

How Can We Find the Best Place for a Plant to Grow? Unit Storyline

Lesson 1: Plants and Places

Plants need many different things to live, grow, and reproduce.

Students analyze habitat photos to make claims about how a habitat can affect a plant's growth and reproduction. They ask questions about the grand spider orchid and its habitat to find out more information about the decreasing number of grand spider orchids.

Lesson 2: Plant Parts

A plant has parts that have structures related to their functions.

Students obtain information and make observations using text, illustrations, photos, and live plants to make connections between plant structures and their functions.

Lesson 3: Plan It Out

Investigations can be planned to determine whether plants need light and/or water to grow.

Students plan and carry out an investigation to investigate whether light and water cause a plant to grow.

Lesson 4: Sunshine and Rain

Plants need light and water to live and grow.

Students analyze and interpret data from their plant growth investigations to use as evidence to make claims about whether light and water cause a plant to grow.

Lesson 5: Flower to Flower

Bees have parts that help them move pollen from stamen to pistil.

Students analyze bee structures and how they function in moving pollen from stamen to pistil.

Lesson 6: A Gardener's Gadget

A solution to decreasing pollinator populations is designing hand pollinators to move pollen.

Students design a solution to the decreasing number of pollinators by mimicking bee structures and their function to make a hand pollinator.

Lesson 7: Hitching a Ride

Seeds have structures that relate to how they are dispersed.

Students use models to investigate how seeds' structure relates to their function and use their observations to support claims about seed dispersal methods, using evidence.

Lesson 8: Home on the Range

Different plants and animals live in different places and work together in their habitats.

Students analyze data about animal and plant ranges by using a simulation to discern patterns among plants and animals in a habitat and investigate how these parts work together in the natural world.

Science Challenge

Lesson 9: Place That Plant! Part 1

Plants can be placed in habitats that provide what they need to live, grow, and reproduce.

Students analyze and interpret information about two plants and use a map to make suggestions about where to plant them, using knowledge about what causes each plant to grow, how seeds will be dispersed based on their structure, and how the plant will be a part of the habitat system.

Lesson 10: Place That Plant! Part 2

The grand spider orchid is facing population decline because of its pollinator.

Students analyze an argument about where to place a plant in a schoolyard, based on what they know about how the parts in a habitat will work together to help the plant live, grow, and reproduce. They use evidence collected through the module to construct an explanation for the decreasing number of grand spider orchids.

Source: Smithsonian Science Education Center, How Can We Find the Best Place for a Plant to Grow? in Smithsonian Science for the Classroom. Carolina Biological, Burlington, NC, 2019.