

Nature Walk with the FRDC

Background Information on the Fraser River:

The Fraser River starts as a trickle of melted snow at the top of Mount Robson which is in the Rocky Mountains, sitting on the border of British Columbia and Alberta. The river travels 1,375 kilometers through BC and empties into the Pacific Ocean. There are many tributaries (a river or stream that flows into a larger river or lake) that add water to the Fraser as it travels through BC. The Fraser River is longest river in BC, and one of the largest in all of Canada.

The landscapes of the Fraser River change from the beginning of its journey to its end. As you exit the headwaters on Mount Robson the water is crystal clear, shallow, and extremely cold. The middle portion of the river is called the Fraser Canyon, where the river is squeezed between mountain ranges, increasing the speed, and creating many impressive rapids. The point at which the fresh water of the Fraser River meets the salty water of the Pacific Ocean is called the estuary. Because estuaries have access to both riparian (river) and marine nutrients, they are home to an incredible diversity of life. The lower mainland is located in the estuary portion of the Fraser River.

Indigenous peoples have been living in what we now call Canada for time immemorial, meaning that Indigenous communities have no stories of arriving here. They have always been here. There are many different First Nations along the river; each group is unique, with their own language or dialect, specific traditions, particular relationships with the landscape, stories, etc. The river has been used by Indigenous communities for thousands of years and they have specialized technologies, traditions and celebrations related to the river, nature, and biodiversity. Hul'q'umi'num', Halq'eméylem, and hənq̓əminəm' are Indigenous language dialects spoken in the lower portion of the Fraser River. In Halq'eméylem, the language dialect spoken in the upper portion of the lower Fraser, the word for river is Stolo. In hənq̓əminəm', a language dialect spoken in the lower portion of the lower Fraser, the word for river is stalə'w'. Indigenous communities throughout BC speak other languages and dialects and will have other names for the river.

The Fraser River Discovery Centre is located on the traditional and unceded territory of the hənq̓əminəm' and Halq'eméylem speaking peoples. Territory acknowledgement is one small part of Reconciliation. We ask you take a moment to think of other ways you can participate in Reconciliation with Indigenous communities.

The river is also now known as the Fraser River, named after Simon Fraser, a European fur trader and explorer who led an expedition in 1808 along the river, establishing trade routes for what is now called the Hudson Bay Company.

The Fraser River Basin is an extremely biodiverse region, with hundreds of species of plants, animals, and fungi. The major habitat types along the Fraser River include brackish and freshwater marshes, salt marshes, tidal flats, sloughs, and flood-plain forests among others.

The Fraser River watershed is also home to 60% of BC's population, approximately 3 million people. A watershed is an area of land that drains all the water into one main river. You could imagine this as the watershed being a sink, and the Fraser River the drain; anything poured along the sides of the sink will end up in the drain, just like all the rivers and streams around the watershed end up in the Fraser River.

Program Overview:

In this program students will explore the connections between living things within their Kingdom (Kingdom Plantae). They will learn the connectedness of science to our communities and how they can begin to identify plants in their everyday lives. Students will learn some of the key identifiers of each sub-category in the Kingdom Plantae and use these skills on a forest walk to identify some plants. This information can then be used within the classroom to further investigate plants and find connections between plants, and between people and nature.

Program Objectives

- Discuss how things have features and behaviours that help them survive in their environment.
- To learn about some of the medicinal and edible native plants of BC.
- To understand that land and nature have been and continue to be a source of life-sustaining resources.
- To learn the basics of Kingdom System organization (Kingdom Plantae) and how to identify sub-categories within the kingdom.
- Work on observational skills in nature, including slowing down, drawing, discussing, and connecting to nature.
- Explore our personal connections to the land and plants in our local community. What are our experiences, histories and futures with these plants and lands?

Helpful Vocabulary

Species: a group of living organisms of the same kind who are capable of creating offspring.

Identification: to find out who or what something is.

Observation: to notice and learn about something, therefore drawing ideas or thoughts about it.

Biological Survey: a process for discovering organisms (living things) present in a: group, place, or time.

Native Plant: lives here naturally in its habitat.

Invasive Plant: brought here by people, by accident or on purpose.

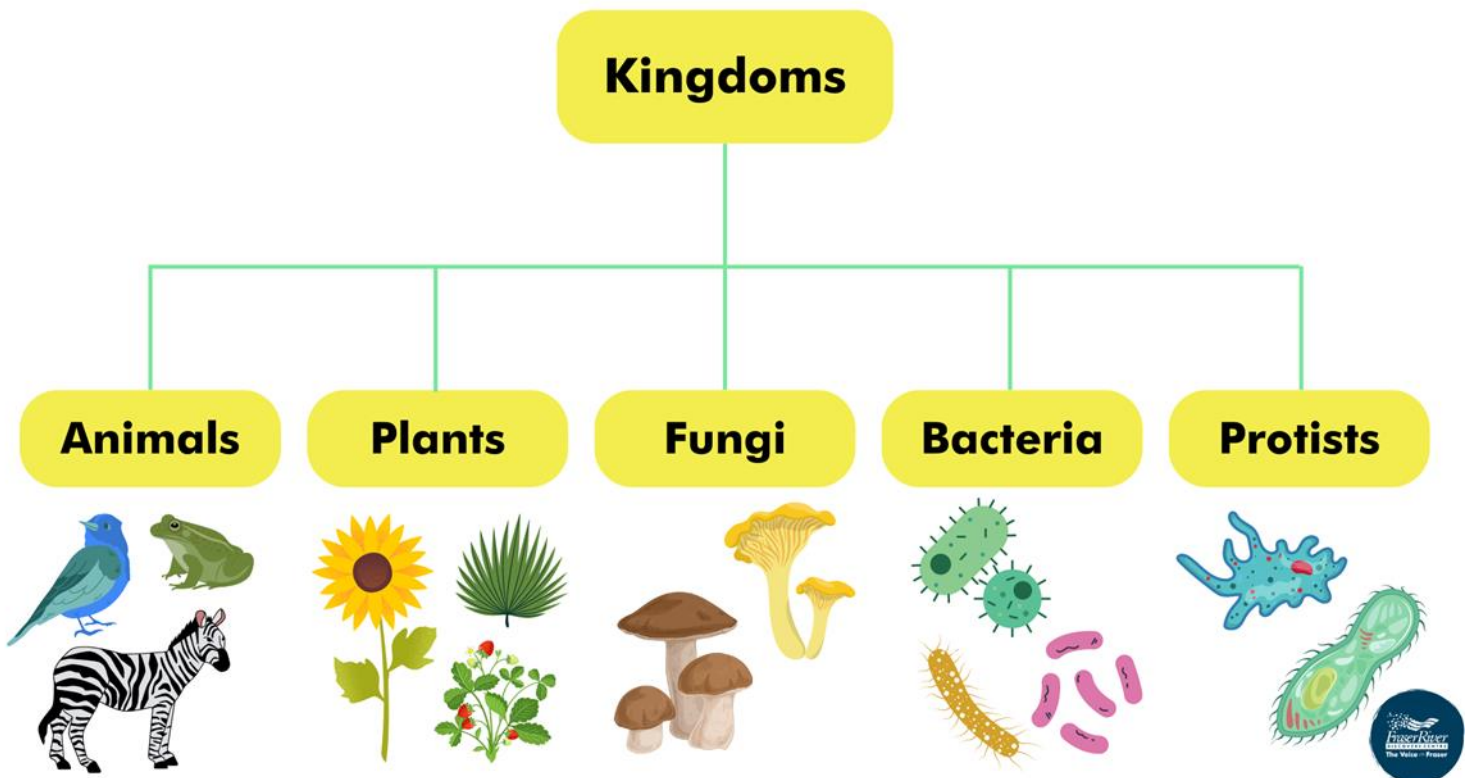
In- class activities:

Here are some ideas to help prepare your class for the program.

Pre-visit:

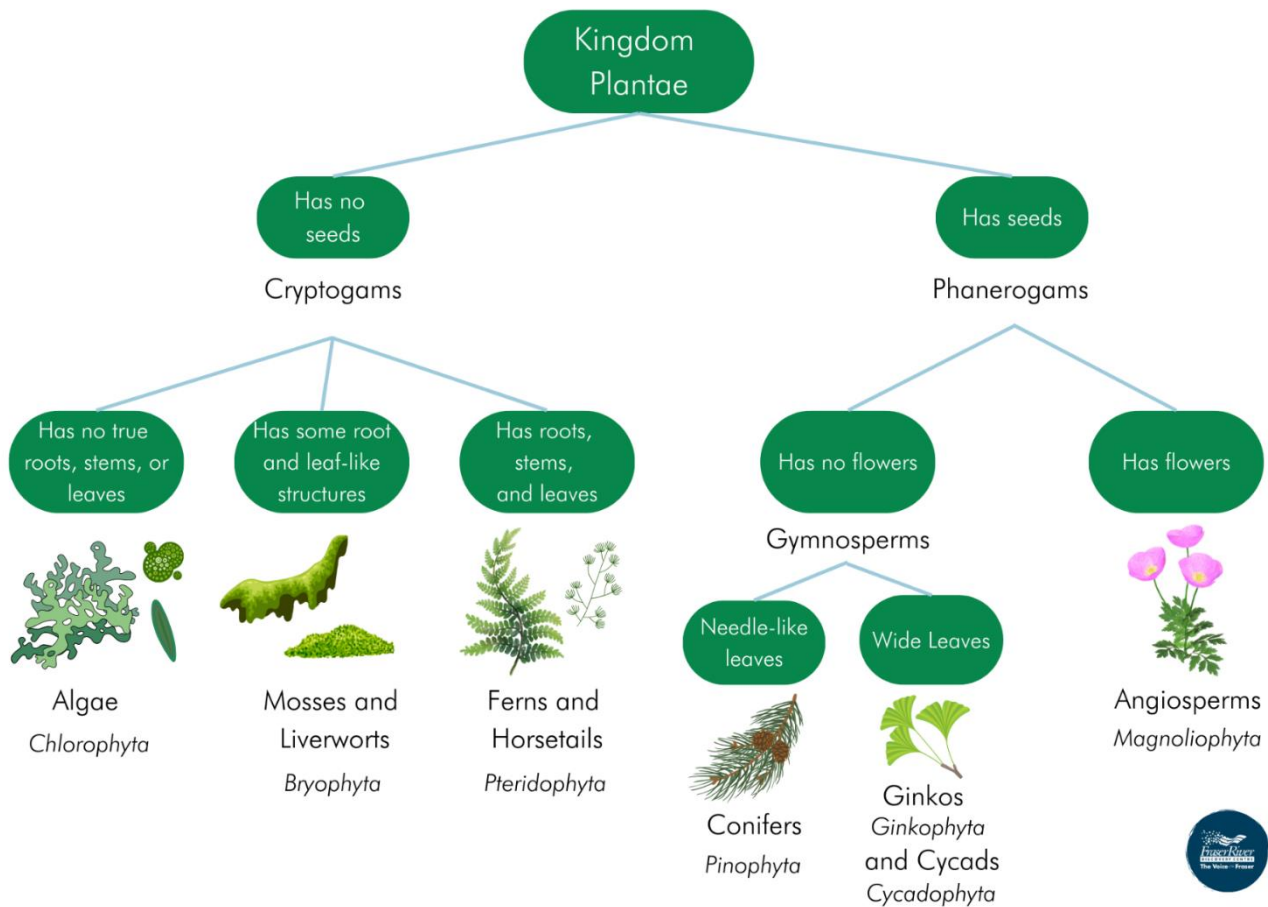
1. Discuss with your class the Kingdoms of Living things. Please explore through the diagram and noted video (b.) why kingdoms exist. We will explore these kingdoms in our program together. The video may have additional information that the students do not absorb, and that is ok! As long as there is an understanding of why there are kingdoms.

b. <https://youtu.be/SIbFuiCfkr8>



2. Play a plant identification game as a group. Challenge your class to identify them. Use the link below, then click on "Enter the photo gallery". You can filter this to pick some based on the group, or just try to choose them at random. Project the website onto a screen and challenge your class to use the attached diagram to dissect which category the plant falls under!

c. <https://linnet.geog.ubc.ca/biodiversity/eflora/>



Post-Visit:

1. Nature Journaling is always fun and can be done in many different ways. Continue practicing observation skills by going on another nature walk and creating more nature journal pages. Most nature journals consist of a mixture of drawings, block text, and small notes. Alternatively, for rainy days have students pick a native BC plant and journal about the plant they chose.
 - a. <https://linnet.geog.ubc.ca/biodiversity/eflora/>
2. In the program, students wrote down their questions about the plants they were observing. Create a research question using the questions they came up with during the program. Students could research their question and the plant they were observing and make a poster, diagram, model, presentation etc.
3. Secret Plant Activity
 - a. In the program, students practiced their observation skills on their own. This secret plant activity allows them to work together to find a plant based on a friend's observations. If time allows, this activity may be done during the program, if not we encourage you to do it with your students after the program!
 - b. Using the Secret Plant page in the students' journals, students will be observing a plant for a fellow classmate to find once they are done. Encourage students to work away from the person they want to share their observations with. Once students have had time to make their observations, bring them back and ask them to pair up. Students will take turns trying to find each other's plants based on the observations they have in front of them.