

Life of the Salmon

Grades 2-3

Overview

The students will discuss the Life Cycle of the Salmon using a display model and chart. The students will use *The Story of the Pacific Northwest Salmon* to review the concepts they learned.

Objectives

- To help students understand the life cycle of the Northwestern Pacific Salmon.
- To help students understand the importance of protecting the habitat of the salmon.
- To help students understand what they can do to help protect the salmon's habitat.

Materials

For the presenter:

- *Salmon Life Cycle Display* - available at BPA (optional)
- *Backgrounder - The Magnificent Journey* (BPA booklet)
- 1 copy of the *Life Cycle of the Salmon* (attached)
- *Journey of the Oncorhynchus* (BPA booklet)
- white or light blue butcher paper - about 4' x 4'
- colored marking pens or crayons
- glue

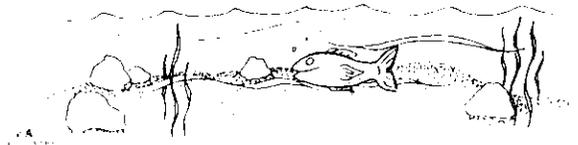
For each student:

- copy of *The Story of the Pacific Northwest Salmon*
- 1 crayon

Background

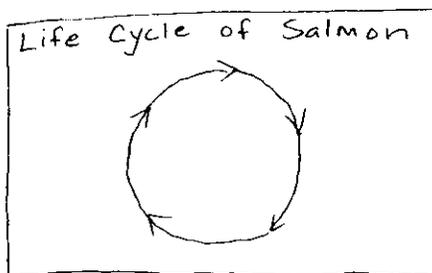
Salmon, known as the king of the fish, are one of the great natural resources of the Pacific Northwest. For Northwest Native American tribes, they hold special religious meaning. For all of us in the Northwest, they are a part of our culture and recreation.

These beautiful creatures have one of the most unusual life cycles in the animal world. They are born in freshwater streams many miles from the Pacific Ocean. When they are strong enough, they swim to the ocean, sometimes traveling hundreds of miles to get there. Fish that are born in freshwater and then migrate to saltwater are called anadromous fish.



Salmon spend their adult lives in the ocean, from one to five years depending on the species. During this time, they may swim as far north as the gulf of Alaska or south to the coastline of California. Then something amazing happens. In the vast ocean, they manage to find the mouth of the Columbia River. They enter the estuary and head up the Columbia River. With unerring instinct, these majestic fish leap water falls and jump up fish ladders at dams to get back to the exact stream where they were born. Once they reach their birth place, they build nests called redds. Here they lay eggs and spawn before dying. As the eggs hatch, a new generation of fish will take their place.

The Bonneville Power Administration is working hard to protect these fish at all stages of their life cycle so that future generations can enjoy our majestic salmon.



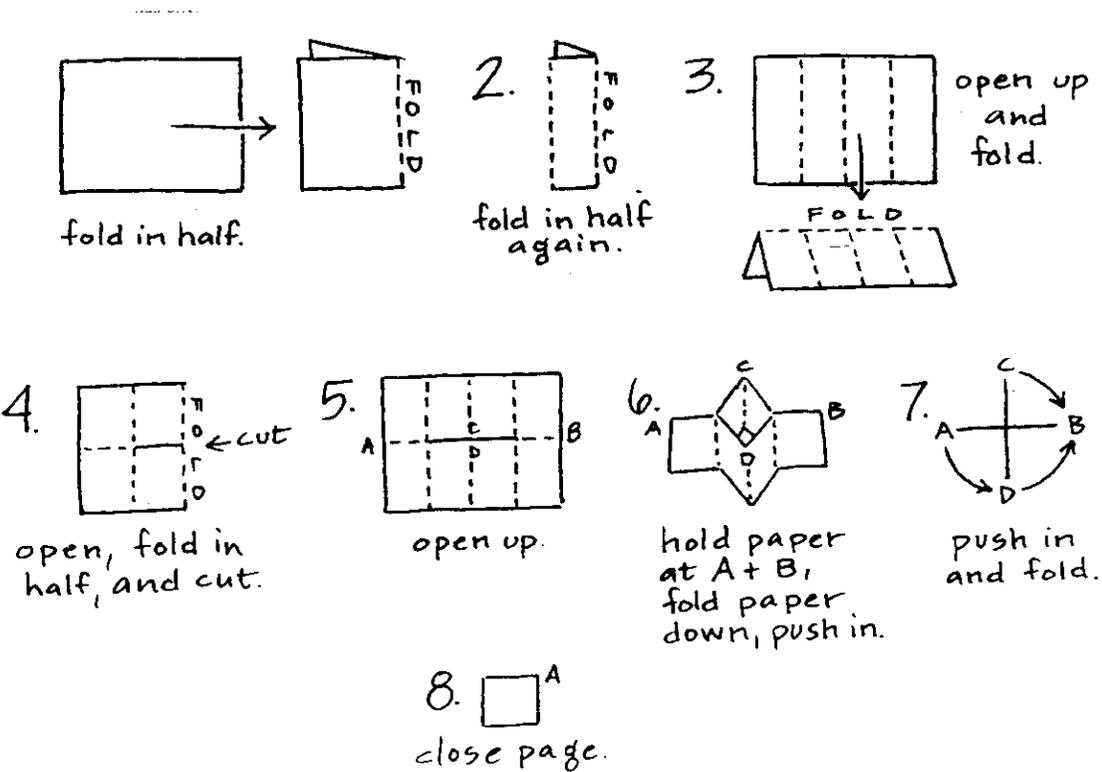
Getting Ready

Activity 1

Read *The Magnificent Journey*, it gives background information on salmon that you might be interested in and would help with the class discussion. Draw a large circle with a black marker in the center of the butcher paper. Print - *Life Cycle of the Salmon* above the circle. You will be gluing the life cycle pieces on to the paper. Hang the blue butcher paper up in front of the class where all the students will be able to see it. Color each part of the *Life Cycle of the Salmon* and cut out the ovals.

Activity 2

Fold enough copies of The Story of the Pacific Northwest Salmon, so each student in the class has one.



Procedures

Activity 1

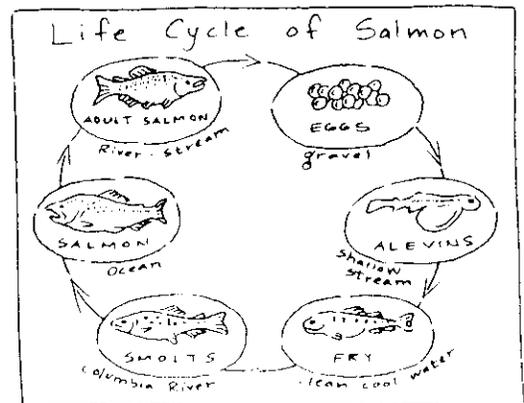
Begin by using the questions below to spark the student's interest and start them thinking about salmon.

Questions

“Have you every gone fishing? Do you know where the Columbia River is? What kinds of fish would you find there?” If the students do not respond with salmon, share with them that salmon can be found in the Columbia River. Use the poster in the back of *The Magnificent Journey* to show them different kinds of salmon. Ask: “Do you know any facts about salmon?” (*This will give you an idea how much they already know.*) After the students have shared what they know, share with them some of the interesting facts about salmon.

Tell them that they are going to learn about the life cycle of the salmon. Share with the students BPA’s Life Cycle Display model. As you talk about each stage, show the pictures that you colored and glue them on the blue paper. Discuss where each stage occurs (*stream, river, ocean*). Write on the butcher paper where each stage takes place (*eggs - gravel in a stream*).

1. **Eggs** - adult salmon lay their eggs in gravel. The water is shallow, cool and clear. The female salmon covers her eggs with fine gravel.
2. **Alevins** - the eggs hatch and grow into tiny fish, a little more than 1 inch long. They are called alevins. Each has an orange pouch on its belly. The pouch is a yolk sac that provides food during the first few weeks of the salmon’s life.
3. **Fry** - the young fish slip up through the gravel. The yolk sacs are gone. The young fish now called fry are hungry and ready to eat, but do not stray far.
4. **Smolts** - the young fish continue to grow in the fresh water for up to 2 years. They are called smolts now and are ready to make their journey to the ocean.
5. **Salmon** - the salmon live in the ocean from 2 - 5 years and continue to grow larger.
6. **Adults** - the adult salmon find their way to the mouth of the Columbia River and swim up river to the stream where they were born. Here they lay their eggs and the cycle starts over again.



Activity 2:

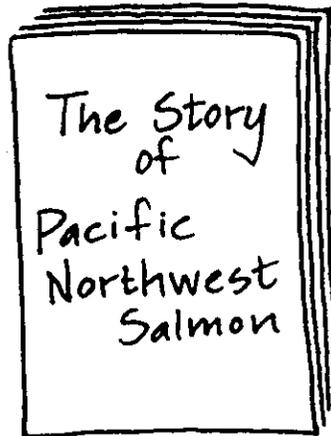
Hand out a copy of *The Story of the Northwest Salmon* to each student. As you read through it together, take time to review at each stage what is important for the salmon to survive. When you get to the last page, ask: "What kinds of things can we do to help?" Things to emphasize:

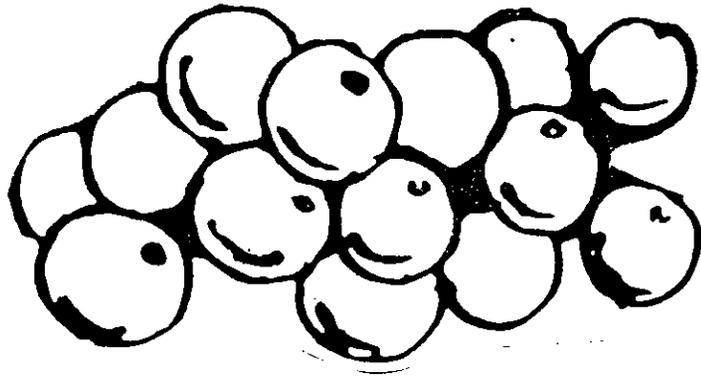
1. **Conserve Water** - Use less at home to save more for fish.
2. Do **NOT** dump any waste in streams or ditches.
3. **Use less chemicals**. Fertilizers, bug and weed killers, detergents and drain cleaners are all poisonous to fish and wildlife.
4. **Use less electricity**. The Northwest uses rivers to make hydroelectric power which is our main source of electricity. Using less electricity leaves more water for fish in the rivers.
5. **Plant trees beside streams**. Salmon and trout need cool shady water to survive. Trees also stop erosion and provide more food for fish.
6. **Ask others to help**.

On the last page, have the students record what people can do to help salmon.

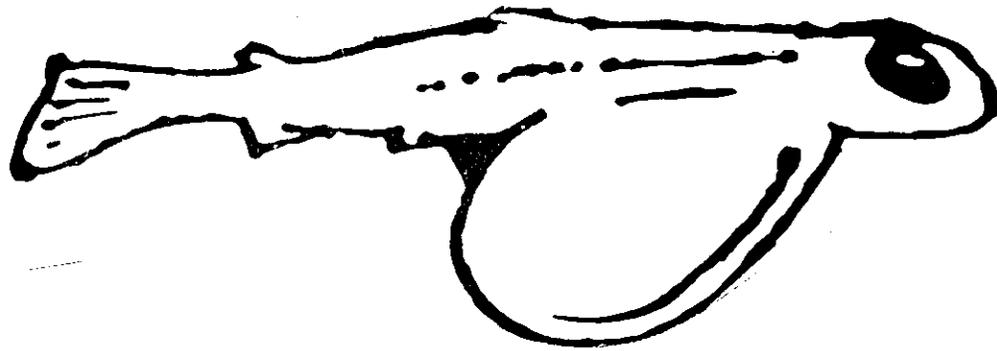
Closure

Have each student share with their neighbor two important facts they learned about salmon. Ask a couple of students to share with the whole class.

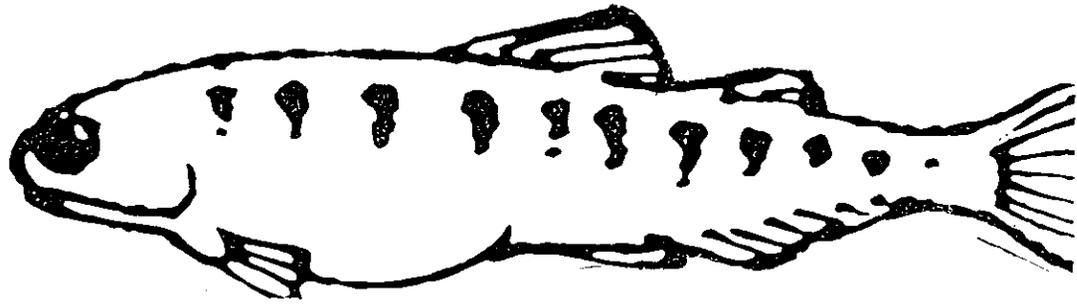




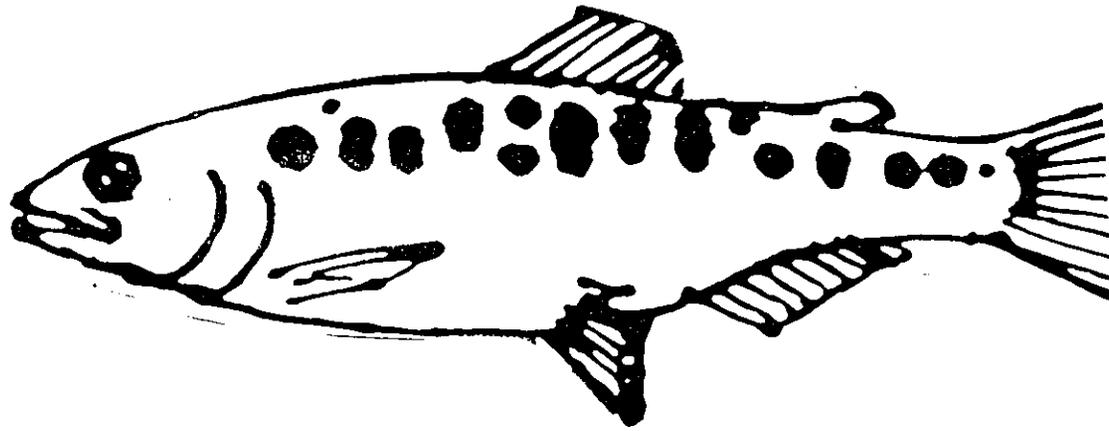
Eggs



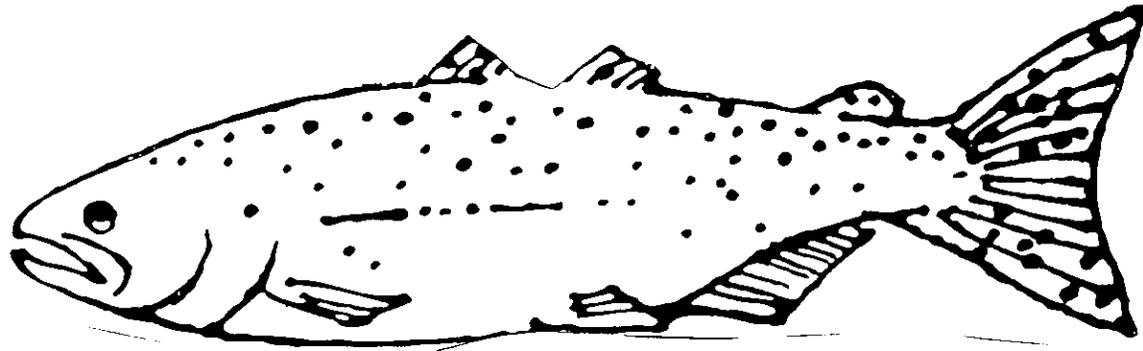
Alevin



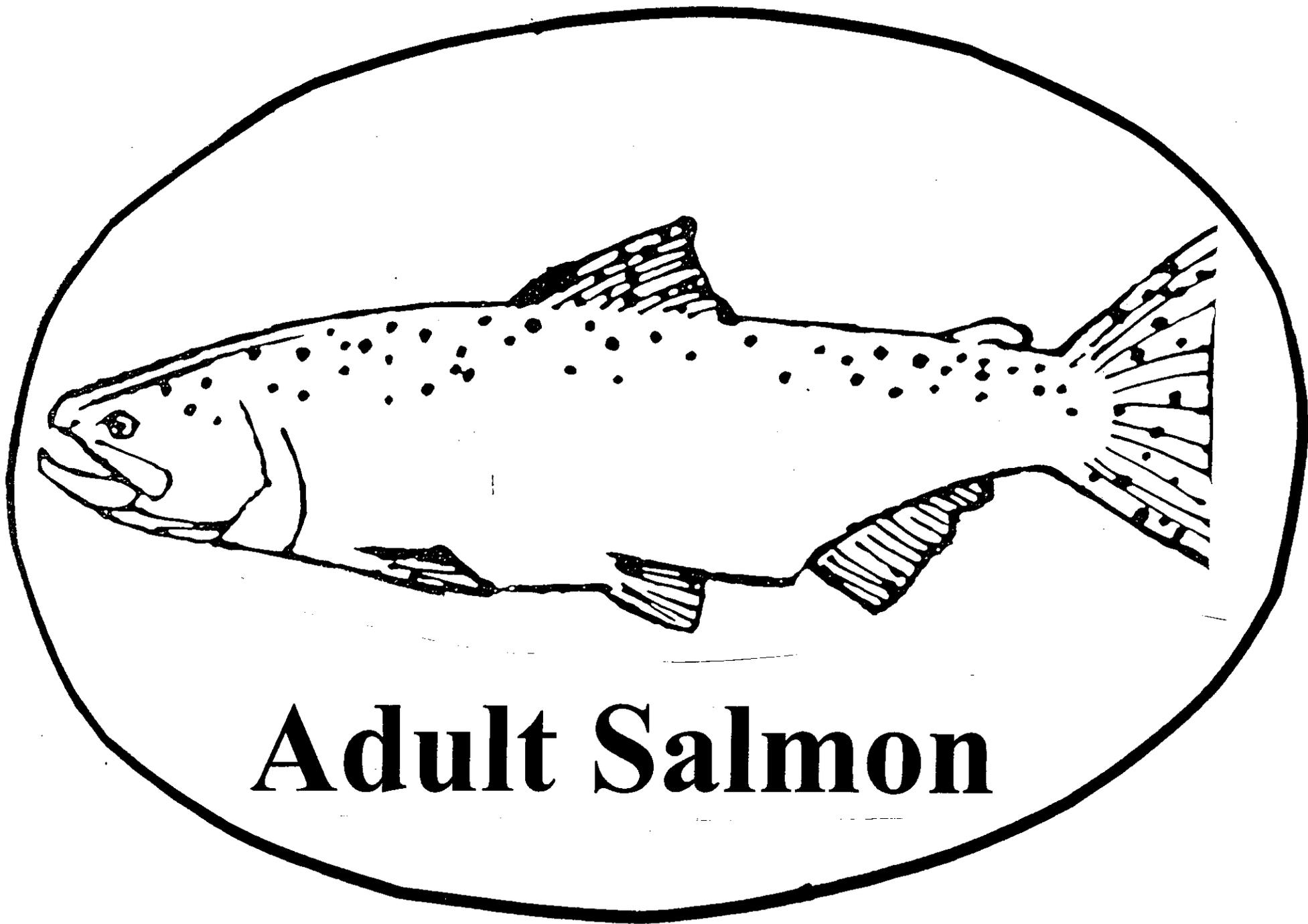
Fry



Smolt



Salmon



Adult Salmon