



Plants & Trees for Me!

NGSS Standards: K-LS1-1, K-ESS2-2, K-ESS3-3

Level: Kindergarten

Time: 45 minutes

Objectives:

1. Students will learn how plants produce their own food (photosynthesis).
2. Students will learn to label plant parts.
3. Students will learn how certain plants reproduce through pollination.

Materials:

- Flower model
- Colored bandanas (green, black, dark blue, grey, orange)
- Packet of sugar
- How a tree grows kit
- Dry erase board and marker

Pre-Activities:

Photosynthesis song: <https://www.youtube.com/watch?v=I.gYPeeABoUs>

Parts of a plant: <http://courtoisieng.com/71617/parts-of-a-flower-coloring-page/parts-of-a-flower-coloring-page-parts-plant-coloring-sheet/>

Procedure:

1. Begin the lesson with asking the students if their bodies make food? Imagine if your body could make food from the energy of the sun!
2. Plants can do this! This process is called Photosynthesis. Use the colored bandanas to represent the input and outputs of photosynthesis.
 - a. The orange bandana represents the sun and energy for the plants.
 - b. The blue bandana represents water taken in by plants.
 - c. The grey bandana represents CO₂ taken in by plants and oxygen released by plants.
 - d. The black bandana represents soil providing nutrients for plants.
 - e. The green bandana represents chlorophyll in the leaves...the sugar packet represents C₆H₁₂O₆---glucose or sugar for energy!!!
3. Using the dry erase board, draw a plant and have the students help you label the roots, stem, leaves, flower. Draw a tree and have the students help you label roots, trunk, branches, leaves.
 - a. Roots: stabilize the plant and bring nutrients to the plant from the soil
 - b. Stem/Trunk: support the plant and leaves, transports nutrients.
 - c. Leaves: house chloroplasts with chlorophyll for making energy (sugar) for the plant.
 - d. Flowers: host the reproductive organs for the plant.

4. Utilize the Flower model to demonstrate pollination.
 - a. Have a few students volunteer to 'visit' the plant like a bee or butterfly and pick up pollen from the anther and take it to the stigma of several flowers. The pollen will travel down the style and fertilize the ovaries present to produce seeds for new flowers. Pollination is complete!

Post-Activities & Resources:

1. Tree worksheet: <https://www.teacherspayteachers.com/Product/Parts-of-a-Tree-Worksheet-2750754>
2. Pollination: https://www.fs.fed.us/wildflowers/pollinators/What_is_Pollination/