxygen and food that plants make.

**CUT OUT THE SQUARES  
AND GLUE THEM TO THE CORRECT POSITIONS  
IN THE PHENOMENAL PHOTOSYNTHESIS POSTER!**

