

SALMON CONNECTIONS

Students view a PowerPoint summary of the salmon life cycle, their role in the ecosystem, and their importance to Pacific Northwest culture and commerce.

LEARNING OBJECTIVES

- Gain a basic understanding of the central role that salmon play where students live - in the ecosystem, culture, and economy of the region.
- Gain a basic understanding of threats to salmon sustainability and how students and their families might help reduce those threats.
- Practice listening skills.

PREPARATION

1. Invite your area Salmon in the Schools coordinator to present this lesson.
OR
Copy the Salmon Connection Powerpoint to a flash drive and print the script.
2. Check that the flash drive works in your projecting equipment.

LESSON









1. Introduce the presentation by emphasizing that it is an overview. Students will learn more as their salmon project unfolds.
2. Take questions during the presentation as time permits. Note which topics draw the most student interest for later exploration.



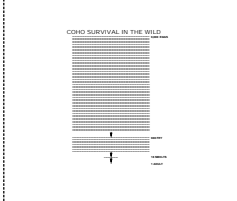
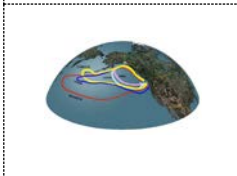



NOTE

This activity works well as an introduction to raising salmon. Use it shortly after your eggs arrive or as the lead-in to a series of special activities related to salmon.

STANDARDS Environment & Sustainability Life Science Social Studies
THEME Salmon
GRADES 2 - 5
TIME 40 - 50 minutes

SALMON CONNECTIONS

SLIDE	TALKING POINTS
 <p>CONNECTING WITH SALMON</p>	<p>In this lesson, we'll learn how you are connected to salmon. We'll explore their history, life cycle, and importance here in the Pacific Northwest - and what you will be doing to help keep them strong.</p>
	<p>The oldest salmon fossil comes from 50 million years ago, long before people walked the earth.</p>
	<p>5 to 6 million years ago, salmon were up to 10 feet long and weighed up to 500 pounds. They also had impressive teeth, so today we call them "sabretooth salmon."</p>
	<p>Five different kinds of salmon live in the Pacific Ocean and the rivers, streams, and lakes that feed into the Pacific. By contrast, the Atlantic Ocean supports only one salmon species.</p>
	<p>This map gives you an idea of where Pacific salmon live.</p>
	<p>Just like people, salmon have a life cycle, from eggs to alevin, fry, fingerlings, smolts, adults, and finally spawners. What are the corresponding life stages for people?</p>
	<p>How long salmon spend at each life stage varies by species but we'll look at coho, since that's the species you are rearing. When spawners return to a river, stream, or lake, they leave their fertilized eggs buried in loose gravel so predators won't see them. When the eggs hatch into alevin, they stay in the gravel. When the alevin become fry, they leave the gravel and start swimming freely, looking for food. If they find enough, they grow into fingerlings over the next year, then into smolts ready to migrate to saltwater. There they reach their full size and stay for two years before returning as spawners to repeat the cycle.</p>
	<p>The trick to rearing salmon in a tank is to create a habitat that provides everything baby salmon need to survive in the wild. What are some of those things?</p>

	<p>Let's look at how you'll be providing three of the important things juvenile salmon would find in the wild. (<i>compare</i>)</p>
	<p>Now let's look at how you'll be providing three more. (<i>compare</i>)</p>
	<p>Survival numbers vary but this illustration gives you an idea of why spawners must leave thousands of eggs for the species to continue. In the wild, about 1 out of 10 coho eggs survives to become fry. Roughly 900 fry are required to result in one adult.</p>
	<p>Salmon that survive their time in freshwater could have a long journey ahead of them. If they find enough food in Puget Sound, they will stay here. If not, they will go into the open ocean.</p>
	<p>Predators are one reason survival is so low. Lots of larger animals depend on salmon for lunch. But predators aren't their only concern.</p> <p>Rain collects all kinds of chemicals, from streets, parking lots, and landscapes. If these chemicals don't kill salmon outright, they can rob them of their ability to spawn.</p> <p>Loss of habitat is a third major reason so many salmon die early. Houses and other buildings next to the water take out plants that keep the water cold for salmon. Stripping hillsides of trees can cause such erosion in heavy rains that salmon can't see food or predators in muddy water. They also can't breath.</p>
	<p>Because you are rearing your salmon in the safety of an aquarium, you will be helping them beat these odds. You will be feeding them every day. You will be checking water temperature every day. And you will be testing the water for chemicals that can harm them. You will be keeping track of what you do and your data on charts.</p>
	<p>When your fry are big and strong, you will carefully release them into the natural habitat of _____.</p>



Habitat isn't just where salmon live. They also contribute to making it a healthy place. After spawners die, their bodies feed the water insects that young salmon will need to eat. They also feed many other animals that are part of the web of life.

Not many people realize that salmon are the reason we have such lush forests in the Pacific Northwest. Their bodies feed plants along the water but, thanks to birds and other predators, they also feed trees and bushes away from the water.



Salmon connect to even more in the Pacific Northwest. How many of you know someone who makes money fishing for salmon? Many people work to bring salmon to our tables and others make a living from all the people who go salmon fishing for the fun of it.



Salmon are also at the heart of a strong and deeply rooted culture here. For centuries, Native American art, stories, and ceremonies have reminded people to cherish the earth and the water that gives us so much life.



Here are things that you and your family might do to protect the water and habitat that salmon need to survive and thrive:

- Bike, walk, or take the bus whenever possible. Chemicals from cars make salmon sick.
- Share what you learn with your family. When your mom asks you what you did in school today, tell her!
- Convince your family to visit one of Seattle's many parks or even join a work party to restore habitat.



(Read review points.)