?Iiḥčaqxmis Saamin

(Salmon Are Important)

A Nuu-chah-nulth Cultural Perspective to Complement the DFO Primary

Salmonids-in-the-Classroom



Pilot Version

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Pilot Version

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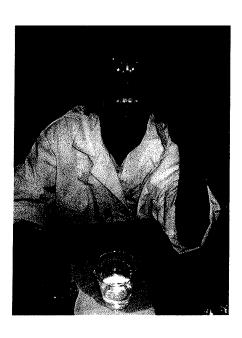
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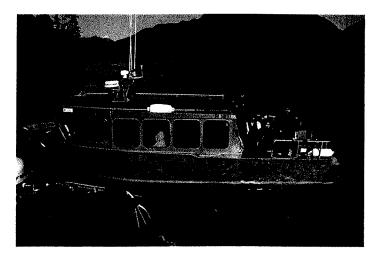
Purpose

This curriculum is designed to:

- Engage grade four Nuu-chah-nulth students in conversations about how First
 Nations and western scientific belief systems support and challenge each other.
- Enhance the federal *Salmonids-in-the-Classroom* series with Nuu-chah-nulth culture, language, and traditional ecological knowledge via experiential learning. This series is available for free download at www.streamtosea.ca.
- Fulfill a request from Nuu-chah-nulth Ha'wiih (hereditary Chiefs) who asked for curriculum that would balance Nuu-chah-nulth knowledge with western education.







Introduction for Educators

There are many lessons and activities included here to enrich the *Salmonids-in-the-Classroom* curriculum with Nuu-chah-nulth language, culture, and traditional ecological knowledge. This addendum was created with guidance from parents, elders, students, and teachers. There is a need to engage First Nations students in science through culturally relevant and meaningful instruction. The lessons are valuable for non-Nuu-chah-nulth as well, promoting cross-cultural understanding and respect. This curriculum is for grade four students but is adjustable for a wide variety of elementary school grades.

Relevance to Curriculum

The following chart documents the prescribed learning outcomes met by lessons in <code>?liḥčaqimis Saamin</code> (Salmon are Important): A Nuu-chah-nulth Cultural Perspective to Complement the DFO Primary Salmonids-in-the-Classroom.

Refer to: http://www.bced.gov.bc.ca/irp/curric_grade_packages/gr4curric_req.pdf

| Language Arts Learning Outcomes | ruage Arts Learning Outcomes ?liḥčaqimis Saamin Unit # | | | | | | | | | |
|---|--|---|---|---|---|---|---|---|---|----|
| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
| Oral Language: thinking | | | | | | | | | | |
| A7: Demonstrate enhanced vocabulary knowledge and usage | • | | • | • | • | • | • | | | |
| A8: Use speaking and listening to respond, explain, and provide supporting evidence for their connections to texts | • | • | | | | | • | • | | |
| Oral Language: features | | | | | | | | | | |
| A12: Recognize the structures and patterns of language in oral texts, including: sound devices, root words, word families, structural sequencings cues, idiomatic expressions | • | | | | | • | | | | |
| Reading and Viewing: purposes | | | | | | | | | | |
| B1: Read fluently and demonstrate comprehension of a range of grade-appropriate literary texts, including: stories from various aboriginal and other cultures, stories from a variety of genres (e.g. folktales, legends, autobiography, historical fiction), poems that make obvious use of literary devices | | • | | | | | | | | |
| B2: Read fluently and demonstrate comprehension of gradeappropriate information texts, such as: non-fiction books, textbooks and other instructional materials, materials that contain diagrams, charts, illustrations, or graphs, reports and articles from newspapers and children's magazines, reference material, website designed for children, instructions and procedures | | | | | • | | • | | | |
| Reading and Viewing: thinking | | | | | | | | | | |
| B8: Respond to selections they read or view by: expressing an opinion with supporting evidence, explaining connections (text-to-self, text-to-text, and text-to-world) discussing and giving reason for their choice of favorite texts | | • | | | | | | | | |

| Language Arts Learning Outcomes (continued) | | ?liḥčaqằmis Saamin Unit # | | | | | | | | | |
|---|--------------------------------------|---------------------------|---|---|---|---|---|---|---|---|----|
| | | 1 | 2 | 3 | | 5 | 6 | 7 | 8 | 9 | 10 |
| Writing and Representing: purposes | | | | | | | | | | | |
| C4: Create meaningful visual representations that communicate personal response, information, and ideas relevant to the topic, featuring: development of ideas through clear, focusses, and useful details, connections to personal feelings, experiences, opinions, and information, an expressive voice, an organization in which key ideas are evident | | | • | | | | | | | | |
| Science Learning Outcomes | g Outcomes ?liḥčagǎmis Saamin Unit # | | | | | | | | | | |
| | 1 | 2 | | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
| Processes of Science: | | • | | | | | | | | | |
| Make predictions, supported by reasons and relevant to the content | | | | | | | | • | | • | |
| Life Science: Habitats and Communities | | | | | | | | | | | |
| Demonstrate awareness of the Aboriginal concept of respect for the environment | | | • | • | | | | • | • | | • |
| Determine how personal choices and actions have environmental consequences | | | • | • | | | | | | • | |

| Social Studies Learning Outcomes | ?liḥčagðmis Saamin Lesson # | | | | <u>#</u> | | | | | |
|----------------------------------|-----------------------------|---|---|---|----------|---|---|---|---|----|
| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |

| Skills and Processes of Social Studies: | | | | | | | | | | |
|---|---|--------------|---|--|--|---|---|--|---|---|
| A2: Use maps and timelines to gather and represent information | • | | | | | | | | | |
| A4: Identify alternative perspectives on a selected event or issues | | | | | | • | • | | • | |
| Identity, Society, and Culture | | | | | | | | | | |
| B1: Distinguish characteristics of various Aboriginal cultures in BC | • | • | | | | | | | | • |
| Economy and Technology | | ************ | | | | | | | | |
| D2: Describe technologies used by Aboriginal people in BC and Canada | | | | | | | | | | • |
| Human and Physical Environment | | | | | | | | | | |
| E3: Describe Aboriginal peoples' relationship with the land and natural resources | | • | • | | | | • | | | • |

Background Information

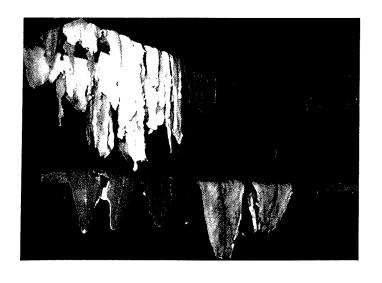
Who Are the Nuu-chah-nulth People?

- We are the Nuu-chah-nulth-aht. We continue to follow our ancestors' true self-determination and real self-sufficiency from when they lived and thrived on the lands and waters on the west coast of Vancouver Island. Through the Nuu-chah-nulth Tribal Council, our vision is self-government that promotes strong, healthy communities, which are guided by n'aas (Creator) and Ha'wiih (hereditary Chiefs).
- We belong to sixteen Nuu-chah-nulth Nations located on the west coast of North America. These nations include Pacheedaht First Nation (located near Port Renfrew) and the Makah Nation (located in coastal Washington). Though we share a common language group, we speak different dialects and come from diverse communities and families. There is no one Nuuchah-nulth perspective, but our traditions share many things in common.
- We are a rich and vibrant people. Our culture and ceremonies, protocols and governance are both historical and current. We have practiced our ways for thousands of years and many of these ways are practised in our communities today. Yet our culture is not static. It is ever evolving.
- Over millennia we have generated specialized and technical knowledge of the interconnectedness of all things in our traditional territories. Historically, our territories were 'owned' by our Ha'wiiḥ (hereditary Chiefs) who oversaw and appointed specialized knowledge holders, such as beach-keepers, forestry workers, and stream-keepers, whose job it was to protect and manage the resources in a sustainable manner.

- An important principle in Nuu-chah-nulth culture is "Hišuuk iš c'awaak (hish-ook ish tsa-walk), which means "everything is one and all are connected."
 This phrase reflects the holistic view that we are a part of the world and not apart from it.
- ?iisaak, (ee-sock) meaning respect with caring, is another important Nuuchah-nulth value. This phrase refers to respect for one's self, others, and the environment.
- Nuu-chah-nulth culture and history are passed down orally. Oral traditions
 are different than written traditions, but are nonetheless valuable. Canadian
 courts have recognized oral history as important and valid sources of First
 Nations histories.
- It is important to us as Nuu-chah-nulth to have relaxed inter-generational spaces, where food, laughter, and learning can happen.



June Hicklin (Yuu-luu-ilth-aht) with her granddaughter.



"When I get it, [salmon] I feel wealthy, rich, and secure, especially when we've canned it, smoked it, and put it away for the future, just like my granny and my mom did." June Hicklin (Yuu-luu-ilth-aht)

Connections and Protocol

1. Preparation:

Make many connections with local First Nations individuals and organizations. If you need help connecting with resource people, ask:

- Local First Nation administration offices
- Nuu-chah-nulth Tribal Council: 250 724-5757
- Port Alberni Friendship Centre: (250) 723-8224

2. Protocol:

- When inviting an elder to the school, always have refreshments available.
 Eating and drinking together is a traditional way of visiting and demonstrates good manners.
- Be forthright when booking your guest. Let them know if they will be paid.
- Don't ask too many questions of elders. This may be considered rude.
- Ask for permission if you want to take photos or record the knowledge shared. In Nuu-chah-nulth culture, there are protocols about the sharing of songs, dances, and knowledge.

3. Follow up

- Build a relationship. Invite them back to the school another day.
- Acknowledge your guest with a small gift or card in front of the class. This
 is a culturally appropriate form of respect.

Nuu-chah-nulth Salmon Culture

- Nuu-chah-nulth people traditionally moved to different areas within a Ha'wilth's (hereditary chief's) territory to follow the salmon runs and gather other sources of food to eat fresh or preserve by drying and smoking. Moving seasonally provided our ancestors with a steady supply of seafood throughout the year.
- Thanks to the care and sustainable practices of Nuu-chah-nulth people, there was an abundance of salmon. Nuu-chah-nulth have always had cacałuk (tsatsa-thluk) or "fisheries officers" whose job it was to watch for and assess the salmon runs. They provided important information that would help determine how many fish our ancestors could take from the river while still leaving enough to spawn and return in good numbers.
- The knowledge and practice of preserving the salmon enabled Nuu-chah-nulth people to have lengthy gatherings and feasts (up to a month long) during the winter months. This wealth of food helped our ancestors develop intricate hierarchies, governance, trade, and culture.

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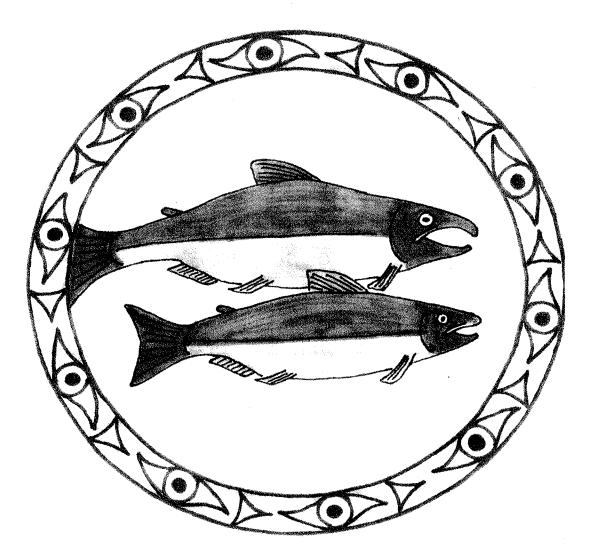
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?Iihčaqxmis Saamin

(Ee-chocktl-miss Saw-min, Salmon Are Important)

Lessons and Activities



Introduction to Nuu-chah-nulth Territory and Language

Learning Outcomes

At the end of this lesson, students should be able to:

- Identify Nuu-chah-nulth traditional territories on a map.
- Identify other First Nations people on Vancouver Island.
- Use preliminary Nuu-chah-nulth vocabulary.

Instructions

- Share with the students the map of Nuu-chahnulth traditional territories (next page).
- Ask, "Who knows what groups of First Nations people live on Vancouver Island?" (e.g. Nuu-chahnulth, Coast Salish, and Kwa-kwa-kwak.)
- Point out that traditional Nuu-chah-nulth territory goes from the western part of Vancouver Island (Kyuquot area) and west of the mountains that bisect Vancouver Island, out into the ocean. The southern most point is Port Renfrew.
- Ask the students to show where you are on the map. Point out that the Nuu-chah-nulth language group is made up of 16 smaller Nations (including Pacheedaht and Makah).
- Introduce the Nuu-chah-nulth language, either with a guest speaker or through the resources that follow.

Lesson One

Time: one hour

Materials Required:

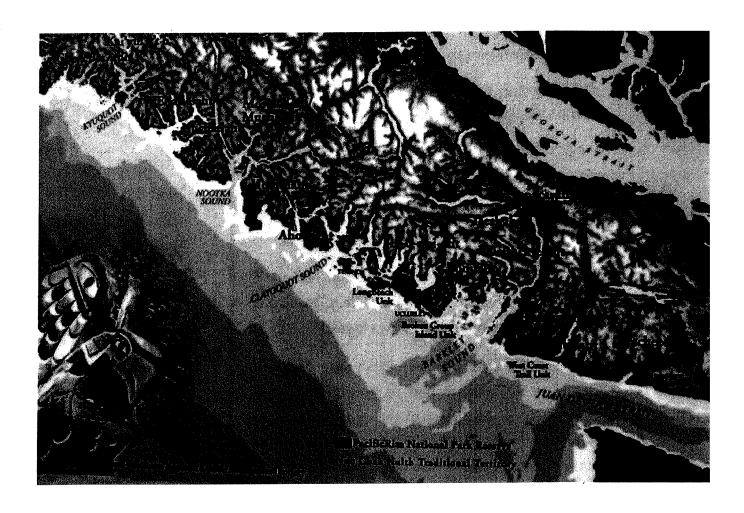
- Map of traditional Nuu-chah-nulth territory
- Flipchart
- Nuu-chah-nulth speaker and/or computer access



Main Ideas:

Where Nuu-chahnulth territories are located and an introduction to the Nuu-chah-nulth language.

Map of Nuu-chah-nulth Ha-ha-houlthee



Introducing Nuu-chah-nulth language

- There are some sounds in Nuu-chah-nulth that don't exist in English. To
 accurately write out the language, Nuu-chah-nulth use the Nuu-chah-nulth
 modified American Phonetic Alphabet. This alphabet is included with this
 unit.
- If it is not possible to invite a Nuu-chah-nulth-speaking person into the classroom to introduce the words, try visiting www.firstvoices.com. This website is an excellent resource containing sample words for three Nuu-chah-nulth dialects (Nuučanuł, čišaa?atḥ, and Ehattesaht / Nuchatlaht).
- First Voices also has the Nuu-chah-nulth modified Phonetic Alphabet, along with vocabulary, phrases, and attached audio files for proper pronunciation.
- First Voices also has a games section accessible from each of the three Nuu-chah-nulth pages. This includes word searches, jigsaw puzzles, quizzes, hangman, flashcards, and more. The games are well designed for independent learning or review.

Introductory Nuu-chah-nulth Vocabulary

| English | Nuu-chah-nulth | Nuu-chah-nulth E-Z Speak |
|-----------------|---------------------|-----------------------------|
| yes | ha?ah | ha-ah |
| no | wik | wick |
| good | λuł | tlulth |
| come here | čuk ^w aa | choo-kwah |
| please | łaakšiħ | thlock-shitl |
| thank you | Хееko | tleh-co |
| quiet everyone | wikʕaaλ̇́ič | wick-ahtl-itch |
| listen everyone | na?aataḥ?ič | nah-aah-tah-itch |

| | Nuu-chah-nulth Phonetic Alphabet |
|----|--|
| a | Sounds like the "u" in "bus" |
| aa | Sounds like the "a" in "father" |
| c | Sounds like the "ts" in "bats" |
| ċ | Sounds like "ts-a" |
| č | Sounds like the "ch" in chop |
| č | Sounds like "ch-a" |
| e | Sounds like the "e" in "pet" |
| ee | Sounds like the "e" in "eggs" |
| h | Sounds like the "h" in "home" |
| ķ | Sounds like the "ha" when exhaling to clean your glasses |
| i | Sounds like the "i" in "thick" |
| ii | Sounds like the "e" in "seek" |
| k | Sounds like the "k" in "keep" |
| K | Pronounced like a hard "k" with a popping sound, "ka-a" |
| k" | Sounds like the "qui" in "quick" |
| K™ | Sounds like "qwa" |
| Ť | You make this sound after "the", as in the word athlete. Your air pushes out through the sides of your tongue. |
| 2 | Sounds like "thl" in whittling, "tla" |
| R | Sounds like "tla" with an a, "tla-a" |
| m | Sounds like "m" in "morning" |
| m | Sounds like "ma" |
| n | Sounds like the "n" in "nose" |
| ń | Sounds like an "n" but pronounced forcefully |
| 00 | Sounds like the "o" in "only" |

| | Nuu-chah-nulth Phonetic Alphabet |
|----------------|--|
| р | Sounds like "p" in "pick" |
| p | Sounds like "p'a" but pronounced forcefully |
| | say kaa kaa kaa, then gradually move your tongue back in |
| q | your mouth as you keep saying this. It will feel as though you |
| | are about to swallow your tongue. |
| q ^w | Sounds like the "qu" in "quake" pronounced at the back of |
| 4 | the throat |
| S | Sounds like the "s" in "six" |
| Š | Sounds like the "sh" in "shoes" |
| t | Sounds like the "t" in "talk" |
| t | Sounds like "t'a" but pronounced explosively |
| uu | Sounds like the "oo" in "hook" |
| w | Pronounced like the "w" in "wish" |
| w | Sounds like "w'a" but pronounced explosively |
| X | Sounds like a cat's hiss |
| × | Combines the sound of clearing the throat with "x" |
| x ^w | Sounds like "x" but rounded with the "w" sound |
| ×, w | Pronounced like clearing your throat with your lips rounded |
| У | Sounds like the "y" in "yes" |
| ý | Sounds like "y'a" but pronounced explosively |
| Ç | Pharyngeal - made by tensing up the throat |
| 7 | Glottal stop - a pause between vowels |

Reprinted with permission from the Nuu-chah-nulth Tribal Council website. www.nuuchahnulth.org

Himuuca (hih-moo-tsa, Storytelling)

Learning Outcomes

At the end of this lesson, students should be able to:

- Describe the meaning of hišuuk iš c'awaak (hish-ook-ish tsa-walk, everything is one, all are connected).
- Explain the Nuu-chah-nulth concept of transformation.
- Discuss the importance of respecting salmon resources.

Background

- Salmon were and *still are* very important to Nuuchah-nulth people.
- Himuuca is a traditional teaching tool. Himuuca shows us where we stand in the world and it shares valuable lessons of how we should act and how we should treat others.
- Listening to himuuca is not just for young children.
 Nuu-chah-nulth told himuuca over and over again, in part so children would remember the story, and in part so they would learn the lessons the stories contained.

Lesson Two

Time: one to six hours

Materials Required:

- Circular seating area
- "The Chief's Son and the Salmon" story
- Other materials based on activities chosen



Main Ideas:

Respect and care for salmon. We depend on each other.

- Himuuca teaches and reinforces that we are connected to the animals and that
 all is one, and everything is connected. When you are interconnected, you are
 not above or below other animals or the earth or waters. You are equal and all
 has value.
- Nuu-chah-nulth stories are set in the time when people could transform between their human and animal form. Transformation is a reoccurring theme in Nuuchah-nulth culture.
- Consider providing snacks during the story telling. It is culturally appropriate to feed listeners so that they ingest what they are hearing or witnessing along with the food they are eating. In this way, knowledge becomes a part of the listener.

The Chief's Son and the Salmon

In the old days, when people could change between their animal form and their human form whenever they wanted to, there was a Ha'wilth's son, a chief's son, who didn't listen to his family. His mom and dad, his grandmother and grandfather, his aunties and uncles always told him to return the salmon bones to the river when he was finished eating. He didn't know why they always said this to him, and he didn't feel like walking down to the river to return the bones. Instead he just tossed the bones into the bushes.

Hmmm, nothing bad seemed to happen, so from then on he would just throw the bones into the bushes. He did that again and again, and after quite a while, the fishing in the village started to get worse.

One night while he was sleeping, he was grabbed and taken to the river and brought down to the Salmon people's village at the bottom of the ocean. What he saw was both amazing and terrifying: the boy had been told about these types of villages, full of the Salmon people, but unlike the stories he was told, this village was almost empty.

The Salmon people who had grabbed him removed their salmon skins at their big house and fed the very scared Ha'wilth's son around the fire. They told him, "Our village use to be full and lively. Now it has lost so many of our people. When you didn't return the bones to the river, our family members, cousins, moms and dads, and aunties and uncles could not be reborn and return to our village."

The Ha'wilth's son saw how very sad the salmon people were, having lost their family and friends. He promised to fix things. He awoke the next day back in his bed and raced outside to the forest. He looked and looked in the bushes for every single fish bone he had thrown away. It took him a few days to find them all, but when he did, he returned them to the river and said a prayer to the creator and the Salmon people.

Later the salmon were able to return to the rivers. From then on, the Ha'wilth's son respected the salmon and was thankful that they shared themselves with his people. He always returned the Salmon people's bones to the river after that.

Suggested Discussion Questions and Activities

- Discuss the concept of hisuuk is c'awaak (we are all one, we depend on each other) as it appears in this story. How are the people and the salmon dependent on one another? How do the boy's actions affect this interdependence?
- Discuss how salmon bones and carcasses provide nutrients for both rivers and forests, nourishing plants and animals.
- Give students the opportunity to practise the art of storytelling. After reading the story aloud, have the students read it to themselves a few times. Students can then tell the story to a classmate. Remind students that they do not have to

remember the story verbatim. Most coastal First Nations have a variation of this story and theirs will be a variation too.

- A variation of the above point is to have the students create their own story to share.
- Write a sequel to the "Chief's Son and the Salmon People," or have students use their imaginations to 'interview' one of the characters in the story and write about events from his or her perspective.
- Act the story out or it tell the story with drawings or props, puppets, or flannel storyboards.
- Provide the students with a drawing or photocopy of a salmon for writing their story on the back. These salmon stories can be glued (only the heads) onto a board covered in blue paper (the ocean) so that their stories can be shared.
- Invite in culturally knowledgeable person to share a story.

Nuu-chah-nulth Reflections Salmon Mural

Learning Outcomes

At the end of this lesson, students should be able to:

- Demonstrate through art what they have learned about salmon life stages, fishing, and food preparation.
- Show relationships between water, land, people, and salmon.

Instructions

- Using the coloured rolls of paper, prepare the mural with the sky, mountains, land, rivers, and an ocean. Have students draw what they are learning about and cut and paste this onto the mural. For example, when learning about the salmon life cycle, draw salmon eggs and place them in the rivers and streams.
- Identify what salmon need to survive in the different environments and at different life stages. Draw items that the eggs and fry need to survive.
- Identify the obstacles salmon may have to survival such as garbage, dams, birds, other fish, etc.
- Include how humans interact with salmon and their environment. For example, roads, houses, docks, ditches, fishing practises, etc.

Lesson Three

Time: ongoing throughout curriculum

Materials Required:

- Bulletin board or other large area to hang mural
- Rolls of blue, green, and brown paper
- Markers
- · Glue sticks



Main Idea:

Create a visual record of concepts learned throughout the unit.

Salmon Anatomy: Part One

Learning Outcomes

At the end of this lesson, students should be able to:

- Hear and speak Nuu-chah-nulth words for salmon anatomy.
- Practise writing Nuu-chah-nulth words for salmon anatomy.

Instructions

- Distribute the handout of Nuu-chah-nulth salmon anatomy vocabulary that follows this lesson to all students.
- Read the vocabulary aloud, asking students to repeat the words. If you are unsure of the pronunciation, ask a Nuu-chah-nulth speaker or go to www.firstvoices.com.
- If possible, obtain a fresh, whole salmon from a local hatchery for students to see and touch.
- With paintbrush, paint a light coat of tempera paint on the salmon body. Press the paper thoroughly onto the salmon. Repeat with each student and let dry overnight. (Note: use fabric paint if printing onto T-shirts).
- The following day, label the fish prints with the vocabulary using scientific labelling technique: straight lines drawn from labelled spot to corresponding word and no overlapping lines.
- Visit <u>www.salmonidsintheclassroom.ca</u> for further details on salmon anatomy.

Lesson Four

Time: Two hours (spread over two days

Materials/Resources:

- · One fresh salmon
- · Paper for printing
- Tempera or acrylic paints
- Paint brushes or foam brushes
- Nuu-chah-nulth salmon anatomy vocabulary (one per student)
- Pencils



Main Ideas: Hear, speak, and write Nuuchah-nulth terms for salmon anatomy. Identify salmon

Saamin Anatomy Vocabulary

| | English | Nuu-chah-nulth | EZ Speak |
|-----|-------------|---------------------|------------------|
| 1. | head | tuḥciti | tooh-tsi-tee |
| 2. | mouth | hinaqsuł | hih-nawk-sulth |
| 3. | eye | qasii | kah-see |
| 4. | nostrils | hiťaqጰiḥta | heh-tawk-tleh-ta |
| 5. | cheeks | panaḥoo | pa-na-hoo |
| 6. | gills | ťaľwas | ta-kwas |
| 7. | body | ?usit | oo-sit |
| 8. | adipose fin | λičaaỷak | tlih-chah-yuck |
| 9. | tail | nača | nah-chah |
| 10. | scales | čiṗałmis | chi-palth-mis |
| 11. | skin | tuk ^w aq | too-kwok |

Salmon Anatomy: Part Two

Learning Outcomes

At the end of this lesson, students should be able to:

- Speak the Nuu-chah-nulth words for salmon anatomy.
- Write and spell the Nuu-chah-nulth words for salmon anatomy.

Instructions

- Review student anatomy vocabulary handout from lesson four. Read the vocabulary aloud, asking students to say the word with you. (If you are unsure of the pronunciation, ask a Nuu-chah-nulth speaker or go to www.firstvoices.com to hear the pronunciation.)
- Have students label the Nuu-chah-nulth saamin anatomy diagram that follows this lesson. For more details about salmon anatomy, visit www.salmonidsintheclassroom.ca and review the dissection diagrams.

Lesson Five

Time: One hour

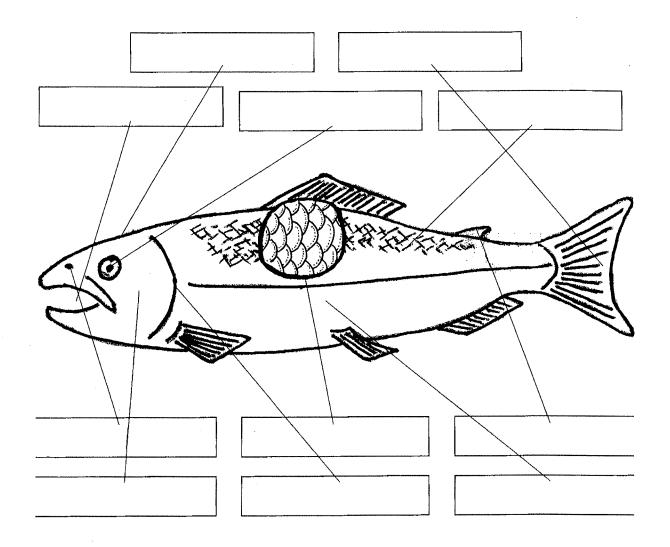
Materials Required:

- Nuu-chah-nulth
 Saamin anatomy
 diagram (one for
 each student)
- Extra copies of Nuuchah-nulth salmon anatomy vocabulary
- Pencils

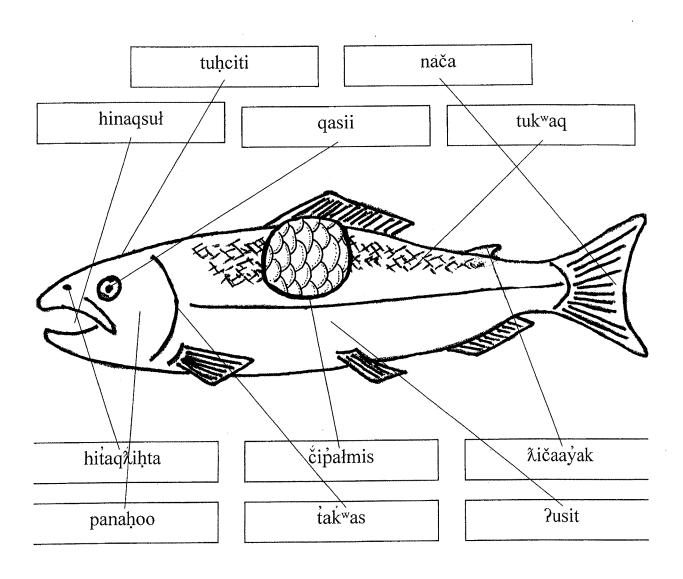


Main Idea: Practise hearing, speaking, and writing Nuu-chah-nulth terms for salmon anatomy and correlate these terms to anatomy diagram.

Nuu-chah-nulth Saamin Anatomy



Nuu-chah-nulth Saamin Anatomy Answer Key



Five Species of Salmon

Important to Nuu-chah-nulth-aht

For Nuu-chah-nulth people, salmon were and are extremely valued. For this reason, the Nuu-chah-nulth language has very specific words for salmon. It also has different names for salmon when they are in the ocean versus the river, and names for each stage of a salmon's life. Traditionally Nuu-chah-nulth-aht did not have a general word for *salmon*, but instead named each species. Later people borrowed a word from English to refer to salmon in general: saamin (saw-min).

| English | Nuu-chah-nulth | Nuu-chah-nulth E-Z Speak |
|----------------|----------------|-----------------------------|
| spring/chinook | sacup | sa-tsoop |
| pink/humpback | čaapi | chaw-pee |
| coho | cuwit | tsoo-wit |
| chum/dog | hinkuu?as | hin-coo-us |
| sockeye | miʕaat | me-aht |

Salmon Anatomy: Part Three

Learning Outcomes

At the end of this lesson, students should be able to:

• Apply Nuu-chah-nulth salmon anatomy vocabulary to classroom activities.

Instructions

 Direct students to complete the crossword puzzle and word search that follow this description. (Students can use their vocabulary handout from lesson four as a resource.)

Lesson Six

Time: One hour

Materials Required:

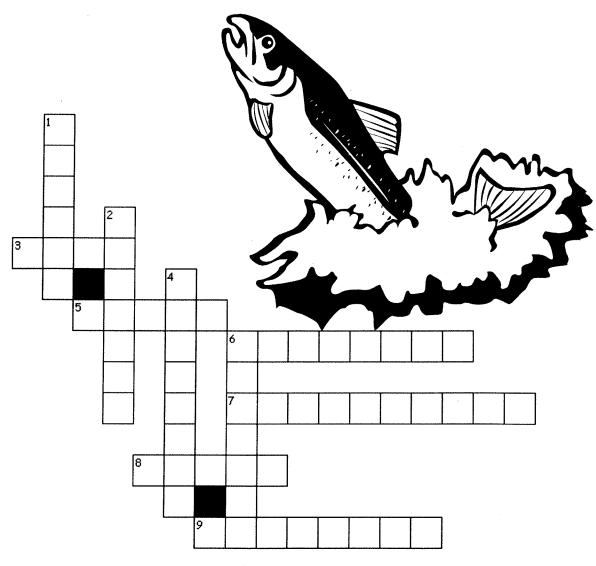
- Copies of Nuu-chahnulth Saamin anatomy crossword and word searches
- Extra copies of Nuuchah-nulth salmon anatomy
- Pencils



Main Ideas:

Reinforce Nuu-chahnulth words for salmon anatomy and practise writing Nuu-chah-nulth words using Nuu-chahnulth modified American Phonetics.

Saamin Anatomy in Nuu-chah-nulth



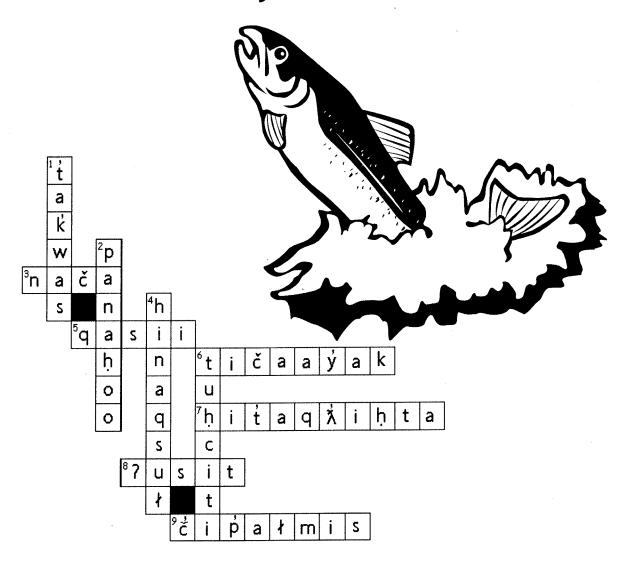
Across

- 3. Tail
- 5. Eye
- 6. Adipose fin
- 7. Nostrils
- 8. Body

<u>Down</u>

- 1. Gills
- 2. Cheeks
- 4. Mouth
- 6. Head

Saamin Anatomy in Nuu-chah-nulth



Across

- 3. Tail
- 5. Eye
- 6. Adipose fin
- 7. Nostrils
- 8. Body

<u>Down</u>

- 1. Gills
- 2. Cheeks
- 4. Mouth
- 6. Head

Nuu-chah-nulth Salmon Word Search

QEK Č M I S R М L Н S Κ † Κw S Z G J C D D С Α М G Q A R U Ζ Ν Ν Q U T G R s U S T R M G Q S Н D Х Q Q Н K C KY K C В ł U S Q Α 1 G ZQS U C G D F MCXE D Χ M S Υ 0 Α R R U KLY В R Т С U Χ E N S GY G Α K D Q N W N S D J В U Р S QB † A Q Λ̈́ H Т Z Н Χ J Q Н 1 Α F Z R Z SH C 0 K O S 0 QY Kw J S M В 0 0 Н Α F R B F Κ D D Α H R X S Χ SF M

SAČUP SAAMIN

HINAQSUł

ŤAKWAS

CUŴIT

TAA?IM

QASII

HIŤAQŹIḤTA

PANAḤOO

TIČAAÝAK

NAČA

ČIPAłMIS

?USIT

TUHCITI

nostrils

cheeks

scales

head

body

tail

salmon

eye

adipose fin

gills

mouth

sockeye salmon

coho salmon

pink/humpy salmon

Salmon Life Cycle: Concept and Vocabulary

Learning Outcomes

At the end of this lesson, students should be able to:

- Hear, speak, and write the Nuu-chah-nulth salmon life cycle vocabulary.
- Explain the Nuu-chah-nulth concept of a salmon life cycle.

Instructions

- The six large life-stage pictures included with this lesson are for the teacher. The page showing all six life stages on one page is for the students. (Note: a stylized version of these life stages is included at the end of this document for students to colour.)
- Introduce the Nuu-chah-nulth words for salmon life stages. Go to <u>www.firstvoices.com</u> to hear the pronunciations and to hear what the Nuu-chah-nulth alphabet sounds like. Alternatively, invite a Nuu-chah-nulth speaker into your classroom for help.
- Discuss the life cycle and the concept of "Hišhuk iš c'awaak," (hish-ook ish tsa-wok) which means everything is one, and all are connected.
- Hand out the salmon life cycle pictures for colouring. Cut and glue the life stages onto the page labelled "Salmon Life Cycle." More representations of salmon life stages are at the end of this book.

Lesson Seven

Time: One hour

Materials Required:

- Copies of Nuu-chahnulth Saamin anatomy crossword and word searches
- Extra copies of Nuuchah-nulth salmon anatomy
- Pencils

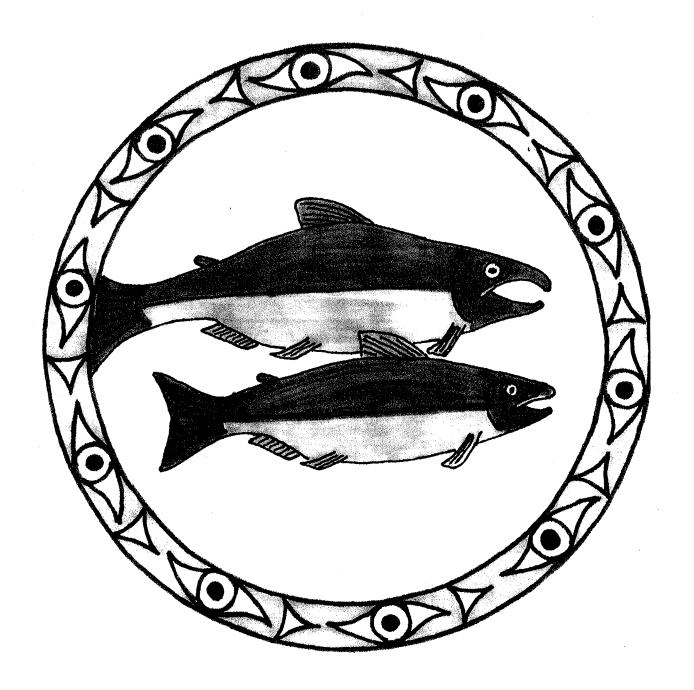


Main Ideas:

Reinforce Nuu-chahnulth words for salmon anatomy and write Nuu-chah-nulth words using Nuu-chah-nulth modified American Phonetics.

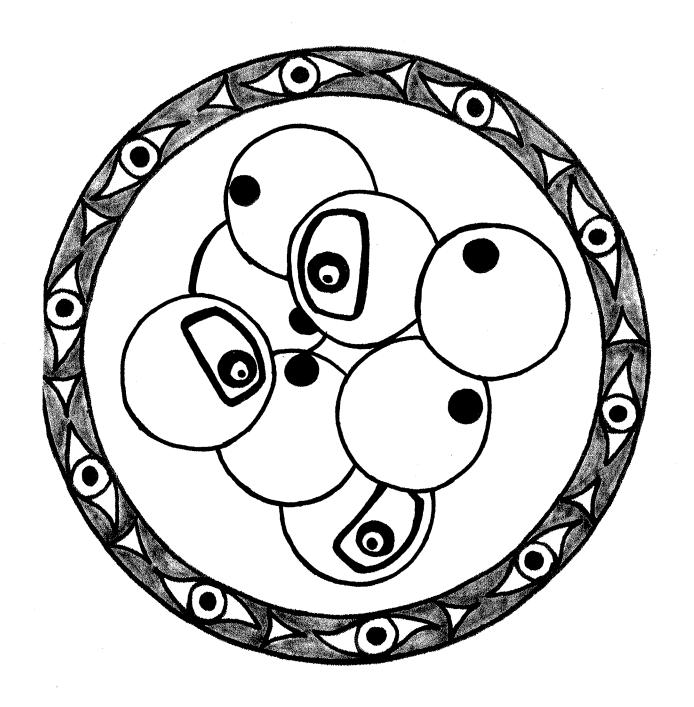
Nuu-chah-nulth Saamin Life-Cycle Vocabulary

| English | Nuu-chah-nulth | Nuu-chah-nulth E-Z Speak |
|----------------|---------------------------|-----------------------------|
| life cycle | no Nuu-chah-nulth word | n/a |
| adult salmon | saamin | saw-min |
| eggs | nixtin | niq-tin |
| alevin | no Nuu-chah-nulth word | n/a |
| fry | ciix ^w aa | tsee-qwah |
| smolt | taatwin | taht-win |
| spawning adult | k ^w eḥnin | kwah-nin |



kweḥnin

(kwah-nin) spawning salmon

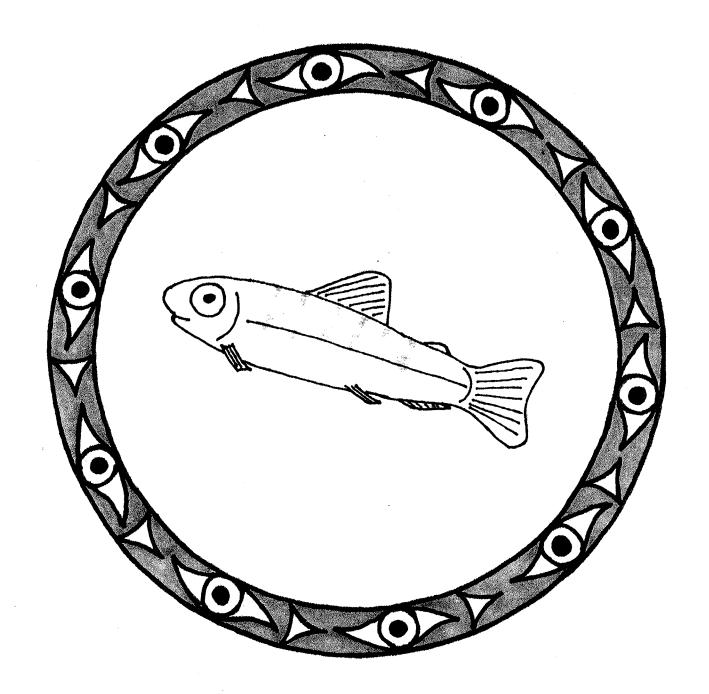


nixtin

(niq-tin) eggs

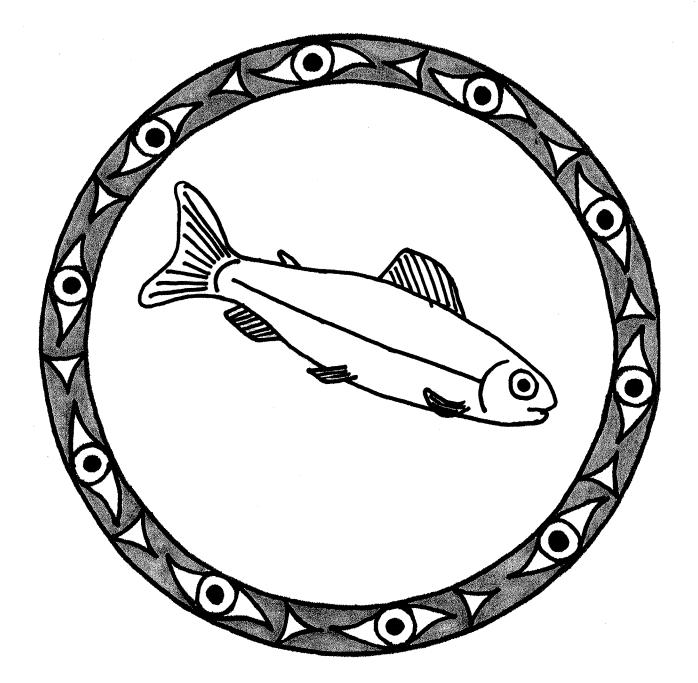


alevin



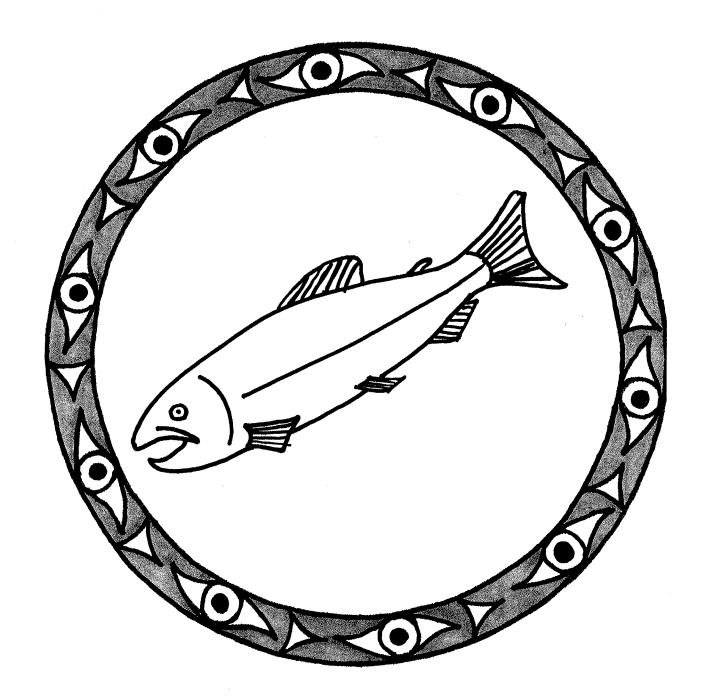
ciix^waa

(tsee-qwah) fry



, taatwin

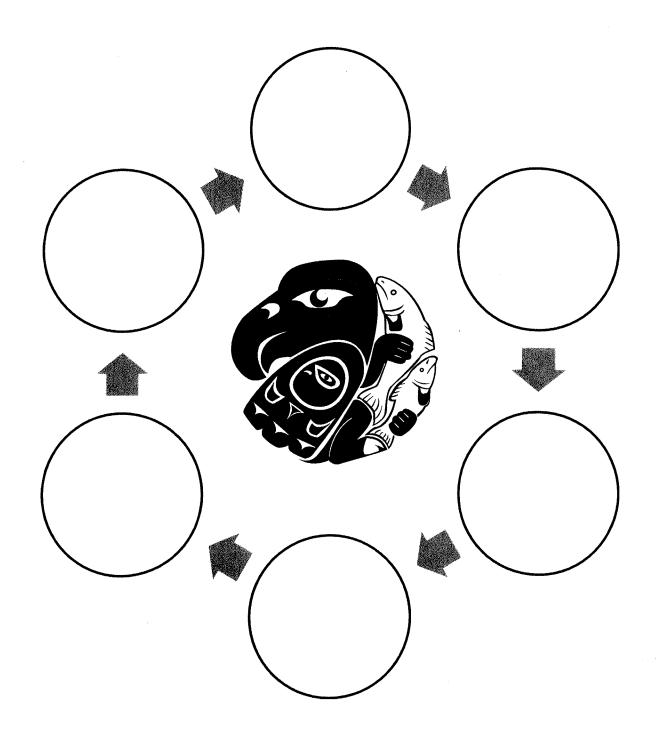
(taht-win), smolt



saamin

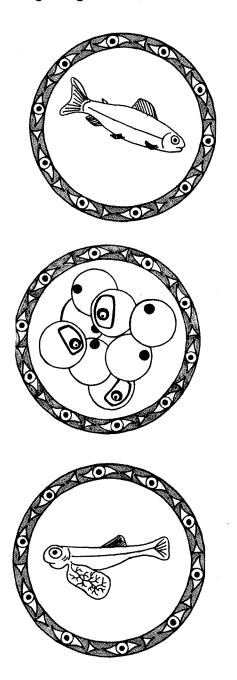
(saw-min), adult salmon

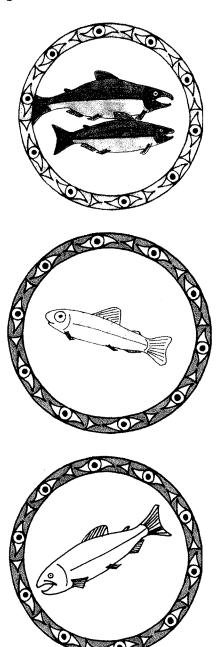
Salmon Life Cycle



Salmon Life Cycle Pictures

Cut out the life-stage pictures below and glue them onto your Saamin Life Cycle page in an order that shows the sequence of a saamin life. Hint: circles have no beginning or end, so wherever you start the life cycle is right!





Imagine You Are a Saamin

Learning Outcomes

At the end of this lesson, students should be able to:

- Identify the stages in the life cycle of salmon.
- Describe the obstacles to survival that salmon face during their life cycle.

Teaching Suggestions

 Personalize the story for your students by naming the streams and rivers after local water systems. Add in further landmarks that the children may recognize.

Lesson Eight

Time: ½ hour

Materials Required:

Space for the students to lie down (preferable)



Main Ideas:

Learn life cycle stages and empathize with dangers the salmon faces during its life cycle.

Imagine You Are a Salmon

By Christine Aday

Instructions

Dim the lights and have the children lie down or rest their heads on their desks. Instruct them to close their eyes, relax, and open their imaginations because they are going to feel what it is like to be a salmon.

The Story

You are a coho salmon egg. You are buried in the gravel in a stream and it is dark all around you, but you aren't afraid because you are safe and sound with hundreds of your brothers and sisters surrounding you in the *redd* your mother dug for you last year. The water is cool and clear, running over your egg. You have two great big eyes and like to wiggle about in your shell.

Some time passes, and it is now early spring. You have grown larger, and it is getting pretty tight for you to move around inside your egg. Are you ready? It is time to break out of your shell. (Make some sound effects.) You are now an *alevin* and it feels good to stretch out. You are still in the gravel, and the water is warming up slightly, but it is still nice and clean. The smell of the water is the smell of home. Breathe in deeply. You get all the food you need from the yolk sack that is attached to your belly.

More time passes and you are a now a bit older and a bit stronger. Your yolk sac is just about empty. Soon you will need to find your own food. Okay, it is time

for you to swim up out of the gravel. Swim, swim! You are a fry, and there are so many others like you swimming around. Hello brothers and sisters. Hello cousins. Whoa! Stay out of the swift currents—you're not big enough to swim there yet. You are wondering what to eat and then you see some mosquito larvae. They look tasty. Quick, catch the ant that just fell into the water! Great, you caught the ant, but watch out, there is quu?ušin, the raven, trying to catch you, because he is hungry too. Stay to the sides of the river under cover of the salmonberry shrubs and the tree roots.

Over a year has gone by. Oh my how you have grown – you are a smolt! But there are less of you in the stream now because trout, river otters, and maamaati (mah-mah-tee, birds) have eaten some of you. It is spring again, and you are ready to start your long journey down the stream to the ocean. You begin swimming and the current of the stream helps by pushing you along. Eating and swimming, eating and swimming. Then the water begins to taste salty. You have reached the estuary and can sense the ocean close by, but you'll need to stay in the estuary for a while to get used to the salt water. There is a lot of food here for you: zooplankton, worms, shrimp, and all sorts of bugs. But there are also a lot of predators that want to eat you! Watch out for loons, herons, and bigger fish.

A few weeks pass, and you continue to grow. You feel the need to go north, so you swim out into the ocean with your relatives and head for Alaska. You eat everything that gets in your path—squid, herring, anchovies, shrimp, and lots of your old favourites: zooplankton – munch, munch.

Hey, what's that? You see a wounded herring and chase after it, but your brother gets to it first, and lucky for you, because it's not a wounded herring at all but a baited fish hook that your brother bites onto. He fights but can't get away. Up and up he goes to the surface, until he disappears out of the water. Good-bye brother.

You swim around the ocean with your relatives. Killer whales, seals, and people are all trying to catch you, but you have been one of the lucky ones and have avoided being eaten. After about a year and half, you are now a fully grown adult coho and you get a strong urge to head home to the stream where you were born. Will you ever find it? It is thousands of kilometres away. Use your keen sense of direction, smell, and possibly the earth's magnetic field and the position of the stars, you start to swim for home.

As you near the coast you face many dangers. Fishnets scoop up whole schools of your brothers and sisters. Seals and sea lions eat many more. But you keep swimming, driven by an urge to go home to the very stream where you hatched several years ago. You are close now. You can smell the water of your birthplace. Getting home is your only thought.

You have finally made it to the estuary. Your body is changing: you have now stopped eating and are using your body's stored food supplies to keep you going. Your teeth grow larger. Your shiny silver scales have darkened, and you are getting skinnier. Up the stream you go, fighting the current that helped you when you were a fry.

Bears wait in the stream, eating as many of you as they can. The eagles also have a feast, because the stream is shallow and offers little protection to a fully-grown salmon. Oh no, what is this up ahead? It's a great big logjam blocking the way. You swim back and forth trying to find a way around it, but you can't. So you try jumping up over it instead. The water is rushing so fast against you. Come on, jump! Jump! Your body gets a bunch of scratches from the logs, but you make it. You swim just a bit further up the stream, finally reaching the place where you were born. You dig a redd and release some of your eggs. Another salmon fertilizes them and you cover the redd back up. You do this a few more times. You are so tired now, but you stay alive until you just can't any longer. Your world gets dark and quiet, and you gently slip away.

After you die, your carcass provides food for other animals, including small invertebrates whose own young will become food for the next generation of salmon fry. Your carcass also fertilizes the forest, which provides important shade and food for future salmon. Through you, the great cycle of life continues.

"I am a Salmon" Discussion Questions:

- Discuss what the students liked about being a salmon. What made them happy? What made them sad? Why?
- Discuss what happens to a salmon's body once they have laid their eggs. Talk about how salmon carcasses are eaten by bears, birds, bugs, other salmon, and trout in the stream, and that salmon live on through the other animals and trees. Discuss how death is a part of the cycle of life. The death of the salmon giving life to its young and feeding many others with its body are also tangible examples of hisuuk is c'awaak, (hish-ook-tsawalk), everything is one, all are connected. Salmon carcasses also fertilize vegetation which provides habitat for insects. These insects lay aquatic larvae which salmon fry feed on. For more on this concept, visit: http://www.thinksalmon.com/learn/science/salmon_forest

Chuu-qwa, chuu-qwa, chuu (Go, Go, Stop), Salmon Swims Home

Learning Outcomes

At the end of this lesson, students should be able to:

- Describe some risks that salmon face when returning to their natal stream.
- Explain how salmon interact with each other and other wildlife.

Instructions

- This is a great game for kids to release energy.
 It can be played inside or out. The children are 'salmon,' making their way back home to spawn.
- Designate a starting line as the ocean with a river in the middle. At the far end is the finish line, representing their natal stream. Have one person be čims, the bear, standing in the stream where the fish were born. The 'bear' turns away from the 'salmon' who are in the ocean, and yells "chuu-kwa, chuu-kwa (come here, come here). The 'salmon' start swimming.
- When čims yells chuu (stop), the 'salmon' freeze.
- Čims turns around. If he/she catches any 'salmon' still swimming, then those salmon get eaten and sit out (čims will indicate these salmon by calling their names).
- Repeat the sequence until a 'salmon' reaches the stream where it was born. The first 'salmon' home is the winner and gets to be čims next.

Lesson Nine

Time: 1/2 hour

Materials Required:

A large open area such as a field, beach, or gym.



Main Idea:

Salmon face risks while returning to their natal stream.

Saamin is Yummy!

Learning Outcomes

At the end of this lesson, students should be able to:

- Identify different ways to prepare salmon for consumption and preservation.
- Identify reasons why Nuu-chah-nulth people historically preserved salmon.
- Explain why the Nuu-chah-nulth concept of respect for salmon was important historically and is still important today.

Background

When the salmon are returning home, it is a very busy time in Nuu-chah-nulth communities. People are busy harvesting fish, cleaning fish, and sharing with elders, family, and friends. Although most people eat some of the fish fresh, much is also preserved through freezing, canning, and smoking.

Different species of salmon return at different times of year and are preserved using different methods. The decision about how to preserve the fish often has to do with percentage of fat content among the species. For example, very oil fish, such as sockeye salmon, take much longer to smoke and dry. For this reason, many people prefer to preserve sockeye by canning.

Some of the different ways that Nuu-chah-nulth prepare salmon include canning, smoking, half smoking, and full smoking. Nuu-chah-nulth also make ?upłskwi (uplth-skwee, or salmon jerky), and cook salmon by barbecuing, pit cooking, and boiling.

Lesson 10

Time: Variable

Materials Required:

Varies per activity



Main Idea:

Salmon can be preserved in many ways.

Suggested Activities

- Discuss why it was important to Nuu-chah-nulth people historically to preserve salmon. Why is it important today?
- Discuss why you might "clean" a salmon when you catch it. What parts do you
 remove? Nuu-chah-nulth people believe it is very important to take good care of
 the fish from the moment they leave the water. Treat them gently because the
 flesh bruises. Gut them and put them on ice immediately. Handle the salmon with
 respect.
- Give thanks to the salmon. Salmon is very good food, just right for our bodies and great for our brains.
- Consider returning salmon bones to river to demonstrate respect. If possible have an elder or other knowledgeable person speak to your class about the importance of being respectful of the salmon.
- Try roasting a real salmon on sticks as traditionally done—over an open fire. Consult the Nuu-chah-nulth cookbook, "Čamus: West Coast Cooking Nuu-chah-nulth Style" (Uu-a-thluk, Nuu-chah-nulth Tribal Council Fisheries, 250-724-5757) for instructions on how to "butterfly" a salmon for cooking over a fire. As an alternative, barbecue a salmon over a grate. Make fish sandwiches, baked salmon, or fish soup and supinin (quick bread) using other recipes in Čamus.
- Consult the Uu-a-thluk Traditional Foods Toolkit (Uu-a-thluk, Nuu-chah-nulth Tribal Council Fisheries, 250-724-5757) for excellent step-by-step instructions on how to dry and smoke salmon and how to cook in a steam pit.

Further Activities and Suggestions for ?Iiḥčaq\u00e4mis Saamin

Discussion Starters:

- In Nuu-chah-nulth culture, the first fish or the first set of salmon caught after the salmon return home is usually given away. Talk about why this might happen.
- Relate caring for the fry in the classroom with what the salmon need at the different stages of their life in the wild. What are some important things kids can do to care for the salmon or their habitat?

Resources:

- Invite in a Nuu-chah-nulth fisheries manager, biologist, officer, or hatchery worker. The majority of Nuu-chah-nulth First Nations have their own fisheries programs. There are also Nuu-chah-nulth regional biologists located in each NTC regional office (Tofino, Port Alberni, and Gold River) and many other great resource people at Uu-a-thluk, the Nuu-chah-nulth Tribal Council fisheries department. The main office is located in Port Alberni (250-724-5757).
- Help students learn how to draw in the style of First Nations art. There are
 excellent books available for step-by-step learning, such as, "Learning by Doing,
 Pacific Northwest Coast Native Indian Art" by Jim Gilbert and Karin Clark.
- Learn how salmon were caught by Nuu-chah-nulth-aht in the past and in the present. Compare and contrast. Consult the School District 70 publication, "Traditional Nuu-chah-nulth Food Harvesting and Preparation," available online: http://www.sd70.bc.ca/ Programs/Ab Ed/AbEdCurrNTC/Foods-Curr.pdf

- Go to <u>www.firstvoices.com</u>. Choose the language group "Nuu-chah-nulth." There
 is vocabulary, phrases, the Nuu-chah-nulth alphabet, and more. Permit students
 who are capable to independently navigate <u>www.firstvoiceskids.com</u> and play
 Nuu-chah-nulth language games.
- If you don't already have live fish in the classroom, consider getting an aquarium through the Salmonids-in-the-Classroom program funded by the Department of Fisheries and Oceans Canada (DFO). These aquariums are stocked with salmonid eggs, which students care for and monitor until the fry are ready for release to a local creek. This fry release provides an excellent opportunity for a field trip, though the program requires considerable teacher commitment and attendance at an in-service session. Supply of aquariums is limited. Contact your DFO Education Coordinator to inquire about availability in your community. http://www.pac.dfo-mpo.gc.ca/education/cordinators-coordonnateurs/index-eng.htm
- Watch the following free videos about salmon's importance to First Nations across
 B.C:
 - Feasting for Change: http://www.youtube.com/watch?v=KF7PNeSoGV0
 - o Nashuk Youth Council: http://uuathluk.ca/wordpress/?page_id=785

Activties:

- Invite culturally knowledgable people to share stories, fishing, or conservation methods and histories with your classroom.
- Make posters illustrating how the students interpret hisuuk is c'awaak (everything
 is one, all are connected) or ?iisak (ee-sock), which means respect.
- Show children First Nation drawings of salmon (use more than one artist's rendering of salmon) and other fish to contrast with the salmon. Ask them how they know the picture is representing salmon. Some clues include a:
 - Large eye
 - Fin on top and bottom of its body

- Small tail in relation to its full body size

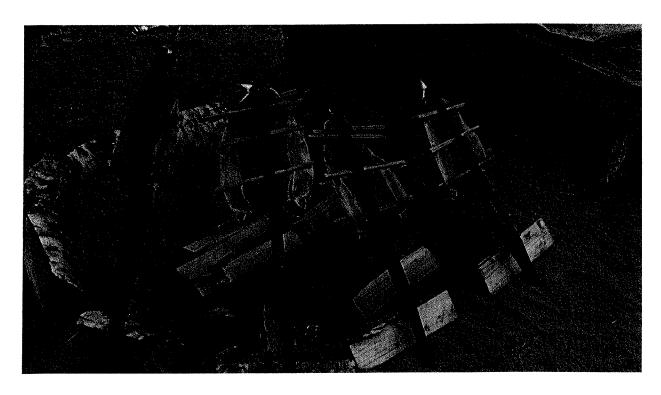
 If you have difficulty with access to First Nations art, try searching on Google

 Images.
- Draw a large outline of a salmon and give each student a fish scale outline that is relative in size to the salmon. Have the students colour the fish scale on one side any way that they like. On the back of the scale, have them write something they appreciate about salmon or a fact about salmon. Glue part of the scales onto the salmon outline so the backs of the scales can be folder over and read.
- Write poems about salmon.
- Invite in a singer or drummer from the community. Go to www.nuuchahnulth.org
 to hear the Nuu-chah-nulth song.
- Bring children to a stream, river, or lake and instruct them to sit quietly by themselves for a time to relax and experience the setting with all of their senses. Ask them to think of something they appreciate about where they are and what the salmon need from that area to be healthy. Ask them to find a spot to sit off by themselves, within physical boundaries for safety. Spend some minutes in quiet. Observe. Use senses. Call them in and gather in a circle and pass around a special item like a rock, a feather, or a shell. Whoever has the special item has their chance to speak about what they noticed or liked the best or what they are thankful for.
- Read Carol McDougall's book A Salmon's Sky View to the students for another perspective of what it would be like to be a salmon. Try the art activity in her book, where the students wet the page, add watercolour paint to a wet page. When dry, use a black permanent marker to draw and colour in a silhouette of what the salmon sees, for example, an orca or a leaf. This activity produces stunning results with a very simple technique.
- Create a three-dimensional paper salmon using a photocopied or enlarged picture of a salmon. Have the children colour the two sides and then start stapling the

edges together. Stuff with paper and then close up the fish with more staples. The children can use them in their play, then hang the fish from the ceiling with string to create a school of fish in their school.

?u?aałuuksuu saamin

(oo-ah-thluck-soo saw-min), Take care of the salmon.



Roasting fish in Huu-ay-aht territory.

