

LEARNING EXPERIENCE TWO

Guiding Question: How do traditional plant foods increase food diversity?

This **Learning Source** and accompanying **Build Competencies** activities ask students to explore the diversity of plants that are part of traditional Indigenous foods and food systems. This **Learning Source** and **Build Competencies** activity can also be used with **LEARNING EXPERIENCE ONE** on pages 39 to 42 to explore the variety of plants used as food sources.

This Learning Source provides starting points and information to investigate: - Traditional food diversity - Focus on root vegetables - Focus on green vegetables - Focus on fruit plants - Other plant foods - Traditional food stories Take some time to explore the concept of a “traditional food system” with students. Introduce or revisit the stages in a food system. A food system includes how and where food is grown, the materials needed to grow the food, how it is processed and distributed and how it is consumed. It also includes the waste that is created by all these activities. Brainstorm foods and food production processes that can be part of traditional food systems.	Build Competencies: Returning to Traditional Roots Students explore connections between traditional and local plant foods and create an Alberta food profile focused on a traditional or local food ingredient. This handout includes activities that support competencies and weblinks to online resources that students can explore. 	 Assess Look for evidence of understanding of the following concepts: - Traditional plant knowledge - Needs and uses of plants - Plant varieties - Environments For a formative assessment, use the Alberta food profile that students research and develop in the Build Competencies handout to assess their understanding of traditional uses for plants.
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Additional Research or Background Sources

Consult teacher or student background sources such as the examples that follow to further explore, enrich or expand activities for this guiding question. Student research sources are also provided in **Build Competencies** handouts.

An overview of traditional plants and animals is provided in *Plants and Animals Used by Mikisew Cree First Nation for Food, Medicine and Materials*, created by the Mikisew Cree First Nation Government and Industry Relations, Centre for Indigenous Environmental Resources, Sagow Pimachiwin, and accessed at https://web.archive.org/web/20180602033530/http://www.yourcier.org/uploads/2/5/6/1/25611440/sagow_pimachiwin_guidebook.pdf.

The Alberta Teachers' Association provides *First Nations Traditional Plants and Uses* at www.teachers.ab.ca/SiteCollectionDocuments/ATA/For%20Members/ProfessionalDevelopment/Walking%20Together/PD-WT-16i%20-%209%20First%20Nations%20Traditional%20Plants%20and%20Uses-2019%2001%2028.pdf.





Additional information and discussion questions are provided in the carousel slide for this guiding question in the **food DIVERSITY** section of the **LEARN** webpage.

Click on the carousel slide to open and explore the following content.

- ◆ Traditional foods
- ◆ Alberta traditional food stories

The Assembly of First Nations references a traditional food system in a PDF document titled Traditional Foods: Are they safe for First Nations consumption? found at www.afn.ca/uploads/files/env/traditional_foods_safety_paper_final.pdf. Students can be encouraged to explore the role of plants in Indigenous food systems from a historic as well as current context.

The term “traditional food system” includes all of the food species that are available to a particular culture from local natural resources and the accepted patterns for their use within that culture. This term also embraces an understanding of the socio-cultural meanings given to these foods, their acquisition, and their processing; the chemical composition of these foods; the way each food is used by age and gender groups within a selected culture; and the nutrition and health consequences of all of these factors for those who consume these foods.

The Indigenous Food Systems Network at www.indigenousfoodsystems.org provides information, stories and legends, recipes and resources that can be previewed and used as background or with students. The Indigenous Food Systems Network defines a traditional food system.

The vast myriad of rivers, watersheds, landforms, vegetation and climatic zones have worked together for thousands of years to shape and form Indigenous land and food systems. Consisting of a multitude of natural communities, Indigenous food systems include all of the land, air, water, soil and culturally important plant, animal and fungi species that have sustained Indigenous peoples over thousands of years. All parts of Indigenous food systems are inseparable and ideally function in healthy interdependent relationships to transfer energy through the present day agriculture based economy that has been developed and industrialized through the process of colonization.

In contrast to the highly mechanistic, linear food production, distribution, and consumption model applied in the industrialized food system, Indigenous food systems are best described in ecological rather than neoclassical economic terms. In this context, an Indigenous food is one that has been primarily cultivated, taken care of, harvested, prepared, preserved, shared, or traded within the boundaries of our respective territories based on values of interdependency, respect, reciprocity, and ecological sensibility. As the most intimate way in which Indigenous peoples interact with our environment, Indigenous food systems are in turn maintained through our active participation in traditional land and food systems.

There are a multitude of additional resources provided on the Empowering the Spirit website, at www.empoweringthespirit.ca.

The Destination Indigenous website, launched by the Indigenous Tourism Association of Canada, provides insights into ways that traditional food sources are being used in contemporary food in restaurants across Canada. A discussion of the role of traditional food culture can be found at <https://indigenouiscuisine.ca/food-culture/>.

Additional information that reflects the diversity of traditional food sources of Indigenous peoples can be found at <https://indigenouiscuisine.ca/peoples-of-canada/>.

> ACCOMMODATE AND/OR EXTEND LEARNING

Have students add the traditional plants they have learned about, as well as any others they research, to the dichotomous keys they develop as part of **Learning Experience One**.

Provide students with opportunities to collaboratively - in small groups or as a whole class guided activity - research traditional food recipes that use the plant foods that they have learned about. Alternatively, students can create a **traditional food system infographic**, using a cycle diagram graphic organizer.



Explore opportunities to make this a cross-curricular learning opportunity with CTS Foods classes.



Find **Science 7** learning outcomes supported by this learning experience on the following page.

Use this activity to provide students with an opportunity to build understandings of traditional Indigenous perspectives on plants for food and other uses, including medicinal. Make connections to traditions and cultural food experiences that students have as well.



LEARNING EXPERIENCE TWO: LEARNING OUTCOMES AND COMPETENCY MAP

project AGRICULTURE Activity	GRADE 7 SCIENCE	
	CONCEPTUAL KNOWLEDGE	PROCEDURAL KNOWLEDGE
LEARNING SOURCES How do traditional plant foods increase food diversity? BUILD COMPETENCIES Returning to Traditional Roots 	Grade 7 Unit B: Plants for Food and Fibre 1. Investigate plant uses; and identify links among needs, technologies, products and impacts - illustrate and explain the essential role of plants within the environment - describe human uses of plants as sources of food and raw materials, and give examples of other uses (e.g., identify uses of plants as herbs or medicines; describe plant products, and identify plant sources on which they depend) 2. Investigate life processes and structures of plants, and interpret related characteristics and needs of plants in a local environment - describe the general structure and functions of seed plants (e.g., describe the roots, stem, leaves and flower of a common local plant) - investigate and interpret variations in plant structure, and relate these to different ways that plants are adapted to their environment (e.g., distinguish between plants with shallow spreading roots and those with deep taproots; describe and interpret differences in flower form and in the timing of flower production)	Grade 7 Unit B: Plants for Food and Fibre Ask questions about the relationships between and among observable variables, and plan investigations to address those questions - define practical problems (e.g., identify problems in growing plants under dry conditions) Conduct investigations into the relationships between and among observations, and gather and record qualitative and quantitative data - research information relevant to a given problem Analyze qualitative and quantitative data, and develop and assess possible explanations - use and/or construct a classification key (e.g., distinguish among several grain varieties, using a classification guide or key) - compile and display data, by hand or computer, in a variety of formats, including diagrams, flow charts, tables, bar graphs and line graphs (e.g., prepare a record of a plant's growth that charts its development in terms of height, leaf development, flowering and seed production) - identify new questions and problems that arise from what was learned Work collaboratively on problems; and use appropriate language and formats to communicate ideas, procedures and results - communicate questions, ideas, intentions, plans and results, using lists, notes in point form, sentences, data tables, graphs, drawings, oral language and other means (e.g., show the growth of a group of plants over time through a data table and diagrams) Show interest in science-related questions and issues, and pursue personal interests and career possibilities within science-related fields (e.g., observe plants in the local community, and ask questions about plants with unusual characteristics; pursue a hobby related to the study of living things; express an interest in science-related/technology-related careers) Work collaboratively in carrying out investigations and in generating and evaluating ideas (e.g., assume responsibility for their share of work in preparing for investigations and in gathering and recording evidence; consider alternative ideas and approaches suggested by members of the group; share the responsibility for difficulties encountered in an activity)