

Coming Home to Salmon Nation: Bioregional Learning for ESL Students

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COMING HOME TO SALMON NATION

The Advanced Reading and Writing class I taught in Spring 2007 was strongest in bioregional content, and I'd like to use that class as an example. It met two nights - 5 hours - a week, plus 2 1/2 - 3 hours of homework. Many of the students also worked full-time, so they had to work hard. They could learn a lot, but there was a danger they might give up. There was a need for high energy in the class to get people through it. And to prepare students for community college and/or to stretch their reading skills for work and life, we needed to concentrate on nonfiction and newspaper and academic readings. I wanted a theme that would engage them strongly, and would help them feel at home here and more attached to and responsible for the environment. I was excited about the idea of Salmon Nation, so I decided to build the spring course around that.

We began by studying the concept of Salmon Nation. We went on to study salmon and their life cycles, American Indian tribes whose lives have been interwoven with Columbia River salmon, and what has happened to both the salmon and the river tribes since Euro-Americans came to the Columbia, up to the present. After that we studied Northwest forests and Kwakwaka'wak people on Vancouver Island - again, the lives of the forests and the native people before and after Euro-American contact, up to the present. Then we moved closer to home and studied tribes of the central Oregon coast. In "The Unauthorized Biography of Me" by Sherman Alexie, we read about a young Spokane Indian's life, and we ended by studying immigration to the Northwest, a history the students are part of.

Reading - articles, legends, personal narratives, and poems with comprehension and discussion questions. Comprehension questions were important to build skills for community college courses and to score well on entrance placement tests. Dense, challenging readings were accompanied by reading aloud, discussion, posters, videos, music, realia, and food. Students each chose a tribe and wrote research papers. We visited the public library together, focusing on parts of the library where students could find research books. I also brought many books that students could borrow to class. Students read both books and internet sites for research. Skill-based class reading exercises included main ideas and vocabulary in context.

Outcomes: Good scores on Lane entrance placement tests, stronger ability and confidence in academic reading, greater ability to understand newspaper articles, especially about topics related to our bioregion, greater enjoyment of reading.

Vocabulary - I chose words from readings, both words needed to write about and discuss bioregional content and words with broad applications. Students used the words in sentences for homework. They each wrote a vocabulary sentence on the board in class. From their homework, I collected representative sentences for each word and made handouts, which students studied for vocabulary quizzes. They also studied prefixes and suffixes, which were present in many of our vocabulary words.

Outcomes: Stronger general and academic vocabulary, stronger vocabulary related to bioregion, stronger ability and confidence in guessing words from context.

Writing - After reading legends about places, students wrote their own legends about places, legends that came from their various backgrounds. We made a class book of these legends, with a copy for each student. They wrote answers to comprehension questions, paraphrasing and summarizing material they had read. They wrote journal entries reflecting on bioregional class content. They each chose a group of native people they were interested in and wrote research papers. In writing, they learned and practiced transition words, complex sentences, essay structure, and ways of planning a research essay.

Outcomes: stronger content and structure in essay writing and improved ability to paraphrase what they read. Improved scores on FWA writing tests for the state.

Listening and Speaking - Students discussed the content of what they read and related it to their lives. They also discussed their feelings about what they were learning, through interpersonal exercises such as Widening Circles. Videos of salmon life cycles, Celilo Falls, old-growth forests, Kwakwaka'wak and powwow dances, and Siuslaw Indian customs also provided listening practice. Students listened to and talked with visitors from the Lower Umpqua tribe and Oregon Wild.

Grammar - Grammar was drawn from reading and writing needs: for example, adverb clauses for writing legends, passive voice for vocabulary sentences and reading, review of past and present perfect for reading. [Students also worked in small groups with grammar exercises that focus on their favorite grammar errors.]

Field trips - Though field trips were optional, most students participated. In May we visited an old-growth forest and a camas meadow near Eugene, dug camas bulbs, cooked them and ate them together. In June we drove to Florence, where Siuslaw people showed us the site of a traditional salmon weir and we went to an historical museum with Siuslaw baskets. We ate lunch in a park among huckleberry thickets, walked on the beach, and visited a salmon restoration project on the Siuslaw River estuary. Many students also attended the U. of O. spring powwow, though we didn't do this as a group.

Holistic class outcomes:

Group cohesion through learning engaging material together.

High student retention: we began with 19 people and ended with 17.

Improved study habits and confidence in ability to complete challenging homework assignments.

Stronger sense of this bioregion through learning about salmon, forests, and native people.

Stronger awareness of native people around us, and local history related to the bioregion.

Hopefulness through seeing the repeating pattern of natural balance over thousands of years, an ongoing crash after contact with Euro-Americans, and, in recent years, many people working to restore the balance.

A sense of being at home in this place, leading to receptivity and enthusiasm about protecting the local environment.

I'd be very glad to share and exchange ideas about bioregional curriculum. Please write to me at katerg@igc.org or call 541-935-8843. I would be glad to send you e-mail copies of the salmon handouts or others about forests, Kwakwaka'wak and Siuslaw people, dances and good manners at powwows, and immigration to the Pacific Northwest. A partial list of the most helpful resources follows.

SALMON NATION RESOURCES

PEOPLE AND PLACES

American Indian people who live near you

Visits to powwows, celebrations, nearby reservations and tribal museums

Environmental volunteers, activists, and scientists who work with salmon and forests

Visits to forests, salmon streams, and restoration sites

Art museums, natural and cultural history museums, and historical museums

VIDEOS/DVDs

Celilo Falls and the Remaking of the Columbia, Oregon Sea Grants Communications, 2005.

In These Ancient Trees, National Wildlife Federation, 1991: old-growth forests and clearcutting

The Native Americans: The Tribal People of the Northwest, TBS Productions, 1994: culture, history, and insights of four Northwestern tribes

Planet Earth #4: Seasonal Forests, 2005: animals of the old-growth canopy

Salmon on the Line, Wombat Productions, 1984: salmon science, history, problems

Smoke Signals, Miramax: screenplay of Sherman Alexie stories

Song of the Salish Sea, Earthwise Media, 2006: salmon life cycle

Totem Pole Raising, Magic Lantern Group, 2002.

The World of American Indian Dance, Four Directions Entertainment, 2002.

CDs

Creation's Journey, Native American Music, presented by the Natl. Museum of the American Indian.

Mahk Jchi, Ulali.

BOOKS

American Peoples, David Murdock, Eyewitness Anthologies, DK Publishing, 1996.

Atlas of Oregon, Second Edition, Loy, Allen, Buckley, Meacham, U. of Oregon Press, 2001.

Celilo Falls: Remembering Thunder, Wilma Roberts' photos. Wasco Co. Hist. Museum Press, 1997.

Faces of a Reservation [Warm Springs] Cynthia Stowell, Oregon Hist. Society Press, 1997.

Field Guide to the Pacific Salmon, Robert Steelquist, Sasquatch Publishing, 1992.

First Fish, First People: Salmon Tales of the North Pacific, Judith Roche and Meg McHutchinson, editors, U. of Washington Press, 1988.

The First Oregonians, edited by Laura Berg, Oregon Council for the Humanities, 2007.

Indian Legends of the Pacific Northwest, Ella Clark, U. of California Press, 2003.

Keepers of the Totem, Time-Life Books, 1998.

Landscapes of Promise: The Oregon Story, 1800 - 1940, William Robbins, U. of Washington Press, 1997.

People of the River: Native Arts of the Oregon Territory, Bill Mercer, Portland Art Museum/U. of Washington Press, 2005.

The Rainforests of Home: Profile of a North American Bioregion, edited by Peter Schoonmaker, Bettina von Hagen, and Edward Wolf, Island Press, 1997.

Reaching Home: Pacific Salmon, Pacific People, Natalie Fobes, Alaska Northwest Books, 1994.

Salmon and His People, Dan Landeen and Allen Pinkham, Confluence Press, 1999.

Salmon Nation: People, Fish, and Our Common Home, Edward Wolf, Seth Zuckerman, editors, Ecotrust, 2003.

The World of the Kalapuya, Judy Juntunen, May Dasch, Ann Rogers, Benton Co. Hist. Society, 2005.

A SELECTION OF CLASS HANDOUTS FROM THE FIRST THREE WEEKS OF CLASS, WHEN

WE STUDIED SALMON, FOLLOWS. THE CONTENT-BASED WORK WAS ONLY PART OF WHAT HAPPENED IN CLASS WORK AND HOMEWORK.

ADVANCED READING & WRITING

Progress in Advanced Reading and Writing depends on your attendance and participation in class, your timely completion of assignments, and improvement in reading, writing, and vocabulary skills. In this class you will do part of your learning during class, and the other very important part working independently out of class.

Vocabulary

CLASSWORK

Learn vocabulary in class.

Vocabulary quizzes.

readings, *Vocabulary in Use*.

HOMEWORK

*Write sentences for new words.

*Find new words in class and homework

Reading

CLASSWORK

Read, discuss, and

magazines, articles, and Internet.

HOMEWORK

*Read newspapers,

answer questions in class.

*Write journal entries about reading.

*Do Internet and library research to write a research paper.

Writing

CLASSWORK

Practice paragraph & essay structure. Write compositions in three drafts each.

Do grammar exercises that focus on common writing mistakes.

Write in a free-writing journal.

HOMEWORK

*Grammar exercises.

*Write in a free-writing journal.

WRITING ON THE COMPUTER

Essay assignments can be handwritten, especially first drafts, but it will save you time and energy if you can type and save later drafts on the computer.

*Starred activities are those you can do lots of to make faster progress.

I'm very glad you are in my class, and I look forward to working with you this term!

APRIL 1, WEEK 1

4. Where do we live? Look at maps, overhead. Read about and discuss Willamette Valley. 15 minutes.

5. Read about Salmon Nation and answer written questions. 30 minutes.

[I used this to measure whether students were at the correct reading level.]

THE WILLAMETTE VALLEY

The Willamette Valley runs through much of Oregon, from the Columbia River in the north to Roseburg in the south. It is nestled between the Coast Range to the west and the Cascade Range to the east. Compared to the mountains that surround it, it has less rain and snow - an average of 45 inches a year - and warmer temperatures. Its mild temperatures and good soils make it one of the best farming areas in Oregon.

The land in the Willamette Valley is mostly prairies, floodplains, and rolling hills. When the Kalapuya Indians lived in the valley, they burned it every year to make it easier to gather food plants and hunt animals. The valley was wetlands and big open meadows with oaks growing here and there, because oaks are resistant to fire. Douglas firs, cedars, and other evergreen trees grew in the hills and mountains, away from the fires.

After European-American settlers came here from farther east in the U.S., in the 1800s, the Kalapuya died or were put on reservations. The settlers didn't burn the valley as the Kalapuya had. They started farming, they drained most of the wetlands, and they cut down many forests.

Now the Willamette Valley is mostly cities, towns, and farms, with small areas of wetlands and oak forests. Douglas firs grow in the valley now, too. The mountains that surround the valley are covered with Douglas fir forests and clearcuts.

Glossary

| | |
|--------------|--|
| nestled | kept safely, as in a nest |
| prairie | wide grassy land, mostly flat |
| floodplain | area with good soil, where a river sometimes floods |
| wetland | land that is under water at least part of the year |
| resistant to | not harmed by |
| evergreen | green all year |
| settler | someone who moves to land where there are few people |
| reservation | land kept for American Indian people |
| drain | remove the water |

SALMON NATION

Along the west coast of North America, people and salmon have lived together since the last Ice Age, twelve thousand years ago. Five species of Pacific salmon inhabit the waters of this region, from the rain-soaked coast of Alaska to rivers and small creeks in the dry Oregon country east of the Cascade Mountains.

Human beings have lived in this vast landscape, just as the salmon have filled its rivers. Every year, with the salmon's age-old migration from ocean to **headwaters**, people have caught them, eaten them, and celebrated their return. In turn, as people have multiplied and spread across the land, salmon have come to depend on us for the freshwater streams where the fish **hatch**, grow, and, years later, return to **spawn**.

This shared territory is Salmon Nation, which spans two countries, six states, and one province. Beyond that, Salmon Nation is a way of thinking that recognizes this land is not ours alone. We the people of Salmon Nation choose not to turn our backs on these fish.

The salmon **reciprocate**. Thanks to the **nutrients** brought inland from the sea by spawning salmon, the trees and earth of this region are built of salmon just as our bones and flesh are partly salmon-made. Native people have shaped their cultures to the rhythms of the salmon migrations and the lessons they offered. Today, we have an opportunity to learn from the example of native people.

To learn this wisdom, we must understand these fish and our long relationship with them and with our forests, lands, and waters. This term, we'll learn about Pacific salmon and their rivers, about the forests they depend on, and Indian cultures that are closely connected to salmon.

Salmon Nation is a place: anywhere Pacific salmon have ever swum. It is a way of thinking that

emphasizes **rootedness**, respect, and interconnectedness with each other. Salmon Nation is a community of city-dwellers, Indian tribes, fishermen, farmers, and loggers who are working together to improve our neighborhoods and **watersheds**.

Salmon Nation is people working together to make a strong economy that protects the natural wealth of our land. We want Salmon Nation to be as rich for our grandchildren as it's been for us. This place is so **abundant** and special that it has attracted a constant flow of immigrants, from 12,000 years ago on into the 21st century. The land and waters of Salmon Nation draw us close.

GLOSSARY

headwaters: place where a stream or river begins

hatch: to be born from eggs

spawn: lay eggs

reciprocate: give back

nutrients: chemicals or food that provide for life and growth

rootedness: being rooted, connected to a place, like the roots of a tree

watersheds: the higher lands that drain water and melted snow into rivers

abundant: having more than enough

This abridged version of the Introduction to *Salmon Nation: People, Fish, and Our Common Home*, Edward Wolf and Seth Zuckerman, editors, 2003, is used with permission

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SALMON NATION: COMPREHENSION QUESTIONS

1. Where is Salmon Nation?
2. Why do salmon depend on us now?
3. How do the salmon help the trees and the earth?
4. How are many tribes of native people here connected with salmon?
5. What three ideas are especially important in a Salmon Nation way of thinking?
6. How long have immigrants been coming to Salmon Nation?

VOCABULARY IN CONTEXT

Look at each of these words in the essay, "Salmon Nation." Underline the meaning that is closest to the way the word is used in the essay.

1. inhabit (paragraph 1)
 - a. live in
 - b. have a bad habit
 - c. get stuck inside
2. multiplied (par. 2)
 - a. did math
 - b. increased, grew to be more and more
 - c. got sick
3. recognizes (par. 3)
 - a. meets
 - b. goes back
 - c. understands
4. interconnectedness (par. 6)
 - a. bus system
 - b. being connected
 - c. interview
5. city-dwellers (par. 6)
 - a. people who live in cities
 - b. tall buildings
 - c. city water
6. flow (last paragraph)

- a. bird b. wall c. steady movement like water

*** Homework for Thursday April 3**

Read all of "Salmon Nation," *Z Magazine*. We'll discuss this on Thursday and answer written questions in class. As you read, notice words that you don't understand very well. We can talk about these words in class. Also, please think about the five questions below, which we will discuss in class.

"Consider this crazy idea":

a) Why can't we really throw anything away?

"Go for a hike in the woods":

b) What things are especially abundant here in Salmon Nation?

"Everything you eat was once alive":

c) What stories do the things around you tell?

"Imagine being out in the cold Pacific Ocean":

d) Where do salmon come after they live out in the Pacific?

"The Lands and Waters of Salmon Nation":

e) What is a watershed? a bioregion? (Think about the word bioregion. It's not in *Longman's Dictionary*, but I think you can understand it from the context.)

APRIL 3, WEEK 1

2. Discuss April 1 reading questions. 10 minutes.

3. Present perfect vs. past tense - have been coming since 12,000 years ago, began to come 12,000 years ago, have been coming for 12,000 years
2 columns - give sentences for both. 20 minutes.

4. New vocabulary in homework reading - students ask questions, 15 minutes.

5. Write answers to new questions on "Salmon Nation" homework [below] and discuss. Discuss

homework questions, too. Answer questions in groups - each group answers several questions. 45 minutes.

WRITTEN COMPREHENSION QUESTIONS: Salmon Nation Homework

1. When oil drips out of the bottom of a car, where does it go?
2. What is special about the very old forests on the Pacific coast?
3. When salmon come in from the Pacific ocean to lay their eggs in the streams where they were born, which salmon are the fattest?
4. Use the word watershed in a sentence.

* READING/WRITING HOMEWORK FOR APRIL 8

60 minutes: Write nine sentences using each of the following words from the "Salmon Nation" *Z Magazine* homework reading: **foundation, symbol, contamination, bounty, (all on page 2) adapt, (page 3) coherent, watershed, bioregion, celebrate (all on page 4.)**

APRIL 8, WEEK 2

1. Vocabulary homework - students write sentences on board. 15 minutes.
3. Salmon reading - life cycle - read out loud, write answers to questions. Look at salmon chart together. 30 minutes.
5. Salmon life cycle video clips. 15 minutes.

THE LIVES OF PACIFIC SALMON

Although Pacific salmon spend most of their lives at sea, they spawn in freshwater, returning to the streams and rivers where they were born. They swim upstream, often traveling hundreds of miles. The female uses her body as a shovel to dig a hollow in the gravel on the bottom of the stream. She lays thousands of eggs while a male stays at her side to fertilize them. Then she flaps her tail against the stream bottom, covering the eggs with a protective layer of gravel. The eggs incubate in this gravel nest. A pair of salmon usually make four or five nests.

Soon after they finish spawning, the salmon die. Their bodies become food for eagles, bears, and other animals. Their decaying bodies also give nutrients to the forests and streams that will feed the next generation of salmon.

Water flowing through the gravel carries oxygen to the salmon embryos inside the eggs. In a couple of months, the baby salmon swim up through the gravel and begin to eat small insects in the water. From 50 to 90 percent of young salmon die before they reach the ocean: many predators feed on them.

After a period ranging from a few days (in the case of pink and chum salmon) to a year and a half (in the case of coho salmon) the young fish that have survived swim downstream to the ocean. As they swim downstream, their bodies begin changing to prepare for a life in saltwater.

Salmon spend between one and five years in the ocean, depending on their species. They swim across the open waters, eating smaller fish. Some species of Pacific salmon, like pink salmon, stay close to shore, while others travel as far as Russia and Japan. Chinook salmon can swim as far as 2,500 miles and may stay at sea for four to seven years.

At last the salmon begin their journey home to spawn. Their ability to find their home waters was a mystery for many years. We now know that their sense of smell guides them once they enter fresh water. However, we still don't understand how they can choose the mouth of the right river when they come back to the coast!

On their way home, salmon encounter many obstacles. If they avoid seals, bears, and fishermen, and they are strong enough to jump up waterfalls and dams, they will have a chance to spawn. Salmon stop eating when they enter freshwater on their journey home. Their bodies begin to disintegrate. By the time they reach the place where they were born, they are usually bruised and beaten, their skin tattered. Among the millions of eggs laid every year, only a few - between one and fifteen percent - grow into adult salmon who return home and spawn.

Because salmon return to their home streams to reproduce, they divide naturally into distinct populations that seldom interbreed with their neighbors. Over the millions of years that salmon have lived here in Salmon Nation, each population has adapted to the conditions of its home river.

There are five species of Pacific salmon: chinook, chum, coho, pink, and sockeye. Each species of salmon has several runs, each returning to its river at a specific time of year. Biologists usually refer to wild salmon populations by their run (time of return) and race (river of origin) - for example, Columbia River spring chinook, Siuslaw River fall coho, etc.

SPECIES OF PACIFIC SALMON

Chinook (Oncorhynchus tshawytscha)

The Chinook, also known as King Salmon, is the largest and least abundant of Pacific salmon. Adults spend two to three years at sea and their average weight is 24 pounds. A chinook salmon has small black spots on its back and fins. Chinook most often spawn in large streams and rivers, many of which have been dammed.

Chum (Oncorhynchus keta)

Chum salmon are also known as "dog" salmon because of the spawning males' large teeth. Chum weigh an average of 12 pounds. Spawning males develop vertical reddish stripes on their flanks; females have a reddish horizontal stripe. While chum are fast swimmers, they are not good jumpers and don't migrate far inland to spawn. Chum salmon make up about 13 percent of the West Coast catch.

Coho (Oncorhynchus kisutch)

Coho, also known as silver salmon, are powerful fish that can jump falls that many other salmon can't jump. Coho average about 10 pounds, and are the number one fisherman's fish. Coho spend only one winter at sea, returning the next fall to spawn, often in small creeks. Coho is fourth in abundance.

Pink (Oncorhynchus gorbuscha)

The Pink is the smallest Pacific salmon, averaging three to five pounds. They travel more than 150 miles in the ocean, but rarely swim far upriver to spawn. Pinks are also called "humpbacks" because spawning males develop a large hump on their backs. Pinks make up more than half the total West Coast commercial catch.

Sockeye (Oncorhynchus nerka)

When Sockeye enter freshwater, usually after two years at sea, both males and females develop bright red bodies and green heads. Sockeye average about 12 pounds. Sockeye salmon make up about 25 percent of the West Coast catch.

compiled by Kate Rogers Gessert
mostly from American Rivers website, "Pacific Salmon,"
and *Salmon Nation: People, Fish, and Our Common Home*, Edward Wolf and Seth Zuckerman, editors,
2003.

COMPREHENSION QUESTIONS: The Lives of Pacific Salmon

name _____

Where does a female salmon lay her eggs?

What happens to salmon after they die?

What percentage of young salmon survive to reach the Pacific Ocean? (*Math!)

What is the farthest distance that Pacific salmon travel in the ocean?

What is the longest time they stay in the ocean?

What sense do salmon use to find their home waters?

What are three obstacles salmon must overcome to reach home and spawn?

Why do salmon seldom interbreed?

If a biologist says a fish is an "Umpqua River fall chinook," what does he/she mean?

SPECIES OF PACIFIC SALMON

Which salmon are the biggest?

Which salmon often spawn in large streams and rivers?

Which salmon are especially good at jumping?

Which ones often return to small creeks?

Which salmon species is the most abundant? The least abundant?

Which salmon turn bright red and green when they spawn?

Why do some salmon turn bright colors when they are spawning? (not in the essay)

HOMEWORK: Read these legends about places.

Here are several questions to think about:

Do you think anything in these legends is true?

Why do you think that many Indian tribes tell legends about places?

**** In your life, what legends and stories about places have you heard?**

Think about this last question carefully. It will help you with the next writing assignment.
We'll talk about this in class.

HOW COYOTE MADE THE COLUMBIA RIVER

adapted from *Indian Legends of the Pacific Northwest* by Ella Clark, 1953
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This version of how the Columbia was told in 1951 by Peter Noyes, a Colville Indian in southeastern Washington. He had first heard it 80 years before. In many Pacific Northwest Indian stories, Coyote is a creature of great power.

"Long ago, when Coyote was the big man on the earth, this valley was covered by a big lake. At that time there was no Columbia River. West of us, between the lake and the ocean, was a long ridge of mountains. But the Columbia River did not go through it. Indians today believe that.

"Coyote was smart enough to see that the salmon would come up from the ocean to be food for his people here, if he would make a hole through the mountains. So he went down to a place near where Portland is now, and with his powers he dug a hole through the mountains there. The water went through the hole and on to the ocean.

"The water in the big lake up here was drained, and the water flowing out of it made the Columbia River. Coyote got the water to flow through that hole, the way it does today. Then the salmon came up the river to this part of the country. His people after that had plenty to eat.

"When he dug that hole through the mountains, Coyote made a kind of bridge. You may have heard about it - a wide rock bridge that went across the river. People could walk from one side of the Columbia to the other. A long time afterward, an earthquake knocked the bridge down. The rocks that fell into the water formed the Cascades of the Columbia. They made it hard for boats to go up and down the river there."

Years after he told this story, Mr. Noyes was pleased to read about new scientific discoveries. Geologists found plenty of evidence that in the past, enormous lakes covered parts of Washington that are now drained by the Columbia River and its tributaries.

its tributaries: smaller rivers and creeks that bring water into the Columbia

THE MAIDEN AND HER RACCOONS by Kate Gessert

Before I first visited Bandon, on the south Oregon coast, I had already read this Coquille Indian legend about the big rocks on the Bandon beach.

An Indian maiden, the beautiful daughter of a chief from the Oregon mountains, was excited about visiting the Oregon coast for the first time. But she didn't know much about the ocean or about Seatco, the evil monster who lived under the waves. While the maiden was playing on the beach at night with her baby raccoons, Seatco tried to grab her. She ran from him, dropping her pets on the way. Although she managed to escape, she and her raccoons were turned to stone. They are all still there, the young woman lying on the beach with her face looking up into the sky, and the baby

raccoons scattered along the beach behind her. Seatco was also turned to stone. He sits on a large rock on the beach, staring at her.

When I walked with my family on the beach in Bandon, I was surprised by how much the rocks seemed to illustrate this legend, especially the rock that resembles the profile of a woman's face, gazing up into the sky.

The students also read Sherman Alexie's poem, "That Place Where Ghosts of Salmon Jump," and a place legend from "Interior and Exterior Landscapes," an essay by Leslie Marmon Silko.

APRIL 10, WEEK 2

1. Explain corrections on April 8 reading comprehension questions. 10 minutes.
2. Read stories from homework aloud together in small groups. 25 minutes. Also read "The Place Where Ghosts of Salmon Jump" by Sherman Alexie.
(Sid and Kate: Answer a few vocabulary questions but keep focus on understanding general ideas of what is happening.)
3. Explain writing a story. 25 minutes.

READING/WRITING HOMEWORK FOR APRIL 15

Please try to complete both these homework assignments by next Tuesday, even if it takes longer this time. I have written how much time I think each assignment will take, but it might take you more time or less time. Some assignments may also be slower to do in the beginning.

1. 60 minutes: Write the first draft of a legend or story that involves a place. The place could be anywhere. The story could have happened long ago or recently. If you don't know a story that involves a place, you can ask your friends or make up a story of your own.

Write two short paragraphs that work as an introduction and conclusion for the story or legend. (This is the way "How Coyote Made the Columbia River" and "The Maiden and Her Raccoons" are written.)

In the story, remember to tell **who**, **when**, **where**, **what** near the beginning of the story, and to tell the story in the order that it happened, so the reader will understand the story clearly.

2. 45 minutes: Write seven sentences, with each sentence using one of the following words from the week's reading: **nutrient**, **obstacle**, **disintegrate**, **migrate** (all salmon reading), **drain**, **evidence** ("How Coyote Made the Columbia River"), **demand** ("The Place Where Ghosts of Salmon Jump.") Remember to use the word the same way it's used in what we have read. For example, **demand** is both a noun and a verb. Which way is it used in Alexie's poem?

Estimated homework time: 1 hour 45 minutes

APRIL 15, WEEK 3

1. Vocabulary homework - students write sentences on board. 25 minutes.

Go over vocabulary details: parts of speech, same meaning as in reading.

Read together sentences that students wrote.

5. Salmon and His People - read out loud, answer written questions. 30 minutes.

Were there Indian tribes that didn't depend heavily on salmon? Where?

Look at map together.

HOMEWORK: read "Celilo Falls" and think about this question:

Why is Celilo Falls important to Elizabeth Woody?

SALMON AND HIS PEOPLE

Many Northwest Indian tribes believed that salmon are people who live under the ocean most of the year and then turn into fish once a year and swim up the rivers to feed everyone. The Indians had many ceremonies to welcome the salmon and treat them with respect. It was considered important to return salmon bones to the water. People thought that if the fish were not treated well, they might get angry and not come back. Some salmon ceremonies are still celebrated today, like the First Salmon Feast that took place this past weekend beside the Columbia River.

Many Northwest tribes lived their lives according to the rhythms of the salmon. In winter they lived in permanent villages of big wooden houses. A large part of their winter food came from smoked and dried, pounded salmon, often mixed with fish oil and dried berries. Eighty-five percent of many people's calories came from fish, mostly rich, nutritious salmon. Salmon was part of every ceremony, from naming a baby to saying farewell to the dead.

During spring, summer, and fall, the Indians moved from one camp to another, catching salmon and other fish on the Pacific coast and in the rivers, hunting deer, elk, and other animals, and gathering roots and berries. There were special places, times, and ways that each food was collected, and special ways that it was preserved to be eaten later. Families and tribes had traditional areas where they fished, hunted, and gathered.

Men did the fishing, catching salmon with dip nets, bone-tipped spears, and weirs (underwater fences) made of branches and stones. Women cooked, dried, and smoked the fish and stored them in baskets. About one out of every twenty returning salmon were caught on their way upriver, so there were still plenty left to spawn.

Perhaps the biggest salmon fishing area in what is now Oregon and Washington was Celilo Falls on the Columbia River, upstream from where the enormous Dalles hydroelectric dam now stands. Indian people from all over the Northwest and beyond came here in summer to fish, trade, and party. Friends and family members got together to talk, dance, and play games. Young men and women courted and married. Indians from the Pacific coast traded furs, fish oil, and dentalium shells. Indians from farther east came to Celilo to trade horses and buffalo robes. Kalapuya people from the Willamette Valley traded camas cakes.

When European explorers first came to the Columbia River watershed in the 1770's, they found a

thriving population of about 100,000 Indians, nourished by salmon runs of up to 16 million fish.

Kate Gessert

compiled from many websites

SALMON AND HIS PEOPLE: COMPREHENSION QUESTIONS

IN ANSWERING THESE QUESTIONS, PLEASE USE YOUR OWN WORDS!!

1. Why did Northwest Indians think that it was important to treat returning salmon with respect?
2. What did many Indian people eat in winter?
3. How was salmon preserved for winter?
4. Why was Celilo Falls important?
5. What kinds of things were traded at Celilo Falls?
6. How big were the salmon runs of the Columbia watershed when European explorers first arrived?

STUDENT VOCABULARY SENTENCES FROM APRIL 8

by Bernardino, Damaris, Dolores, Jaime, Jessica, Kate, Lizbeth,
Petras, Rosalba, Rosio, Ruben, and Suja

Marketa, Paul,

1. foundation, noun (founder, noun, found, verb, founding, adjective)

If you have a good foundation in your relationship, it will last forever.

Cleaning up the world is the foundation of better years to come.

The foundation of a democratic country is a free and fair election system.

If you want to build a house that can stand more than a hundred years, you have to build a very good foundation first.

2. symbol, noun (symbolism, noun, symbolize, transitive verb, symbolic, adjective, symbolically, adverb)

Salmon is the symbol of this area that reaches from California north to Alaska.

The symbol of our school is the pear flower.

An eagle eating a snake is one of the symbols on the Mexican flag.

The death of honey bees is a symbol of the way we're destroying the environment.

3. contamination, noun (contaminate, transitive verb)

Gardens near old buildings often have problems with lead contamination in the soil.

The government warned about contamination in the ocean, because a big ship had sunk. The contamination in our rivers in Mexico is bad.

4. adapt, intransitive/transitive verb (adaptation, adaptability, adapter, nouns, adaptable, adjective)

It's hard to adapt to the weather in Eugene. It's easier to live in a new country if you can adapt to the culture. All humans, animals, and plants have to adapt to climate change. Some plants and animals that cannot adapt fast enough are dying.

5. bounty, noun (bountiful, bounteous, adjectives, abound, verb)

The cultural and historical bounty of the Czech Republic attracts many tourists from abroad. In her garden there is a bounty of flowers.

The bounty of our forest is important and we can use it.

6. coherent, adjective (incoherent, adjective, in/coherence, noun, in/coherently, adverb)

While she was waking up, her first words were coherent.

The way my teacher teaches English is very coherent.

The president gave a coherent speech about his work.

7. watershed, noun

It's important to keep our watershed clean because we are part of the watershed community. Mexico has a lot of watersheds across its mountain ranges.

8. bioregion, noun (bioregional, adjective)

The Chiapas forest bioregion is changing a lot because people there are cutting too many trees. Every bioregion has its own species of plants and animals.

9. celebrate, transitive/intransitive verb (celebration, noun, celebratory, celebrated, adjectives)

To be alive every day, to have good health and a wonderful family, are important reasons to celebrate the miracle of life. We've worked hard all week. Now let's celebrate! In my family this month we will celebrate four birthdays.

RECALLING CELILO

by Elizabeth Woody, a Warm Springs Indian writer

Think about this question: why is Celilo Falls important to the writer?

Along the mid-Columbia River, 90 miles east of Portland, Oregon, stand Celilo Indian Village and Celilo Park... Beneath the shimmering surface of the river lies Celilo Falls, or *Wyam*. *Wyam* means "Echo of Falling Water" or "Sound of Water upon the Rocks"... It was one of the most important fisheries of the Columbia River system. In recent decades, the greatest irreversible change occurred in the middle Columbia as Celilo was flooded by the Dalles Dam on March 10, 1957. The tribal people who gathered there did not believe it possible.

Historically, the *Wyampum* lived at *Wyam* for over 12,000 years. Estimates vary, but *Wyam* is among the longest continuously inhabited communities in North America. The elders tell us we have been here from time immemorial.

Today we know Celilo Falls as more than a lost landmark. It was a place as revered as one's own mother. The story of *Wyam's* life is the story of the salmon, and of my own ancestry. I live with the 42-year absence and silence of Celilo Falls...

The original locations of my ancestral villages on the Columbia River are Celilo Village and the *Wishram* village that nestled below the petroglyph, She-Who-Watches... But my own connections to Celilo Falls are **tenuous** at best. I was born two years after Celilo drowned in the backwaters of The Dalles Dam.

My grandfather fished at Celilo with his brother, at a place that a relative or friend permitted... They fished on **scaffolds** above the white water with dip nets... When the fish ran, people were wealthy. People from all over the country would come to Celilo to watch the Indians catch fish. They would buy fish freshly caught. It was one of the most famous tourist sites in North America...

What happened at *Wyam* was more important than entertainment. During the day, women cleaned large amounts of finely cut fish and hung the parts to dry in the heat of the arid landscape. So abundant were the fish passing *Wyam* on their upriver journey that the fish caught there could feed a whole family through the winter. Many families had enough salmon to trade with others for special items.

No one would starve if they could work... It was a dignified life. Peaceful, perhaps because of the sound of the water that echoed in people's minds...

From time immemorial, the Creator's instruction was direct and clear. Feasts and ceremonies that honor the first roots and berries are major events. The head and tail of the first salmon caught at Celilo is returned to *N'ch-iwana*, the Columbia River. The whole community honors that catch: *One of our relatives has returned, and we think about the lives we take to care for our communities.*

Songs are repeated seven times by seven drummers, a bell ringer, and people gathered in the **Longhouse**. *Washat* song is an ancient method of worship. By wearing the finest Indian dress, the dancers show respect to the Creator. Men on the south side, women on the north, the dancers begin to move. In a circle they dance sideways, counterclockwise. This ceremony symbolizes the partnership of men and women, the equality and balance within the four directions and the universe. We each have our place and our role. As a result, the Longhouse is a special place to learn.

Meanwhile, in the kitchen, women prepare the meal. Salmon, **venison**, edible roots, and the various berries - huckleberries and chokecherries - are the four sacred foods... Those who gather the roots and berries are **distinguished**. They are chosen to gather the foods because they have good hearts and minds... One does not gather food without proper training, so as not to **disrupt** natural systems.

What has happened to Celilo Falls illustrates a story of ignorance of this land... The Columbia River is today broken up by 19 hydroelectric dams, many planned and built without a thought for the salmon. Nuclear, agricultural, and industrial pollution, the clearcut mountainsides - all are harmful to salmon.

Since 1855, the Columbia's 14 million wild salmon have **dwindled** to fewer than one hundred thousand.

Traditional **awareness** teaches us to take only what we need, and let the rest grow. How can one learn? My uncle reminded me that we learned about simplicity first. He said, "Remember the stories your grandmother told. Remember when she said her great-grandmother, *Kah-Nee-Ta*, would tell her to go to the river and catch some fish for the day? Your grandmother would catch several fish, because she loved to look at them. She would let all but two go. Her grandmother taught her that."

A larger sadness shadows my grandmother's story.... What if the wild salmon no longer return? I cannot say whether we have the strength necessary to endure this loss.

The salmon, the tree, and even Celilo Falls (*Wyam*) echo inside us if we become still and listen. Once you have heard, take only what you need, and let the rest go.

Elizabeth Woody (Navaho/Warm Springs/Wasco/Yakama) received the American Book Award for her poetry collection, "Hand into Stone." This essay is adapted from Salmon Nation: People, Fish, and Our Common Home, 2003. These adapted excerpts are used with permission

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GLOSSARY

| | |
|----------------------|---|
| irreversible (adj.) | unable to be reversed |
| immemorial (adj.) | beyond memory |
| revere (verb) | love and respect |
| tenuous (adj.) | not strong |
| scaffold (n.) | platform high in the air |
| arid (adj.) | dry (refers to climate) |
| Longhouse (noun) | large building for Indian ceremonies and gatherings |
| venison (noun) | deer meat |
| distinguished (adj.) | special and respected |
| disrupt (v.) | bring into disorder |
| dwindle (v.) | grow smaller |
| awareness (n.) | knowledge and understanding |

APRIL 17, WEEK 3

1. Talk about "Celilo Falls" reading in small groups. 10 minutes.

Why is this place important to the writer?

2. Video clips of Celilo Falls history. 15 minutes.

3. Revising story + idea for book of class stories. 15 minutes.

4. Time words and adverb clauses in writing - find examples in legends we read last week. Small groups. 20 minutes.

What are good time transition words for stories?

Write some on board.

*

READING/WRITING HOMEWORK FOR APRIL 22

1. 60 minutes: Write the second draft of a legend or story (the same one that you wrote a first draft about.)

- * Make sure you have a strong introduction and conclusion.
- * Clearly explain who, where, when, what as the story begins.
- * Use time words and adverb clauses where they are helpful.
- * Start a new paragraph whenever there is an important change in time or action.
- * Bring the reader close by describing people, places, and feelings.
- * Check grammar and sentence structure and make it as good as you can.

2. 45 minutes: Write six sentences, with each sentence using one of these words from the the week's reading: **nutritious**, **preserve**, **traditional** ("Salmon and His People"), **balance** (bottom of page 1, "Recalling Celilo") **dignified**, **awareness** (page 2, "Recalling Celilo.") Be careful to use the same parts of speech that are in the readings. Also, write two sentences with words that contain suffixes we've been practicing: one word with -ion/-tion/-sion suffix, another word with -less ending.

APRIL 22, WEEK 4

1. Vocabulary sentences. 20 minutes.

3. Read first part of salmon reading and discuss these questions. 30 minutes.

Salmon are only one genus of animals - we could look at any closely.

What four big dangers to salmon do you read about in this first part? (through the two logging paragraphs)

What happened to the Indian tribes who had fished for salmon?

How could Euro-American people let all this happen?

WHAT'S HAPPENED TO THE SALMON?

Salmon and Indian people lived in balance for thousands of years. But when European-Americans came to the Pacific Northwest, everything began to change. Settlers and businessmen from the East Coast of the U.S. caught salmon in the rivers in huge nets, traps, and fish wheels. They built canneries along the banks of the Columbia River and caught fish as fast as possible to send to consumers in the eastern U.S. and Europe. If they caught too many salmon for the canneries to process, they just shoveled the dead fish back into the river. Salmon runs soon began to decline.

Indian people whose cultures were built around salmon were also in trouble. Up to 90 percent of the people in Pacific Northwest tribes were killed by European diseases to which they had no **immunity**: smallpox, measles, malaria, flu. **Epidemics** swept through villages and left no one to bury the dead, whose bodies drifted down the rivers.

By 1870, the population of Indians in the Columbia region had shrunk from 100,000 to less than 10,000, and the non-native population had grown to 100,000. **Treaties** between the U.S. government and the **decimated** tribes forced the Indians to give up most of their land and live on reservations. As an important part of the treaties, they kept their rights to fish at their usual places.

However, that was often difficult. Canneries, fish wheels, roads, canals, and railroads soon lined the banks of the Columbia. Then, in the 1930's, the U.S. began building hydroelectric dams in the Columbia and other rivers. Many high dams were built without fish ladders to help returning salmon get upriver to spawn. Even when there are fish ladders, young salmon heading down to the ocean are often killed by

overheated water stored behind the dams, by spinning blades of dam turbines, and by the fishes' long fall over the dam into the **churning** water at the bottom, which causes bubbles to form in their blood. Government workers on the Columbia sometimes catch young salmon now and carry them downstream on barges, trying to take them safely below the dams.

As European-American farmers moved to Salmon Nation in the 19th century, they **diverted** water from the rivers to **irrigate** their crops during the dry summers. Young salmon died/die in irrigation ditches and were/are sucked into powerful irrigation pumps. Fish die in the warmer, more shallow streams, and have few places to hide from predators. Cattle grazed/graze along stream banks and walk through the water. They crush salmon eggs, eat young trees that shade the streams, and cause erosion and water pollution.

Late in the 19th century, **commercial** loggers moved into the coastal valleys of Salmon Nation. Near streams and rivers, they cut down **old-growth** forests and dragged the giant logs to the river. Loggers often stored the logs in a "splash dam," a temporary dam which they later blew up with dynamite. The explosion forced all the logs to rush downstream at once, scraping away everything in the water: plants, branches, and gravel where salmon spawned.

With bulldozers and chainsaws, logging spread across the landscape. Clearcutting, which is still widely practiced, removes all forest cover, causing landslides that often **clog** streams that are downhill from the clearcuts. More soil in streams means that even if salmon make it home to spawn, a lot of their eggs can't hatch. Tree bark from logging also washes into the water, **smothering** salmon eggs. Hundreds of thousands of miles of logging roads have been built, washing muddy water downhill into streams. Cutting down trees that grow near river banks raises the water temperature, harming salmon eggs and young.

Water pollution that threatens salmon has many sources: industries that dump chemicals and garbage into rivers and ocean bays, sewage and **run-off** from cities and suburbs, agricultural run-off of fertilizers, **herbicides**, eroded soil, and animal feces, and oil spills in the ocean. In recent years, global warming has become recognized as a danger to salmon (as well as everyone else.) Both salmon and their prey are affected by warmer temperatures and sometimes lower oxygen levels in the ocean, streams, and river.

Although it's not as bad as it was in the early days of the Columbia canneries, salmon are still being overfished. Wildlife scientists recommend that only 4 to 10 percent of any animal's **population** be caught every year. Yet into the 1990's, 85 to 90 percent of many salmon runs were caught by commercial fishermen. Most commercial fishermen catch salmon in the ocean, before the fish return to spawn. The percent of salmon that is fished now has been reduced to 30 percent on average, but that is still far too much. As you may have read in the newspaper recently, salmon in Oregon and California are **off-limits** for commercial fishing this year because there are so few fish.

In Salmon Nation, ocean fish are disappearing more quickly than anywhere else in the world. Pacific salmon are gone from about 40 percent of their breeding territory in Washington, Oregon, Idaho and California. In two-thirds of the area they occupied 100 years ago, they are **extinct**, **endangered** or **threatened**.

RECOVERY EFFORTS

Many efforts have been made to help salmon recover, ever since the early 20th century when scientists realized how fast the salmon runs were decreasing.

The first "solution" to the problem was hatcheries, baby-fish factories where salmon eggs are hatched and raised until young fish are released to the wild. In the U.S., more than 50 million hatchery-raised salmon are still raised and released every year, although by now people understand that there are many problems. Hatchery-raised fish compete with young wild salmon for food, increase disease, and breed with wild salmon to **produce offspring** that have lower rates of survival. At this time, 80 percent of the salmon who return to the Columbia are hatchery fish.

Fish ladders have been built at dams since the 1940's, and people keep trying different ways to help young salmon get downriver to the ocean. Salmon from fish farms are alternatives to wild-caught salmon, but environmental problems include the need for large numbers of smaller wild fish to feed to the salmon, water pollution, and the escape of farmed Atlantic salmon who carry diseases and interbreed with wild ones. Farmed salmon are also less healthy to eat because they are fed antibiotics and their flesh is **dyed**.

Many communities have projects to restore salmon **habitat**. People remove garbage from streams, plant shade trees on the banks, and add old logs and pools to make places for salmon to spawn.

In the late 1960's, Indians whose ancestors had fished on the Columbia River held many **protests** to get back their fishing rights. They brought a lawsuit against the federal government for breaking the rules of the 1855 treaty. They won the lawsuit, and they are now **entitled** to half the Columbia River salmon catch. They formed the Columbia Intertribal Fish Commission, and their biologists have made an intertribal plan for salmon recovery. "We are here for the **long run**," says Louie Pitt of the Confederated Tribes of Warm Springs. "We want to see the salmon here for our generations to come."

GLOSSARY

| | |
|-------------------|---|
| immunity | inability to be harmed |
| epidemic | many cases of the same disease at the same time |
| treaty | formal agreement, usually between countries |
| decimate | destroy a large part of |
| reservation | land set apart for Indian tribes to live on |
| blade | flat wide part of an engine |
| churn | move around violently |
| barge | big flat boat |
| divert | turn from one direction or use to another |
| irrigate | give regular water to plants on farms |
| commercial | for business rather than personal use |
| old-growth | oldest, biggest trees |
| clog | fill up so it cannot flow |
| smother | kill by taking away air to breathe |
| run-off | water or liquids that run into streams and oceans |
| herbicides | chemical poisons to kill weeds |
| population | the number of individuals in a group |
| off-limits | not permitted |
| extinct | there are no more any more anywhere |
| endangered | the population is so small that it is in great danger of extinction and must be strongly protected |
| threatened | the population is in moderate danger of extinction and must be protected |
| recover | return to earlier strength |
| produce offspring | have babies |
| dye | add color with chemicals |
| habitat | place where an animal or plant lives |
| protest | speak and have gatherings against |
| entitled to | having a right to |
| long run | a long time |

Major sources:

"Muddied Waters, Muddled Thinking" by Jim Lichatowich and Seth Zuckerman, from *Salmon Nation: People, Fish, and Our Common Home*, Ecotrust, Portland, 2003.

Salmon and His People by Dan Landeen and Allen Pinkham, Confluence Press, Lewiston, 1999.

THINK ABOUT THESE 3 HOMEWORK QUESTIONS: What additional dangers to salmon did you read about on page 2, the homework part of the essay?
What efforts are being made to help salmon recover?
How well are these efforts working?
WRITE ANSWERS TO THESE QUESTIONS :
How did non-native people let salmon get in such trouble? What did the people need to learn?
What have we learned in the present about salmon and nature? What do we still need to learn?

APRIL 24, WEEK 3

1. Talk about salmon reading in small groups, 15 minutes.

Discuss homework questions plus:

Do we still think the way people used to? What do we still need to learn?

2. History of salmon and salmon recovery projects video clips. 15 minutes.

READING/WRITING HOMEWORK FOR APRIL 29

1. 60 minutes: Write the final draft of a legend or story (the same one that you wrote a first draft about.) Work on it carefully so it is ready to copy.

* Use time words and adverb clauses where they are helpful.

* Start a new paragraph whenever there is an important change in time or action.

* Make all corrections to grammar, spelling, and sentence structure.

2. 60 minutes: Write ten sentences, with each sentence using one of these words from "What's Happened to the Salmon?":

immunity, decimate, divert, commercial, population, extinct, endanger (the verb: to put in danger,) recover, habitat, protest.

Be careful to use the same parts of speech that are in the reading, and use the words in the same way generally that they are used in the reading.

Estimated homework time: 2 hours

THE WILLAMETTE VALLEY

The Willamette Valley runs through much of Oregon, from the Columbia River in the north to Roseburg in the south. It is nestled between the Coast Range to the west and the Cascade Range to the east. Compared to the mountains that surround it, it has less rain and snow - an average of 45 inches a year - and warmer temperatures. Its mild temperatures and good soils make it one of the best farming areas in Oregon.

The land in the Willamette Valley is mostly prairies, floodplains, and rolling hills. When the Kalapuya Indians lived in the valley, they burned it every year to make it easier to gather food plants and hunt animals. The valley was wetlands and big open meadows with oaks growing here and there, because oaks are resistant to fire. Douglas firs, cedars, and other evergreen trees grew in the hills and mountains, away from the fires.

After European-American settlers came here from farther east in the U.S., in the 1800s, the Kalapuya died or were put on reservations. The settlers didn't burn the valley as the Kalapuya had. They started farming, they drained most of the wetlands, and they cut down many forests.

Now the Willamette Valley is mostly cities, towns, and farms, with small areas of wetlands and oak forests. Douglas firs grow in the valley now, too. The mountains that surround the valley are covered with Douglas fir forests and clearcuts.

Glossary

nestled

kept safely, as in a nest

prairie

wide grassy land, mostly flat

floodplain

area with good soil, where a river sometimes floods

| | |
|------------------------|--|
| wetland | land that is under water at least part of the year |
| resistant to evergreen | not harmed by green all year |
| settler | someone who moves to land where there are few people |
| reservation | land kept for American Indian people |
| drain | remove the water |

SALMON NATION

Along the west coast of North America, people and salmon have lived together since the last Ice Age, twelve thousand years ago. Five species of Pacific salmon inhabit the waters of this region, from the rain-soaked coast of Alaska to rivers and small creeks in the dry Oregon country east of the Cascade Mountains.

Human beings have lived in this vast landscape, just as the salmon have filled its rivers. Every year, with the salmon's age-old migration from ocean to **headwaters**, people have caught them, eaten them, and celebrated their return. In turn, as people have multiplied and spread across the land, salmon have come to depend on us for the freshwater streams where the fish **hatch**, grow, and, years later, return to **spawn**.

This shared territory is Salmon Nation, which spans two countries, six states, and one province. Beyond that, Salmon Nation is a way of thinking that recognizes this land is not ours alone. We the people of Salmon Nation choose not to turn our backs on these fish.

The salmon **reciprocate**. Thanks to the **nutrients** brought inland from the sea by spawning salmon, the trees and earth of this region are built of salmon just as our bones and flesh are partly salmon-made. Native people have shaped their cultures to the rhythms of the salmon migrations and the lessons they offered. Today, we have an opportunity to learn from the example of native people.

To learn this wisdom, we must understand these fish and our long relationship with them and with our forests, lands, and waters. This term, we'll learn about Pacific salmon and their rivers, about the forests they depend on, and Indian cultures that are closely connected to salmon.

Salmon Nation is a place: anywhere Pacific salmon have ever swum. It is a way of thinking that emphasizes **rootedness**, respect, and interconnectedness with each other. Salmon Nation is a community of city-dwellers, Indian tribes, fishermen, farmers, and loggers who are working together to improve our neighborhoods and **watersheds**.

Salmon Nation is people working together to make a strong economy that protects the natural wealth of our land. We want Salmon Nation to be as rich for our grandchildren as it's been for us. This place is so **abundant** and special that it has attracted a constant flow of immigrants, from 12,000 years ago on into the 21st century. The land and waters of Salmon Nation draw us close.

GLOSSARY

headwaters: place where a stream or river begins

hatch: to be born from eggs

spawn: lay eggs

reciprocate: give back

nutrients: chemicals or food that provide for life and growth

rootedness: being rooted, connected to a place, like the roots of a tree

watersheds: the higher lands that drain water and melted snow into rivers

abundant: having more than enough

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SALMON NATION: COMPREHENSION QUESTIONS

1. Where is Salmon Nation?
2. Why do salmon depend on us now?
3. How do the salmon help the trees and the earth?
4. How are many tribes of native people here connected with salmon?
5. What three ideas are especially important in a Salmon Nation way of thinking?
6. How long have immigrants been coming to Salmon Nation?

VOCABULARY IN CONTEXT

Look at each of these words in the essay, "Salmon Nation." Underline the meaning that is closest to the way the word is used in the essay.

1. inhabit (paragraph 1)
 - a. live in
 - b. have a bad habit
 - c. get stuck inside
2. multiplied (par. 2)
 - a. did math
 - b. increased, grew to be more and more
 - c. got sick
3. recognizes (par. 3)
 - a. meets
 - b. goes back
 - c. understands
4. interconnectedness (par. 6)
 - a. bus system
 - b. being connected
 - c. interview
5. city-dwellers (par. 6)
 - a. people who live in cities
 - b. tall buildings
 - c. city water
6. flow (last paragraph)
 - a. bird
 - b. wall
 - c. steady movement like water

THE LIVES OF PACIFIC SALMON

Although Pacific salmon spend most of their lives at sea, they spawn in freshwater, returning to the streams and rivers where they were born. They swim upstream, often traveling hundreds of miles. The female uses her body as a shovel to dig a hollow in the gravel on the bottom of the stream. She lays thousands of eggs while a male stays at her side to fertilize them. Then she flaps her tail against the stream bottom, covering the eggs with a protective layer of gravel. The eggs incubate in this gravel nest. A pair of salmon usually make four or five nests.

Soon after they finish spawning, the salmon die. Their bodies become food for eagles, bears, and other animals. Their decaying bodies also give nutrients to the forests and streams that will feed the next generation of salmon.

Water flowing through the gravel carries oxygen to the salmon embryos inside the eggs. In a couple of

months, the baby salmon swim up through the gravel and begin to eat small insects in the water. From 50 to 90 percent of young salmon die before they reach the ocean: many predators feed on them.

After a period ranging from a few days (in the case of pink and chum salmon) to a year and a half (in the case of coho salmon) the young fish that have survived swim downstream to the ocean. As they swim downstream, their bodies begin changing to prepare for a life in saltwater.

Salmon spend between one and five years in the ocean, depending on their species. They swim across the open waters, eating smaller fish. Some species of Pacific salmon, like pink salmon, stay close to shore, while others travel as far as Russia and Japan. Chinook salmon can swim as far as 2,500 miles and may stay at sea for four to seven years.

At last the salmon begin their journey home to spawn. Their ability to find their home waters was a mystery for many years. We now know that their sense of smell guides them once they enter fresh water. However, we still don't understand how they can choose the mouth of the right river when they come back to the coast!

On their way home, salmon encounter many obstacles. If they avoid seals, bears, and fishermen, and they are strong enough to jump up waterfalls and dams, they will have a chance to spawn. Salmon stop eating when they enter freshwater on their journey home. Their bodies begin to disintegrate. By the time they reach the place where they were born, they are usually bruised and beaten, their skin tattered. Among the millions of eggs laid every year, only a few - between one and fifteen percent - grow into adult salmon who return home and spawn.

Because salmon return to their home streams to reproduce, they divide naturally into distinct populations that seldom interbreed with their neighbors. Over the millions of years that salmon have lived here in Salmon Nation, each population has adapted to the conditions of its home river.

There are five species of Pacific salmon: chinook, chum, coho, pink, and sockeye. Each species of salmon has several runs, each returning to its river at a specific time of year. Biologists usually refer to wild salmon populations by their run (time of return) and race (river of origin) - for example, Columbia River spring chinook, Siuslaw River fall coho, etc.

SPECIES OF PACIFIC SALMON

Chinook (Oncorhynchus tshawytscha)

The Chinook, also known as King Salmon, is the largest and least abundant of Pacific salmon. Adults spend two to three years at sea and their average weight is 24 pounds. A chinook salmon has small black spots on its back and fins. Chinook most often spawn in large streams and rivers, many of which have been dammed.

Chum (Oncorhynchus keta)

Chum salmon are also known as "dog" salmon because of the spawning males' large teeth. Chum weigh an average of 12 pounds. Spawning males develop vertical reddish stripes on their flanks; females have a reddish horizontal stripe. While chum are fast swimmers, they are not good jumpers and don't migrate far inland to spawn. Chum salmon make up about 13 percent of the West Coast catch.

Coho (Oncorhynchus kisutch)

Coho, also known as silver salmon, are powerful fish that can jump falls that many other salmon can't jump. Coho average about 10 pounds, and are the number one fisherman's fish. Coho spend only one winter at sea, returning the next fall to spawn, often in small creeks. Coho is fourth in abundance.

Pink (Oncorhynchus gorbuscha)

The Pink is the smallest Pacific salmon, averaging three to five pounds. They travel more than 150 miles in the ocean, but rarely swim far upriver to spawn. Pinks are also called "humpbacks" because spawning males develop a large hump on their backs. Pinks make up more than half the total West Coast commercial catch.

Sockeye (Oncorhynchus nerka)

When Sockeye enter freshwater, usually after two years at sea, both males and females develop bright red bodies and green heads. Sockeye average about 12 pounds. Sockeye salmon make up about 25 percent of the West Coast catch.

compiled by Kate Rogers Gessert
mostly from American Rivers website, "Pacific Salmon,"
and *Salmon Nation: People, Fish, and Our Common Home*, Edward Wolf and Seth Zuckerman, editors,
2003.

COMPREHENSION QUESTIONS: The Lives of Pacific Salmon

Where does a female salmon lay her eggs?
What happens to salmon after they die?
What percentage of young salmon survive to reach the Pacific Ocean? (*Math!)
What is the farthest distance that Pacific salmon travel in the ocean?
What is the longest time they stay in the ocean?
What sense do salmon use to find their home waters?
What are three obstacles salmon must overcome to reach home and spawn?
Why do salmon seldom interbreed?
If a biologist says a fish is an "Umpqua River fall chinook," what does he/she mean?

SPECIES OF PACIFIC SALMON

Which salmon are the biggest?
Which salmon often spawn in large streams and rivers?
Which salmon are especially good at jumping?
Which ones often return to small creeks?
Which salmon species is the most abundant? The least abundant?
Which salmon turn bright red and green when they spawn?
Why do you think some salmon turn bright colors when they are spawning? (not in the essay)

HOMEWORK FOR APRIL 10: Read these legends about places.

Here are several questions to think about:

Do you think anything in these legends is true?

Why do you think that many Indian tribes tell legends about places?

**** In your life, what legends and stories about places have you heard?**

Think about this last question carefully.

It will help you with the next writing assignment. We'll talk about this in class on Thursday.

HOW COYOTE MADE THE COLUMBIA RIVER

adapted from *Indian Legends of the Pacific Northwest* by Ella Clark, 1953

This version of how the Columbia was told in 1951 by Peter Noyes, a Colville Indian in southeastern Washington. He had first heard it 80 years before. In many Pacific Northwest Indian stories, Coyote

is a creature of great power.

"Long ago, when Coyote was the big man on the earth, this valley was covered by a big lake. At that time there was no Columbia River. West of us, between the lake and the ocean, was a long ridge of mountains. But the Columbia River did not go through it. Indians today believe that.

"Coyote was smart enough to see that the salmon would come up from the ocean to be food for his people here, if he would make a hole through the mountains. So he went down to a place near where Portland is now, and with his powers he dug a hole through the mountains there. The water went through the hole and on to the ocean.

"The water in the big lake up here was drained, and the water flowing out of it made the Columbia River. Coyote got the water to flow through that hole, the way it does today. Then the salmon came up the river to this part of the country. His people after that had plenty to eat.

"When he dug that hole through the mountains, Coyote made a kind of bridge. You may have heard about it - a wide rock bridge that went across the river. People could walk from one side of the Columbia to the other. A long time afterward, an earthquake knocked the bridge down. The rocks that fell into the water formed the Cascades of the Columbia. They made it hard for boats to go up and down the river there."

Years after he told this story, Mr. Noyes was pleased to read about new scientific discoveries. Geologists found plenty of evidence that in the past, enormous lakes covered parts of Washington that are now drained by the Columbia River and its tributaries.

its tributaries: smaller rivers and creeks that bring water into the Columbia

THE MAIDEN AND HER RACCOONS by Kate Gessert

Before I first visited Bandon, on the south Oregon coast, I had already read this Coquille Indian legend about the big rocks on the Bandon beach.

An Indian maiden, the beautiful daughter of a chief from the Oregon mountains, was excited about visiting the Oregon coast for the first time. But she didn't know much about the ocean or about Seatco, the evil monster who lived under the waves. While the maiden was playing on the beach at night with her baby raccoons, Seatco tried to grab her and she ran from him, dropping her pets on the way. Although she managed to escape, she and her raccoons were turned to stone. They are all still there, the young woman lying on the beach with her face looking up into the sky, and the baby raccoons scattered along the beach behind her. Seatco was also turned to stone. He sits on a large rock on the beach, staring at her.

When I walked with my family on the beach in Bandon, I was surprised by how much the rocks seemed to illustrate of this legend, especially the rock that resembles the profile of a woman's face, gazing up into the sky.

SALMON AND HIS PEOPLE

Many Northwest Indian tribes believed that salmon are people who live under the ocean most of the year and then turn into fish once a year and swim up the rivers to feed everyone. The Indians had many ceremonies to welcome the salmon and treat them with respect. It was considered important to return salmon bones to the water. People thought that if the fish were not treated well, they might get angry and not come back. Some salmon ceremonies are still celebrated today, like the First Salmon Feast that took place this past weekend beside the Columbia River.

Many Northwest tribes lived their lives according to the rhythms of the salmon. In winter they lived in permanent villages of big wooden houses. A large part of their winter food came from smoked and dried, pounded salmon, often mixed with fish oil and dried berries. Eighty-five percent of many people's calories came from fish, mostly rich, nutritious salmon. Salmon was part of every ceremony, from naming a baby to saying farewell to the dead.

During spring, summer, and fall, the Indians moved from one camp to another, catching salmon and other fish on the Pacific coast and in the rivers, hunting deer, elk, and other animals, and gathering roots and berries. There were special places, times, and ways that each food was collected, and special ways that it was preserved to be eaten later. Families and tribes had traditional areas where they fished, hunted, and gathered.

Men did the fishing, catching salmon with dip nets, bone-tipped spears, and weirs (underwater fences) made of branches and stones. Women cooked, dried, and smoked the fish and stored them in baskets. About one out of every twenty returning salmon were caught on their way upriver, so there were still plenty left to spawn.

Perhaps the biggest salmon fishing area in what is now Oregon and Washington was Celilo Falls on the Columbia River, upstream from where the enormous Dalles hydroelectric dam now stands. Indian people from all over the Northwest and beyond came here in summer to fish, trade, and party. Friends and family members got together to talk, dance, and play games. Young men and women courted and married. Indians from the Pacific coast traded furs, fish oil, and dentalium shells. Indians from farther east came to Celilo to trade horses and buffalo robes. Kalapuya people from the Willamette Valley traded camas cakes.

When European explorers first came to the Columbia River watershed in the 1770's, they found a thriving population of about 100,000 Indians, nourished by salmon runs of up to 16 million fish.

SALMON AND HIS PEOPLE: COMPREHENSION QUESTIONS

IN ANSWERING THESE QUESTIONS, PLEASE USE YOUR OWN WORDS!!

STUDENT VOCABULARY SENTENCES FROM APRIL 8

by Bernardino, Damaris, Dolores, Jaime, Jessica, Kate, Lizbeth,
Petras, Rosalba, Rosio, Ruben, and Suja

Marketa, Paul,

1. foundation, noun (founder, noun, found, verb, founding, adjective)

If you have a good foundation in your relationship, it will last forever.

Cleaning up the world is the foundation of better years to come.

The foundation of a democratic country is a free and fair election system.

If you want to build a house that can stand more than a hundred years, you have to build a very good foundation first.

2. symbol, noun (symbolism, noun, symbolize, transitive verb, symbolic, adjective, symbolically, adverb)

Salmon is the symbol of this area that reaches from California north to Alaska.

The symbol of our school is the pear flower.

An eagle eating a snake is one of the symbols on the Mexican flag.

The death of honey bees is a symbol of the way we're destroying the environment.

3. contamination, noun (contaminate, transitive verb)

Gardens near old buildings often have problems with lead contamination in the soil.

The government warned about contamination in the ocean, because a big ship had sunk. The contamination in our rivers in Mexico is bad.

4. **adapt, intransitive/transitive verb (adaptation, adaptability, adapter, nouns, adaptable, adjective)**
It's hard to adapt to the weather in Eugene. It's easier to live in a new country if you can adapt to the culture. All humans, animals, and plants have to adapt to climate change. Some plants and animals that cannot adapt fast enough are dying.

5. **bounty, noun (bountiful, bounteous, adjectives, abound, verb)**

The cultural and historical bounty of the Czech Republic attracts many tourists from abroad. In her garden there is a bounty of flowers.

The bounty of our forest is important and we can use it.

6. **coherent, adjective (incoherent, adjective, in/coherence, noun, in/coherently, adverb)**

While she was waking up, her first words were coherent.

The way my teacher teaches English is very coherent.

The president gave a coherent speech about his work.

7. **watershed, noun**

It's important to keep our watershed clean because we are part of the watershed community. Mexico has a lot of watersheds across its mountain ranges.

8. **bioregion, noun (bioregional, adjective)**

The Chiapas forest bioregion is changing a lot because people there are cutting too many trees. Every bioregion has its own species of plants and animals.

9. **celebrate, transitive/intransitive verb (celebration, noun, celebratory, celebrated, adjectives)**

To be alive every day, to have good health and a wonderful family, are important reasons to celebrate the miracle of life. We've worked hard all week. Now let's celebrate! In my family this month we will celebrate four birthdays.

RECALLING CELILO

by Elizabeth Woody, a Warm Springs Indian writer

Think about this question: why is Celilo Falls important to the writer?

Along the mid-Columbia River, 90 miles east of Portland, Oregon, stand Celilo Indian Village and Celilo Park.... Beneath the shimmering surface of the river lies Celilo Falls, or *Wyam*. *Wyam* means "Echo of Falling Water" or "Sound of Water upon the Rocks".... It was one of the most important fisheries of the Columbia River system. In recent decades, the greatest irreversible change occurred in the middle Columbia as Celilo was flooded by the Dalles Dam on March 10, 1957. The tribal people who gathered there did not believe it possible.

Historically, the *Wyampum* lived at *Wyam* for over 12,000 years. Estimates vary, but *Wyam* is among the longest continuously inhabited communities in North America. The elders tell us we have been here from time immemorial.

Today we know Celilo Falls as more than a lost landmark. It was a place as revered as one's own mother. The story of *Wyam's* life is the story of the salmon, and of my own ancestry. I live with the 42-year absence and silence of Celilo Falls...

The original locations of my ancestral villages on the Columbia River are Celilo Village and the *Wishram* village that nestled below the petroglyph, She-Who-Watches.... But my own connections to Celilo Falls are tenuous at best. I was born two years after Celilo drowned in the backwaters of The Dalles Dam.

My grandfather fished at Celilo with his brother, at a place that a relative or friend permitted... They fished on scaffolds above the white water with dip nets.... When the fish ran, people were wealthy. People from all over the country would come to Celilo to watch the Indians catch fish. They would buy fish freshly caught. It was one of the most famous tourist sites in North America....

What happened at *Wyam* was more important than entertainment. During the day, women cleaned large amounts of finely cut fish and hung the parts to dry in the heat of the arid landscape. So abundant were the fish passing *Wyam* on their upriver journey that the fish caught there could feed a whole family through the winter. Many families had enough salmon to trade with others for special items.

No one would starve if they could work.... It was a dignified life. Peaceful, perhaps because of the sound of the water that echoed in people's minds....

From time immemorial, the Creator's instruction was direct and clear. Feasts and ceremonies that

honor the first roots and berries are major events. The head and tail of the first salmon caught at Celilo is returned to *N'ch-iwana*, the Columbia River. The whole community honors that catch: *One of our relatives has returned, and we think about the lives we take to care for our communities.*

Songs are repeated seven times by seven drummers, a bell ringer, and people gathered in the **Longhouse**. *Washat* song is an ancient method of worship. By wearing the finest Indian dress, the dancers show respect to the Creator. Men on the south side, women on the north, the dancers begin to move. In a circle they dance sideways, counterclockwise. This ceremony symbolizes the partnership of men and women, the equality and balance within the four directions and the universe. We each have our place and our role. As a result, the Longhouse is a special place to learn.

Meanwhile, in the kitchen, women prepare the meal. Salmon, **venison**, edible roots, and the various berries - huckleberries and chokecherries - are the four sacred foods... Those who gather the roots and berries are **distinguished**. They are chosen to gather the foods because they have good hearts and minds.... One does not gather food without proper training, so as not to **disrupt** natural systems.

What has happened to Celilo Falls illustrates a story of ignorance of this land... The Columbia River is today broken up by 19 hydroelectric dams, many planned and built without a thought for the salmon. Nuclear, agricultural, and industrial pollution, the clearcut mountainsides - all are harmful to salmon. Since 1855, the Columbia's 14 million wild salmon have **dwindled** to fewer than one hundred thousand.

Traditional **awareness** teaches us to take only what we need, and let the rest grow. How can one learn? My uncle reminded me that we learned about simplicity first. He said, "Remember the stories your grandmother told. Remember when she said her great-grandmother, *Kah-Nee-Ta*, would tell her to go to the river and catch some fish for the day? Your grandmother would catch several fish, because she loved to look at them. She would let all but two go. Her grandmother taught her that."

A larger sadness shadows my grandmother's story.... What if the wild salmon no longer return? I cannot say whether we have the strength necessary to endure this loss.

The salmon, the tree, and even Celilo Falls (*Wyam*) echo inside us if we become still and listen. Once you have heard, take only what you need, and let the rest go.

Elizabeth Woody (Navaho/Warm Springs/Wasco/Yakama) received the American Book Award for her poetry collection, "Hand into Stone." This essay is adapted from Salmon Nation: People, Fish, and Our Common Home, 2003. These adapted excerpts are used with permission

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GLOSSARY

| | |
|----------------------|---|
| irreversible (adj.) | unable to be reversed |
| immemorial (adj.) | beyond memory |
| revere (verb) | love and respect |
| tenuous (adj.) | not strong |
| scaffold (n.) | platform high in the air |
| arid (adj.) | dry (refers to climate) |
| Longhouse (noun) | large building for Indian ceremonies and gatherings |
| venison (noun) | deer meat |
| distinguished (adj.) | special and respected |
| disrupt (v.) | bring into disorder |
| dwindle (v.) | grow smaller |
| awareness (n.) | knowledge and understanding |

WHAT'S HAPPENED TO THE SALMON?

Salmon and Indian people lived in balance for thousands of years. But when European-Americans came to the Pacific Northwest, everything began to change. Settlers and businessmen from the East Coast of the U.S. caught salmon in the rivers in huge nets, traps, and fish wheels. They built canneries along the banks

of the Columbia River and caught fish as fast as possible to send to consumers in the eastern U.S. and Europe. If they caught too many salmon for the canneries to process, they just shoveled the dead fish back into the river. Salmon runs soon began to decline.

Indian people whose cultures were built around salmon were also in trouble. Up to 90 percent of the people in Pacific Northwest tribes were killed by European diseases to which they had no **immunity**: smallpox, measles, malaria, flu. **Epidemics** swept through villages and left no one to bury the dead, whose bodies drifted down the rivers.

By 1870, the population of Indians in the Columbia region had shrunk from 100,000 to less than 10,000, and the non-native population had grown to 100,000. **Treaties** between the U.S. government and the **decimated** tribes forced the Indians to give up most of their land and live on **reservations**. As an important part of the treaties, they kept their rights to fish at their usual places.

However, that was often difficult. Canneries, fish wheels, roads, canals, and railroads soon lined the banks of the Columbia. Then, in the 1930's, the U.S. began building hydroelectric dams in the Columbia and other rivers. Many high dams were built without fish ladders to help returning salmon get upriver to spawn. Even when there are fish ladders, young salmon heading down to the ocean are often killed by overheated water stored behind the dams, by spinning **blades** of dam turbines, and by the fishes' long fall over the dam into the **churning** water at the bottom, which causes bubbles to form in their blood. Government workers on the Columbia sometimes catch young salmon now and carry them downstream on **barges**, trying to take them safely below the dams.

As European-American farmers moved to Salmon Nation in the 19th century, they **diverted** water from the rivers to **irrigate** their crops during the dry summers. Young salmon died/die in irrigation ditches and were/are sucked into powerful irrigation pumps. Fish die in the warmer, more shallow streams, and have few places to hide from predators. Cattle grazed/graze along stream banks and walk through the water. They crush salmon eggs, eat young trees that shade the streams, and cause erosion and water pollution.

Late in the 19th century, **commercial** loggers moved into the coastal valleys of Salmon Nation. Near streams and rivers, they cut down **old-growth** forests and dragged the giant logs to the river. Loggers often stored the logs in a "splash dam," a temporary dam which they later blew up with dynamite. The explosion forced all the logs to rush downstream at once, scraping away everything in the water: plants, branches, and gravel where salmon spawned.

With bulldozers and chainsaws, logging spread across the landscape. Clearcutting, which is still widely practiced, removes all forest cover, causing landslides that often **clog** streams that are downhill from the clearcuts. More soil in streams means that even if salmon make it home to spawn, a lot of their eggs can't hatch. Tree bark from logging also washes into the water, **smothering** salmon eggs. Hundreds of thousands of miles of logging roads have been built, washing muddy water downhill into streams. Cutting down trees that grow near river banks raises the water temperature, harming salmon eggs and young.

Water pollution that threatens salmon has many sources: industries that dump chemicals and garbage into rivers and ocean bays, sewage and **run-off** from cities and suburbs, agricultural run-off of fertilizers, **herbicides**, eroded soil, and animal feces, and oil spills in the ocean. In recent years, global warming has become recognized as a danger to salmon (as well as everyone else.) Both salmon and their prey are affected by warmer temperatures and sometimes lower oxygen levels in the ocean, streams, and river.

Although it's not as bad as it was in the early days of the Columbia canneries, salmon are still being overfished. Wildlife scientists recommend that only 4 to 10 percent of any animal's **population** be caught every year. Yet into the 1990's, 85 to 90 percent of many salmon runs were caught by commercial fishermen. Most commercial fishermen catch salmon in the ocean, before the fish return to spawn. The percent of salmon that is fished now has been reduced to 30 percent on average, but that is still far too much. As you may have read in the newspaper recently, salmon in Oregon and California are **off-limits** for commercial fishing this year because there are so few fish.

In Salmon Nation, ocean fish are disappearing more quickly than anywhere else in the world. Pacific salmon are gone from about 40 percent of their breeding territory in Washington, Oregon, Idaho and California. In two-thirds of the area they occupied 100 years ago, they are **extinct**, **endangered** or **threatened**.

RECOVERY EFFORTS

Many efforts have been made to help salmon recover, ever since the early 20th century when scientists realized how fast the salmon runs were decreasing.

The first "solution" to the problem was hatcheries, baby-fish factories where salmon eggs are hatched and raised until young fish are released to the wild. In the U.S., more than 50 million hatchery-raised salmon are still raised and released every year, although by now people understand that there are many problems. Hatchery-raised fish compete with young wild salmon for food, increase disease, and breed with wild salmon to **produce offspring** that have lower rates of survival. At this time, 80 percent of the salmon who return to the Columbia are hatchery fish.

Fish ladders have been built at dams since the 1940's, and people keep trying different ways to help young salmon get downriver to the ocean. Salmon from fish farms are alternatives to wild-caught salmon, but environmental problems include the need for large numbers of smaller wild fish to feed to the salmon, water pollution, and the escape of farmed Atlantic salmon who carry diseases and interbreed with wild ones. Farmed salmon are also less healthy to eat because they are fed antibiotics and their flesh is **dyed**.

Many communities have projects to restore salmon **habitat**. People remove garbage from streams, plant shade trees on the banks, and add old logs and pools to make places for salmon to spawn.

In the late 1960's, Indians whose ancestors had fished on the Columbia River held many **protests** to get back their fishing rights. They brought a lawsuit against the federal government for breaking the rules of the 1855 treaty. They won the lawsuit, and they are now **entitled** to half the Columbia River salmon catch. They formed the Columbia Intertribal Fish Commission, and their biologists have made an intertribal plan for salmon recovery. "We are here for the **long run**," says Louie Pitt of the Confederated Tribes of Warm Springs. "We want to see the salmon here for our generations to come."

GLOSSARY

| | |
|-------------------|--|
| immunity | inability to be harmed |
| epidemic | many cases of the same disease at the same time |
| treaty | formal agreement, usually between countries |
| decimate | destroy a large part of |
| reservation | land set apart for Indian tribes to live on |
| blade | flat wide part of an engine |
| churn | move around violently |
| barge | big flat boat |
| divert | turn from one direction or use to another |
| irrigate | give regular water to plants on farms |
| commercial | for business rather than personal use |
| old-growth | oldest, biggest trees |
| clog | fill up so it cannot flow |
| smother | kill by taking away air to breathe |
| run-off | water or liquids that run into streams and oceans |
| herbicides | chemical poisons to kill weeds |
| population | the number of individuals in a group |
| off-limits | not permitted |
| extinct | there are no more any more anywhere |
| endangered | the population is so small that it is in great danger of extinction and must be strongly protected |
| threatened | the population is in moderate danger of extinction and must be protected |
| recover | return to earlier strength |
| produce offspring | have babies |
| dye | add color with chemicals |
| habitat | place where an animal or plant lives |
| protest | speak and have gatherings against |
| entitled to | having a right to |

long run

a long time

APRIL 1, WEEK 1

4. Where do we live? Look at maps, overhead. Read about and discuss Willamette Valley. 15 minutes.

5. Read about Salmon Nation and answer written questions. 30 minutes.

[I used this to measure whether students were at the correct reading level.]

HW 45 minutes: Read all of "Salmon Nation," *Z Magazine*.

APRIL 3, WEEK 1

2. Discuss April 1 reading questions. 10 minutes.

3. Present perfect vs. past tense - have been coming since 12,000 years ago, began to come 12,000 years ago, have been coming for 12,000 years

2 columns - give sentences for both. 20 minutes.

4. New vocabulary in homework reading - students ask questions, 15 minutes.

5. Write answers to new questions on "Salmon Nation" homework [below] and discuss. Discuss homework questions, too. Answer questions in groups - each group answers several questions. 45 minutes.

WRITTEN COMPREHENSION QUESTIONS: from Salmon Nation Homework

1. When oil drips out of the bottom of a car, where does it go?

2. What is special about the very old forests on the Pacific coast?

3. When salmon come in from the Pacific ocean to lay their eggs in the streams where they were born, which salmon are the fattest?

4. Use the word watershed in a sentence.

READING/WRITING HOMEWORK FOR APRIL 8

60 minutes: Write nine sentences using each of the following words from the "Salmon Nation" *Z Magazine* homework reading: **foundation, symbol, contamination, bounty, (all on page 2) adapt, (page 3) coherent, watershed, bioregion, celebrate (all on page 4.)**

APRIL 8, WEEK 2

1. Vocabulary homework - students write sentences on board. 15 minutes.
3. Salmon reading - The lives of pacific salmon - life cycle - read out loud, write answers to questions. Look at salmon chart together. 30 minutes. Korea.
5. Salmon life cycle video clips. 15 minutes.

HW Read place legend stories.

APRIL 10, WEEK 2 Antonio brought salmon!

1. Explain corrections on April 8 reading comprehension questions. 10 minutes.
2. Read stories from homework aloud together in small groups. 25 minutes. Also read "The Place Where Ghosts of Salmon Jump" by Sherman Alexie.
(Sid and Kate: Answer a few vocabulary questions but keep focus on understanding general ideas of what is happening.)
3. Explain writing a story. 25 minutes.

READING/WRITING HOMEWORK FOR APRIL 15

1. 60 minutes: Write the first draft of a legend or story that involves a place.
Write two short paragraphs that work as an introduction and conclusion for the story or legend.
(This is the way "How Coyote Made the Columbia River" and "The Maiden and Her Raccoons" are written.)
2. 45 minutes: Write seven sentences, with each sentence using one of the following words from the the week's reading: **nutrient, obstacle, disintegrate, migrate (all salmon reading), drain, evidence ("How Coyote Made the Columbia River"), demand ("The Place Where Ghosts of Salmon Jump.")**

APRIL 15, WEEK 3

1. Vocabulary homework - students write sentences on board. 25 minutes.
Go over vocabulary details: parts of speech
5. Salmon and His People - read out loud, answer written questions. 30 minutes.
Why did NW Indians think that it was important to treat returning salmon with respect? What did many Indians eat in winter? Why was Celilo Falls important?
Were there Indian tribes that didn't depend heavily on salmon? Where?
Look at map together.
HOMEWORK: read "Celilo Falls"

APRIL 17, WEEK 3

1. Talk about "Celilo Falls" reading in small groups. 10 minutes.
Why is this place important to the writer?
2. Video clips of Celilo Falls history. 15 minutes.
3. Revising story + idea for book of class stories. 15 minutes.
4. Time words and adverb clauses in writing - find examples in legends we read last week. Small groups. 20 minutes. What are good time transition words for stories?

READING/WRITING HOMEWORK FOR APRIL 22

1. 60 minutes: Write the second draft of a legend or story (the same one that you wrote a first draft about.) * Make sure you have a strong introduction and conclusion. Clearly explain who, where, when, what as the story begins.

* Use time words and adverb clauses where they are helpful.

2. 45 minutes: Write six sentences, with each sentence using one of these words from the the week's reading: **nutritious, preserve, traditional ("Salmon and His People"), balance (bottom of page 1, "Recalling Celilo") dignified, awareness (page 2, "Recalling Celilo.")** Also, write two sentences with words that contain suffixes we've been practicing: one word with -ion/-tion/-sion suffix, another word with -less ending.

APRIL 22, WEEK 4

1. Vocabulary sentences. 20 minutes.

3. Read first part of What Happened to the Salmon? reading and discuss these questions. 30 minutes.

Salmon are only one genus of animals - we could look at any closely. What four big dangers to salmon do you read about in this first part? (through the two logging paragraphs)

What happened to the Indian tribes who had fished for salmon?

How could Euro-American people let all this happen?

HOMEWORK FOR APRIL 24

Read the rest of "What's Happened to the Salmon" and think about these 3 homework questions: What additional dangers to salmon did you read about on page 2, the homework part of the essay? What efforts are being made to help salmon recover? How well are these efforts working?

WRITE ANSWERS TO THESE QUESTIONS :

How did non-native people let salmon get in such trouble? What did the people need to learn? What have we learned in the present about salmon and nature? What do we still need to learn?

APRIL 24, WEEK 3

1. Talk about salmon reading in small groups, 15 minutes.

Discuss homework questions plus:

Do we still think the way people used to? What do we still need to learn?

2. History of salmon and salmon recovery projects video clips. 15 minutes.

READING/WRITING HOMEWORK FOR APRIL 29

1. 60 minutes: Write the final draft of a legend or story (the same one that you wrote a first draft about.) Work on it carefully so it is ready to copy.

2. 60 minutes: Write ten sentences, with each sentence using one of these words from "What's Happened?": **immunity, decimate, divert, commercial, population, extinct, endanger (the verb: to put in danger,) recover, habitat, protest.**