Lesson 1: Introduction to the Great Bear Sea

Overview: Students will be introduced to the marine area in BC known as the Great Bear Sea, including the corresponding local land-based communities that call this region home. They will consider how this unique area – as one of the most biodiverse in the province and the world – functions in BC in terms of ecological, social/cultural, geographic and economic significance.

Suggested Time: 2 class sessions (75 minutes each)

*** Teacher Note:** Throughout this resource, additional materials, several images and colour resources are noted with a * in the materials list. These resources are available on the Great Bear Sea USB, or at www.greatbearsea.net.

Materials and Resources:

- Computer, projector, and screen
- Chart paper and markers
- Lesson 1 Film Clips:
  - Planning Part1 (10 mins)
  - Respect (10 mins) – *optional*
- Teacher Background – Lesson 1
- 1.1 Sub-Regions of the Great Bear Sea
- 1.2 Multiple Lenses
- Great Bear Sea MaPP Study Area Map *
- Great Bear Sea MaPP Study Area With Sub-Regions Map *
- Great Bear Sea Regional Maps*

Learning Objectives:

Students will:

1. Understand and identify the ecological, economic, cultural/social and geographic importance of oceans, including the Great Bear Sea.
2. Communicate ideas and perspectives about oceans and marine resources orally and in writing.
3. Explore the ideas of stewardship and leadership in planning for the future of marine resources and ecosystems.

Lesson Context

This lesson introduces students to the area known as the Great Bear Sea – an ecologically biodiverse and important marine area for British Columbia. They will be introduced to the four sub-regions of the area and consider the communities and species that call this diverse ecosystem home.

Students will begin to explore the importance of this region from multiple lenses, including ecological, social/cultural, geographic and economic, considering what they already know about the area and the questions they hope to explore in future lessons. By exploring this key region of British Columbia through multiple lenses, students will need to consider how decision-making around one factor may impact/influence other factors, and the implications of this for the region as a whole. The lesson aims to help students make explicit that all lenses need to be considered in ensuring a healthy ecosystem, and thus economic prosperity and cultural well-being for generations to come.

Learning Activities

Part A

Activity 1: The Region Known as the Great Bear Sea (40 minutes)

1. Share the following quotes with students, and have them identify the common theme or share their reactions to what is being said. Can they relate to the comments made? Why or why not?

   - *People seem to forget that First Nations people have been here for thousands of years and they're a part of the ecosystems that are here. We're not simply dependent on them, but we're part of the functioning ecosystems.*
     – Dallas Smith, President, Nanwakolas Council
   - *Marine planning is extremely important, so important that my council passed a resolution to support it. And now we're looking at the implementation phase. I would say that we have cautious optimism, it depends on how it's going to unfold. You need a plan because haphazardly we're not going to make it. We, being the planet.*
     – Carol Kulesha, Mayor (Past), Queen Charlotte, Haida Gwaii
   - *The sea, the great unifier, is man's only hope. Now, as never before, the old phrase has a literal meaning: we are all in the same boat.*
     - Jacques Yves Cousteau, Oceanographer
   - *Everything we eat, whether it's inter-tidal, whether it's bottom fish, whether it's herring, whether it's herring spawn, whether it's salmon – everything*

comes out of that ocean. It's a lifeline. It's a lifeline for our people.
- William Housty, Chair, Heiltsuk Integrated Resource Management Department

2. Let students know that these quotes were taken from a film about an area in BC known as the Great Bear Sea. Project the **Great Bear Sea MaPP Study Area Maps*** on a screen to show the area and sub-regions. With a partner, have students brainstorm what they already know about this area in BC.

3. As a class, facilitate a discussion around student responses. Some additional prompting questions may include:
   - Have you ever lived or visited any of the areas around the Great Bear region?
   - Students may be familiar with the Great Bear Rainforest, including the recent steps to protect the area. What have they heard about the recent agreements to protect the area known as the Great Bear Rainforest?
   - Why do you think this region may be important for BC and Canada?
   - What do you wonder about this region?

4. Divide the class into groups of 4, and have each group look at one of the **regional maps*** more closely. Looking at the areas from a geographic perspective, have the groups discuss 2 potential benefits associated with the geography of the area, and 2 potential challenges. Discuss as a class.

5. Provide each group with a copy of **1.1 Sub-Regions of the Great Bear Sea for Marine Planning**. Have groups list the unique geographic attributes of their assigned region of the Great Bear Sea, and how this may impact the region. Discuss these as a class and have groups consider any additional benefits/challenges associated with the geography of the regions. Reinforce the idea that coastal waters of BC have impacts for areas all over the province and beyond.

6. Have each student take some time to brainstorm 2 – 3 questions about the region and record these in a journal/notebook.

Activity 2: Introduction to the Film (35 minutes)

1. Let students know that over the coming days, the class will be exploring more about this region, and its importance to BC, through film exploration. Introduce the film *The Great Bear Sea: Reflecting on the Past, Planning for the Future*, explaining that it is a film focusing on this particular region in BC and how people are coming together, amid growing demands on BC coastal waters, to plan for the future of the region.

2. On the board, list the following terms: ecological, geographic, economic, and social/cultural. Spend a bit of time reviewing these terms with students, including some examples (see **Teacher Background – Lesson 1**), drawing on prior knowledge

when possible. Hand out a copy of **1.2 Multiple Lenses** to each student (or have them create this in their journal/notebook) and have students jot down notes/ questions regarding each factor as they watch the film clip.

3. Watch the **Planning Part 1** film clip as a class.

4. Provide students with a few moments to make additional notes on their own.

Part B

Activity 1: Group Mind-Mapping (75 minutes)

1. Divide students into groups of 4 – 5 and provide each group with chart paper and a variety of pens/markers of different colours.

2. Ask each group to create a mind map focusing on the Great Bear Sea, using the notes they took in the previous activity as a starting guide. Use a different colour for each branch of the mind map stemming from "Great Bear Sea" in the center of the chart paper and have them incorporate key words and images in the mind map. Let students know that the 4 lenses may be natural starting branches of the mind map, but they are by no means limited to these ideas. (Note: This activity could also be done digitally, using a program such as Padlet or Stormboard.)

3. Reserve at least 20 minutes at the end of this activity for students to share their work. Have each group post their mind map around the classroom, and provide quiet 'gallery walk' time for students to review all the maps. Engage in a large group discussion, having students share their observations. Some possible prompting questions may include:

    - What is one new thing you learned and one new thing you wonder as a result of working in groups or reviewing all the mind maps?
    - Could some of the ideas/branches of your mind map overlap? For instance, consider how a species like salmon, which is important to the region, may be considered from an economic, cultural and geographic perspective.
    - What do you think are some of the biggest benefits and challenges of working and living in this region?

4. Have students return to the 2 – 3 questions that they developed at the end of the first activity in this lesson. Were some of their questions addressed? Have students create 1 - 2 additional questions that they now have about the Great Bear Sea.

Extension Ideas

- Have students research 1 or 2 of the questions they have about the Great Bear Sea. This can be related to any topic/curiosity/inquiry.
- Show the film clip **Respect**, Underwater Big House, Story of Gitnuganaks told by Vernon Brown, Kitasoo/Xai'xais Nation. Have students explore the significance of this story in First Peoples' culture and the Great Bear Sea.
- Have students search online for information pertaining to the Great Bear Rainforest and the steps made to protect the area. Who was involved and how has the area been impacted?
- Research, visit and observe areas/habitats that are important in your local community, such as, eelgrass beds, tidal flats, estuaries, wetlands, bogs, marshes, beaches, lakes, rivers, shorelines, etc. Have students note the geographic attributes and significance of the area from multiple lens.

Assessment Ideas

- Formatively assess students' engagement in group work and large group discussion.
- Assess students' prior knowledge by collecting **1.2 Multiple Lenses**.
- Use the mind maps for the Great Bear Sea as a formative assessment of students understanding of the multiple lenses and close viewing of the film clip(s).
- As an exit ticket, have students submit their questions.

Teacher Background – Lesson 1

The Great Bear region of British Columbia's north coast is one of Canada's unique ecological treasures. It is home to islands, wild rivers, cold-water seas, a rich marine ecosystem, and one of the world's last intact temperate rainforests. The Great Bear region is interconnected between the land and the sea and truly is an ecosystem that is unlike anything else in the world.

The Great Bear Sea covers a large area from the northern tip of Vancouver Island to the Alaska border. It can be divided into four sub-regions: North Coast, Haida Gwaii, Central Coast, and North Vancouver Island, as described in the film. The Great Bear Sea is home to many species of living organisms and many different kinds of habitat. For example, 20% of the world's remaining Pacific salmon are in this area, moving from the rivers to the sea and returning to spawn in their life cycle. It is home to two species of bears including a special type, or sub-species, of black bear called the spirit bear that lives nowhere else on Earth. Many types of marine mammals such as sea otters, dolphins, porpoises, humpbacks and killer whales call this area home or migrate through the waters. The area contains globally significant populations of breeding seabirds as well as important foraging habitat for trans-equatorial migrants that spend the summer in BC when it is winter in Australia and New Zealand. The area also is part of the Pacific Flyway and each fall and spring, hundreds of thousands of shorebirds, ducks, geese and other birds fly between the breeding grounds in the Arctic and their wintering areas in Mexico and South America, stopping at the nutrient-rich estuaries and mud flats to refuel and regain body fat for the long journey. The Great Bear Sea contains important habitats for threatened and endangered species, and supports a rich, complex food web ranging from tiny pteropods to the giant whales – this is one of the most biodiverse temperate regions of the world. A simple definition of biodiversity for students is the variety of living organisms in an ecosystem or habitat.

The Great Bear region is the traditional, ancestral and unceded territory for many First Nations which have depended on the resources of the land and sea for thousands of years. This area is also very rich in culture, with various species, artefacts and landscapes holding great significance to the communities that call this area home. The Great Bear Sea provides employment for many in the region in a variety of industries such as fishing and tourism. At the same time, there are many threats to this region including overfishing, increased marine traffic, oil spills and development. The biodiversity of the region, the fact that so many communities depend on this area for sustenance, and the increasing global competition for natural resources and waterways, provides a good framework for understanding the importance of ecosystem protection and planning for the future.

This unit will help students develop critical thinking skills across multiple Social Studies courses. It also provides a framework for understanding the importance of ecosystem protection and planning for the future. Through watching the film and learning more about the specific regions of the Great Bear Sea, including the communities that live and

work in the regions, students have the opportunity to critically evaluate the future of the Great Bear Sea region from a number of perspectives:

- Ecological (biodiversity; threatened species; stewardship; conservation; sustainable harvesting; etc.)
- Geographic (estuaries, rivers, oceans; proximity to shipping routes and other sources of marine traffic; traditional territories and land ownership; etc.)
- Economic (ecotourism; fishing; marine highways; development; gas/oil lines; etc.)
- Social/Cultural (First Nations traditions and knowledge; family and community; worldviews and beliefs; values and norms; etc.)

Part of the role of the Great Bear Sea regional marine plans is to help advocate for sustainable job development. Many jobs depend upon the resources of the Great Bear Sea ecosystem. In order to maintain sustainability (healthy ecosystems and jobs for people in the community) economic and ecosystem needs should be considered in planning for the future.

1.1 Sub-Regions of the Great Bear Sea

Central Coast Sub-Region

The Central Coast plan area extends from Laredo Channel and the northern tip of Aristazabal Island in the north to the southern limit of Rivers Inlet and Calvert Island. Moving from the west, the area includes the shelf waters of Queen Charlotte Sound, hundreds of islands, and exposed rocky headlands which meet an intricate shoreline in the eastern portion of the plan area. The shoreline is cut by narrow channels and steep-walled fjords that contain ecologically complex estuaries, calm inlets and pocket coves. Its main communities include Bella Coola, Bella Bella, Ocean Falls, Wuikinuxv, Shearwater and Klemtu. First Nations partners participating in the Central Coast Marine Plan include the Heiltsuk, Kitasoo/Xai'xais, Nuxalk and Wuikinuxv Nations.

Haida Gwaii Sub-Region

Xaadaa Gwaay, Xaaydaga Gwaay.yaay, or Haida Gwaii ("Islands of the people") is an archipelago on the edge of the continental shelf off the north coast of BC. It is surrounded by several large bodies of water – Hecate Strait separates Haida Gwaii from the mainland, and the islands are bounded by Dixon Entrance in the north, Queen Charlotte Sound to the south and the Pacific Ocean to the west. The chain of islands extends roughly 250 kilometres from its southern tip to its northernmost point and includes the communities of Gaaw (Old Massett), Masset, Gamadiis Llnagaay (Port Clements), Tll.aal Llnagaay (Tlell), Hlgaagilda (Skidegate), Daajing Giids (Queen Charlotte) and K'il Llnagaay (Sandspit). Boundaries for the Haida Gwaii plan area are defined by the Haida Statement of Claim (east/south), the international boundary with the US (north), and the toe of the continental slope (west).

North Coast Sub-Region

The North Coast plan area includes an impressive stretch of coastline that is indented with deep fjords and dotted with thousands of islands. It is a region of profound beauty, significant ecological diversity and remarkable cultural richness. The North Coast plan area extends from Portland Inlet to the south end of Aristazabal Island, where it has an overlap with the northern boundary of the Central Coast plan area. The western edge of the North Coast plan area borders the Haida Gwaii plan area. Prince Rupert, Terrace and Kitamaat are the largest communities in the North Coast plan area, and support an overall population of approximately 42,000 people. Participating First Nations in the North plan area include the Gitga'at, Gitxaala, Kitsumkalum, Kitselas, Haisla, and Metlakatla Nations, who are represented by the North Coast-Skeena First Nations Stewardship Society in this planning process.

North Vancouver Island Sub-Region

The North Vancouver Island plan area is home to the Kwakwaka'wakw First Nations and lies between northern Vancouver Island and B.C.'s mainland. There are many islands, inlets and fjords within the area, which is characterized by its natural beauty and biodiversity of species and ecosystems. Major water bodies include Queen Charlotte Sound, Queen Charlotte Strait, Johnstone Strait, Smith Inlet, Seymour Inlet, Knight Inlet and Bute Inlet. The plan area includes the communities of Port Hardy, Port McNeill, Alert Bay, Sayward and Campbell River. Members of the Nanwakolas Council and partners in the MaPP initiative are: Mamalilikulla-Qwe'Qwa'Sot'Em, Tlowitsis, Da'nakda'xw-Awaetlatla, Gwa'sala-'Nakwaxda'xw, Wei Wai Kum, Kwiakah and the K'ómoks First Nations.

Name:_____

1.2: Multiple Lenses

Ecological	Social/Cultural
Economic	Geographic