

The Right Plant in the Right Place

Guide students to understand how the right plant in the right place can benefit the planet, humans, and animals.

OBJECTIVE

Students will:

- ✓ Learn about the uses and benefits of plants
- ✓ Review the basic steps of plant growth
- ✓ Understand the concept of native versus non-native plants

TIME

45 minutes

MATERIALS

- ✓ Plant Purposes activity sheet

Optional:

- ✓ Plant dissection tool at [scholastic.com/bloom/plantpower](https://www.scholastic.com/bloom/plantpower)
- ✓ Make Your Community Bloom poster

1 Tell students that plants perform countless roles in our communities, our country, and our world. Some of these roles are as simple as bringing food to our plates, and some are as complex as ensuring the health of the entire planet.

2 Have students brainstorm ways that plants are important to humans, animals, and the environment. Keep track of these by writing them on the board. The list will include providing safe and nutritious food, medicine, building materials, paper products, pigments, oxygen for breathing, atmospheric balance, physical and mental health, etc.

3 Review with students the basic steps of plant growth. After a seed germinates, a sprout forms and begins to grow. Most plants need light, water, and food to create fuel; as it receives these, the plant develops. Over time, leaves (or similar structures) form and increase the production of energy for the plant. Eventually, the plant develops reproductive parts—in many cases, these are flowers. Next comes pollination, by which pollen is carried to the egg, usually with the help of a pollinator, such as an insect or a bird. Once this occurs, the egg is fertilized and can begin to mature into a seed. Eventually, these seeds will be dispersed, a process that can happen in many ways: Some seeds are blown in the wind, some are spread by birds, etc. If the seed lands in a fertile environment, the entire process can begin anew. [See the next page for more detailed information.]

4 Introduce students to the concept of “the right plant in the right place.” For example, when plants develop in a certain region (native plants), they are therefore naturally suited to that particular soil and climate. For example, a saguaro cactus is native to the Arizona desert, but the sugar maple is not; one needs warm, dry weather, and the other needs cool, wetter weather. Ask students to consider what could happen to native plants if the climate changes. If a region becomes too hot or cold for a plant species, it might not be able to adapt and survive. If a plant species dies in a certain region, the wildlife that depends on it will suffer as well.

5 Distribute copies of the Plant Purposes research activity sheet and guide students through the instructions. Students will research native plants in their community and how they depend on climatic and soil conditions. If you happen to live in a diverse ecological region, consider limiting their area of focus to a particular park or location. Students will then choose a specific native plant, learn its characteristics, and draw it.

EXTENSION IDEAS

- ▶ Students can “dissect” a digital plant with the fun tool at [scholastic.com/bloom/plantpower](https://www.scholastic.com/bloom/plantpower). (Direct them to start with the roots.)
- ▶ Show the **Make Your Community Bloom poster** and discuss how plants help the area around them thrive.
- ▶ Lead the class in a field study about native plants in your region. In advance, have students learn about 10 native plants that might be found in a local park or similar location. Next, travel to that park and perform a survey, “diagnosing” the native plants from a horticultural perspective. Students will identify the plants there, determine if they are healthy or struggling, and create a plan for improving the park to better support the soil quality, plant life, and community that surrounds the area.



The Right Plant in the Right Place (cont.)

SUPPLEMENTAL INFORMATION:

Plant Growth Cycle

GERMINATION Cell duplication begins under the right conditions for the type of plant: temperature (usually warm, sometimes cold), moisture (the just-right amount), and location (like soil, sometimes water) conditions.

SPROUTING The primary root emerges to anchor the seed and absorb nutrients from soil.

VEGETATIVE Leaves grow and begin to convert light energy into chemical energy that can later be released to fuel the plant's activities (photosynthesis)—plants make their own food!

FLOWERING Ovules, the female reproductive parts of the plant, grow as part of the flower. Flowers use scent and color to attract pollinators.

POLLINATION Ovules are fertilized by pollen, often via pollinators (e.g., insects, birds).

SEED DISPERSAL Fertilized ovules develop into seeds, which are dispersed (e.g., gravity, wind, animals), and the cycle can begin again with germination.



BLOOM!

NAME: _____

Plant Purpose: The Where, Why, and How of Native Plants

Native plants are plants that have developed in a certain region and are therefore naturally suited to that region's soil and climate. In this activity, you will explore native plants in your area and research how they contribute to the environment. Next, you will choose a native plant and conduct a closer exploration of it.

RESEARCH

Conduct research on native plants in your region. Collect your research notes below.

What is the climate of your region?

How much rainfall occurs yearly in your region?

What kind of soil is available for plants in your region?

How do your native plants support local wildlife?

How do your native plants depend on local wildlife?

How do your native plants benefit people in the region?

How do your native plants improve the environment, in addition to supporting wildlife and people?

MY NATIVE PLANT

INSTRUCTIONS: Choose one of your many native plants to describe and draw. Provide the common name and Latin name of your plant. In your description, provide characteristics of your plant, including the climate and soil type it needs to survive. Next, create an illustration of your plant.

Name:

Description:

Make Your Community Bloom

Connect the projects below with the areas of the community that could be improved with plant power.



A

Add greenery to roadways to dampen sound from traffic and lessen the amount of pollution that enters the air and nearby waterways.



B

Remove dangerous materials and waste from a dump, and plant trees, shrubs, and grasses to return the land to its natural state.



C

Plant vacant city lots and start green markets where neighbors can get together and share/buy fresh fruits, vegetables, and flowers.



D

Plant by riverbanks to help keep runoff and effluent out of the water. Plant tall grasses to increase food and habitat for wetland critters.



E

"Crank up" the variety of trees and plants in suburban neighborhoods to break up sprawling lawns and increase local biodiversity.

Extra Credit: Do you see plant solutions that have already taken root? Can you spot even more room to grow?

Answer key is located in Lesson 2.