

## LESSON | PLANT GROWTH AND WATER

Go deeper  
with our  
**digital tool** on  
plant life cycles:  
**[scholastic.com](https://www.scholastic.com/growingstrong)**  
**[/growingstrong](https://www.scholastic.com/growingstrong)**

Pair nonfiction reading and hands-on experiments to solidify your students' knowledge of plant life cycles.

### Objective

Students will analyze text about plant growth, then conduct an investigation about the water needs of different plants.

### Standards

#### NGSS

3-LS1-1. Investigate and visually represent life cycles

4-LS1-1. Construct an argument that plants and animals have internal and external structures that function to support survival

5-LS1-1. Visually represent understanding of needs to grow and thrive

#### CCSS ELA

RI.3-5.2 Determine the main idea of a text

### Time

45 minutes

5–10 minutes for follow-up of experiment for 4–5 days

### Materials

- Two or more plants in pots
- How Plants Grow...and Help You Grow! activity sheet
- Fun Fruit Facts! classroom poster
- What Do You and Plants Need to Grow? activity sheet
- Venn diagram template ([scholastic.com/growingstrong](https://www.scholastic.com/growingstrong))

**1** Start by asking: *What things do you need to be healthy that a plant also needs?* (Possible answers: I drink water and plants need water, we both need fresh air, etc.)

**2** Have students read and complete the summarizing activity on the How Plants Grow...and Help You Grow! activity sheet. Share learnings as a class. Emphasize that plants need sunlight and water (air, too!).

**3** Introduce a research question: *What happens if the amount of water you give a plant changes? How can we find out more?* Pair up students to brainstorm ideas. Explain that the class will develop an experiment in which they will give plants varying amounts of water each day (including not watering the plants at all), and then record how each plant reacts. Note: You can use two or three small potted plants in your classroom or plants outside on your school grounds.

**4** Have students create a log booklet by folding a few pieces of paper in half. Explain that each day, they'll record the amount of water given to each plant and draw a small sketch of what the plant looks like.

Using color will be helpful to show any changes in leaf/flower color.

**To increase the challenge:** Have students draw predictions at the beginning of the booklet.

**To decrease the challenge:** Make a class chart and have students take turns filling in the daily observations.

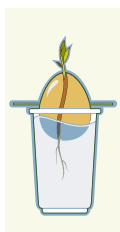
**5** Show the Fun Fruit Facts! poster to launch a discussion about what plants need to survive (e.g., seeds, particular climate needs) and what humans need to survive (e.g., healthy food like avocados, digestive system to extract nutrients). Have students complete the Venn diagram with the What Do You and Plants Need to Grow? activity sheet. Collect a list on the board of healthy choices students can make, such as eating plant-based foods like avocados, bananas, and apples.

**6** After a week, have students draw conclusions about the water experiment. Ask: *What happened to each plant when you gave it various amounts of water, or none? How did different plants react to the same amount of water?* Have them write conclusions in their booklets.

## Plant Project Grow an Avocado Plant

**1**

Place three toothpicks into the sides of a dried avocado pit. Prop it in a full glass of water.



**2**

Wait for roots and a sprout to appear (2–6 weeks). Invite students to help plant the seed in a pot filled with soil.



**3**

Set in a sunny spot, water regularly, and watch it grow!



Name \_\_\_\_\_

# How Plants Grow...and Help You Grow!

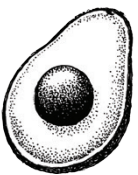
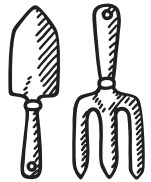
Read the paragraphs below and underline important information. Then write a short summary (about two sentences) of each paragraph on separate paper.

**All plants have a life cycle.** A seed starts out in the ground. Add water and sunlight, and it will start to grow. As the plant sends roots into the ground, its stem and leaves climb toward the sky. As it grows, it also makes seeds. These seeds can fall to the ground. Seeds can also travel in the wind and on animals. Animal droppings take seeds far and wide. This means the plant can grow again.



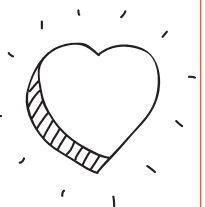
**All plants need sunlight and water.** But different plants can have different needs. For example, avocados need warm weather to grow. So almost all the avocados we eat in the U.S. come from Mexico, where the weather is warm all year. Plants like apple and peach trees can survive cold winters, so they grow as far north as Canada.

**Plants feed themselves.** A plant's stem is like a straw that sucks up water from the ground. The water goes to the leaves. Then the leaves make food for the plant using sunlight, water, and air. Unlike plants, animals can't make their own food. So, many animals eat plants to get the energy the plant produced in its leaves.



**Some plants need help to grow fruit.** When you plant seeds from fruits like blueberries and bananas, you can grow fruit. The seeds from other fruits, like avocados and apples, may not give you fruit if you plant them. Farmers use a process called grafting to help these trees produce fruit.

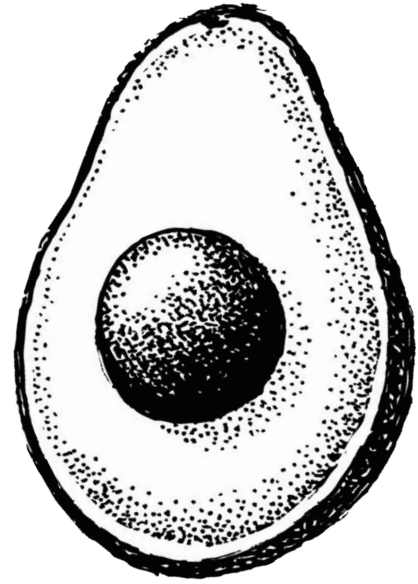
**Fruits and vegetables contain important nutrients.** Eating them helps your body grow strong and healthy. For example, avocados have nearly 20 nutrients, including vitamins, minerals, fiber, and good fats. Your body needs these nutrients to work properly.



Name \_\_\_\_\_

# What Do You and **Plants** **Need to Grow?**

Plants and people need some of the same things to grow. But people are more complicated! Review what you learned about avocados and other fruits. Then cut out these words and make a Venn diagram to compare which needs you share with plants and which ones you don't.



<b>Skin</b>	<b>Home</b>	<b>Sun</b>
<b>Love</b>	<b>Air</b>	<b>Seed</b>
<b>Friendship</b>	<b>Water</b>	<b>Warmth</b>
<b>Soil</b>	<b>Education</b>	<b>Roots</b>

Name \_\_\_\_\_

# Venn Diagram

