

Sustainable Seafood Education Kit

HOOK, LINE, & THINKER



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LAND ACKNOWLEDGMENT

We acknowledge that K'émk'emeláy/Vancouver is situated on the unceded, traditional, and ancestral lands of the xʷməθkʷəy̓əm (Musqueam), Skwxwú7mesh (Squamish), and səliłwətał (Tsleil-Waututh) Nations, who have cared for the land and waters since time immemorial. The name K'émk'emeláy, meaning “place of many maple trees,” is rooted in the Squamish Nation's history. We recognize and honour these enduring connections, acknowledging the past, respecting the present, and committing to a future built on understanding and reciprocity.

INDIGENOUS LEAD EXTENSION QUESTIONS

1. What does home mean to you?
2. What lessons do nature teach you?
3. What stories from your family or community inspire you?
4. What does the ocean teach you?
5. What responsibilities do you have for your community?

INTRODUCTION

The health of our ocean and the countless communities, cultures, and species that depend on it relies on responsible human choices. Seafood is one of the most valuable resources the ocean provides, nourishing billions of people around the world. However, unsustainable fishing practices, overharvesting, and destructive methods have pushed many marine species and ecosystems to the brink. Every day, habitats are damaged, populations decline, and entire food webs are disrupted due to human actions on the water and along our coasts.

Yet, a different future is possible. By choosing sustainable seafood and supporting responsible harvesting practices, we can protect biodiversity, promote thriving ecosystems, and ensure food security for generations to come. At Ocean Wise, we believe that informed, empowered youth are key to shaping this future. Our sustainable seafood education programs build awareness of how our daily food choices are deeply connected to ocean health and global sustainability. Grounded in recognized science, global frameworks such as the United Nations Sustainable Development Goals (SDGs), and decades of collaborative work with fishers, scientists, Indigenous communities, and industry leaders, these lessons equip students with the knowledge and tools to become thoughtful consumers and ocean stewards.





LESSON 1

Sustainable Seafood – You



ACTIVITIES

WHAT'S ON A PLATE

1. Draw your favourite food to eat at home on the plate.



2. Can you think of where this meal comes from? For example, if your favourite food is blueberries, you could say they come from a wild low bush, harvested high bush, your backyard, or the grocery store.

3. Now draw your favourite seafood or marine product on the plate.



4. Can you think of where it comes from?

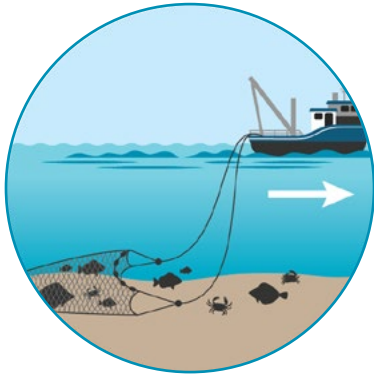


Ocean Wise determines what seafood is sustainable, partnering with businesses and doing the research to help you make better, sustainable choices! Look for our eco-label at the grocery store.

→ **VIEW** the resource(s) for this activity at ocean.org/action/sustainable-seafood-ed-kit

FISHING FOR SUSTAINABILITY

Look at each fishing method card on this page and the next. Colour the methods you believe to be sustainable in green and the unsustainable methods in red.

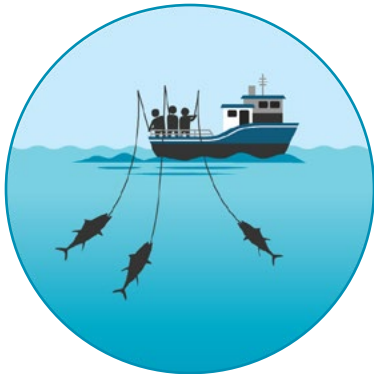


BOTTOM TRAWLS

HOW IT WORKS Large nets dragged along the seafloor to catch groundfish or shrimp.

ENVIRONMENTAL IMPACT Destroys seabed habitats, including corals and sponges, catches many unintended species (bycatch), and can deplete fish populations.

SOCIAL / ECONOMIC IMPACT Can temporarily increase catch, but long-term damage affects local communities and ecosystem health.



POLE-AND-LINE / HANDLINES

HOW IT WORKS Fishers use a single line or a pole with baited hooks to catch fish one at a time. Common for tuna and other large pelagic fish.

ENVIRONMENTAL IMPACT Very selective, minimal bycatch, no damage to seabed or habitats.

SOCIAL / ECONOMIC IMPACT Often small-scale, provides jobs without harming ecosystems.

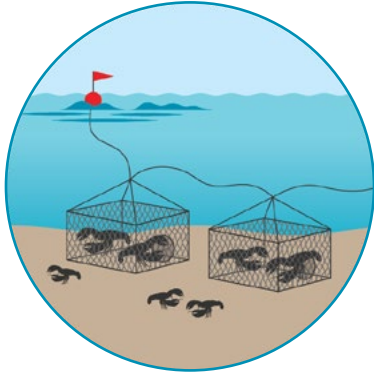


LOGLINES

HOW IT WORKS Very long lines with thousands of baited hooks are set in open water, often for tuna or swordfish.

ENVIRONMENTAL IMPACT High bycatch, including endangered turtles, sharks, and seabirds. Can deplete targeted fish if unregulated.

SOCIAL / ECONOMIC IMPACT Industrial scale benefits a few companies but harms ecosystems.

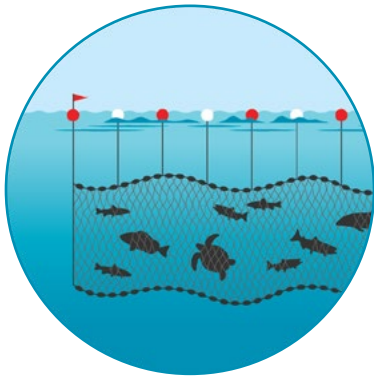


POTS / TRAPS

HOW IT WORKS Pots or traps (often with bait inside) are placed along the ocean floor and have openings that trap the target species that enter them.

ENVIRONMENTAL IMPACT Minimal damage to the area around them due to being stationary. Smaller openings in the pots/traps allow bycatch species to swim out.

SOCIAL / ECONOMIC IMPACT Used in both small-scale and large-scale fisheries. Primarily used for catching crab and lobster which supports livelihoods in coastal communities.

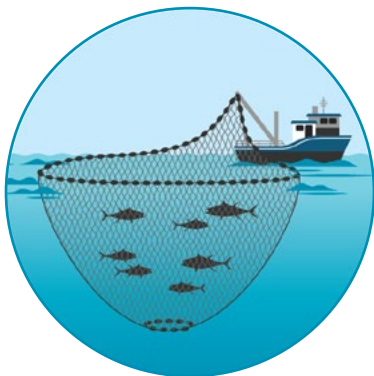


GILLNETS

HOW IT WORKS A large mesh net is set in the water and catches fish when they swim into it and become entangled by their gills.

ENVIRONMENTAL IMPACT High bycatch of species like marine mammals, seabirds, and other fish.

SOCIAL / ECONOMIC IMPACT Gillnets are inexpensive and efficient at catching high volumes of fish. However, other species can become depleted if caught as bycatch.



LIFT NETS / SEINE NETS

HOW IT WORKS Nets are used to capture schools of fish (like herring or sardines) in shallow water. Lift nets are raised from the water; seine nets surround the fish and close at the bottom.

ENVIRONMENTAL IMPACT Minimal habitat disruption, usually low bycatch if used on fast-growing species.

SOCIAL / ECONOMIC IMPACT Supports small coastal communities and provides affordable seafood.



THOUGHTBOOK

Seafood is more than what ends up on our plates, it connects people, cultures, and ecosystems across the world. The choices we make about what we eat can help protect ocean habitats and the animals that live there. Some fishing methods harm the ocean and other species, while others, low impact or Indigenous-managed fisheries, work in harmony with nature. By learning how to recognize sustainable seafood and understanding the impacts of different fishing methods, we can make choices that support healthy oceans and thriving communities.

REFLECT

1. Which seafood do you or your family eat most often, and how might your choices affect the ocean?

2. How do different fishing methods impact marine habitats and species beyond the fish we eat?

3. What is one change you could make in your seafood choices to support sustainability and healthier oceans?





TAKE ACTION

Look for the Ocean Wise label when you go to the grocery store or order seafood at a restaurant. Choosing responsibly sourced seafood helps support healthier oceans and more sustainable fishing practices.

Knowing where your food comes from, how it was caught and the impact it has on marine ecosystems is an important action in itself. Every informed choice is an opportunity to make a difference!

THE WHY

Knowing where your food comes from helps us understand the impact our choices have on the ocean, freshwater ecosystems, and the communities that depend on them. Choosing sustainable seafood supports healthy fish populations, protects marine habitats, and ensures that species can continue to thrive for future generations. It also strengthens local and Indigenous fisheries that practice respect, reciprocity, and balance in harvesting.

By being mindful of what you eat and asking where it was caught, how it was harvested, and whether it supports sustainable practices, you become part of a global effort to reduce overfishing, safeguard biodiversity, and protect cultural traditions tied to the ocean. Your choices matter: each meal can be a step toward conservation, climate resilience, and ensuring that future generations can continue to enjoy the foods and memories we cherish today.



LESSON 2

Overfishing – Tuna



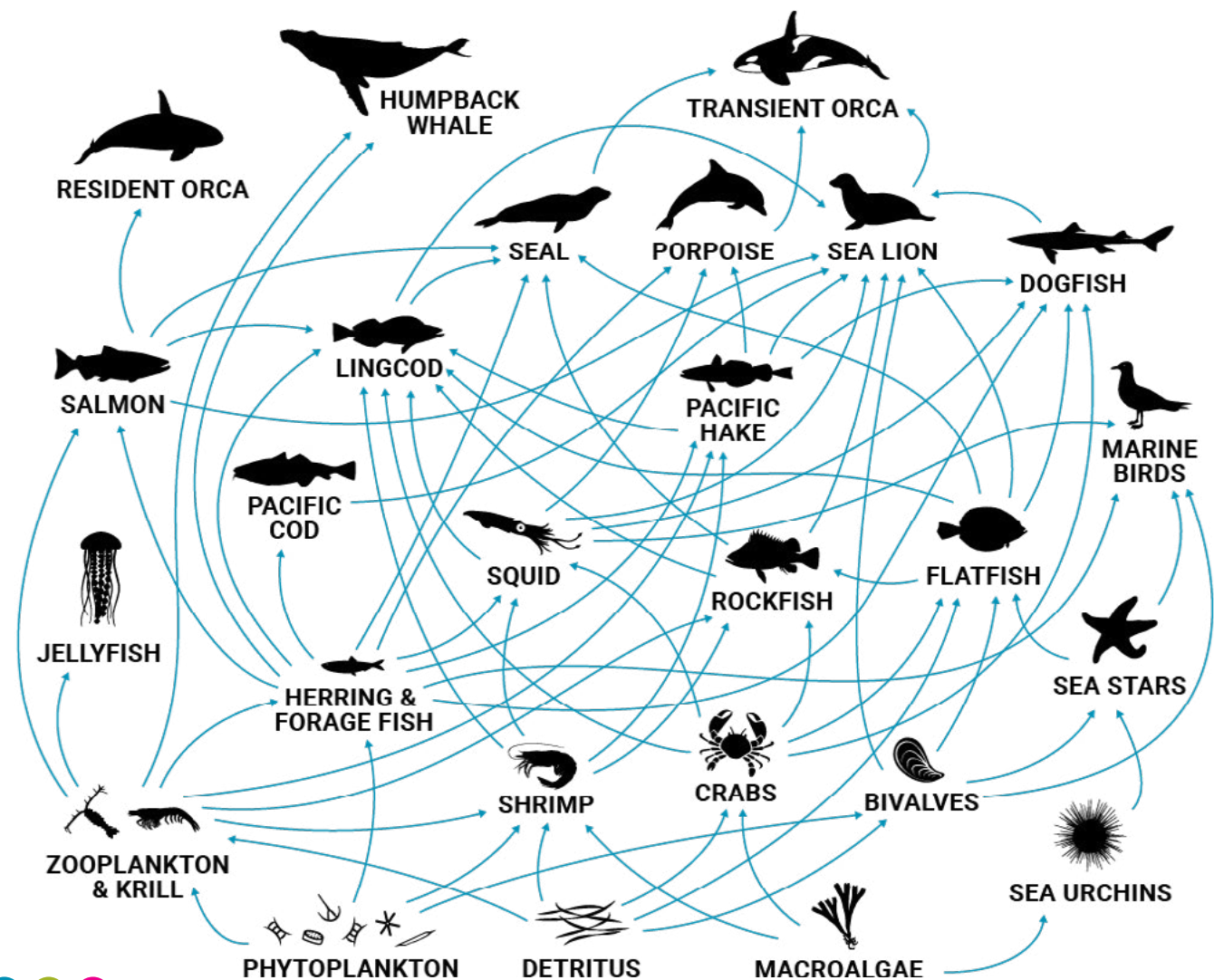
ACTIVITIES

In the ocean, predators like sharks, seals, and larger fish naturally keep fish populations in balance. This is part of a healthy ecosystem where every species plays a role: predators eat some fish, prey reproduce, and populations stay stable over time.

While natural predators are part of the ocean's balance, human activity can tip the scales, threatening fish populations, food webs, and even coastal communities that rely on sustainable seafood. Protecting the ocean means catching fish responsibly, using sustainable methods, and leaving room for nature to maintain balance.

➔ **VIEW** the resource(s) for this activity at ocean.org/action/sustainable-seafood-ed-kit

FOOD WEB OF HOWE SOUND (SIMPLIFIED)



PREDATOR FOOD CHAINS

1. Select a top ocean predator and draw their respective food chain below.

2. Where do humans fit into this? Add them to your food chain above.

I'M A TUNA TRYING TO SURVIVE...

Write a story, comic, or diary entry from the perspective of a tuna trying to survive overfishing. Use the prompt: "I'm a tuna trying to survive..."

➔ **VIEW** the resource(s) for this activity at ocean.org/action/sustainable-seafood-ed-kit



THOUGHTBOOK

Tuna are some of the fastest and most powerful fish in the ocean, traveling thousands of kilometers across international waters. Overfishing doesn't just affect tuna, it impacts the entire food chain and the health of ocean ecosystems. By understanding the threats tuna face and the fishing methods that harm them, we can make smarter seafood choices and support sustainable fisheries. Protecting tuna helps ensure the ocean stays balanced and full of life for generations to come.

REFLECT

1. How does overfishing affect ecosystems and people?

2. What would happen if tuna disappeared?

3. What would you do to save tuna?

4. What might tuna do in real life to avoid the fishers? (migrate, hide deeper, move north)

5. What could happen to ecosystems when top predators disappear?



TAKE ACTION

Eat local and Ocean Wise recommended fish. Choose tuna that is recommended by organizations like Ocean Wise. These labels indicate that the fish comes from fisheries following strict environmental standards.

THE WHY

Choosing sustainable tuna and being mindful of how much seafood we eat helps protect tuna populations and the health of our oceans. Overfishing removes tuna faster than they can reproduce, which disrupts marine ecosystems and affects other species that rely on a balanced food web. By making informed choices, such as looking for Ocean Wise or other sustainable seafood labels, eating tuna in moderation, or choosing local, responsibly caught fish, you are helping ensure tuna populations remain healthy and abundant.

Supporting sustainable fishing practices also protects the livelihoods of small-scale and Indigenous fishers who have long managed these resources responsibly. Every meal becomes an opportunity to contribute to ocean conservation, maintain biodiversity, and ensure future generations can enjoy tuna as part of a thriving, sustainable ocean.



LESSON 3

Connection – Salmon



ACTIVITIES

→ **VIEW** the resource(s) for this activity at ocean.org/action/sustainable-seafood-ed-kit

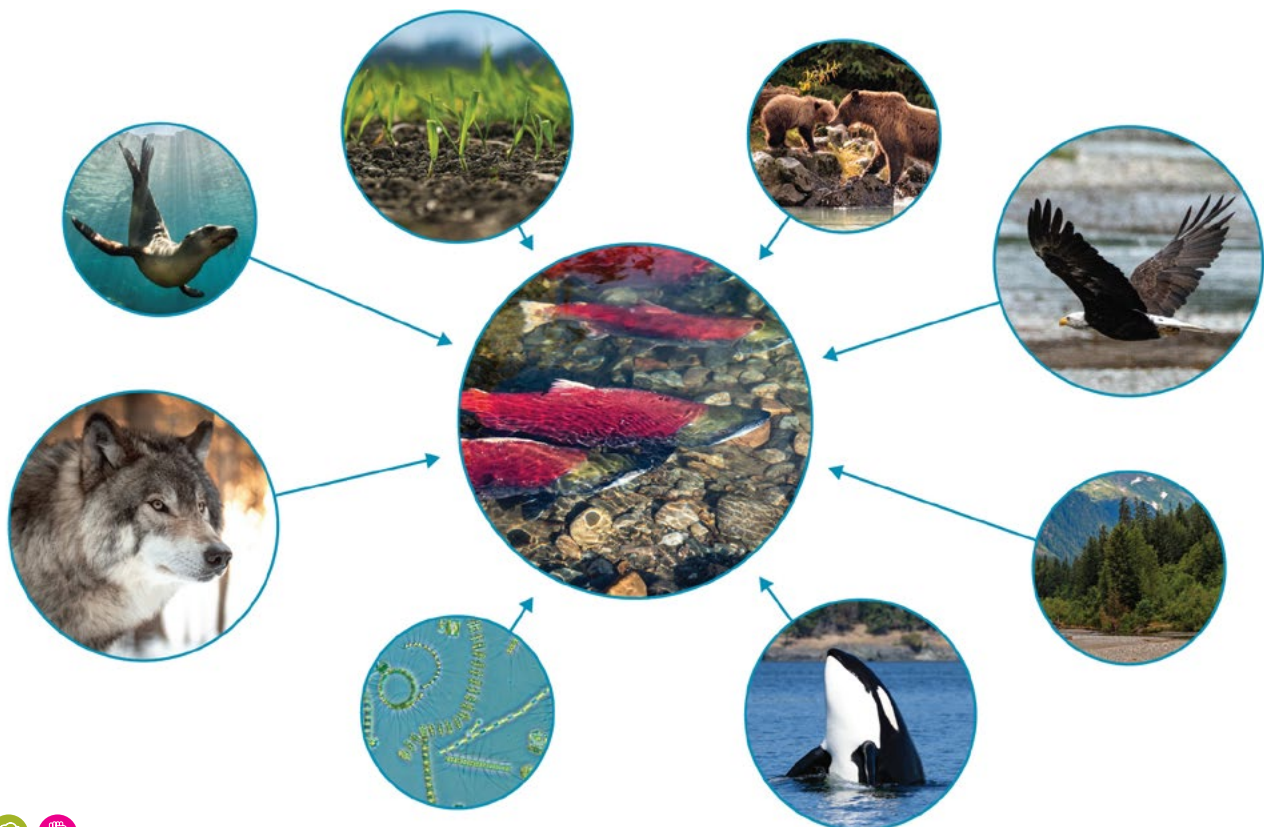
ECOSYSTEM CONNECTIONS

Salmon are an important food source for bears, eagles, wolves, birds, and many other animals. Bears may carry salmon away from the river, spreading nutrients across the surrounding forest. Salmon remains and animal waste are broken down by insects, fungi, and other decomposers, returning nutrients to the soil and water.

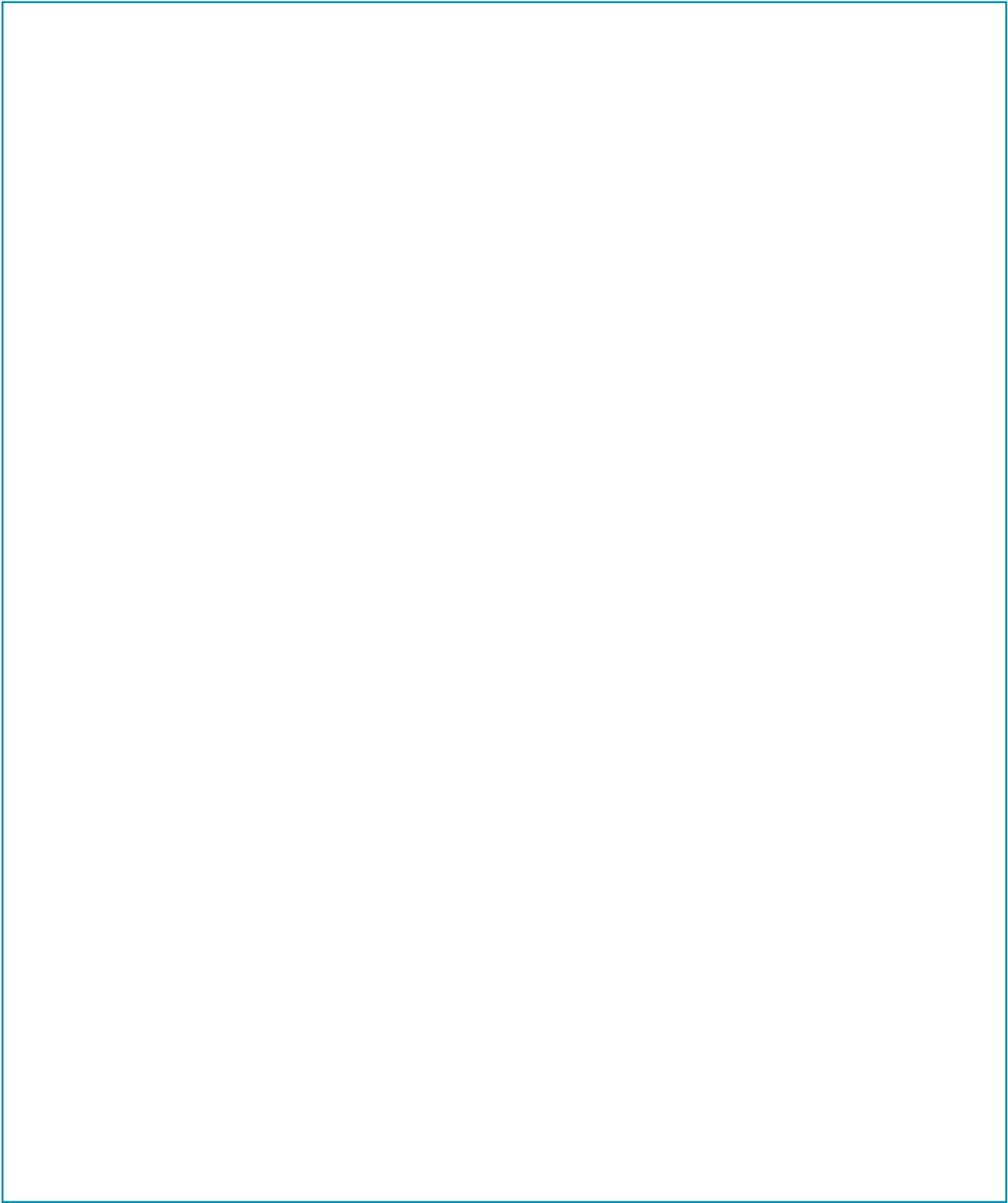
Plants and trees can then benefit from these nutrients, supporting insects, birds, and other wildlife. In this way, nutrients that began in the ocean can travel through salmon and eventually reach the forest.

Salmon are therefore more than a food source, they are an important link between marine, freshwater, and terrestrial ecosystems, helping move energy and nutrients through the natural world.

SALMON NUTRIENT CYCLE



Place yourself in the middle of the nutrient cycle diagram. Draw or write the living things in the surrounding bubbles that you directly impact day to day.





THOUGHTBOOK

The journey of a salmon, from tiny egg to returning adult, connects rivers, oceans, forests, and humans in a vast, interdependent ecosystem. Indigenous communities honour and care for salmon, recognizing their importance beyond food. Each stage of the salmon's life plays a vital role in sustaining wildlife, enriching soils, and supporting plants and forests. Reflecting on this journey reminds us of the delicate balance in nature and the importance of protecting the connections that sustain life.

TWO-EYED SEEING (ETUAPTMUMK)

Two-Eyed Seeing, or Etuaptmumk (pronounced ed-oo-OP-duh-mumk), was introduced by Mi'kmaq Elder Albert Marshall as a way to bridge Indigenous and Western knowledge systems. It highlights the strengths of both perspectives to enhance our understanding and care for the world around us.

This approach recognizes that Indigenous Knowledge, which is rooted in relationships, reciprocity, and holistic stewardship, can complement Western science, which focuses on analytical and data-driven methods. Two-Eyed Seeing does not merge the two systems but encourages walking parallel paths that respect the integrity of each. This idea is reflected in the Two Row Wampum, a Haudenosaunee teaching symbolizing two distinct knowledge systems traveling side by side like two canoes on a river, neither interfering with nor overpowering the other. By honouring both perspectives, learners can build relationships based on mutual respect and shared responsibility.

Using a Two-Eyed Seeing approach in Ocean Wise youth and education programs ensures that ocean conservation efforts are inclusive, culturally relevant, and grounded in multiple ways of knowing. Students are empowered to engage meaningfully, build stronger partnerships, and take action toward a more just and sustainable future.



REFLECT

1. In what ways do humans rely on salmon, and how do salmon rely on humans or human actions?
-
2. If you could share the story of salmon with someone who has never experienced nature, what would you tell them?
-
3. How do the different stages of a salmon’s life reflect challenges and opportunities in our world?
-



TAKE ACTION

Rivers run like veins through the land, carrying life, history, and hope. For salmon, these waterways are more than a path, they are a home, nursery, and legacy. Protecting their habitat is not just about the fish; it is about honouring the delicate balance between land, water, and all who depend on it. You can plant a tree along a riverbank, pick up garbage and remove it, clean water preserved becomes a promise: that life, in all its resilience, will continue to flow.

THE WHY

KEYSTONE SPECIES Salmon are more than just fish they are a critical part of the ecosystem. They support bears, eagles, river otters, and countless other creatures. If salmon populations decline, it causes a ripple effect throughout the food web. Protecting their habitat ensures the health of entire rivers, forests, and coastal ecosystems.

CULTURAL AND COMMUNITY SIGNIFICANCE For many Indigenous Peoples and local communities, salmon are central to culture, traditions, and food security. Protecting habitats is a way of respecting centuries of knowledge and stewardship, and sustaining communities that depend on these fish.

LIFE CYCLE NEEDS Salmon need very specific conditions to thrive: cold, clean water; gravel beds for spawning; and free-flowing rivers to migrate. Habitat degradation like pollution, damming, or deforestation directly threatens their survival. Protecting their habitat is literally protecting their chance to live and reproduce.

CONNECTION TO HUMANS Salmon are not just “wildlife”; they are part of our collective well-being. Economically, recreationally, and spiritually, healthy salmon populations benefit communities and inspire stewardship of the natural world. Protecting their habitat is an act of care for both nature and ourselves.

LESSON 4

Global Climate Shift – Arctic Char



ACTIVITIES

DAY IN THE LIFE OF AN ARCTIC CHAR

Write out your personal daily routine throughout the daily. Then write out what an Arctic Char’s routine might look like. How do they compare?

MY DAILY ROUTINE

MORNING

MIDDAY

AFTERNOON

EVENING

NIGHT

ARCTIC CHAR’S DAILY ROUTINE

MORNING

MIDDAY

AFTERNOON

EVENING

NIGHT



CLIMATE CURVEBALLS

Can you think of two things that could disrupt the Arctic char’s routine?
Examples of disruption to a human routine include bus route changes, grocery store closures, or school schedule shifts.

- 1. _____
- 2. _____

COMPARE RESILIENCE

Resilience means adjusting routines to survive change, but every species has limits and humans do too.

1. Which routine changes more easily, yours or the fish’s?

2. What happens if environmental changes happen too quickly?

THE COST OF A FISH

1. BEFORE

- A fisher catches 50 Arctic char in one day.
- Fuel cost for the trip is \$50.
- Fish sell for \$5 each.

How much profit does the fisher make?



2. AFTER

The fish migration is delayed or smaller due to climate changes.

- A fisher now catches only 20 Arctic char in one day.
- Fuel cost increases to \$80.
- Fish still sell for \$5 each.

How much profit does the fisher make now?



THOUGHTBOOK

Now that you have explored Arctic char, small-scale fisheries, and how climate shifts and ecosystem changes affect both, take a moment to reflect on the connections between fish, communities, and the environment.

REFLECT

1. How do changes in Arctic char migration and routines affect small-scale fisheries and the communities that rely on them?

2. What are the economic and food security consequences when fish are harder to find or costs of fishing increase?

3. How can observing Arctic char and local ecosystems help communities adapt and maintain sustainable harvest practices?

4. What actions could you take in your community to support resilient fisheries and healthy waterways?



TAKE ACTION

We can take action for Arctic char by supporting sustainable fisheries, protecting rivers, lakes, and coastal habitats, and reducing our climate impact. Learning about Arctic char and sharing this knowledge helps raise awareness, while supporting local and Indigenous-led conservation efforts ensures communities and ecosystems remain resilient.

THE WHY

Arctic char plays a crucial role in Arctic ecosystems, transferring energy from smaller organisms to larger predators and maintaining food web balance. Many northern communities rely on char not only for sustenance but also for cultural traditions, meaning changes in char populations can directly impact local food security and economy. Sensitive to cold water and seasonal conditions, Arctic char act as indicators of environmental change. By understanding how these fish, ecosystems, and fisheries interact, communities can adapt to climate shifts and support sustainable harvesting practices.



LESSON 5

Local and Indigenous Practices – Herring



ACTIVITIES

➔ **VIEW** the resource(s) for this activity at ocean.org/action/sustainable-seafood-ed-kit

MARINE SPECIES MATCHING GAME

Play the card game presented by your teacher. Next, write down key facts about two species you learned about in the game.

SPECIES #1 _____

HABITAT _____

DIET _____

NEEDS _____

BEHAVIOUR _____

SPECIES #2 _____

HABITAT _____

DIET _____

NEEDS _____

BEHAVIOUR _____



THOUGHTBOOK

Consider how Indigenous communities interact with the ocean through respect, reciprocity, and care. Reflect on your own choices as a consumer. Think about how every action, like choosing sustainable seafood or reducing single-use plastics, can ripple outward to support healthier oceans and more equitable food systems.

REFLECT

1. What differences did you notice between Indigenous knowledge and commercial practices?

2. How do Indigenous harvesting practices demonstrate respect and reciprocity with the ocean?

3. Why is it important to consider both traditional and modern perspectives when managing marine species?



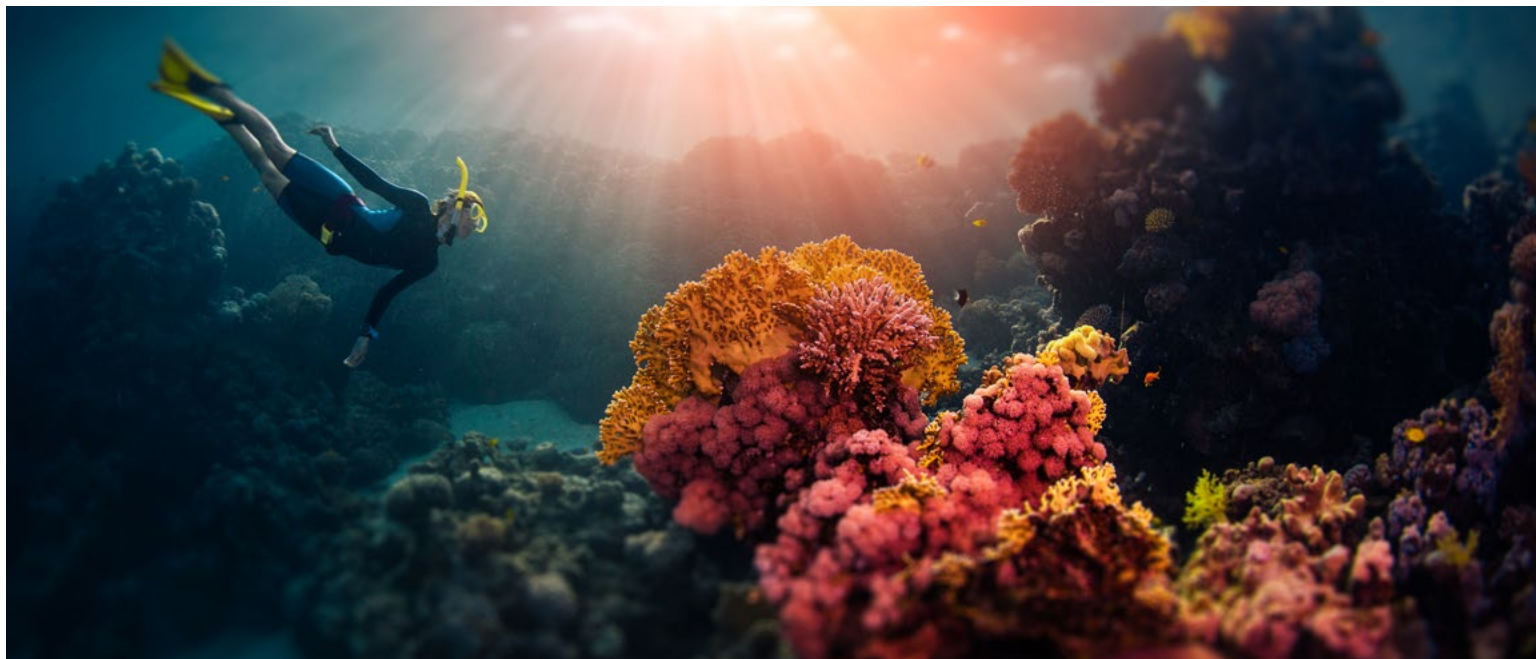
TAKE ACTION

You can make a difference for oceans, communities, and ecosystems through small but meaningful choices. By selecting seafood that is sustainably and ethically sourced, learning about Indigenous harvesting practices, and supporting Indigenous-led initiatives, you help protect marine life and honour cultural traditions.

Reducing your impact on coastal environments, through actions like minimizing single-use plastics, participating in clean-ups, and spreading awareness, creates positive ripples that benefit both people and wildlife. Every choice you make can contribute to healthier oceans, stronger communities, and a more sustainable relationship with the natural world.

THE WHY

Indigenous marine harvesting practices are rooted in centuries of knowledge, stewardship, and respect for the ocean. These practices demonstrate how humans can live in balance with marine ecosystems, taking only what is needed while ensuring species and habitats remain healthy for future generations. By learning from Indigenous knowledge, we see that seafood is not just a resource but part of a larger system of cultural, ecological, and community connections. Understanding these connections empowers us to take responsibility for our actions and contribute to a more just, sustainable, and resilient food system for our next generations.



ABOUT OCEAN WISE

Ocean Wise is a non-profit organization whose mission is to empower communities and individuals to take action to protect and restore our world's ocean. We do this by tackling three critical ocean challenges – climate change, overfishing, and plastic pollution – through six intersecting initiatives: seaforestation, plastics, fisheries and seafood, education, youth, and whales. Through our work we make a real and measurable difference to the health and well-being of the ocean and the people who depend on it. Learn more about the actions you can take at ocean.org

EDUCATION RESOURCES

Our Education team offers in-person mobile education opportunities, online virtual programs, and more. Ocean Wise Professional Development Workshops are designed to train educators on discussing ocean health and literacy for students K–12. Visit ocean.org or email education@ocean.org to learn more.

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