



Lesson Sequence

Lesson	Outcomes or Expectations	Assessment	Teaching Activities	Learning Activities
1. Nature Walk	<p>Students will be able to describe what a native plant is and why this is important to know</p> <p>Students will be able to name at least three plants native to our local environment</p> <p>Students will explore a natural environment in a respectful way</p> <p>This lesson is cross-curricular with PHE</p>	<p>This is an introductory lesson relying on formative assessment</p> <p>Listen and observe as students explore and discuss their observations</p> <p>Scavenger hunt reflection questions will be included in science journal for this unit</p>	<p>Prior to class, visit destination to locate and identify examples of native plants (<i>see appendix for resources</i>)</p> <p>Escort children on nature walk; talk about new vocabulary and concepts</p> <p>Point out native plants throughout the trip.</p>	<p>Students will be guided in their exploration and observations with a native plant scavenger hunt (<i>see appendix</i>)</p> <p>Reflection questions will prompt inquiry into native plants</p> <p>Students will collect two plant samples to preserve by pressing</p>
2. Plant Names: Common and Scientific, and Indigenous uses	<p>Students will learn about the classification of plants (common and scientific names)</p> <p>Students will be introduced to native plants common to Southern Vancouver Island</p>	<p>‘Ticket Out the Door’(see <i>appendix</i>); students name at least 3 plants native to Southern Vancouver Island, and the way at least one is/was traditionally used by First</p>	<p>Lead class in discussion</p> <p>Lead students in choosing a plant that the class will plant and grow over this unit (come with list of possible choices and let students</p>	<p>Teacher and students will co-create a data sheet (one per student and/or one big one for the class) to record observations and predictions on</p>

	<p>(some of which they will have seen in lesson 1) and their uses by First Peoples</p> <p>This lesson is cross-curricular with mathematics</p>	<p>Peoples; Extension Q: list the scientific name for one or more of the plants</p>	<p>select one from that list)</p>	<p>the class plant (i.e. track growth, soil conditions, weather, date, etc - see <i>appendix</i>)</p> <p>Help the class create a graph to track plant growth</p>
<p>3. Native vs Invasive plants, Biodiversity and Interconnect edness of living things on the south coast of B.C.</p>	<p>Students will learn about the difference between native, non-native, and invasive plant species, with emphasis on invasive species and their effects on ecosystems, and the way native plants respond to their changing environment</p> <p>Students will learn what they can do to help combat invasive species</p>	<p>Observation during “invasive or not” activity and string game (<i>see right</i>)</p> <p>Completed “What Can You Do To Help” worksheet (<i>see appendix</i>)</p>	<p>Lead class through slides, and “invasive or not” activity (students look at slides, give thumbs up/thumbs down do say invasive or not), and string game</p>	<p>Students play a string game where they are a species in an ecosystem and everything is connected with a ball of string. They then see, and discuss, what happens when an invasive species is introduced</p> <p>“What Can You Do To Help” Worksheet</p>
<p>4. Plant Structure</p>	<p>Students will learn about characteristics of plants, and what makes them different from animals</p>	<p>Graphic organizer and reflection in science journal</p>	<p>Set up posters around the room showing plant structures (find a source for these)</p>	<p>In pairs, students will be provided with a cup of water, paper plates, tweezers, scissors,</p>

	<p>Students will follow directions in order to dissect a flower</p>		<p>Using document camera, demonstrate how to dissect a flower (add reference here, youtube maybe)</p> <p>Provide a few different species as options to dissect</p> <p>Put broad leaved plant in a sunny window and have students place small piece of paper on the leaves to see the effect from a lack of sunshine</p>	<p>magnifying glass or hand lens</p> <p>Students will follow instructions for dissecting a plant, making observations in a graphic organizer</p> <p>Dissection instructions: https://www.scientificamerican.com/article/dissect-a-flower/</p>
<p>5. Draw a Native Plant (Scientific Drawing Style)</p>	<p>Students will learn about making observations with a native plant</p> <p>Students will be able to draw an accurate representation of a native plant, with at least 3 labelled structures of the plant, and include: a title, description of size, and their</p>	<p>Students will include their drawings in their science journal and reflect on the dissection</p> <p>Post photos of drawings on Fresh Grade</p>	<p>Escort students to an area with native plants.</p> <p>Show several individuals from various native plant species</p> <p>As students draw, circulate and discuss the</p>	<p>Students will choose and draw a native plant, then label at least three structures and characteristics</p> <p>Students should measure the height of the plant and indicate this</p>

	<p>name and date date</p> <p>This lesson is cross-curricular with Art</p>		<p>plant structures they are observing</p> <p>Take photos to help students who may need more time</p>	<p>by drawing a scale bar</p>
<p>6. Nature Walk with Fractions and Decimals</p>	<p>Students will use fractions and decimals to express the ratios of invasive, non-invasive, and native plants found in a local habitat</p> <p>This lesson is cross-curricular with math and PHE</p>	<p>Collaboration and participation during nature walk</p> <p>Completed handout on fractions and decimals (<i>see appendix</i>)</p>	<p>Use iNaturalist app on a device to help students identify different species they come across</p> <p>Supervise students and answer their questions</p>	<p>Collect data on handouts, represent as fractions, and convert to decimals</p> <p>Share findings with classmates to reach consensus on just how prolific invasive plant species are</p>
<p>7. Establish a Class Herbarium</p>	<p>Students will be able to create at least one sample for the class herbarium</p> <p>Students will be able to label their plant using common, scientific and indigenous names, and describe one indigenous use</p>	<p>Quality and completeness of herbarium sample</p> <p>Post photo of complete work on Fresh Grade</p>	<p>Ensure pressed specimens are dry</p> <p>Demonstrate how to mount and label dried plant material</p> <p>Provide a variety of art and reference materials</p>	<p>Students will mount their sample(s) on paper of their choosing.</p> <p>Students will provide the common, scientific, and indigenous plant names and one indigenous use of the plant</p>

	This lesson is cross-curricular with Art			
8. Talk on Seasonal Changes Ecologically	<p>Students will learn how the changing seasons affect the native plants growing in our region</p> <p>Students will think creatively about how plants adapt to seasonal changes</p> <p>This lesson is cross-curricular with Art</p>	Collaboration and participation in creating and presenting the seasonal scene	<p>Watch time lapse video of seasonal changes http://www.lanet.org/inter-net/all-season-s-time-lapse-video/12329/</p> <p>Review what plants need to survive, discuss how seasonal changes affect plants</p> <p>Watch time lapse video of plant growth https://www.youtube.com/watch?v=w77zPAtVTul</p> <p>Divide students into 4 groups, write the seasons on slips of paper and have one person from each team draw a slip</p>	<p>Each group will need to create a role playing scene to describe plants in their selected season</p> <p>All students need to participate</p> <p>There is to be no talking during the scenes; students can use music</p> <p>At the end of class, students will</p>
9/10. Make a Seed Package,	Students will use knowledge gained from previous	Quality and creativity of their created	Present students with samples of the	Alone or in pairs, students will design

<p>Wanted Poster, etc for a Plant of Student's Creation</p>	<p>lessons (i.e. on plant structure, ecosystems, invasive vs non-invasive) to create their own plant</p> <p>This lesson is cross-curricular with English Language Arts & Art</p>	<p>plant and final creative product</p> <p>Presentation to class</p> <p>Both of the above will be assessed to prepare students for their final summative assessment in lesson 12/13 (<i>modify rubric in appendix for use in this lesson</i>)</p>	<p>kinds of things they could produce to advertise or present their plants</p> <p>Co-create criteria of what information to include on designs</p>	<p>their own seed package, wanted poster, or other design of their choosing based on their invented plant</p>
<p>11. Interconnect- edness of Native Plant Species & Environment al Influences</p>	<p>Students will further connect what they have learned with First People's Principles of Learning</p> <p>Students will identify environmental implications of their actions</p> <p>Students will experience and interpret the local environment and its interconnectednes s</p>	<p>Completed 'Know, Wonder, Learn' worksheet (<i>see appendix</i>). Begin before outing, complete during and after plant walk</p> <p>Observe for respectful listening and participation</p>	<p>Have an Indigneous guest speaker come in to take students for a plant walk in Beacon Hill Park. Focus will be on indigenous uses for plants, history, current issues (conservation, etc.), and interconnecte dness</p> <p>Students will have a picnic lunch with tea (<i>see link in</i></p>	<p>During or after tea time, hold a discussion circle. Ask the question: "How is the world view of most First Peoples like a family relationship?"</p> <p>a. Discuss the feelings, responsibilities and obligations most people feel towards other members of their family.</p>

			'Resources' for recipes)	<p>b. Ask students to discuss how the belief that everything in the universe are our relatives would affect the way we treat the environment.</p> <p>Complete 'Know, Wonder, Learn' worksheet</p>
<p>12/13 Research a Native Plant and Create a Monograph</p>	<p>Students will learn about monographs (a detailed written study of a plant)</p> <p>Students will gain experience conducting research and using electronic devices</p>	<p>Depth and quality of research</p> <p>Design and completion of the monograph</p> <p>Presentation to class</p> <p>The product and presentation of this lesson will serve as the main summative piece for this unit (<i>see rubric in appendix</i>)</p>	<p>Support students in their research and monograph designs</p> <p>Co-create criteria to include on monographs (physical description, categorization, habitat, history or folklore, medicinal actions/uses, etc)</p> <p>Provide photographs, taken on previous class</p>	<p>Students research a native plant of their choosing and create their own native plant monograph</p> <p>Students present their monograph and their findings to classmates</p>

			outings, for students to use with their monograph	
14. Design a Native Plant Garden	<p>Students will create a plan for a native plant garden at the school</p> <p>Students will consider environmental conditions, space and size when choosing plants, keeping in mind that plants sense and respond to their environment (i.e. light, water, etc)</p> <p>This lesson is cross-curricular with Math & Art</p>	<p>Collaboration and participation during nature walk</p> <p>Completed garden planning handout</p>	<p>Tell students they will be using what they have learned about in this unit to plan a native plant garden</p> <p>Lead a discussion of the environmental factors that could impact the garden</p> <p>Provide students with field guides and monographs to use as reference</p> <p>Group students according to their ecological communities of interest</p>	<p>Students will choose a variety of plants to fill their garden bed</p> <p>Students will calculate the available area for planting and compare that to the amount of space each plant needs</p> <p>Using the garden planning worksheet, students will draw their garden, indicating species and spacing.</p>
15/16. Plant a Class Native Plant Garden	Time and space permitted, students will get hands on experience co-designing and	Though this lesson is mostly a fun, community building activity to cap	Help students design the garden and supervise them while they plant it	Designing and planting the garden

	planting a class native plant garden	off the unit, teacher should assess students on participation, and observe students collaborating and discussing plans		
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