

FOR TEACHERS



DIY PLANT FIELD GUIDE

ACTIVITY

Students create their own local plant field guide; they'll observe, investigate, and record notable features of plants. Use this activity to incorporate regular and repeated visits to nearby nature and to provide focus for your outdoor exploration.

PURPOSE

- inspire curiosity in, and increase awareness of, local plant diversity
- help students become comfortable and familiar with nearby nature
- build students' personal connections to local plants
- explore the relationships between plants and people
- foster students' desire to care for the spaces these plants grow

SUGGESTED MATERIALS

- paper and/or notebooks
- writing and colouring tools
- rulers
- outdoor clipboards
- plant field guides
- magnifying glasses
- **Plants and Fungi to Know**
- **Native Plant ID**
- **Nature Through the Seasons**



STEPS

1. Introduce botany, the science of plants, and that it is one of the oldest sciences. For thousands of years, people have been investigating what plants we can eat, use for medicine, and use as tools or other materials. Review parts of a plant (roots, stem, leaf, leaflet, flower, fruit, seed).
2. Create a field guide with at least 20 pages using a notebook or blank paper. Use cardstock or other sturdy material for the front and back covers, and have students personalize it.
3. As a class, develop a short checklist of plant features to look for. This can be listed in the front of their guide to act as a reminder about what to observe and document while outdoors.

Remember to look at:

- the number of petals and leaves
 - textures of different plant parts
 - the edges of leaves and flowers
 - leaf veins (is there a pattern?)
 - shapes and sizes of different features
 - both the tops and undersides of leaves (is the colour or texture different?)
 - how the branches grow (opposite or alternate?)
 - evidence of insects (are there any bite marks or patterns?)
 - other nearby plants (are they the same or different?)
4. Review guidelines and safety considerations for studying plants.
 - Do not eat any berries or plants found in parks. Fruits are important food sources for urban wildlife. Some local plants are poisonous to humans.
 - Be careful when touching plants. Some can cause rashes (e.g., stinging nettle) or scratches (e.g., blackberry).
 - Let things grow. Be careful not to trample, pick or damage plants in the process.
 5. With each visit, have students choose 1–2 plants to study, and record as many details as possible through drawings and notes. Have them include the date on their field sketches.
 - Emphasize the value of curiosity and that this is not intended to be a rushed activity.
 - Observational drawing (i.e., drawing what you see) can be an exercise in noticing detail. Students should notice more and more detail with each visit.
 - The focus of scientific sketching is on recording accurate information. Use the ABC's of scientific sketching: Accurate, Big, Colourful, Detailed, and Explained.
 6. Have students refer to local plant field guides to help identify the plants they drew. They can add colour and any interesting facts (e.g., traditional uses) that they learn.
 7. Have students practise using their field guides to identify plants and conduct further investigations. Try having them swap with a partner to check if there is enough detail for someone else to identify a few plants.
 - Celebrate the plants they can identify and showcase their field guides.
 - Continue the learning. What do they want to know next about these plants?



DIFFERENTIATION

- Create a class field guide. Have students contribute pages towards a class field guide that can be used on future outdoor visits.
- Explore nature photography. Take and print photos to create your field guide.
- Explore observations through art: have students paint or draw plants in different artistic styles or mediums.
- Write descriptions of each plant in words or poems.
- Leave space for students to write questions or things they wonder about their plants.
- Create bark rubbings or use leaf shapes to trace outlines.
- Journal by memory. Give students time to observe a plant up close, then describe it in as much detail as they can to a partner (this will help them remember extra detail). Return to class and have students add a notebook entry based on what they remember of their own plant.
- Draw plants to scale, or draw a zoomed-in version of one part of the plant.
- Practise making quick observations. Show an image for just 15 seconds, and have students sketch what they noted in that time.



EXTENSIONS

- Investigate traditional ecological knowledge of local plants including uses for medicine, technology, and food sources.
- Explore relationships between plants and people. Investigate how plants are used in our everyday lives, and the many ways that we depend on them.
- Investigate plants as environmental indicators. Look for local phenological changes and how local plants can act as signals for other events in nature. Note any changes to previous plant sketches through the seasons.
- Write or tell a fictional story that connects to the characteristics of a particular plant.
- Create a plant guide for invasive plants in your neighbourhood.
- Lead a walk and have students each present about one plant that they have studied.
- Discuss how people connect to plants in urban areas. Compare this to other places such as farms, orchards, private lands, or the rainforest.
- Discuss how we can give back to nature. Explore Indigenous ecological practices, and investigate how they incorporate showing respect for plants and the land.



ADDITIONAL RESOURCES

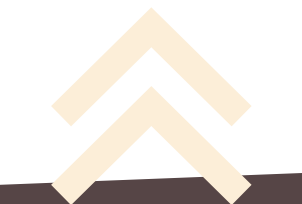
Indigenous Plant Diva, video by Kamala Todd

Native Plant ID cards by Washington Native Plant Society wnps.org/starflower

Plants of Coastal British Columbia, field guide by Pojar & MacKinnon

Seek App by iNaturalist inaturalist.org/seek

Calcademy.org/educators/sketching-for-observation



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and help your students become stewards of our urban forest.