

SEED JOURNEYS

Primary

Intermediate

Secondary

Big Ideas:

Plants and animals have observable features.

Living things have features and behaviours that help them survive in their environment

Curricular Competencies — Students are expected to be able to do the following:

- Demonstrate curiosity and a sense of wonder about the world
- Experience and interpret the local environment
- Ask questions about familiar objects and events
- Express and reflect on personal experiences of place

Concepts & Content — Students are expected to know the following

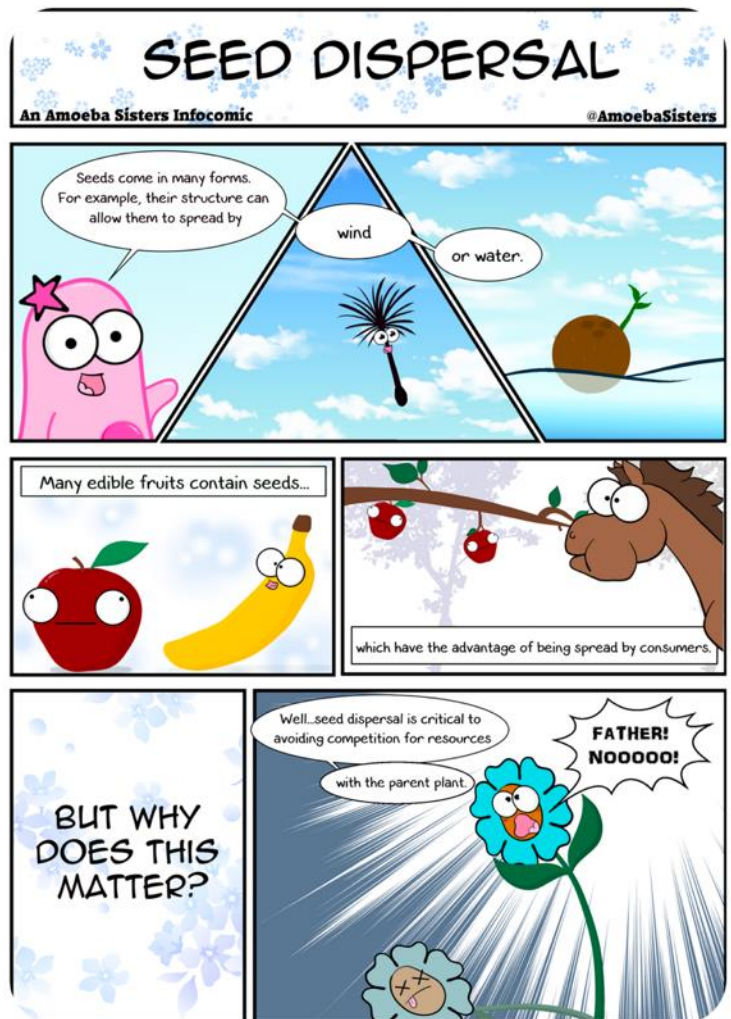
- classification of living and non-living things
- names of local trees
- Structural features of living things (tree seed)

Objectives for This Activity:

- Students will be able to identify the trees where their seed comes from
- Students will be able to record their observations
- Students will be able to share their observations about living things in their local environment to help others learn about their “place”

Pre-Class Preparation:

- Have access to the [Tree ID Book](#) (BC Ministry of Forests, Lands, Natural Resource Operations)
- BC [Tree Posters](#)/plant ID guides such as the online and mobile app from:



<http://leafsnap.com/species/>.

- [Inaturalist](#) also has a useful app.
- Print instruction/pattern sheet for each group of students (see link below)

Lesson Plan

Indoors or out, winged tree seeds can provide children with hours of fun and lots to think about, especially when they discover that some seeds are just like helicopters. In this activity children observe how winged seeds travel away from trees. Introduce tree seeds to your students by watching [this short video](#) or read "[Next Time You see a Maple Seed](#)" by [Emily Morgan](#).

Location: For preparing, a treed area with lots of fallen winged seeds, indoors or outdoors for the activity

Time of year: Autumn is best

Materials:

- Winged tree seeds, at least 1 per child
- A single and double-winged helicopter shape per children
- One [instruction/pattern sheet](#) per group of 4-6 children
- Crayons or coloured felt pens
- Cardboard to draw on
- Share these [pictures](#), [video](#) (Discovery Education) and other Seed Dispersal [resources](#) with the students.
- [PBS Nature](#) (video of mechanical seed dispersal & other links) below:
- [The Seedy Side of Plants](#)
- [Kids Discover Seeds](#)
- [Education.com activity](#)
- [Helicopter Seeds](#)
- [Maple Seeds: Nature's Helicopters](#)



LET'S GET READY

During an outing with the children or by yourself, make a collection of winged tree seeds — at least one per child. Seeds from maples, lodgepole pines, western white pines and hemlocks all have wings, and you may find other suitable trees growing in your area. You will probably need to break apart cones to obtain coniferous seeds.

To prepare for making helicopters, use the instruction/pattern sheet provided to trace and cut out a helicopter shape for each child.

Provide one copy of the helicopter pattern instruction sheet for each group of 4-6 children. These will be used during the activity to show the children how to cut and fold their patterns.

Let's Talk:

Gather all the children, and lay the seeds where everyone can see them. Open a discussion on seeds, and talk about how they travel away from their parent plant, land on the ground, and sprout.

The children will probably be familiar with dandelion seeds and what happens when a person blows on them. Ask them to describe how dandelion seeds travel through the air, and then direct the group's attention to the tree seeds. Get the children speculating on how these seeds travel, and explain they're going to have some fun finding out.

LET'S DO IT

"Test Flights" can be done either before or after the children make helicopters.

Test Flights: Divide the children into groups of 4-6, with one adult per group, and give each child a seed.

Ask the children to pretend they're trees, and it's time for their seeds to fall to earth. To release the seeds, they can climb onto stumps and logs (if you're outdoors) or benches (if you're indoors). If nothing is available to stand on, the children can throw the seeds up into the air.

After lots of test flights, open a discussion on how the seeds travelled through the air. Ask if they spiraled or fell straight to the ground. Select one child to drop or throw a seed while the others make a wind by using a piece of cardboard/stiff paper/hands and fanning it. Discuss how this affects the way the seed flies. Collect the seeds for later use.



Making Wings:

Provide the children with helicopter patterns, and place the instruction sheet where everyone can see it. Help the children fold their patterns to make helicopters. Distribute cardboard and crayons/felt pens for decorating the paper craft; this establishes ownership.

Then give the go-ahead for flying. Encourage many tries and lots of discussion.

Comparing Wings

Select two children, and give a seed to one and a paper helicopter to the other. Ask everyone to watch closely while the pair throws or drops the seed and the helicopter at the same time. Discuss similarities and differences in the way they fly. After several more tries ask the group to pretend they're wind (by fanning it with paper) and observe what happens.

LET'S TALK AGAIN

In each small group, resume your initial discussion on seeds that travel through the air.

Talk about how the wind affects their flight. Help the children understand that if all a tree's seeds fell in the same place, many would not grow because of competition for space, water, light and nutrition.

Talk about some of the other ways seeds travel. For example, some stick to animal fur or people, some are eaten and dropped far away, and others explode from seed pods. Some seeds even travel by water.

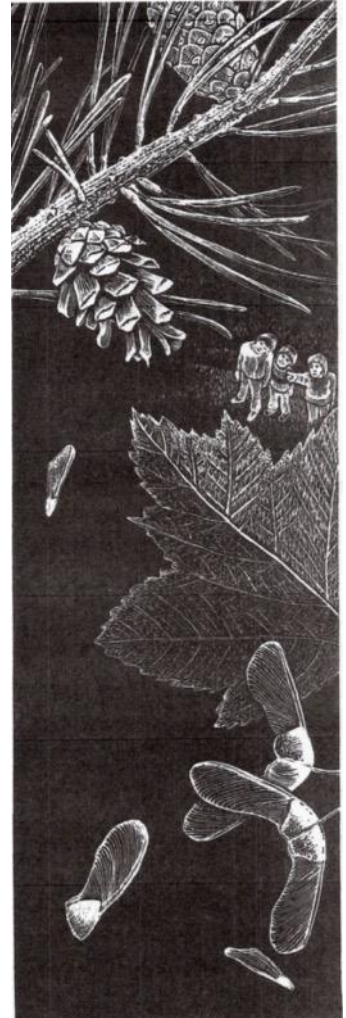
Before you leave, give each child a seed to take home, and explain that this is yet another way that seeds travel.

Assessment/Evaluation

- Compare observations with those of others
- Make simple inferences based on their results and prior knowledge
- Sort and classify data

Extensions/Possible Cross-Curricular Connections

- Physical and Health Education: [Identify and describe practices that promote mental well-being](#). Explain how participation in [outdoor activities](#) supports connections with the community and environment. Explore how a walk in the forest / park (with your parent/trusted adult/guardian/teacher might contribute to good mental health as well as daily physical activity? (The Japanese call this "[forest bathing](#)"!)
- BC [Indigenous culture](#) relies heavily on a close connection with the forest for wellbeing. Connect with local First Peoples and invite an elder or other member to share their stories of your local community and its history with students.



CREDITS: Hosie, R.C. Native Trees of Canada. Don Mills, Ont.: Fitzhenry & Whiteside. (adult)
Rahn, Joan Elma. How Plants Travel. New York: (juvenile), Watson, Aldren A. A Maple Tree Begins. New York:
Viking. (juvenile) This Forest Fun activity has been produced by FORED BC Society through a grant from the
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