



Salmon Journey

Introduction

Salmon are sleek silvery fish with deeply forked tails. Salmon begin life in fresh water, migrate to the ocean and return to their home streams to spawn and die. Five species of salmon live in the Salish Sea – Chinook, Chum, Sockeye, Coho and Pink. Each salmon species uses a different area of their stream habitat and migrates at a different time of the year.

A salmon begins life as a tiny red egg in a gravel nest, called a redd, beside several thousand other eggs. The newly hatched salmon, called an alevin, carries its egg yolk attached to its belly, which feeds it until it grows bigger. When the egg sac is used up, the little salmon becomes a fry and gathers with other fry to find food and hide in pools of quiet water. When a young salmon grows larger and turns silvery, it becomes a smolt. Now it's time to leave fresh water and spend time feeding and growing bigger in a coastal wetland called an estuary where the river meets the sea.

After growing rapidly, adult salmon travel into the open ocean to join a large school with other salmon. After one to five years of life in the sea, salmon begin their journey back to their home streams. Once they get close to fresh water, salmon stop eating. They change color and shape to announce their arrival and to attract mates. As they travel, salmon smell their way back to their birth stream. When they reach their spawning grounds, they pair off and mate. After laying eggs and spawning, the adult salmon die. Their bodies provide ocean nutrients for the forest and food for many animals such as bears and eagles. All five salmon species are endangered because of overfishing, habitat loss, pollution and dams that block their return home. Salmon are the primary food of Granny and her clan whose survival depends on finding enough salmon to eat.

National Science Education Standards

Life Science:

- Characteristics of Organisms. Organisms and their Environments (K-4)
- Characteristics and Changes in Populations. Changes in Environments (K-4)
- Life Cycles of Organisms (K-4)

National Council for Teachers of English/ International Reading Association Standards:

4. Students adjust their use of spoken, written and visual language to communicate effectively with a variety of audiences and for different purposes.
5. Students employ a wide range of strategies as they write and use different writing process elements appropriately to communicate to different audiences for a variety of purposes.
8. Students use a variety of technological and information resources to gather and synthesize information and to create and communicate knowledge.

Key Concepts

- ◆ Five species of salmon (Chinook, Coho, Pink, Chum and Sockeye) live in the Salish Sea.
- ◆ The salmon life cycle involves many stages of growth and change.
- ◆ Salmon use their keen senses to find their way back to their birth stream to spawn and die.
- ◆ Salmon species are endangered because of loss of habit, overfishing, pollution and dams.

Inquiry Questions

- ◆ Why do you think salmon return to their home stream?
- ◆ What do you think happens if salmon can't find their way back to their home stream?
- ◆ Why do orcas have to travel farther to find How do you find your way home?

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Activity #1- Salmon Life Story in Pictures

In this activity, students write and illustrate a picture book that tells the story of a salmon's life cycle in words and pictures.

To find pictures and information about salmon and their life cycles:

- Olympic Nat'l Park: <http://www.nps.gov/olym/naturescience/the-salmon-life-cycle.htm>
- Vancouver Aquarium: <http://www.vanaqua.org/salmonales/english/learningcentre/lifecycle.php>
- Seymour Salmonoid Society: <http://seymoursalmon.com/lifecycle.php>

Materials Needed: construction paper, drawing paper, crayons, colored pencils, markers, yarn, hole punch, scissors, glue

Procedure:

1. Ask students to imagine they are writing the life story of a salmon told from the point of view of the salmon (a salmon's autobiography).
2. Distribute three pages of drawing paper to each student. Fold pages in half to make six pages of interior book pages.
3. Create a page for each stage of a salmon's life cycle. Tell what happens during each stage with written stories and illustrations.
4. Use construction paper to make cover. Choose title, add your name and decorate cover.
5. When complete, assemble book pages. Punch two holes and bind with yarn. Yarn should be loose to open book and turn pages.

Discuss: Like salmon, people have life stages (baby, child, teen, adult, senior). At each life stage, people change and have different experiences. What would you be doing at each stage of your life?

Activity #2- Smells Fishy!

In this activity, students explore how salmon use smell to identify their home streams.

Materials Needed: 5 different liquid scents (garlic, lemon, vinegar, vanilla, citrus, etc.), paper cups, cotton balls

Preparation:

1. Assign and record a scent for each salmon species (Sockeye, Coho, Chum, Chinook, Pink).
2. For each salmon species:
Put a cotton ball soaked in assigned scent in each of 5 paper cups. Mark bottom of cups with salmon species ID. Lay out 5 cups of same scent on floor to make a scent trail for one salmon species.
3. Make four more trails with four different scents for other four salmon species.

Procedure:

1. Ask students to imagine that they are salmon trying to find their home streams. They must use their great sense of smell to find their way home.
2. Divide students into five groups to represent five salmon species: Chinook, Sockeye, Chum, Coho and Pink.
3. Tell each group the name of the scent assigned to their salmon species (e.g. vanilla - Chum).
4. Ask one group at a time to find and follow their scent trail by smell. Match bottom of cups to check answers.

Discuss: Was it difficult to locate your scent? Do you think migrating salmon have difficulty?