



Native Plants

OBJECTIVES

Students will:

- Learn about the importance of native plants to a healthy ecosystem.
- Research plants native to their area.
- Discuss ways that individuals and communities can improve local ecosystems.

OVERVIEW

After learning about the importance of native plants to the success of an ecosystem, students will research plants native to their communities. They will compose plans in which they generate ideas on how they can personally increase native plant growth and suggestions for how their town or city can improve the ecosystem on a larger scale.

TIMING

1 session (approximately 45 minutes)

MATERIALS NEEDED

- Pencil
- Device with internet access, one per student or pair
- **Native Plants Note Taking Guide** Student Handout, one per student
- **Native Plant Plan** Student Handout, one per student
- **Exit Ticket** Student Handout, one half sheet per student

ESSENTIAL QUESTION:

- What role do native plants play in a healthy ecosystem?

SUGGESTED PREPARATION

- Watch the "[Greenhouse Gas Emissions](#)" video from the Sustainability: The Human Factor Video Topic Series as a class prior to beginning the activity.
- Prepare a list of native plants local to your area to use as reference.

PROCEDURE

Engage

1. Take 3–4 minutes to review what students learned and discovered when watching the “[Greenhouse Gas Emissions](#)” video from the Sustainability: The Human Factor Video Topic Series.
2. Introduce the activity's essential question. Consider having it written on a board or a large piece of poster paper. Reinforce that the goal of today's lesson is for students to feel confident discussing the question by the end of the session.
3. For approximately **2–3 minutes**, engage students in the upcoming lesson by asking one or more of the following questions:
 - What is a native plant?
 - Do you know any examples of native plants?
 - Why are native plants important?
4. After this brief introductory discussion, distribute one **Native Plants Note Taking Guide Student Handout** to each student. Instruct them to complete the first two columns of the KWL chart by first recording the things they already know about native plants and then in the middle column taking note of anything they want to know or questions they have. They can return to this chart throughout the session to record the new things they have learned.

Learn

5. Explain to students that, very simply, native plants are local. They are plants that, over time, sometimes *thousands* of years, have evolved in a specific place naturally without human intervention.
6. Ask 1–2 volunteers to share whether they think the native plants in the midwestern states of the United States are different than in Hawaii, or, whether the native plants in Europe are different than in the Amazonian Rainforest. Confirm that native plants vary by region, climate zone, soil type, and migratory paths.
7. Inform students that native plants are extremely important to a successful ecosystem for the following reasons:
 - Because they have evolved in a specific place for so long, their root systems are much deeper, so they require much less water and virtually no maintenance.
 - Their deep roots can prevent water run-off and flooding.
 - They provide homes and food sources for the local wildlife in an area, including important pollinators, and they contribute to the migratory path of many birds and insects.
 - They remove carbon dioxide from the air.
 - By annually dying and regrowing, they naturally nourish the soil and reseed themselves.
8. While you distribute devices with internet access, encourage students to record anything they have learned in the final column of their KWL chart.

Apply

9. Students will be using an allowed search engine to research native plants local to their area. They can use the chart on their **Native Plants Note Taking Guide** Student Handout to record their findings.
10. Encourage students to record the “common name” of the plant for easier identification in the future. Make sure they understand that **annuals** are plants that die and must be replanted each year, and **perennials** are plants that can be planted once and will come back year after year. They should look for at least one benefit to each plant (i.e., they are bee-friendly, they help with soil health, they provide homes for certain birds, etc.).
11. Give students approximately **10 minutes** to complete their research. Students should try to find at least three native plants in that time.
12. After, record the plants that students find in a list on the board. Supplement with any from your list that were not mentioned and give students time to add to their list if desired.

Challenge

13. Distribute a Native Plant Plan Student Handout to each student.
14. Challenge them to begin thinking about steps they can personally take to increase native plant growth (i.e., plant a native species next to my home, gift perennial plants to my family, etc.). Have them also try to think on a larger scale—what is an initiative that their town or city could undertake to improve the local ecosystem (i.e., plant rain gardens, landscape with native perennial plants instead of annuals, etc.).
15. Give students some time to discuss with a shoulder partner before recording their ideas on their handouts.
 - **Note:** *These handouts can be kept to use as references if you decide to facilitate the service-learning educator extension suggestion below.*
16. Remind students that they have the ability to affect their surroundings with their choices now and in the future..

Reflect

17. Distribute an **Exit Ticket** Student Handout to each student and ask them to reflect upon the activity's essential question. Collect them as students leave and use responses to determine their level of understanding. Consider taking time in a future session to address misconceptions, highlight key takeaways, or share interesting insights brought up on the tickets.

EXTENSION IDEAS FOR EDUCATORS

- Distribute the activity's **Family Connection** for students to bring home to extend their learning and include their families in meaningful action.
- Organize a service-learning project in which students research, plant, and care for a native garden in the community or on school grounds.

NATIONAL CONTENT STANDARDS

National Science Standards

- MS-LS2-4. Construct an argument supported by empirical evidence that changes to physical or biological components of an ecosystem affect populations.
 - Ecosystems are dynamic in nature; their characteristics can vary over time. Disruptions to any physical or biological component of an ecosystem can lead to shifts in all its populations.
- MS-LS2-5. Evaluate competing design solutions for maintaining biodiversity and ecosystem services.

KWL—Native Plants

Know	Want to Know	Learned

Native Plants in My Area

Name of Plant	Annual or Perennial	Benefit to Ecosystem

Two Steps I can Take to Increase Native Plant Growth:

1.

2.

My Town or City Can Improve Our Ecosystem with Native Plants By:

In 3–5 sentences, explain the role native plants play in a healthy ecosystem.



In 3–5 sentences, explain the role native plants play in a healthy ecosystem.