Local Pacific Salmon Species

Subject
Science

Objectives
The students will (1) become familiar with the five Pacific salmon species and (2) complete the Pacific Salmon Species of Washington Chart.

Materials
Students for Salmon Journal
Art Supplies

Size/Setting/Duration
Whole class/classroom/~1 hour

Background
After understanding the salmon lifecycle, students are ready to learn about the differences between five of the local Pacific salmon species. Each species varies slightly due to different habitat requirements, spawning habitat needs, and the duration of time spent in freshwater and saltwater. Familiarity with the species will come from this study of the separate species. Note: There are many other species found locally that belong to the Salmonidae family. We focus on these five because they are the most prolific, commercially valuable, and easy for students to remember. Also included in this family but not covered here are Sea-run Cutthroat and Steelhead, anadromous salmonids that have the ability to spawn more than once.

Activity
1. Read the Salmon Fact Sheet handout that is in the Student Journal on page 14. This information sheet should aid your students in understanding some unique characteristics of salmon species. The stages of the salmon lifecycle should also be completed prior to this activity.

2. In the Student Journal on page 16 the five local Pacific salmon are displayed with their varying physical traits and names. Discuss with your students these differences in coloring, spotting, and names (common and other).

3. On pages 17-23 are fact sheets for each of the five salmon we cover. The students will read each of the five fact sheets in order to fill out the Five Pacific Salmon Species of Washington Chart at the end of the activity. Read through the sheets with your students to ensure comprehension. The fact sheets are composed of the scientific name, weight, length, lifecycle, and habitat needs for each salmon species.

4. Once the salmon fact sheets have been read, have your students complete the Five Pacific Salmon Species of Washington Chart on page 24. This chart addresses the scientific and common name of each species, weight, length, and the habitat needed for spawning. All information for this chart is in the fact sheets.
<table>
<thead>
<tr>
<th>Component</th>
<th>Benchmark</th>
<th>Assessment</th>
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</table>
| **1.1 Science**  
Use properties to identify, describe, and categorize substances, materials, and objects | Sort, order, and classify objects by physical properties | Students will complete the *Salmonid Species of Washington* Chart on page 24 |
| **1.2 Science**  
Identify, describe, and categorize living things based on their characteristics | Identify physical characteristics that are used to classify living organisms | Same as above |
| **4.1 Science**  
Use listening, observing, and reading skills to obtain scientific information | Read and comprehend developmentally-appropriate scientific information | Students will use fact sheets to fill out the chart on page 24 |
Pacific Salmon Species in Washington

Coho (Silver)
You wear silver on this finger

Chinook (King)
The king of all fingers

Sockeye (Red)
The finger you use to point to your eye

Pink (Humpy)
Like your pinky

Chum (Dog)
Chum rhymes with thumb

An easy way to remember salmon names!
Chinook

Also Known as: Blackmouth, King, Spring, Tyee
Scientific Name: *Onchorhynchus tshawytscha*

Average Weight: 10-24 lbs (4.5-10.9 kg)
Length at Maturity: 36-58 inches (91.4-147.32 cm)
Primary Human Use: Commercial Fishing and Sport Fishing

**Chinook Lifecycle**

**Fall Chinook**
- Chinook salmon spawn October to November.

- Fall Chinook are mostly "ocean-type" salmonids; this means that they are very dependent on estuaries for rearing.

**Spring Chinook**
- Chinook salmon migrate upstream April to July.
- They spawn early August to September.

- Spring Chinook are mostly "ocean-type" salmonids; however some of the stock is "stream-type". "Stream-type" salmonids rear for one year in freshwater and then out migrate the following spring to the ocean.

**Habitat Needs:** Chinook are most often found in streams or rivers. Spawning occurs in deep, fast water in fist-sized gravel. The best rearing habitat for Chinook includes: sloughs, side channels, mainstem eddies and areas with woody cover.
Chum

Also Known as: Dog, Calico, Keta
Scientific Name: *Oncorhynchus keta*

Average Weight: 9-15 lbs, up to 40 lbs (4.1-6.8 kg, up to 18.1 kg)
Length at Maturity: 25-40 inches (63.5-101.6 cm)
Primary Human Use: Commercial Fishing

Chum Lifecycle

- Chum salmon rear in freshwater for a few days to a month and then migrate out to estuaries.

Habitat Needs: While rearing in the freshwater, juvenile Chum salmon prefer habitats with aquatic plants. In estuaries they like sloughs, tidal marshes, and salt grass.
Coho

Also Known as: Silver
Scientific Name: *Onchorhynchus kisutch*

Average Weight: 6-12 lbs, up to 31 lbs (2.7-5.4 kg, up to 14.1 kg)

Length at Maturity: 24-38 inches (61.0-96.5 cm)

Primary Human Use: Commercial Fishing and Sport Fishing

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**Coho Lifecycle**

- Coho salmon usually spend at least one year in the freshwater (occasionally two) and two years in the saltwater.

**Habitat Needs:** Coho salmon seek protection in beaver ponds, wetlands, and side channels along streams.
Also Known as: Humpy, Humpback
Scientific Name: *Onchorhynchus gorbuscha*

Average Weight: 2.5 lbs, up to 12 lbs (1.0-2.3 kg, up to 5.4 kg)
Length at Maturity: 20-30 inches (50.8-76.2 cm)
Primary Human Use: Commercial Canning

**Pink Lifecycle**

- Pink salmon spawn July to September.
- Pink salmon immediately out migrate to estuaries.
- Pink salmon head out to the ocean after two months in the estuary.

**Habitat Needs:** Pink salmon often spawn closer to the sea than other species; sometimes they even spawn in the saltwater or estuaries.

*Pink salmon have the least dependence on freshwater environments of all the Pacific Salmon.*
Sockeye

Also Known as: Blueback (Columbia and Quinault Rivers), Red
Scientific Name: *Onchorhynchus nerka*

Average Weight: 4-8 lbs, up to 15 lbs (1.8-3.6 kg, up to 6.8 kg)
Length at Maturity: 25-33 inches (63.5-83.8 cm)
Primary Human Use: Commercial Canning

**Sockeye Lifecycle**

- Sockeye salmon spawn August to November.
- Sockeye salmon stay in the river one to two years before smolting.

**Habitat Needs:** Sockeye salmon use lake environments for spawning and rearing, although there are some Sockeye salmon that use the river channel for spawning and rearing. Sockeye use the lower parts of the river because of the slow water and eddies.
Five Salmon Species of Washington

<table>
<thead>
<tr>
<th>Species Name (common and scientific)</th>
<th>Weight</th>
<th>Length</th>
<th>Spawning/Rearing Habitat</th>
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<td>Chinook <em>Oncorhynchus tshawytscha</em></td>
<td>10-24 lbs</td>
<td>36-58 inches</td>
<td>Spawning occurs in deep, fast water. Rear in sloughs, side channels, mainstem eddies, woody cover.</td>
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<td>Chum <em>Oncorhynchus keta</em></td>
<td>9-15 lbs</td>
<td>25-40 inches</td>
<td>Spawn in side channels of sloughs, tidal marshes.</td>
</tr>
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<td>Coho <em>Oncorhynchus kisutch</em></td>
<td>6-12 lbs</td>
<td>24-38 inches</td>
<td>Spawn in tributaries of sloughs. Rear in ponds, wetlands, and side channels.</td>
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<td>Pink <em>Oncorhynchus gorbuscha</em></td>
<td>2-5 lbs</td>
<td>20-30 inches</td>
<td>Spawn throughout river. Rear in estuary.</td>
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<td>Sockeye <em>Oncorhynchus nerka</em></td>
<td>4-8 lbs</td>
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<td>Spawn and rear in lakes and....</td>
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