



EXPLORING THE SALISH SEA AND GREAT BEAR RAINFOREST

A Cross Curricular Unit

STATEMENT OF INQUIRY

Through a variety of experiences including literature, a field trip to the beach, virtual trips, and examining specimens' students will explore how humans, plants and animals connect to and interact in the Salish Sea and Great Bear Rainforest. This unit was designed for grade 4 students following the BC curriculum

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Unit Summary

Subject Areas	<ul style="list-style-type: none"> • Science • Social Studies • English Language Arts
Statement of Inquiry	<ul style="list-style-type: none"> • Through a variety of experiences including literature, a field trip to the beach, virtual trips, and examining specimens' students will explore how humans, plants and animals connect to and interact in the Salish Sea and Great Bear Rainforest.
Essential Questions	<ul style="list-style-type: none"> • What are the unique abiotic factors of the Salish Sea and Great Bear Rainforest? • What are the unique biotic factors of the Salish Sea and Great Bear Rainforest? • How do humans impact the Great Bear Rainforest and Salish Sea? • How have the Great Bear Rainforest and Salish Sea influenced humans? • How do stories reflect different groups understanding of the Salish Sea and Great Bear Rainforest? • What stories do people write and tell about the Salish Sea and Great Bear Rainforest?

Learning Goals

Core Competencies	<p>Communication</p> <ul style="list-style-type: none"> • Connecting and engaging with others • Communicating with intention and purpose • Acquiring and presenting information <p>Collaboration</p> <ul style="list-style-type: none"> • Determining common purpose • Working collectively <p>Critical and reflective thinking</p> <ul style="list-style-type: none"> • Questioning and investigating • Reflecting and assessing <p>Creative thinking</p> <ul style="list-style-type: none"> • Evaluating and developing
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Big Ideas	<ul style="list-style-type: none"> • All living things sense and respond to their environment. (Science) • The pursuit of valuable natural resources has played a key role in changing the land, people, and communities of Canada. (Social Studies) • Exploring stories and other texts helps us understand ourselves and make connections to others and to the world. (English Language Arts)
Curricular competencies	<ul style="list-style-type: none"> • Science <ul style="list-style-type: none"> ○ Demonstrate curiosity about the natural world ○ Make observations about living and non-living things in the local environment ○ Collect simple data ○ Identify first people’s perspectives and knowledge as sources of learning ○ Sort and classify data and information using drawings or provided tables ○ Use tables, simple bar graphs or other formats to represent data and show simple patterns and trends ○ Identify some simple environmental implications of their and others actions • Social Studies <ul style="list-style-type: none"> ○ Construct arguments defending the significance of individuals/groups, places, events, or developments (significance) ○ Sequence objects, images, or events, and determine continuities and changes between different time periods or places (continuity and change) ○ Differentiate between intended and unintended consequences of events, decisions, or developments, and speculate about alternative outcomes (cause and consequence) ○ Construct narratives that capture the attitudes, values, and worldviews commonly held by people at different times or places (perspective) • English Language Arts <ul style="list-style-type: none"> ○ Access and integrate information and ideas from a variety of sources and from prior knowledge to build understanding ○ Use a variety of comprehension strategies before, during, and after reading, listening, or viewing to deepen understanding of text ○ Recognize the role of language in personal, social, and cultural identity ○ Use personal experience and knowledge to connect to text and deepen understanding of self, community, and world ○ Demonstrate awareness of the oral tradition in First Peoples cultures and the purposes of First Peoples texts ○ Identify how story in First Peoples cultures connects people to land ○ Exchange ideas and perspectives to build shared understanding ○ Use writing and design processes to plan, develop, and create texts for a variety of purposes and audiences ○ Use oral storytelling processes ○ Transform ideas and information to create original texts

<p>Curricular content</p>	<ul style="list-style-type: none"> ● Science <ul style="list-style-type: none"> ○ Sensing and responding (Humans, other animals, plants) ○ Biomes as large regions with similar environmental features ○ The effects of the relative positions of the sun, moon and earth including local first people’s perspectives ● Social Studies <ul style="list-style-type: none"> ○ The history of the local community and of local first people’s communities ○ Physiographic features and natural resources of Canada ○ The impact of colonization of first people’s societies in British Columbia ● English Language Arts <ul style="list-style-type: none"> ○ The writing process ○ Forms, features and genres of text ○ Features of oral language ○ Reading strategies
<p>First Peoples Principles of Learning</p>	<ul style="list-style-type: none"> ● Learning is holistic, reflexive, reflective, experiential, and relational (focused on connectedness, on reciprocal relationships, and a sense of place). ● Learning ultimately supports the well-being of the self, the family, the community, the land, the spirits, and the ancestors ● Learning is embedded in memory, history, and story ● Learning ultimately supports the well-being of the self, the family, the community, the land, the spirits, and the ancestors ● Learning involves generational roles and responsibilities
<p>Prior knowledge</p>	<ul style="list-style-type: none"> ● 5 themes of geography (region, place, location, movement, human environment interaction.) ● Tides ● Reading powers (connect, question, infer, visualize, transform)
<p>Students Will Be Able To</p>	<ul style="list-style-type: none"> ● Make connections between the books we read as a class and the places we are learning about. ● Describe the unique ecosystems of the BC Coast ● Investigate one place on the BC coast

Planning for Learning

Learning experiences and teaching strategies	<ul style="list-style-type: none"> • Read aloud • Web quests • Virtual field trips • Performance task • Science labs / demonstrations • Field trips • Class discussions • Mind maps • Vertical surface tasks / questions • Creating an image / graphic • Writing pieces <ul style="list-style-type: none"> ○ Descriptive paragraph ○ Poetry • Art activities / artist studies • Smart board tasks
Formative assessment	<p>Formative assessments are planned before the start of a unit, although they may change based on student needs.</p> <ul style="list-style-type: none"> • KWL chart • Journals • Pencil talks • Discussions • Graphic organizers
Summative Assessments	<ul style="list-style-type: none"> • Travel the BC Coast project • Diorama • Legend about the coast
Performance Tasks	<ul style="list-style-type: none"> • Travel the BC Coast • Diorama of an ecosystem on the coast
Read aloud books	<ul style="list-style-type: none"> • See unit plan below • Each day has a story
Resources	<ul style="list-style-type: none"> • Maps of the BC coast • YouTube videos • Photos • Reading Power books (Gear, 2015) • Making Thinking Visible • Read aloud books

Differentiation	<p>Authentic teaching and learning require differentiation.</p> <p>How have you differentiated in Formative and Summative assessments?</p> <ul style="list-style-type: none"> *Differentiation is not only for students on IEPs; choice activities are what we need to make available for all students
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	Assessment OF Learning	Assessment FOR Learning
Purpose	Report out, summative assessment, measure learning	Guide instruction, improve learning
Audience	Parents and Public	Teachers, counsellors, and students
Timing	At the end	Minute by minute, day by day, at the beginning
Form	Letter grades, rank order, percentages, scores	Descriptive feedback

(Ball, 2021)

Assessment Choices to pick from

FORMATIVE ASSESSMENT: Selected Response - can lead to Summative Assessment but is NOT a Summative Assessment	FORMATIVE ASSESSMENT: Constructed Response - can lead to Summative Assessment but is NOT a Summative Assessment	FORMATIVE ASSESSMENT: Informal Assessment	SUMMATIVE GRASPS ASSESSMENT: Performance/Product
Multiple Choice True-False Matching (This list is not exhaustive)	Fill-in-the-blank Essay Short answers (sentences, paragraphs) Diagram Concept map Flowchart Graph Padlet Map Table Matrix Illustration Cartoon (This list is not exhaustive)	Oral Questioning Observation Interview Conference Process description Checklist Rating scale Journal sharing Thinking aloud Giving/accepting constructive feedback Self-assessment Peer review (This list is not exhaustive)	Presentation Movement Science lab Demonstration Athletic skill Dramatization Musical performance/recital Project Debate Model Exhibition Research paper with citations (This list is not exhaustive)

(Ball, 2021)

Sequential Unit Plan

<i>Lesson</i>	<i>SWBAT</i>	<i>Story</i>	<i>Activities</i>	<i>Assessment</i>	<i>Resources</i>
1.	Introduction to the Salish Sea and Great Bear Rainforest	A West Coast Summer (Woodward, 2018)	Observe – Wonder – Infer with photos (Gear, 2015) KWL Chart	Assess for prior knowledge and questions	Book – A West Coast Summer http://www.pita.ca/uploads/1/2/8/1/12817523/pita_2016_-_gear_infer.pdf P10 https://www.facinghistory.org/sites/default/files/KWL_Chart_handout_v.final_.pdf
2.		Fly over the Salish sea and great bear rainforest	Virtual tour / Magic Carpet ride Student observations 4 square <ul style="list-style-type: none"> - Fold paper into quarters - Draw or write one thing that stands out from each video Pair Share the 4 squares, pick 2 things that stood out to both from the videos. Combine to groups of 4 pick 2 things that stood out to all from the videos. Groups of 4 to share with the class		Fly in video https://www.youtube.com/watch?v=6ACQ7Fxi4ho Great Bear Sea https://www.youtube.com/watch?v=ijtKzPAdmxM Great Bear Rainforest https://www.youtube.com/watch?v=BhU7JW086fg Salish Sea https://www.youtube.com/watch?v=FFUKNsCib_w

<i>Lesson</i>	<i>SWBAT</i>	<i>Story</i>	<i>Activities</i>	<i>Assessment</i>	<i>Resources</i>
3.	Identify the location of the Salish sea and Great bear rainforest	Island in the Salish Sea (McFarlane, Island in the Salish Sea, 2018)	map quest of the BC Coast using google maps	Fill in the blank / multiple choice response	Devices Google maps Worksheet
4.	Identify the unique features of the BC coast	West coast wild (Hodge, West Coast Wild, 2015)	BC Coast Mind Map <ul style="list-style-type: none"> - Independent first - Share in trios at VNPS (teacher photographs student boards) - Build as a class on chart paper 	Observations	West Coast Wild Chart paper Blank paper
5.		Seal Song (Spalding, 2011)	Connection pockets activity (Gear, 2015) Share connections BC Coast 5 themes of geography hand	Brain pockets Discussion Unique features organizer	Seal Song Brain Pocket template http://theprescotts.weebly.com/uploads/5/9/7/0/59702037/connect_-_brain_pockets.pdf 5 themes organizer https://www.teacherspayteachers.com/Product/Five-Themes-of-Geography-Graphic-Organizer-915619?st=a52a62f93c18598f63ce2bfb25c00e8d

<i>Lesson</i>	<i>SWBAT</i>	<i>Story</i>	<i>Activities</i>	<i>Assessment</i>	<i>Resources</i>
6.		Gulf Islands Alphabet (Preece, 2011)	ABC's of the BC Coast <ul style="list-style-type: none"> - Students come up with their own on lined paper - Share in trios - Trios to 6s - Then as a class 	Collect student papers – use 3 colours, one for each step to see progress	Book Lined paper
7.		Jessies Island (McFarlane, Jessie's Island, 2015)	Add to mind map Introduce GRASPS task	Observations	GRASPS task outline
8.		A Morning TO Polish and Keep (Lawson, 2015)	Before During After questions (Gear, 2015)	Short answer task	
9.	Examine the role of Salmon and Sturgeon on the BC Coast	Dip netting with Dad (Sellars, 2014)	Salmon class chart – students add what they already know about salmon to the padlet document created by the teacher.	Padlet web	
10.		Salmon Forest (Suzuki & Ellis, 2003)	Salmon life cycle <ul style="list-style-type: none"> - Scales and Tales Jigsaw 	Fill in the blank diagram	https://waves-vagues.dfo-mpo.gc.ca/Library/348899.pdf
11.		Salmon Creek (LeBox & Reczuch, 2002)	Salmon dissection	Journal response	Contact Hatchery or DFO https://www.pac.dfo-mpo.gc.ca/sep-pmvs/hatcheries-ecloseries/chilliwack-eng.html#visit

<i>Lesson</i>	<i>SWBAT</i>	<i>Story</i>	<i>Activities</i>	<i>Assessment</i>	<i>Resources</i>
12.		Tale of a Great White Fish (de Vries, 2006)	Timeline of life as a sturgeon	Sequencing, making connections to other things that happened in the world	Blank timlie
13.	Compare and contrast the different animals in the Salish Sea respond to their environment	Jason and the Sea Otter (Barber-Starkey, 1989)	Biomes Language Pust words around the room – students find words that interest them (3-5) words and complete Frayer model	Graphic organizer	https://www.teacherspayteachers.com/Product/Biomes-Unit-Biomes-Nonfiction-Reading-Passages-Plant-Adaptations-Word-Wall-2943312 theteachertoolkit.com/index.php/tool/frayer-model
14.		The Seal Garden (McAllister & Read, 2018)	All About Aquatic Biomes	Questions and graphic organizers	https://www.teacherspayteachers.com/Product/Biomes-Unit-Biomes-Nonfiction-Reading-Passages-Plant-Adaptations-Word-Wall-2943312
15.		Otters (Mason, 2003)			
16.		See what a Seal Can Do (Butterworth, 2013)			

<i>Lesson</i>	<i>SWBAT</i>	<i>Story</i>	<i>Activities</i>	<i>Assessment</i>	<i>Resources</i>
17.		A Whales World (McAllister & Read, A Whales World, 2018)	Animals compare	Ven diagram and short paragraph	Animal information sheets Venn diagrams
18.		Sea Otter Pup (Miles, 2017)			
19.		Tides of Change (McFarlane, Tides of Change, 1995)			
20.	Compare and contrast the different animals in the Great Bear Rainforest respond to their environment	Wolf Island (McAllister & Read, 2017)	All About Forest Biomes	Questions and graphic organizers	https://www.teacherspayteachers.com/Product/Biomes-Unit-Biomes-Nonfiction-Reading-Passages-Plant-Adaptations-Word-Wall-2943312
21.		A Bear's Life (McAllister & Read, A Bear's Life, 2017)			
22.		Spirit Bear (Harrinton, 2016)	Animals compare	Ven diagram and short paragraph	Animal information sheets Venn diagrams
23.		A Voice for the Spirit Bears (Oliver, 2019)			
24.		The Great Grizzlies Go Home (Hilgemann, 2020)			

<i>Lesson</i>	<i>SWBAT</i>	<i>Story</i>	<i>Activities</i>	<i>Assessment</i>	<i>Resources</i>
25.	Examine, and create stories told about the BC Coast	Star and Raven’s Legend (Anderson, 2016)	<p>Features of a legend</p> <ul style="list-style-type: none"> - Teach a lesson - Human characters - Has a hero - Clear problem and solution - Good “wins” - Great actions / heroic actions - Clear setting (time / place) - Elements of reality - Reality may be exaggerated - Some elements of fiction (supernatural forces, magical beings) - Traditionally an oral story - Part of a tradition or culture - Explain history <p>Myths</p> <ul style="list-style-type: none"> - Teach a lesson - Non-human characters - Good wins - Natural phenomenon - Mystery - Opposites (good / evil or day / night) - Promote cultural values - Clear theme - Often supernatural - Are metaphors 	Graphic organizer	https://www.teacherspayteachers.com/Product/Traditional-Literature-Comparison-Chart-3223420?st=865c369585e49175c3e1baef50d565a9

<i>Lesson</i>	<i>SWBAT</i>	<i>Story</i>	<i>Activities</i>	<i>Assessment</i>	<i>Resources</i>
26.		Brothers of the Wolf (Simpson, Brothers of the Wolf, 2014)	Plan a legend about the coast using a graphic organizer	Graphic organizer	https://www.teacherspayteachers.com/Product/Write-a-Legend-Outline-1689636?st=72443a6711160ae97f9db43b58d7e39b
27.		The First Beaver (Simpson, The First Beaver, 2008) Slaughter Alley Story			
28.		The Sasquatch, The Fire, and the Cedar Baskets (Dandurand, 2020)	Draft a legend	Writing conferences (TAG)	Sample legends Graphic organizers Narrative writing single point rubric (use SD35 one)
29.		Stand Like a Cedar (Campbell, 2020)			
30.		The Six Cedar Trees (Landahl & Aleck, 2017)			
31.		Sometimes I Feel Like a Fox (Daniel, 2015)			
32.		Storm Boy (Lewis, 1997)			
33.		Waiting for the Whales (McFarlane, Waiting for the Whales, 1991)	Edit legend		
34.		Spur A Wolf's Story (Robertson, 2019)			
			Legend good copy	Completed legend on	

<i>Lesson</i>	<i>SWBAT</i>	<i>Story</i>	<i>Activities</i>	<i>Assessment</i>	<i>Resources</i>
35.		Where the Sea Meets the Shore (Messner, 2018)		narrative writing rubric	
36.		In The Red Canoe (Davidson, 2016)	Share legends		
37.	Construct a diorama showing a feature of one of the ecosystems in the Salish sea or great bear rainforest	No stories	Design and build dioramas	Completed dioramas, focusing on student's oral explanation of their diorama	Diorama supplies Unit images Student notes and graphic organizers
38.					
39.					
40.					
41.					
42.					
43.		Gallery walk diorama presentations			

Slaughter Alley Story - 2014

Below is the story as Uncle Dave told it to me, to set the scene for the story we were running from our “home base” on Goose Bay all the way across Rivers Inlet to the little hamlet of Dawson’s Landing to get gas, a nearly 3 hour round trip adventure, this was the first time I’d been out in the boat with just Uncle Dave, I had never known until that trip across the inlet what a good story teller he is, I didn’t realize until yesterday how much I learned about the history of the area and my family. The story was told over the whine of the outboard motor with the cool evening breeze whipping my hair around as I snuggled deeper into my warm fire engine red survival suit, bouncing on the bow of the small Boston Whaler fishing boat. As we pulled out of our protected bay Uncle Dave began to tell the stories as they had been told to him. As we approached the Slaughter Alley site Uncle Dave slowed the boat down and manoeuvred it as close to shore as he safely could, with out hitting the propeller on the shallow rocky bottom, as the noise of the engine died away he gestured to the smooth white shell beach on the eastern side of the narrow channel and began to tell the story:

Many years ago before any one came over here from Europe, even before people in Europe knew BC existed. The local aboriginal group invited groups from as far away as what is now Victoria to a Potlatch on the beach here, they call this place Slaughter Alley because of what happened. Long ago it was taboo to bring weapons to a potlach so the aboriginal peoples coming in for it

came unarmed, and unprepared for what was awaiting them. As they drew their canoes onto the beach they were ambushed from both sides! Some locals coming from that island others hiding in the forest along the beach waiting, as the visitors came ashore, they men were slaughter and the women and children were taken captive. (Younger, 2014)

Historians are still trying to figure out exactly what happened but as I learned that night in the boat and goggled myself when I got home (we have limited access to technology at Rivers Inlet) the story above has been carried through oral traditions in several aboriginal groups both north and south of Rivers Inlet.

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