



Lesson: Photosynthesis

Name:

Teacher:

Date:

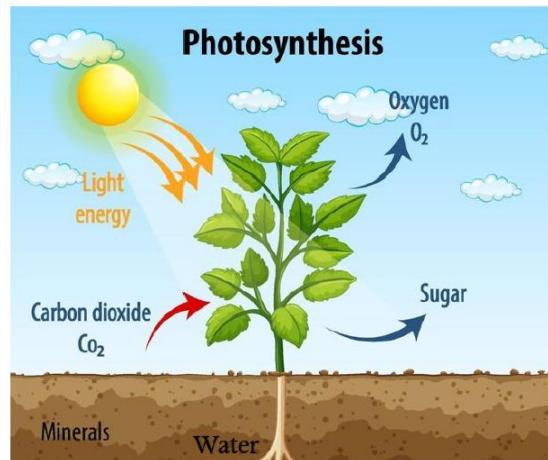
Photosynthesis Model Project Guide

NGSS Standard: MS-LS1-6

Florida Benchmark: SC.4.L.16.2 – Explain that plants use energy from the Sun, air, and water to make their own food.

Objective

- Demonstrate how photosynthesis works by creating a visual model.
- Show the roles of sunlight, water, and carbon dioxide in food production for plants.
- Explain the cycling of matter and energy flow in living systems.



Materials

- Cardboard base
- Green construction paper or green foam
- Scissors
- Glue or tape
- Markers
- Printable plant part templates (roots, stem, leaves)
- Photosynthesis diagram handout
- Yellow/orange paper for sunlight
- Flashlight (optional, indoor use)

Safety Guidelines

- Use scissors carefully and only for cutting materials.
- Do not shine flashlights directly into eyes.
- Maintain a clean workspace to avoid tripping hazards.

Procedures



1. **Prepare the Base:** Provide each student with cardboard, green paper, markers, scissors, and templates.
2. **Construct Plant Parts:** Students cut and assemble roots, stem, and leaves. Attach them to the board and label each part clearly.
3. **Model Sunlight:** Use yellow/orange paper to represent sunlight. Add arrows showing sunlight reaching the leaves.
4. **Model Inputs:** Draw arrows showing:
 - o **CO₂ entering through stomata (leaves)**
 - o **Water absorbed by roots**
5. **Show Outputs:** Draw arrows or labels for:
 - o **Glucose (food) produced**
 - o **Oxygen released into the air**
6. **Presentation:** Students present their models and explain how sunlight, water, and carbon dioxide work together during photosynthesis.
7. **Reinforcement:** Use diagrams or visual references to review key ideas as students share their models.

Clean-Up

- Recycle leftover paper scraps.
- Return scissors, flashlights, and unused materials to storage.
- Ensure tables are cleared before dismissal.