

Oxygen Factory

Objective: To illustrate the process of photosynthesis.

Time: 25 minutes.

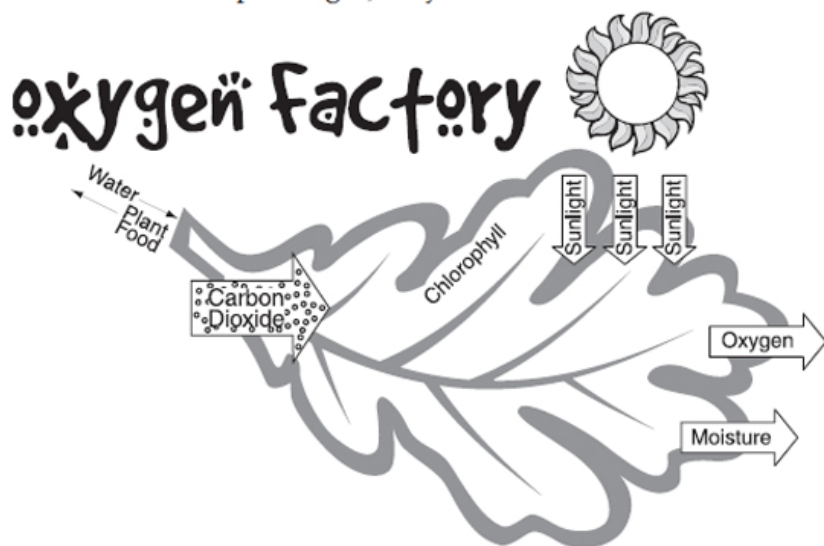
Materials: Oxygen Factory illustration page (in the Appendix), crayons.

Distribute the Oxygen Factory illustration page. Tell the gardeners that plants are the only living things in the world that don't need to find food to eat. Tell them that plants make their own food within the leaves, in a process called PHOTOSYNTHESIS.

Explain that just as when we use different ingredients to follow a recipe, plants need different ingredients to make their food. We use ovens to bake our food to change it into something we can eat; plants use sunlight to change their ingredients into food they can use. Plants use three ingredients to make food: CHLOROPHYLL, WATER and CARBON DIOXIDE.

Explain that the green in the leaves comes from CHLOROPHYLL. Have them lightly color the leaf green. Remind them that the roots bring water to the plant from the ground. The water is carried to the leaves through the stems and veins. Have the gardeners color the stem and veins of the leaf blue. Tell them to take a deep breath and let it out slowly. When they breathe out, remind them that they are breathing out CARBON DIOXIDE—the last ingredient plants use to make their food. Have them color the bubbles of carbon dioxide gray.

Ask the students to remember what plants use to change their ingredients to food. Tell them that the leaves soak up sunlight; they should color the arrows labeled SUNLIGHT bright yellow.



Tell them that the plant sends the food it makes to the stem for the rest of the plant. Have the gardeners take a breath again and tell them that the best part about the plant making its food is that it has leftovers that it does not need. Explain that in this process OXYGEN is made and the plants do not use it, so they send it into the air. Have them color the OXYGEN arrow red. Moisture is also released. Color the MOISTURE arrow blue.