

Muckleshoot Stewardship of the Salmon People

Grades K-8

Knowledge Holder

This lesson was created Jennifer Smith (Muckleshoot, Yakama).



Materials

- Pool Noodles
- Nerf Balls
- Nature Journals
- Various Art Supplies

Standards

This lesson aligns with national Social Studies, Art, and Science frameworks by:

- Exploring how the Muckleshoot Tribe uses both traditional wisdom and modern science to protect their First Foods.
- Investigating the anadromous life cycle of salmon and why they are a keystone species for our ecosystems.
- Learning how Tribal sovereignty and legal agreements help protect our rivers from industrial impact.

Objective

Students will explore the innovative ways the Muckleshoot Indian Tribe is protecting, managing, and ensuring successful salmon runs for both the current community and generations to come. Through sensory exploration, interactive simulations, and artistic expression, youth will understand how tribal sovereignty and modern environmental science unite to defend a keystone species.

Survivance Message

Amongst the Muckleshoot, salmon are celebrated in sacred ceremonies and community dinners. They are enjoyed at daily meals, preserved for winter, and shared generously across the region. Salmon sustain the community in every single way through food, culture, spiritual tradition, and economic livelihood. In fact, the Muckleshoot refer to themselves explicitly as “The Salmon People.” For the Muckleshoot, there is no separation between the salmon and the people. They are one family, bound together in a continuous cycle of mutual survival.

- Salmon are a keystone species. This means they act as the structural anchor of their environment. If they are removed from a habitat or if their populations decline drastically, every other living relative in that ecosystem, from the eagles and killer whales to the cedar trees along the riverbanks, will suffer.
- The volume of water and overall water quality are the primary factors that determine whether a salmon run succeeds or fails. The Muckleshoot Indian Tribe is the only tribe with negotiated In-Stream Flow Agreements. These powerful legal settlements guarantee that city utilities must keep river water flowing at specific minimum levels during crucial migration periods. This ensures the rivers never run too low or dry for the salmon to swim.
- Our Sockeye relatives are struggling in the Seattle ship canal and Lake Washington because the water is getting dangerously hot, largely due to our changing climate. When the water gets this warm, it is difficult for them to survive. To help, Muckleshoot Fisheries started the BLAST program (Ballard Locks Adult Sockeye Transfer). Biologists now step in to dip-net the adult sockeye by hand, tucking them into cool water tanks and driving them safely to the cooler waters of the Cedar River so they can finish their journey home.

“We are the salmon people. The salmon has sustained our way of life. We must do what we can to sustain the life of the salmon.”

- Phil Hamilton, 44 years of dedicated service with the Muckleshoot Tribal Fish Commission



Braiding Knowledge: Curriculum Standards

This lesson is part of a broader framework that weaves together the Next Generation Science Standards (NGSS) and Indigenous Traditional Ecological Knowledge (ITECK). We teach Western science through a localized, relational lens to honor the history and sovereignty of the land and its caretakers. For a detailed breakdown of how this lesson aligns with specific NGSS benchmarks, ITECK guidelines, and UNESCO climate action goals, please visit our [story map](#).

Muckleshoot Vocabulary

Dxwłəšucid (pron. Dwaht-lah-shoo-tsíd): Lushootseed

bəqəlšut (pron. Buh-kuhl-shoolh): Muckleshoot

bəqəlšutucid (pron. Buh-kuhl-shoolh-oo-tsíd): Muckleshoot language

[Cedar Lesson with Valerie Segrest and Becky Sheldon](#)

sxʷəy̓s	hat
stidigʷəd	cedar branch
slagʷac	inner cedar bark
ḵəpəy̓	cedar
ḵəpəy̓ac	cedar tree
sʰəl̥jixʷ	medicine
ḵʷubt	paddle

English Vocabulary

Anadromous, In-stream flow agreement, treaty rights, salmon migration, spawn, keystone species

Muckleshoot Stewardship of the Salmon People

Grades K-8

Activities

15 Min: Feel! (Smelling Your Way Home) Engage students in anadromous biology through sensory exploration, illustrating how salmon use smell to navigate their home watersheds.

"We are going to learn what it means to be anadromous. This means a fish is born in a quiet freshwater stream, travels hundreds or thousands of miles out into the salt waters of the vast ocean to mature, and then uses its memory to return back to its exact freshwater birthplace to spawn. How do they find their way across thousands of miles of open water? They use their noses! Salmon essentially 'smell' their way back to their home creek. Let's stand still, close our eyes, and take a deep breath through our noses. What do you smell around you? Leaves? Damp soil? Do you think you could find your way back to your bedroom from miles away using only your sense of smell?"

- The Scent-Trail Navigation Activity: Place cotton balls scented with distinct essential oils (such as peppermint, clove, or cinnamon) inside small condiment containers with holes poked in the lids. Group these containers in different locations around the room or schoolyard. Divide students into "salmon runs" and assign each team a specific scent. Have them track and "smell" their way through the course, identifying their designated scent markers to successfully reach their home spawning endpoint.

20 Min: Connect! (Mapping the BLAST Journey) Transition students into visual storytellers, documenting the modern, mechanical adaptations salmon undergo due to climate shifts.

"The sockeye salmon in the Muckleshoot BLAST program have a migration unlike any other fish on Earth. They don't just swim, they get to ride in boats and on the highway in the back of a giant tanker truck! Imagine you are a determined sockeye salmon trying to get home. Create a poster or a graphic-novel style comic strip detailing your Incredible Journey through the rushing rivers, the saltwater ocean, the crowded Ballard Locks, and your ride down the highway. If you want to honor the salmon through traditional art, we will practice drawing basic salmon shapes utilizing the traditional Coast Salish style."

- Media Tool: Utilize [Roger Fernandes' Salmon Boy storytelling video](#) to illustrate regional oral traditions and visual forms.

20 Min: Play & Question! (The Salmon Hazard Course) Physically model the extreme odds of salmon survival through a high-energy obstacle simulation.

"Being a salmon is a journey filled with immense obstacles. A female salmon lays between 2,000 and 5,000 eggs in her gravel nest, but out of all those thousands, only 2 or 3 individual fish will successfully make it back to spawn. Let's set up a salmon hazard course! The boundaries of our course are the riverbanks. Along the way, there are human-made barriers, pollution zones, predators like sea lions and birds, and patches of hot, low

Resources

[Muckleshoot Language Library](#)

[Muckleshoot Indian Tribe](#)

[Muckleshoot Indian Tribe BLAST Program](#)

[Muckleshoot Storytelling](#)

[Muckleshoot Traditional Art](#)

[I Love Salmon and Lampreys Children's Nonfiction Story](#)

[Story Telling with Roger Fernandes-Lower Elia Klallam Tribe- Salmon Boy](#)

[Connecting Youth to Culture](#)

[Canoe Journey 2023 Paddle to Muckleshoot](#)

[Song of the Salmon video](#)

Muckleshoot Stewardship of the Salmon People

Grades K-8

water caused by climate change. Teachers will stand at these hazard zones with pool noodles. As you migrate past, if you get tagged by a hazard, your journey stops. Let's see how many of our salmon run start the race, and how many make it home to the spawning grounds."

Reciprocity through Stewardship

Because salmon are so sensitive, the way we treat our own backyards and streets matters to them. Every stream, ditch, and creek is part of a salmon's long journey home. We can show our gratitude to the Salmon People by looking after these waters:

- Be a Guardian of the Storm Drains: If you wash your car, do it on the grass so soaps don't run into the street drains.
- Care for the Soil: Talk to your family about using natural yard care instead of toxic chemicals that wash into salmon streams when it rains.
- Be Mindful of Waste: Make sure items like oil or paint never go down the sink. Take them to community collection sites instead.
- Help the Shorelines: Join a local cleanup to keep plastics and garbage out of the paths of our aquatic relatives.

Adaptations & Extensions

- Hatchery & Ancestral Transit Tours: Coordinate a field trip to a local Tribal fish hatchery to observe environmental engineering in action.
- The Canoe Journey Connection: The Muckleshoot and fellow Coast Salish Tribes are master navigators of the Salish Sea. Under historical settler-colonial laws, these sovereign rights were stripped away, making it a punishable crime for more than three Native people to be in a traditional canoe at one time. Today, Tribes have powerfully reclaimed and celebrated these rights through the annual Canoe Journey. Tribes travel long distances in hand-carved traditional canoes to a shared destination for a week of ceremony, protocol, song, and storytelling. The Muckleshoot Indian Tribe hosted the historic 2023 Canoe Journey (Paddle to Muckleshoot). Instructors can screen regional documentaries to connect salmon restoration to the broader cultural reclamation of waterways.
- Building a Traditional-Style Salmon Habitat: Since students are already learning to draw salmon shapes in the Coast Salish style, you can expand this into a collaborative art-science project. Have students work in teams to design a "Salmon-Safe" riverbank on a large poster board. They must draw and label the features that salmon need to thrive such as cool, shaded water (trees/cedar), clean gravel for spawning, and safe passage pathways. Encourage students to present their posters to their families and communities, explaining why the Muckleshoot Tribe works so hard to protect these specific river features.