

# What animals live in the Great Bear Rainforest?

The Great Bear Rainforest is home to great diversity of plants and animals. Students will view videos and photos of the region and conduct an animal inquiry project.

Keystone species are a species on which other species in an ecosystem largely depend, such that if it were removed the ecosystem would change drastically. Students will recognize the important contribution of salmon as a keystone species in the GBR ecosystem.

## Learning Intentions

1. Recognize the diversity of plant and animal life in the Great Bear Rainforest
2. Why are salmon an important species in the Great Bear Rainforest?

## Blackline Masters

- Learning Intention 2: *Life Cycle of a Salmon*

## Curricular Connections

Refer to the “Curriculum” drop-down option under the “Learn” tab of the Great Bear Rainforest Education and Awareness website.

**Curriculum Alignment: Great Bear Rainforest Education and Awareness website**

<https://greatbearrainforesttrust.org/curriculum/>

## Learning Intention 1

# Recognize the diversity of plant and animal life in the Great Bear Rainforest

## Experiences and Observations

### Part 1: What is rainforest biodiversity?

- “Explode the sentence” Examine each part of the sentence with a mind map.
- Brainstorm: Who and what do you think lives in the rainforest?

### Watch:

#### Enter the Great Bear Rainforest

<https://www.youtube.com/watch?v=js1rnKPAAnE0&t=97s>

or

#### Welcome to the Great Bear Rainforest

[https://www.youtube.com/watch?v=jAHNqN\\_8p2k&t=10s](https://www.youtube.com/watch?v=jAHNqN_8p2k&t=10s)

Ask students:

- Who did you see in this video? What plants and animals live here?
- What are your wonders?
- Inspired by the video and classroom discussions, explore photos of GBR animals using the Gallery tab, and the Biodiversity page (and associated tabs) on the GBREAT website.

#### Great Bear Rainforest and Education Trust

<https://greatbearrainforesttrust.org/>

#### Biodiversity

<https://greatbearrainforesttrust.org/biodiversity/>

- Take your students on a Biodiversity Walk using field guides, binoculars, and magnifying glasses to explore how many different plants and animals they can find. See if students can find any species that would also live in the Great Bear Rainforest.

- This walk can take place in the local school community and can be extended by visiting a nearby location such as a lake, ocean, river, pond, forest, or park.
- Students or teachers can take photos to document their findings (photography reduces our impact on the living world).
- Local Indigenous elders and community members, or local community organization representatives can be invited into the school to lead a species identification walk.

## Part 2: Animal inquiry Project

Have students study an animal of their choice that lives in the GBR.

### Brainstorm

Have students inquire about their animal, including adaptations, habitat, needs, and if possible, Indigenous stories and cultural views related the animal.

### Research

Support students in finding information about their animals through print and digital materials.

**Tip:** Connect with your teacher-librarian so they can support you in curating a list of resources.

### Demonstrate Learning

Students can show their learning in a variety of ways, such as by creating a poster or video, or using plasticine, cardboard boxes and other materials to depict an animal in its habitat.

### Share Learning

Conduct a gallery walk or have students present to show how animals and plants have helped students learn from each other.

### Transform Learning

Encourage students to view their classmates' presentations. Ask: "How are all these presentations connected?" Have them find another animal or plant in the classroom that is connected to their animal's food web (for example, bear eats salmon, salmon bones nourish the cedars).

## Possible topics/Key Vocabulary

- Biodiversity
- Keystone species
- Foundation species

Terrestrial mammals	Marine life	Trees and plants	Lichen, algae, mushrooms and fungi	Birds
Kermode/spirit bear	Salmon	Western Red Cedar	Witch's hair Ragbag lichen	Ravens and Crows
Black bear	Coastal wolves	Sitka Spruce	Green and fucus algae	Bald Eagles
Minks	Orcas	Salal	Bolette and additional fungi	Puffins
Cougars	Humpback and grey whales		Chanterelle and rosella mushrooms	Seagulls
Mountain goats	Dall's porpoise			Great Blue
Deer	Sea lion			Hérons
Beaver	Harbour seals			Coastal Northern Goshawk
	Kelp			Kingfisher
	Sea urchins			Merganser
	Abalone			Marbled murrelet
	Cockles			Crane
	Rockfish			Ospreys
	Herring			Peregrine falcons
	Eulachon (also oolichan, hooligan)			White pelicans

## Reflections on learning

### Making Learning Visible—Learning Stories

- Document your class's biodiversity walks with photos, to allow students to reflect on the plants and animals they found.
- Have students share their learning journey with their families. Have students look for plants or animals with their families on the weekend or in the evenings.

### Animal Inquiry Project

- Single-point / one-point rubrics
  - ◆ Create a rubric with your class about what the expectations are for this project.
- Project-based learning
  - ◆ The Animal Inquiry Project allows students to both gather and share their learning, as well as reflect on the process.
  - ◆ This learning could be presented with a poster, a PowerPoint presentation, a video, or any other way that helps to express students' learning.

## Suggested Resources

### Biodiversity

<https://greatbearrainforesttrust.org/biodiversity/>

### Biodiversity of the Central Coast

<https://www.centralcoastbiodiversity.org/>

### Birds of the Great Bear Rainforest

<https://greatbeartales.com/birds-of-great-bear-rainforest/>

### Going Wild! Teaching about Wild Products from BC's Coast Rainforests

A guidebook for educators for grades 4-7, developed as a collaboration between the Coastal First Nations Great Bear Initiative, Sierra Club BC, and the Centre for Non-Timber Resources at Royal Roads University

<https://coastalfirstnations.ca/wp-content/uploads/2017/06/Going-Wild-web-use.pdf>

### Great Bear Rainforest and Education Trust

Select photos of various species on the "Gallery" tab.

<https://greatbearrainforesttrust.org/>

## Extensions

- Students compare GBR species to local plants and animals. Then, they create a species identification book for their own school yard.
- Make posters of identified species and post them outside so other classes can learn from students' research.

## Learning Intention 2

# Why are salmon an important species in the Great Bear Rainforest?

## Experiences and Observations

- In groups, students discuss the meaning of “keystone species.”
  - ◆ Salmon is a keystone species that supports more than 130 other species with its nutrients. Salmon live throughout B.C. in streams, lakes, estuaries, rivers, and the ocean, so they are a good indicator of the health of our waterways.
- Learn about the salmon life cycle, habitat and survival, including:
  - ◆ Salmon eggs
  - ◆ Salmon alevin
  - ◆ Salmon fry
  - ◆ Salmon smolt
  - ◆ Salmon adults
  - ◆ Salmon spawners

### Salmon Life Cycle

<https://www.salmonidsinthe classroom.ca/pdf/Salmon Life Cycle.pdf>

- As they learn together, students can fill in worksheets with vocabulary definitions (see the blackline master at the end of this activity plan, *Life Cycle of a Salmon*)
- Have students create a representation of the salmon’s life cycle. You can film them describing the journey.
- Consider obstacles and challenges the salmon have to face and how humans play a role.
- Play the salmon obstacle course game. This game requires some prep but is a very fun, interactive way of students moving their way through the salmon’s journey.

## Salmon Migration Obstacle Course

<https://naturekidsbc.ca/wp-content/uploads/2021/08/scienceworld.ca-Salmon-Migration-Obstacle-Course.pdf>

- Make a web to show how salmon are connected to their environment. For example: salmon nourish bears, eagles, seals, and orcas. Bears leave salmon carcasses under cedar trees as nourishment.

## Possible Topics/Key Vocabulary

- Salmon life cycle
- Keystone species
- Foundation species

## Reflections on Learning

### Making Learning Visible—Learning Stories

- Document your salmonids in the classroom project and other salmon activities so that students can share their learning journey with their families. You can also document your students' participation and reflection of the salmon obstacle game.

### Reflections

- Have students draw (or use loose parts) to represent the path of a salmon from the ocean to their spawning grounds and indicate all the dangers they may face (for example, landslides, pollution, fishing, boats, orcas, bear).
- Draw or use loose parts to represent all the animals and plants that the salmon nourish on their journey, perhaps with a food web. This helps to show how they are a keystone species.
- Students create the salmon's journey using loose parts. They recognize the changes salmon go through and the obstacles they face. Hopefully they will also see how we can play a part in supporting these keystone species.



## Project-based Learning

- Students can be engaged in the salmonids in the classroom project.

## Suggested Resources

### Salmonids in the Classroom

<https://www.salmonidsintheclassroom.ca/>

### Salmon Life Cycle

<https://www.salmonidsintheclassroom.ca/pdf/Salmon Life Cycle.pdf>

### Salmon Migration Obstacle Course

<https://naturekidsbc.ca/wp-content/uploads/2021/08/scienceworld.ca-Salmon-Migration-Obstacle-Course.pdf>

### Wild Salmon Program

Using science, policy, and restoration to improve the health of pacific salmon (Raincoast Conservation Foundation).

<https://www.raincoast.org/salmon/>

## Book Suggestions

### Salmon Boy: A Legend of the Sechelt People

Written by Donna Joe, Sechelt Nation

<https://nightwoodeditions.com/products/9780889711662>

### River of Salmon Peoples

Recommended for grades 6-12.

<https://focusedresources.ca/en/k-12-evaluated-resource-collection/river-salmon-peoples>

### The Sockeye Mother

<https://focusedresources.ca/en/k-12-evaluated-resource-collection/sockeye-mother>

## Extension

Salmonids in the Classroom program connection and releases are an opportunity to learn firsthand about salmon, their life cycle, and their connections to the rivers around us. You can learn about salmon and their life cycle as they grow in your classroom or school.

### Salmonids in the Classroom

<https://www.salmonidsintheclassroom.ca/>

If you live by a salmon stream or hatchery, take a walk or a visit to explore and learn more about them and how they have an impact on your ecosystem.



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Name: \_\_\_\_\_

# Life Cycle of a Salmon

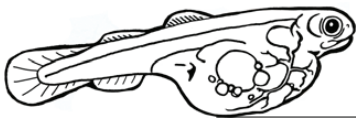
Use the information below to label and describe each stage of the life cycle of the salmon.



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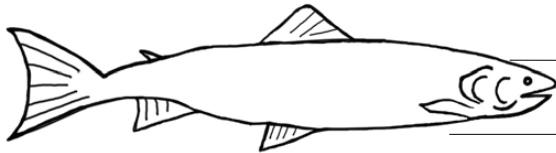
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The Fry swims out of the gravel.

Eggs hatch into the Alevins.

The Smolts continue to grow and prepare to make the trip to the ocean.

Eggs are in the gravel of fresh water and will hatch there.

The Adult stays in the ocean until it's ready to spawn (lay eggs).

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