



PHOTOSYNTHESIS

Vocabulary (can be discussed before or after viewing):

- Photosynthesis
- Glucose
- Phytoplankton
- Chlorophyll
- Carbon Dioxide (CO₂)
- Oxygen
- H₂O
- Food chain (or food web)

I. Pre-viewing Questions

Ask:

How has ever grown tomatoes or vegetables or herbs or other kinds of plants?

What do these plants need to grow?

Does anyone know how “photosynthesis” plays a part in the growth of a plant?

SHOW PHOTOSYNTHESIS VIDEO (eight minutes)



PHOTOSYNTHESIS

II. Post-viewing Questions

Ask:

How do plants make their own food so they can grow?

[Through photosynthesis.]

Who can describe how photosynthesis works?

[Energy from the sun, water — H_2O — from the soil, and carbon dioxide — CO_2 — from the air are processed in the chlorophyll of the plant. Chlorophyll is the pigment that makes plants green.]

What kind of food do the plants make for themselves?

[Glucose—a basic sugar, or carbohydrate.]

When we eat plants, or animals that have eaten plants, what happens to that glucose?

[It goes through our digestive system and into our bloodstream to be transported to all our cells. Our cells break down glucose for energy, just like plants do.]

What does photosynthesis have to do with the air we breathe?

[During photosynthesis, plants “breathe” in carbon dioxide (CO_2) and release (breathe out) oxygen (O_2) into the air.]

Why is it important to keep our planet “green”?

[Because we need plants for food and for a way to take carbon dioxide out of the air and produce oxygen.]

General Discussion:

What else did viewers learn from the video? Was it enjoyable? Ask for examples of what was clear/confusing. How did the recipe relate to the science topic? What else do learners want to know about this topic? Would they show it to their children?

Web Lessons: On tv411.org/Science, note the science and math web lessons that correlate to **Photosynthesis**. Use them as part of your lesson or encourage learners with outside access to the internet to visit tv411.org where they can review the videos, learn more about the topic through the related web lessons, or explore other videos and lessons.