

Chaan Gin-gáay

Sea Mammals

Grade Levels K-2

Haida Cultural Significance

Haida people have occupied the Northwest coast for thousands of years. Their tribal land covers a wide region from Prince of Wales to the Queen Charlotte Islands.

Haida people traditionally subsist on the area's wealth of natural resources. A way of life suited to the resources and demands of the environment was adopted. Hunting activities were determined by the seasonal availability of local resources.

Haida people continue to have a great understanding of the environment. The techniques used to gather food have changed but subsistence hunting and fishing continue to be important today.

Food is a central aspect of Haida culture and the sea is an abundant provider. The sea offers a bounty of animal life and supplies many foods. The types of foods eaten and methods of preparation have remained much the same over the years.

In order to respect the lives of the animals that are harvested, all parts of the animal are utilized in some way. For example, parts of many different sea mammals are used in the making of at.óow, tools, and weapons.

Sea mammals also play an important role in many of the oral narratives of the Haida people. Some of them have become symbolic crests owned by particular clans.

Elder/Culture Bearer Role

Haida people are taught from an early age to respect the land and their surroundings and to take only what can be used. Throughout this unit an Elder can reinforce and teach:

- Haida words and phrases—Names of animals and their body parts in Haida
- Clan history—Names, stories, speeches, songs, dances, designs, rivers, berry patches, and sea mammal hunting grounds were considered clan property, or at.óow. Elders can share how clans knew where their specific hunting areas were and how this was determined.
- Cultural values—Elders will share how to treat sea mammals taken for survival.
- Storytelling—An Elder can share the legends of Strong Man and Naatsilanéi.

Overview

In Lesson #1, Let's Learn about Southeast Alaska Ocean Environment and Sea Mammals, students are introduced to the environment of SE Alaska. This unit begins with a geography lesson on Southeast Alaska and marine environment before focusing on the sea mammals.

A series of elementary level thematic units featuring Haida language, culture and history were developed in Ketchikan and Hydaburg, Alaska in 2004-6. The project was funded by the U.S. Department of Education, Haida Language Immersion Program - Boosting Academic Achievement grant #S356A030046, awarded to the Sealaska Heritage Institute.

Lessons and units were written by a team including Jordan Lachler, project director and linguist specializing in documenting and revitalizing Native American languages. Lachler heads up the local field office of SHI in Ketchikan. Cheryl Holter (T'áaw Kúns) grew up in Hydaburg, raised by her grandparents, Willis and Hazel Bell and has worked with the remaining fluent Haida Elders for years. She taught the Haida language to students since returning to Hydaburg in 1990. Linda Schrack (Skíl Jáadei) grew up in Ketchikan, spending a great deal of time with her grandparents, Robert and Nora Cogo. She worked for many years in the field of early childhood education, and is an accomplished Native artist and traditional Haida dance group leader. Julie Folta, a cultural curriculum specialist with years of experience developing and teaching thematic, child-centered curriculum in rural Alaska also contributed to lessons and Annie Calkins edited final drafts of the units.

All units are available at sealaskaheritage.org.



Sealaska Heritage Institute

The contents of this curriculum were developed under the Haida Language Immersion Program: Boosting Academic Achievement (2005) grant from the U.S. Department of Education. However, the contents do not necessarily represent the policy of the Dept. of Education and you should not assume endorsement by the Federal Government



Students are then introduced to six sea mammals they will study in this unit. They learn the main characteristics of sea mammals.

Lesson #2, Let's Learn about Seals introduces the names for seals and body parts in Haida and the seal environment and life cycle. Students draw, measure, and write about seals, adding this to their Southeast Alaska Sea Mammals book. They learn the cultural importance of seals to Haida people.

In Lesson #3, Let's Learn about Sea Lions, students learn the name for sea lions and their body parts in Haida. They learn about the sea lion environment and life cycle. Student draw, measure, and write about sea lions adding this to their Southeast Alaska Sea Mammals book. They also learn the cultural importance of sea lions to Haida people. Students pretend to be sea lions hunting hooligans. The legend of Strong Man is shared.

Lesson #4, Let's Learn about Sea Otters, introduces students to the name for sea otters and their body parts in Haida, followed by learning about the sea otter environment and life cycle. Student draw, measure, and write about sea otters and add it to their Southeast Alaska Sea Mammals book. They also learn why sea otters were important to Haida people.

In Lesson #5, Let's Learn about Porpoises, students learn the name for porpoises, and their body parts in Haida along with learning about the porpoise environment and life cycle. They draw, measure, and write about porpoises.

Lesson #6, Let's Learn about Killer Whales, students again learn the name for killer whales and their body parts in Haida. They learn about where the killer whale lives and its life cycle. Students draw, measure, and write about killer whales. They learn the cultural importance of killer whales to Haida people and watch a dramatic performance of Naatsilanéi. Students role play transient and resident killer whale behaviors.

In Lesson #7, Let's Learn about Humpback Whales, students learn the name for humpback whales and body parts in Haida, and about the whale environment and life cycle. Students draw, measure, and write about humpback whales and why they were important to Haida people. Students learn how humpback whales feed on herring in Southeast Alaska and pretend to be humpback whales eating herring.

In Lesson #8, Staying Warm, students begin to understand how sea mammals survive in the sea. They conduct an experiment to understand why and how sea mammals depend on blubber.

In Lesson #9, Let's Learn about Sound, students learn about sound waves and echolocation. They watch a clip of "Whale Speak" from Finding Nemo and practice talking like whales. They conduct experiments with sound.

Lesson #10, Museum Visit has students going on a field trip to learn about the cultural importance of sea mammals to Haida people. They learn to recognize the images of different sea mammals on museum objects. Students do a scavenger hunt of sea mammal images.

In Lesson #11, Research Report, students use their knowledge of sea mammals to create a new sea mammal. They give their sea mammal a name, build their animal out of clay, and write about their animal.

In a culminating activity, students confidently share their new knowledge with families and on older students. They share the Southeast Alaska Sea Mammals Book and learning log with their reading buddies and families during a Sea Mammal Day. Students discuss similarities and differences, social behavior, prey, size, and cultural significance of the sea mammals they



studied.

Alaska State Standards

Cultural Standards

- A. Students are well grounded in the cultural heritage and traditions of their community, and practice traditional responsibilities to the surrounding environment.
- B. Students are able to build on knowledge and skills of the local cultural community as a foundation from which to achieve personal and academic success.
 2. Make effective use of the knowledge, skills and ways of knowing from their own cultural traditions to learn about the larger world in which they live.
- C. Students actively participate in various cultural environments.
 1. Perform subsistence activities in ways that are appropriate to local cultural traditions.
- D. Students engage effectively in learning activities based on traditional ways of knowing and learning.
 1. Acquire in-depth cultural knowledge through active participation and meaningful interaction with Elders.
 2. Interact with Elders in a loving and respectful way that demonstrates an appreciation of their role as culture-bearers and educators.
- E. Students demonstrate an awareness and appreciation of relationships and processes of interaction of all elements in the world around them.
 1. Understand ecology and geography of the bioregion they inhabit.
 2. Recognize how and why cultures change over time.

Lesson #1: Southeast Alaska Waters of the Haida People

Objectives

Students:

- Learn about the relationship between land and sea
- Learn about the ocean as an environment for sea life
- Identify six common species of Southeast Alaska sea mammals in Haida and in English
- Understand what is unique about sea mammals
- Give specific reasons why an animal is a sea mammal when shown a picture

Time

3-4 hours



Materials

- Flash cards of Haida vocabulary
- Globe or map that includes Southeast Alaska
- Pictures of sea mammals found in Southeast Alaska
- Alaska reference books
- Plastic sea mammals
- Pocket chart Haida word cards/phrases
- Wall chart paper for creating posters
- What Do You See? Song on CD

Haida Vocabulary

siigaay	the ocean
sgáan, sgáanaay	(the) killerwhale
kún, kunáay	(the) whale
ku, kwáay	(the) sea otter
xúud, xúudaay	(the) seal
káy, káydaay	(the) sea lion
skúl, skúulaay	(the) harbor porpoise





Haida Phrases

Tl'áan uu síigaay íijang?	Where is the ocean?
Dáa gw sgáan ḱing us?	Do you see a killerwhale?
Kún gw is us?	Is this a whale?
Kwáay hl díi ḱindaa.	Show me the sea otter.
Gíisd uu xúudaay ḱinggang?	Who sees the seal?
Káyaay í'waan-gang.	The se lion is big.
Skúulaay iig hl stlajúu.	Point to the harbor porpoise.

Teacher Background Information

Southeast Alaska is surrounded by water. Much of Southeast Alaska consists of a string of islands known as the Alexander Archipelago, the southern part of which includes the traditional lands of the Alaskan Haida people. Most Haida villages were located very near the ocean, so the ocean plays a very important role in daily life. The ocean supports a wide array of life and provides many resources. People travel on water using boats, but fish and sea mammals spend their whole lives in water. They have many special characteristics allowing them to survive in this marine environment.

Activity #1

Looking at the Southeast Alaska Ocean Environment

Look at map of Southeast Alaska. Discuss the ocean as an environment for life. With the students compare the ratio of water to land in Southeast Alaska.

Activity #2

What is a sea mammal?

As a class, brainstorm the names of as many animals in Southeast Alaska as possible. As they are listed divide the list into land mammals and sea mammals without telling students.



After brainstorming for a few minutes ask students, “What can you tell me about the list?” One appropriate response might be the largest list is land mammals and the shorter list sea mammals.

Pose this question to students, “What makes a mammal a mammal?” Tell them the main characteristics of a mammal:

- They have fur or hair.
- They are warm blooded.
- They live in water.
- They have a thick layer of fat to keep them warm.
- They have fins and flippers.
- They breathe air.

Activity #3: **Sea mammal book title page**

Have students draw an ocean scene for the cover of their Sea Mammals book, which they will use throughout this unit. As they are drawing remind them of the map of Southeast Alaska and ask them to think about all the times they have been out in the local natural environment. Explain that pages will be added later for each sea mammal studied.

Activity #4: **What Do You See Song**

This may work best if you have a set of stuffed animals or photos of Southeast animals to use as you play and/or sing this song. Give each animal or picture to a different student; have the class then take turns being the animal as you sing the song. As you go through the verse for that animal, have the student hold up the animal or picture so everyone can see it and point to it. Go through one verse for each different animal, using different hand motions to indicate each.

Assessment

Ask students to tell or write why sea mammals are different from land animals. Use a scoring guide or simple rubric to assess whether their knowledge is correct.



Sea Mammals



Lesson #2: Let's Learn about Seals

Objectives

Students:

- Identify a seal as a sea mammal
- Learn the habitat of a seal
- Learn the body parts of a seal in Haida
- Recognize the crest of a seal on museum artifacts
- State the importance seal has to Haida people
- Compare the length of a seal to themselves

Time

4-5 hours



Materials

- Construction paper
- Seal pattern
- Rubber boots
- Glue
- Scissors
- Stuffed seal (squeeze to make sound)
- Flashcards for Haida words
- Seal fat/seal oil
- Berries
- Piece of seal fur or items made from seal
- If possible, a pair of seal skin boots

Haida Vocabulary

gáay	fat, blubber
ƙaj	head
xyáay	front flipper
st'áay	hind flipper
sk'íwii	whisker
gáw	hair, fur

Haida Phrases

Áa uu xúudaay gáay íjang.	Here is the seal's blubber.
Xúudaay ƙaj hl tlatl'áa.	Touch the seal's head.
Xúudaay xyáay hl díi ƙíndaa.	Show me the seal's front flipper.
Xúudaay st'áay iig hl stlajúu.	Point to the seal's hind flipper.
Xúudaay sk'íwii hl k'wáayandaa.	Count the seal's whiskers.
Tl'áan uu xúudaay gáw íjang?	Where is the seal's fur?

Activity #1

Draw a seal for sea mammal book

Students use the pattern to trace the seal and cut it out. Ask them to draw the seal's face. When they have cut out the seal pattern direct them to glue it onto another piece of paper and then to draw the environment where you might find a seal. You might suggest that they locate the seal on an iceberg.

Activity #2

Seal artifact book

As a class look through the Seal Artifact Book to prepare for Museum visit. Ask children questions about what they see. Record their questions on a chartpack or the board. Take the questions generated to the museum, to see if you can learn the answers.



Activity #3

Traditional footwear vs rubber boot

Teacher Preparation: If possible, borrow a set of seal skin boots to show the class. Alternative: use pictures of traditional boots to lead the discussion.

Use bucket of water to test waterproofness of traditional footwear. Have students put on the boots and immerse them in water to see if they are waterproof. Repeat the procedure with a pair of rubber boots. Try bare feet. Decide which is the most waterproof. Brainstorm as a class why that might be so.

Look at how the traditional and the rubber boots are made. Talk about how women traditionally sewed seal skin, using special stitches to make the seam waterproof.

Activity #4

Seal hop race

Teacher Background Information

Official Description from World Eskimo-Indian Olympics:

Seal Hop - This is a game to test the participant's strength and endurance to pain. The object is to see how far one can go in a "push-up" position, with elbows bent and knuckles down. The only parts of the body allowed to touch the floor are knuckles and toes. From this position, the participant "hops" forward as far as possible, keeping the back straight and elbows bent. This game originally was played on the floor of a traditional community center or hut, or outside on the ground.

"To better appreciate the background of these games, envision yourself in a community village hut three hundred years ago with the temperature outside at 60 degrees below zero, and everybody in attendance celebrating a successful seal hunt. While the young men are demonstrating their athletic prowess and strength, the umialiks, or whaling captains, are on the perimeter of the hut looking with great interest at the young adults – one or more of these young men would be incorporated into their whaling and hunting crews – the fastest, the strongest, the one showing great balance and endurance to pain would be the top pick." –WEIO website

Activity:

Have students line up. Tell them the point of this game is to see how far they can go on hands and toes.

Activity #5

Seal oil

Invite a hunter into the classroom to discuss seal hunting.

Get some seal fat from a hunter and process it into seal oil by cutting up the fat and frying it in a deep pan over low heat, like bacon. Pour the seal oil into jars for students to take home or give away. The crisp fat is good to eat when cool. Put a few pieces in the bottom of the jars. Have students try it. Dip dry fish or seaweed in it, if possible.

Try an experiment: Put some berries in seal oil in one bowl and put berries without seal oil in another bowl. Have student predict which ones will spoil first. In a day or two, check to see



which one has spoiled.

Activity #6 Learning log entry

Direct students to write an entry in their Sea Mammals book, in response to the questions: "What is the name of just one sea mammal? Why is it a sea mammal?"

Assessment

Make a poster which accurately displays what makes a seal a sea mammal. Ask students to tell two ways that Haida people use seal oil and record their answers.

Lesson #3: Let's Learn about Sea Lions

Objectives

Students:

- Identify a sea lion as a sea mammal
- Learn the habitat of a sea lion
- Recognize the crest of a sea lion on traditional artifacts
- Identify body parts of a sea lion in Haida and English
- State the function of the sea lions body parts
- Retell the story of Strong Man
- Describe the importance of the shakee.át
- Compare and contrast how seals and sea lions are alike and different

Time

3-4 hours

Materials

- Stuffed sea lion (squeeze to make sound)
- Flashcards for Haida words
- Thick fishing line or wire 6" long (whiskers), 5 – 8 per student
- Fake fur (ermine)
- 6 black and orange feathers per student
- White feathers
- 5 x 6 inch brown paper per student
- 2 x 14 inch strip brown paper per student
- 2 x 14 inch strip cardboard box per student
- 2 x 6 inch strip brown foamee
- 7 x 11 inch white fabric or white construction paper
- Eagle Raven design 1 per student
- Construction paper
- Round white stickers (teeth) 2 per student
- Sponges



- Brown paint
- Black markers
- Venn diagram
- CD with music
- Stellar Sea Lion Habitat Map

Haida Phrases

Áa uu káydaay gáay íijang.	Here is the sea lion's blubber.
Káydaay kaj hl tlat'áa.	Touch the sea lion's head.
Káydaay xyáay hl díi kíndaa.	Show me the sea lion's front flipper.
Káydaay st'áay iig hl stlajúu.	Point to the sea lion's hind flipper.
Káydaay sk'íwii hl k'wáayandaa.	Count the sea lion's whiskers.
Tl'áan uu káydaay gáw íijang?	Where is the sea lion's fur?

Teacher Background Information

Sakíid

The **sakíid** headdress was designed to be used while dancing at Haida potlatches and ceremonies.

The headdress is constructed on a frame of thin wood covered with cloth. A carved frontlet depicting a crest design rests above the dancers forehead once it is complete. Abalone shells are inlaid around the frontlet. Around the frame stellar sea lion whiskers and orange and black flickertail feathers are placed. A long train of cloth covered with ermine fur hangs down the back.

Before using the **sakíid** to dance with, white eagle down was placed in the crown. The down would float down filling the air and landing on guests as a gesture of peace.

Activity #1

Draw a sea lion for sea mammal book

Tell the students to either draw and color a picture or trace the pattern for a sea lion. Then they add the nose, mouth, teeth (cutting triangles out of round white stickers), and whiskers. Next they glue the sea lion to construction paper, add the title and create the environment where sea lions live. Make sure they write their names on the bottom of their drawing, label the sea lion, and then share their drawing with a partner. As they share ask them to tell one thing they learned about sea lions.

Activity #2

Making a Sakíid headdress

Show students the model of a **sakíid**. Then tell them to cut out the eagle/raven design and



it to the 5 x 6" brown paper. Tape 5 – 8 sea lion whiskers to the top of this paper and set aside. Glue the brown 2 x 14" paper to the cardboard box strip. Now glue the frontlet to the 2 x 14" strip. Add the brown foamee to the headband strip and fit to head, staple. Staple the white cloth to the back of strip. Next add orange and black feathers. Add the fake fur to the back over the white cloth. Turn on a CD of Haida music and allow students to dance in a traditional style, wearing their sakkít.



Activity #3 What do sea lions eat?

Students pretend to be hungry sea lions fishing for hooligans.



Activity #4

Sea lion, sea lion, killer whale game

Play to the rules of Duck, Duck Goose. This works well with a small stuffed killer whale that students can “pass off” to the next player. Here are several Haida phrases that can be used in playing the game.

Áa uu káyd iijang.	This is a sea lion.
Áa uu sgáan iijang.	This is a killer whale.
Káydaay iig hl stlajúu.	Point to the sea lion.
Sgáanaay iig hl stlajúu.	Point to the killer whale.
Káyd, káyd, sgáan!	Sea lion, sea lion, killer whale!
Gyáa hlaa, sgáan!	Stand up, killer whale!
Káydaay hl xijuuláang!	Chase after the sea lion!
Dáng gwíi ka’álgan ii!	You won!

Activity # 5

Strong Man story - Dukt’ootl’

Read aloud the Dukt’ootl’ story to the class. (For the full Tlinigt version see: Dukt’ootl’, Frank Johnson in Haa Shuká, Our Ancestors pg. 138-151 Dauenhauer, 1987.) Discuss Taan aaní, as described in the story. Ask children what they think the main idea of the story is, what lesson there is to learn in the story.

Have students retell the story to each other.

Get a piece of wood with a branch still attached and let students try to twist it off, simulating the strength test in the story.

Investigate the footgear that was used traditionally to allow walking on rocks. What would give better traction when walking on slippery seaweed?

Have an Elder come in and tell the story in Haida.

Activity # 6:

Sea lion artifact book

Review Sea Lion Book in this unit, in preparation for a Museum Visit. Students should recognize images and parts of sea lions used in artifacts.

Tell the class which Haida clans use Sea Lion images as crests.

Looking at the pictures, see if the students can identify which parts of the sea lion were specifically used. For example, the whiskers were used for the tops of sakiit, the hide for leather armor, the teeth for decoration and charms.

Activity #7

Learning log entry

Direct students to write an entry in their Sea Mammals book, in response to the question: “What did you learn about Haida people today?”



Assessment

Sea Lion/Seal Comparison:

Make available to each student a Venn diagram (See Resources). Explain how the Venn diagram works and how to put information on it. Brainstorm how seals and sea lions are alike and different. Discuss size, shape, color, use, and movement. Give students ample time to work independently or in pairs to make their own Venn Diagram. Provide time for students to share their Venn diagrams with each other. Check individual diagrams to assess correct knowledge.

Resources included with this lesson

- Sakíit Pattern
- Sea Lion Artifact book
- Stellar Sea Lion Habitat Map
- Venn Diagram comparison chart - Assessment
- Dukt'ootl' – Strong Man story excerpt

Lesson #4 Let's Learn about Sea Otters

Objectives

Students:

- Learn the body parts of a sea otter
- Identify a sea otter as a sea mammal
- Describe the characteristics of a sea otter
- Learn the habitat of a sea otter
- Recognize the crest of a sea otter on traditional artifacts

Time

2-3 hours

Materials

- Stuffed Sea Otter (squeeze to make sound)
- Flashcards for Haida words
- Piece of sea otter fur or items made from sea otter
- Reference Books from School Library
- Books:
 - The Cousteau Society Otters* ISBN 0-671-86567-6
 - The Sea Otter* ISBN 1-56294-418-5
 - Sea Otter Goes Hunting* ISBN 0-7635-7930-0
 - Welcome to the World of Otters* ISBN 1-55110-520-9





Haida Phrases

Áa uu kwáay gáay iijang.	Here is the sea otter's blubber.
Kwáay kaj hl tlat'aa.	Touch the sea otter's head.
Kwáay xyáay hl dii k'indaa.	Show me the sea otter's front paw.
Kwáay st'áay iig hl stlajúu.	Point to the sea otter's back paw.
Kwáay sk'iwii hl k'wáayandaa.	Count the sea otter's whiskers.
Tl'áan uu kwáay gáw iijang?	Where is the sea otter's fur?

Activity #1

Draw a sea otter for sea mammal book

Students use the pattern to trace the sea otter. Then they cut out the sea otter and add the eyes, nose, whiskers, mouth, special rock, and feet. Ask them to glue the sea otter to the blue construction paper. Students can now add the appropriate environment around the sea otter.

Activity #2

Sea otter artifact book

Review Sea Otter artifact Book (See Resources) to prepare for the upcoming Museum visit. Discuss the importance of Sea Otter fur as a trade item for the Haida people. It brought them much wealth.

Activity #3

Learning log entry

Direct students to write an entry in their Sea Mammals book, in response to the following: Write two facts you learned about sea otters today.

Assessment

Arrange for brief individual conference times with each student. Using a checklist or simple scoring guide as a recording tool, review his/her learning log, asking the child what he/she knows about each mammal. Also use this opportunity to reinforce reading skills.

Lesson #5

Let's Learn about Porpoises

Objectives

Students:

- Identify a porpoise as a sea mammal
- Learn the body parts of a porpoise
- Describe the characteristics of a porpoise
- Learn the habitat of a porpoise
- Recognize the crest of a porpoise on traditional artifacts



Time

2-3 hours

Materials

- Stuffed porpoise (squeeze to make a sound)
- Flashcards for Haida words
- Construction paper
- Scissors
- Glue

Haida Vocabulary

hlk'yáad tail, fluke

ƙagán sk'ajáaw blowhole

Haida Phrases

Sƙúulaay ƙaj hl tlatl'áa.

Touch the porpoise's head.

Sƙúulaay xyáay hl díi ƙíndaa.

Show me the porpoise's front flipper.

Sƙúulaay hlk'yáad iig hl stlajúu.

Point to the porpoise's tail.

Tl'áan uu sƙúulaay kún ijang?

Where is the porpoise's nose?

Dáa gw sƙúulaay ƙagán sk'ajáaw ƙing us?

Do you see the porpoise's blowhole?

Activity #1

Draw a porpoise for sea mammal book

Student use the pattern to trace the porpoise. Next they cut out the porpoise and add the eyes, nose, whiskers, mouth, special rock, and feet. Direct them to glue the porpoise to the blue construction paper. Students now add the appropriate environment around the porpoise.

Activity #2

Learning log entry

Direct students to write an entry in their Sea Mammals book, in response to the following: Write two facts you learned about porpoises today.

Assessment

Use flashcards with Haida words for the four sea mammals studied thus far and ask individual children to point to the correct mammal as you say their names. (or, if appropriate, ask students to name the mammal as you point to each one.) Record their responses.



Lesson #6 Let's Learn about Killer Whales

Objectives

Students:

- Identify a killer whale as a sea mammal
- Learn the habitat of killer whales
- Recognize the crest of a killer whale on museum artifacts
- Identify simple body parts of a killer whale in Haida and English
- Describe the function of flukes, blowhole, dorsal fin, flippers.
- Describe the difference between a transient and resident killer whale
- Role play specific whale behavior, such as spy hopping
- Retell the legend of Naatsilanéi

Time

45 minutes

Materials

- Stuffed killer whale (squeeze to make sound)
- Flashcards for Haida words
- 1 Transient or Resident Card per student
- Dorsal fin pattern – 1 per student
- 1 Black and Red Crayon per student
- Killerwhale fin pattern
- 1 foamee strip for each student
- Stapler



- Scissors
- Glue
- “Find the Keet” booklet 1 per student
- Five Killer Whales Song
- Card stock
- Popsicle sticks
- Tóoch ka Dleit Song
- Killerwhale pattern
- Black, white and blue construction paper
- Reference Books from School Library
- Books:

Orca’s Song ISBN 0-920080-29-4

Alaska’s Watchable Whales: Humpback and Killer Whales ISBN 0-9744053-0-2

Storm Boy ISBN 1-58246-057-4

Killer Whales ISBN 1-58717-142-2

O is for Orca ISBN 1-57061-392-3

- Video:

Naatsilanéi and the Killer Whales

Available from: Gary Waid, 215 Gold Street, Juneau, Alaska 99801

Haida Phrases

Sgáanaay kaj hl tlat’áa.

Touch the killer whale’s head.

Sgáanaay xyáay hl dii k’indaa.

Show me the killer whale’s flipper.

Sgáanaay hlk’yáad iig hl stlajúu.

Point to the killer whale’s tail.

Tl’áan uu sgáanaay kagán sk’ajáaw ijang?

Where is the killer whale’s blowhole?

Activity #1

Transient or resident killer whale

Break students into two groups and give each one a name card, either transient or resident. The transient will move all about the room when given the signal. The residents are further broken down into pods of five and move together in only one area of the room when given the signal. Explain that the residents will vocalize with one another frequently and eat only salmon. The transients will move quietly all about the room looking for seal and sea lions. Provide ample time for the group to experience being killer whales. After the experience discuss why the transient killer whales are quiet while hunting seal and sea lions.

Discuss killer whale behavior, such as, spy hopping, breaching, and what it would look like if they were whales. Let them practice being killer whales experiencing each of the behaviors. (See resources for accurate descriptions)

Activity #2

Five killer whales

Students will cut out each of the five circular killer whales (see resources) xeroxed on card stock and attaching them to five popsicle sticks. Once finished, teach the group the killer whale song (see resources).



Activity #3

Draw a killer whale for sea mammal book

Students use the pattern to trace the killer whale and then cut it out.

Activity #4

Dorsal fin headdress

Direct students to color the picture pattern of a killer whale's fin black and red and then cut out the killer whale dorsal fin. After students have finished coloring the pattern, show them how to attach the killer whale fin to the headband. Once all the headbands are completed, have the class sing the five killer whales song together, with their headbands on.



Activity #5

Naatsilanéi and the Killer Whales Video

Students watch a dramatic production of Naatsilanéi by Gary Waid of Juneau. "The story is ancient. It goes back to the time when the Tlingits ruled their lands and rode the seas; a time when natural and supernatural were one..." After watching the production they retell the legend, using the dorsal fin headdresses.

Questions to discuss with students after watching the dramatic production.

- Where did Naatsilanéi get the idea to carve a killer whale?
- Why couldn't the sea lions see the spear tip in the sea lion leader's son?
- What was the skin bag used for that the sea lions gave to Naatsilanéi?
- What was Naatsilanéi's first request of the killer whales?
- What was his last request?
- Who was Naatsilanéi's unexpected visitor on the sea lion rock?
- Why do you think the killer whales spared the nephew's life?
- What does it mean to be jealous? Tell about a time when you were jealous.

How did you resolve your jealousy? How did it make you feel?



(For two Tlingit versions see: Naatsilanéi by Willie Marks pg. 109-122; Naatsilanéi by J.B. Fawcett pg. 123-138 in Haa Shuká Our Ancestors, Dauenhauer, 1987.)

Try to have an Elder come in and tell the story in Haida.

Activity #7 Labeling a killer whale

Students use the killer whale graphic organizer to label the body parts (see resources).
Body parts to label in this activity include:

kagán sk'ajáaw

blowhole - opening to the lungs of a whale, similar to human nostrils.

gáay

blubber - a layer of fat just below the skin of some aquatic mammals.

ts'ál

dorsal fin - the fin on a whale's back. Fins consist of dense, fibrous connective tissue, with no bones.

xyáay

flippers - the broad flat forelimbs of whales. The flippers of a killer whale are supported by bones. They are used for steering and stopping.

hik'yáad

flukes - horizontal lobes of the tail of a whale, used for propulsion.

xángii

eyes

xahlíi

mouth





Activity #8 Killer Whale Artifact Book

Review the killer whale book to prepare for a Museum visit. Generate any questions the students may have about killer whales and record them. Take them to the museum with you, to see if you can learn the answers.

Ask an Elder/Culture Bearer to tell the class about which clans use killer whale images as crests.

Activity # 9 Learning log entry

Ask students to: Write 3 new facts you learned about killer whales. Tell me two ways that killer whales are important to Haida life.

Assessment

Copy and distribute the "Is it a Whale?" worksheet. Tell students to circle the animals that are whales and draw an X through the animals that are not whales. Ask students to independently write why the circled animals are whales.

Lesson #7 Let's Learn about Humpback Whales

Objectives

Students:

- Identify a whale as a sea mammal
- Learn the habitat of a whale
- Recognize the crest of a whale on traditional artifacts
- Identify a humpback whale as a baleen whale
- Explain the process humpback whales use to eat

Time

45 minutes

Materials

- Story Problem
- Containers of different shapes with equal volume of water
- Measuring cup
- Reference Books from Library
- Books:
 - Our Whaling-Watching Trip* ISBN 0-7635-6729-9
 - Whales* ISBN 0-7635-6549-0
 - Life Cycle of a Whale* ISBN 0-7368-3398-6
 - Splash! A Book About Whales and Dolphins* ISBN 0-439-20166-7
 - Ibis A True Whale Story* ISBN 0-590-42849-7
 - In the Company of Whales* ISBN 1-55143-058-4



Going on a Whale Watch ISBN 0-590-45769-1

- Small plastic whales
- Bubbles
- Herring
- CD with humpback whale sounds
- Scissors
- Glue
- Construction paper

Haida Phrases

Kunáay kaj hl tlatl'áa.

Touch the whale's head.

Kunáay xyáay hl dii k'indaa.

Show me the whale's flipper.

Kunáay hlk'yáad iig hl stlajúu.

Point to the whale's tail.

TI'áan uu kunáay kagán sk'ajáaw iijang?

Where is the whale's blowhole?

Activity #1

Draw a humpback whale for sea mammal book

Students use the pattern to trace the humpback whale and cut it out. They then add the eyes and mouth. Next they glue it to the light blue construction paper, add the title and show it to a friend. They should point to each of the whale's features as they share their whale patterns.

Activity #2

Humpback whale problem solving

Students use pictures, tallies, or numbers to show their work in solving the humpback whale problem. (See Resources) They then share how they found their answers.

Activity #3

Bubblenet feeding

Bubble feeding involves one or a few whales blowing air from their blowhole underwater. This produces sound as the bubbles form a cloud that rises toward the surface. The bubbles trap the prey between the surface and the whales' mouth. A bubble net is formed when the bubbles emitted by the whales form a ring and concentrate the prey inside. Both the sound and the bubbles work to capture the prey so the humpback can have more food,

To capture large schools of herring humpback whales work together. Each whale has a job; one blows bubbles around the herring school to keep the fish from escaping, others vocalize to confuse the herring and bring them to the surface and others herd the fish to the surface. Once the fish are at the surface they lunge upwards and gulp as many herring as they can.

Give each student a job:

- 1 will be the bubble blower (if a bubble machine can be found it would be great to use)
- 5 will be the singers
- 5 will be herders
- 11 – 13 will be herring

Herring are together in a school, swimming around. The herring will act afraid and confused by the bubbles so they move to the center of the room.



Bubble blower blows bubbles in a circle around the room.

Herders move the herring to the center of the room.



All of the humpback whales will need to “pretend” to eat the herring by opening their mouths wide.

Activity #4 Fingerprints/flukes

Scientists are able to identify humpback whales by means of their flukes. Print out the flukes (see resources) and from the following web site, <http://geekphilosopher.com>. Examine the flukes and find distinguishing marks and list them on chart paper. Invite a local police officer to share with students how fingerprinting of children is done and how it benefits our community.

Activity #5 Learning log journal entry

Ask students to respond to the following in their Sea Mammal book: “Why would eating in a group be better than eating alone?”

Assessment

When posed with the question, “How do humpback whales eat?” students simulate a group of



humpback whales bubblenet feeding.

Given pictures of whale and killer whale, ask students to select the correct written word card to label the picture in Haida. Record their responses.

Lesson #8

Let's Learn about Staying Warm!

Objectives

Students:

- Explore the purpose of blubber and be able to explain its purpose for sea mammals

Time

45 minutes

Materials

- Ice cubes
- A bowl of ice water
- 2 Ziploc sandwich bags per group
- Thermometer
- Four Timers
- Plastic gloves
- Crisco - 5-6 tablespoons per group
- Staying Warm Experiment Page (Resources)
- Staying Warm Graphing Page (Resources)

Haida Vocabulary

kálg, kálgaay	(the) ice
tadáang	is cold
stláay	hand
xwiigang	feels cold

Haida Phrases

Kálgaay tadáang.	The ice is cold.
Dii stláay xwiigang.	My hand feels cold.
Dáng stláay gw xwii us?	Does your hand feel cold?
Kálgaay gw tadáa us?	Is the ice cold?

Activity #1

Staying warm with blubber

Break students into groups of five. Fill four-five Ziploc bags with 5-6 tablespoons of shortening (approximately 1/3 full), then turn the remaining four-five zipper bags inside out. Place each one carefully inside the bag with the Crisco so that you are able to zip one bag to the other. This creates a blubber glove to put a hand in.



Measure the temperature of the water. Quickly put the hand without the blubber glove into the water so that students can feel the difference when placing the plastic gloved hand in the water. Students now put the hand in the blubber glove into the ice water and time how long each student in the group can keep it in the water. Record the length of time students kept their hands in the water.

Groups draw a picture of the experiment and complete the table (see resources). Students should know they are recording data on how long each can keep their hand in ice water with the blubber glove. In the end they will compare their notes on to how long non-gloved hands can stay in the water.

Ask: *How cold did the water feel with the plastic glove?
When you put the blubber glove on did you feel a difference?
Why is it easier to keep the blubber glove in the water longer?
Do you think a nice layer of blubber would protect you in the cold ocean water? Would it protect sea mammals?*

This layer of blubber helps keep seals, sea lions, killer whales, and humpback whales warm.

Activity #2 Learning log entry

Ask students to respond to these questions: "Why is blubber important to sea mammals?" "What purpose does it serve?"

Assessment

Use the two "Staying Warm" forms to assess whether students can compare information from a data table to a graph. As children write about the experiment, you can assess whether students understand the ranges of how long they can keep gloved hands in the ice water.

Lesson #9 Let's learn about Sound!

Objectives

Students:

- Investigate their personal hearing range
- Explore the basic concept of whale communication

Time

45 minutes

Materials

- Whistle
- Blindfold
- Bell
- Stapler
- Large scissor
- Drum



- Dice
- 1 clipboard per student
- Pencils
- Answer sheet
- Finding Nemo, the movie
- The Whale's Song by Dyan Sheldon
- Tuning fork
- Cup of water
- Cereal flakes
- Rubber bands
- Radio

Haida Phrases

Gúus uu dǎng gudǎnggang?	What do you hear?
Kún gw dǎng gudǎng us?	Do you hear a whale?
Kunáay Hl gudǎnggang.	I hear the whale.
Gám kunáay Hl gudǎng'anggang.	I don't hear the whale.

Activity #1 Hearing game


Discuss the fact that sea mammals have well-developed hearing. It is one way living animals learn about their surroundings.

Collect various items that make different sounds. Show students the various materials. Explain that they will each choose a spot in the room (or playground) and sit in that spot until the end of this activity.

Students then guess, hypothesize as to which material will be the easiest to hear and which will be the hardest.

Let them know you will place the items in a bag and pull them out one at a time. (Keep items behind the bag so they will not be able to see them.)



Before beginning they put a  by the item they think is the easiest to hear. They then put an X by the one they feel will be the hardest to hear.

Start with any item. For example, have students close their eyes until after they hear the sound, ring the bell. Students now open their eyes and write in space #1 what they heard. Give them ample time to write their answer. Use this procedure for the next five items.

Remind them not to shout out their answer but write their answer down.

Questions:

Which noise was the easiest to hear?

Which noise was the hardest to hear?



What affects what you hear?

What did Haida men need to do when hunting seal, sea lions and sea otters?

Activity #2 Echolocation

Before beginning find an area near the school that has an echo spot. Take the students out to the echo spot and allow students to experience hearing their own echo. Discuss how their voice reflected back to them. The sound reaches the ears in the form of sound waves, which pass through the air. Any object that stops the sound waves you send and reflect the waves back to you without changing the shape of the sound produces an echo.

On land sound waves do not travel very far because they hit houses, trees, cars, schools, office buildings, stores, rocks, etc. But, in the ocean there are not many obstacles in the path of sound waves. It is possible for whales to hear sounds for very long distances because there is little that blocks the path.

Whales use the sounds they make to communicate with one another and to find food in the water. Whales send out high-pitched sounds that travel through the water and then bounce off objects. This is called *echolocation*.

Now listen to the sounds of humpback whales on the CD and ask students what the whales may be communicating to one another. Brainstorm their ideas on chart paper.

Activity #3 Watching *Finding Nemo*

Play a short 2-3 minute clip from "*Finding Nemo*" in which Dorrie, the fish talks like a whale.

Discuss what Dorrie is doing and why she thinks she can communicate with the whale. Ascertain if students believe that whales communicate in this or any other manner. This activity serves as a book introduction for the following activity and book, *The Whale's Song* by Dyan Sheldon.

Activity #4 *The Whale's Song*

Read and discuss *The Whale's Song* by Dyan Sheldon. Discuss that whales are communicating with their songs. Go to www.intersea.org/sndarch.html to listen to some humpback whale recordings. Discuss how they various recordings are alike and how they are different.

Activity #5 Sound is produced when objects vibrate

Conduct a series of experiments/demonstrations as follows:

1. Strike a tuning fork and dip it in water. What happens to the water; the tuning fork?
2. Sprinkle cereal flakes on a drum, then tap the top of the drum. What happens to the cereal?
3. Stretch a rubber band between two fingers and pluck it; stretch the elastic farther and pluck it again. What do you notice about the movement of the rubber bands? What happens to the pitch produced?



4. Put your hand on the top of a playing radio. What do you feel? Describe sounds and changes of sounds of different objects.
5. Put your fingers on the front of your throat, very close to your “voice box.” Be careful that you don’t press hard enough to hurt yourself. Make a noise. What did you feel in your throat as the noise was coming out?

What was each of these objects doing as it was making sound? (vibrate, make sound, make sound waves)

How do you think whales make the sounds they do?

Activity #6 Sound recordist visit (email visiting)

Discuss with students how a sound recordist is able to record whales communicating. Ask them why someone might want to record that sound. Explain that they use “fancy” microphones to record whales. Invite a sound recordist (Kathy Turco in Fairbanks for example) to visit with students via e-mail. Ask her to share her job and what she does with the sounds that she has recorded of whales in Alaska.

Activity #7 Learning log entry

Ask students to write and/or draw a short response to this question, “Why is it important for sea mammals to have a great sense of hearing? How does it help them?”

Assessment

Schedule time with individual students to review their learning log entries. Ask each child to read what they have written. Ask them comprehension questions as they read. Ask each child to choose his/her favorite animal. Then ask him/her to pose one question about that animal – something you might learn about at the upcoming museum visit. Write down the question so that each student will have one particular question to take on the field trip.

Lesson #10 Museum Visit

Objectives

Students:

- Experience the galleries in the State (or local) Museum
- Recognize artifacts they have learned about in this unit
- Learn why artifacts are stored in a museum
- Observe traditional cultural artifacts that are in the museum
- Find clan crests and sea mammal crests on artifacts in a museum



- Understand that there are many Haida artifacts in a museum because they are valued

Time

2-3 hours

Materials

- Sea mammal artifact books from previous lessons

Haida Vocabulary

táaw, táawaay	(the) halibut hook
st'a hlk'únk', st'a hlk'únk'aay	(the) moccasins
dajáng, dajangáay	(the) hat
ķigw, ķigwáay	(the) basket
ķ'iits'aangw, ķ'iits'aangwaay	(the) inside house post
gaayhldáa dajangáay	(the) helmet

Haida Phrases

Táaw hl díi ķíndaa.	Show me a halibut hook.
St'a hlk'únk'aay gw is us?	Are these the moccasins?
Giisd uu dajangáay ķínggang?	Who sees the hat?
Tl'áan uu ķigwáay iijang?	Where is the basket?
ķ'iits'aangwaay iig hl stlajúu.	Point to the inside house post.
Gaayhldáa dajangáay hl ķing.	Look at the helmet.

Activity #1

Museum field trip

Students visit the Alaska State Museum (or your local museum) to examine sea mammal images, artifacts and hunting tools. Invite an Elder/Culture Bearer or a museum staff member to discuss traditional hunting practices.

Gather the class together and ask them to present the questions they have generated previously to the museum staff members. Tell them to listen carefully and with respect to their responses.

Review Sea Mammal Artifact Books.

Ask the museum staff and/or an Elder to talk about which clans use sea mammal images as crests.



Activity #2 Scavenger hunt

Do a scavenger hunt at the museum (See Resources). Search for images of sea mammals on artifacts.

Assessment

After the museum visit, as a class write a thank you letter to the Museum staff. Ask each child to mention one thing he/she learned or liked at the museum, to add to the letter.

Lesson #11 Research Project

Objectives

Students:

- Use knowledge gained through the unit to create a new sea mammal
- Discover the cultural significance the new animal could have to Haida people
- Be able to identify their new animal as a sea mammal
- Be able to identify three species of sea mammals that live in the water surrounding their community
- Present what they have learned with families and/or older students

Time

60 - 90 minutes

Materials

- Pictures of sea mammals in Southeast Alaska
- Foil
- Clay (like the kind train modelers use)
- Containers for water
- Paint
- Animal references from library

Activity #1 Making a clay model

Each student will need foil to form a sea mammal. Once an adult checks their form they can begin adding the clay material around the foil form. Students dip the material into foil water and layer in onto the foil form, making sure that they layer the material so that there are no holes. Allow to dry overnight. Paint the creatures the following day.



Activity #2 Writing a report

Students use a simple research organizer (See Resources) to begin to prepare a report on their new sea mammal and include the following:

- Environment where it lives
- Social behavior
- Solitary living or group living
- Prey
- Size
- Food
- Picture or drawing

Direct each student to finish a report on their new sea mammal to share with their families and/or reading buddies or other older students.

Activity #3 Sea mammal party

Invite parents and family members to an afternoon or evening of sharing. Students share their Sea Mammal Book, Learning Log, report and pictures with their families at this culminating Sea Party. Ask parents to bring a snack to share. Provide each children with the opportunity to share his/her new knowledge and newly created sea mammal.

Assessment

In the culminating activity, Lesson #10, each students shows his/her understanding of sea mammals. Review their reports, presentations and books about sea mammals:

- Is each item complete? Did the student follow directions?
- Does the report contain information that shows age appropriate understanding?
- Are the illustrations accurate?