



Plant Stations

LESSON

GRADE LEVEL K-3

CATEGORY Plants, Animals & Habitats

TOPIC Native Plants

LENGTH

Variable

MATERIALS

Vary according to stations and may include:

- Set of plant cards
- Illustrations of native plants, pictures of wildlife
- Magnifying glasses
- Live plant material
- Cardstock, glue, laminating material, paint chips

SETTING

Classroom or outdoors

GROUP SIZE

class, small group or individual

SKILLS

Classification, identification, matching, comparing

SUBJECTS

Science, Art

Objectives

Students actively participate in stations recognizing, comparing and exploring native plants and their features.

Objectives

Students will be able to:

- Recognize some native plants and their key features.
- Explore and compare differences in native plants.
- Recognize connections of wildlife and people to native plants.
- Sort plant cards into native and non-native species.

Background

A native species is one that naturally occurs in an area. A native plant, for example, is a plant that has lived and evolved in a certain place for a long time (i.e. thousands of years) and is part of the natural ecosystem. Native species have co-evolved with other competing species, predators, diseases, climate factors and other aspects of a region and an ecosystem. Native plants are part of a natural balance and a natural system and provide important food and shelter for wildlife.

Non-native or alien species are those that do not naturally occur in an area and were likely brought to a place by humans, either accidentally or intentionally. A non-native species has not evolved as part of the native ecosystem and does not have the same balance and place in the ecosystem. Some non-native species are called invasive because they are able to spread and dominate or push out native species.

Plants that grow wild may not be native to the region and may even be invasive. Plants that grow wild can often fool people, they may not be native to that region – they may even be invasive. Check a field guide for your region such as listed in the resource section.

“By ‘playing’ with the material the children make discoveries that provide a base for scientific conceptual development on which they will build for the rest of their lives.” – Margaret McIntyre, Early Childhood and Science.

Material Preparation

Vary according to stations, may include: pictures and supplied illustrations of native plants (and some non-native plants), pictures of wildlife, cardstock, glue, mactac or laminating materials, colour cards such as paint samples from a paint store, magnifying glasses, leaves of native plants, possibly live samples and other plant materials (see section 2 of procedure).

Procedure

Set up plant stations around the room or outside using some of the suggestions provided. You may want to create a handout or booklet for the students to take with them to the different stations, or just have them rotate through the stations as they are. Check a field guide to make sure the plants you are using for this activity are native to your area. (Note: many of these “plant stations” can also be simple activities kept in bags for individual or group play at appropriate times.)

Optional: provide students with a booklet, or “bingo” type sheet to fill out as they visit the stations.

Station 1: Native Plant Study

Provide live samples of plants and match illustrated plant cards to the live samples. Magnifying glasses can also be used to encourage observations. Include a quick instruction on how to use the magnifiers. *See Important Notes: Live Samples and Collection.

Station 2: What is Native?

Identify and reinforce the concept of native and non-native plants.

1. Provide plant cards of easily identified plants that students should be able to sort into native and non-native species.
2. Choose obvious examples of non-native species for younger children (examples: palm trees, exotic flowering plants, cactus). This is a simple version of the What is Native? activity and can be a reinforcement if you have already done a this activity.

Alternative Version: Provide 2 pictures – one of a natural area such as in the region that you live and the other with a very manicured garden of exotic plants. Ask students to choose where different plant species (on cards) might belong.

Station 3: A Rainbow of Plants

Provide pictures or live samples of plants and colour cards (i.e. from a paint store) and ask students to match the cards to colours they find on the plants.

Station 4: Shape Hunt

Provide pictures or illustrations of native plants and cards with shape outlines. Match the shapes to the flowers. Examples of shapes and plants: circle – wild rose, heart – bleeding heart, star – salmonberry, egg-shaped – salal leaf, bell-shaped – salal flower. Addition: crayon rubbings for shapes can be made from different shaped leaves.

Station 5: All Shapes and Sizes

Option 1: provide laminated leaf cards with 2 of each type of leaf for matching.

Option 2: provide outline shapes of leaves and match real leaves to the outline shapes.

Option 3: for older children: Use the native species cards supplied (see Activity Black Lines) or make a set of cards with pairs of matching laminated pressed leaves (and flowers) and the name at the bottom.

Station 6: Wildlife Connection

Provide pictures of plants with specific features that students would be able to connect with wildlife. Provide cards of wildlife (pictures or illustrations with names for older students or toy creatures if available) and ask students to match the creatures to a plant they might use. (Suggestions: bees to flower, beaver to small tree, squirrel to acorn/oak tree, bird to a bush with berries.) Include a picture of a person to promote the idea that we are part of the natural system as well.

Station 7: Plant Creations

Provide native plant materials with paper, glue and other appropriate art supplies and allow the creative juices to flow! (Suggestions for materials: fallen dried leaves and needles, fallen or dried flowers, cones or pieces of cones.) *See Important note below: Live Samples and Collecting



*Important Notes: Live Samples and Collecting

It is very important to model the stewardship of native plants and natural areas that we want to convey to students. The following are some guidelines for the collection of native plant materials:

- Bring live samples of native plants from a nursery or garden. Please do not remove native plants from natural areas.
- Collecting native plant materials such as leaves, flowers and other parts of plants in a sensitive manner. Collect materials in small amounts (or from different areas), materials that have already fallen or collect no more than 5% of fruit, seeds or cuttings from a plant to ensure sufficient parent materials for natural propagation, food and habitat for wildlife.
- It is illegal to collect from any national, provincial, regional or local park (without a permit).
- Do not collect intensively from the same area.
- Avoid disturbance to the area you collect from including avoiding trampling of other plants and spread of invasive species.
- For more information, see the Garry Oak Ecosystem Recovery Team's Guidelines for the Collection and Use of Native Plants on their website at www.goert.ca.

Assessment

1. Identify 4 different leaf shapes of native plants
2. Identify the correct habitats of a few native and exotic plants.
3. Match drawings and pictures of one plant to a real plant

Resources

Field Guides for Native Plants in BC

Johnson, D, L. Kershaw, A. MacKinnon and J. Pojar (eds.). 1995. Plants of the Western Boreal Forest and Aspen Parkland. Lone Pine Publishing and the Canadian Forest Service, Canada.

Kershaw, L., A. MacKinnon and J. Pojar. Plants of the Rocky Mountains. Lone Pine Publishing

MacKinnon, A., J. Pojar, and R. Coupé. 1992. Plants of Northern British Columbia. BC Ministry of Forests and Lone Pine Publishing, Canada.

Parish, R., R. Coupé and D. Lloyd. 1996. Plants of Southern Interior British Columbia. BC Ministry of Forests and Lone Pine Publishing, Canada.

Parish, R., R. Coupé, and D. Lloyd, 1999. Plants of Southern Interior British Columbia and the Inland Northwest. Lone Pine Publishing,

Pojar, J. and A. MacKinnon. 1994. Plants of Coastal British Columbia: Including Washington, Oregon and Alaska.. BC Ministry of Forests and Lone Pine Publishing, Canada.

Pojar, Jim and Andy MacKinnon. 1994. Plants of the Pacific Northwest Coast: Washington, Oregon, British Columbia and Alaska. Lone Pine Publishing, Vancouver, BC.

Websites for Native Plants in BC

Native Plant Society of BC

<http://www.npsbc.ca/>

(includes information on native plants and links to more valuable resources)

E-Flora BC

<http://ibis.geog.ubc.ca/biodiversity/eflora/>

(electronic atlas of the flora of British Columbia)

Hat Gardening with Native Plants Guide

http://hat.bc.ca/attachments/HAT_Garden_Brochure_web.pdf

(includes top ten naturescape plants page: photos with descriptions)

Search the web for specific sites on a special local ecosystem(s) in your area. Example: Southeastern Vancouver Island and the Gulf Islands are home to Garry oak ecosystems.

You can find great information on the Garry Oak Ecosystem Recovery Team website: <http://www.goert.ca> www.goert.ca

Extensions

Create a bulletin board highlighting the native plants you have focused on and display some of the native plant creations.

Older students: choose a native plant and create a poster or a small report.