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. Cherilyn 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 Fols, a cultural curriculum specialist with years of experience developing and teaching thematic, child-centered curriculum in rural Alaska also contributed to lessons and Ann Calhoun edited final drafts of the units.

All units are available at sealaskaheritage.org.

Haida Cultural Significance
Upon settling in Southeast Alaska the Haida people evaluated their environment. They adapted their lives to what nature provided – which is a lot of species of trees. This unit explores the use of the spruce tree. The roots provided containers for cooking, hats to keep people dry and lashings for many of the tools used. The trunk gives us canoes, paddles and temporary shelters, and the pitch was melted down and used as an antiseptic on cuts and burns.

Many clan treasures are carved from the trunks of spruce trees or woven from the roots. With a visit to a museum students can explore some of these items as well as everyday items made from the parts of a spruce tree.

Elder/Culture Bearer Role
Elders can enrich this lesson with their knowledge of the traditional uses of the parts of a spruce tree as well as assist in the learning of Haida words and phrases. Elders enrich the museum visit by expanding on and personalizing the knowledge shared on the museum description cards.

Throughout the unit an Elder can reinforce and teach language, cultural values and traditional knowledge.

Overview
In Lesson #1, Let’s Learn about Spruce Trees students learn the names for parts of a tree in Haida and English and dress up as trees with roots, bark, and branches.

In Lesson #2, Let’s Explore the Forest students are introduced to spruce trees in the forest.

In Lesson #3, Get to Know a Tree students draw, measure, and collect cones and make a rubbing from one tree they choose in the forest.
In Lesson #4, What do Trees Need to Grow? students learn about the life cycle of a spruce tree.

In Lesson #5, Who Needs Trees? students learn about squirrels in the forest. They also learn a Haida song about a squirrel.

In Lesson #6, Whose Home is this? students listen to and dramatize a story about a young eagle’s life from egg to fledging.

In Lesson #7, Let’s Find Tree Treasures in the Museum, students discover traditional objects and artifacts made from parts of spruce trees.

In Lesson #8, Spruce Root Gathering, students learn how to gather and prepare spruce roots.

In Lesson #9, Let’s Make Haida Band Aids, students learn the traditional Haida way to make a band-aid, using spruce pitch, spruce roots and leaves.

Alaska State Standards

English/Language Arts
A1) Apply elements of effective writing and speaking
B3) Relate what is viewed, read, and heard to practical purposes in the student’s own life, to the world outside, and to other texts and experiences.

Math
A2) Select and use appropriate systems, units, and tools of measurement, including estimation.

Science
A12) Distinguish patterns of similarity and differences in the living world in order to understand the diversity of life
A14a) Understand the interdependence between living things and their environments
B15) Use science to understand and describe the local environment

Cultural Standards
A3) Acquire and pass on the traditions of the community through oral and written history
C1) Perform subsistence activities in ways that are appropriate to local cultural traditions
D1) Acquire in-depth cultural knowledge through active participation and meaningful interaction with Elders
D3) Interact with Elders in a loving and respectful way that demonstrates an appreciation of their role as culture-bearers and educators
E2) Understand the ecology and geography of the local bioregion
4. Using an oven mitt remove the spoon from the hot plate.
5. Place the liquefied pitch on a clean leaf.
6. After the pitch has cooled down (about 2-3 minutes) place the leaf on one student's arm. The pitch will be against the skin.
7. Ask the students:
   - What should we do to keep the band aid in place?
   - If you get a cut does your band aid stay on?
   - Is there something that the spruce tree provides that we can use as a tie?
8. We're going to use this piece of string to tie the band aid into place. During traditional times we would have used spruce roots to tie the band aid in place.
   - Ask students to list the steps of making the band aid. Write the steps on chart paper.
9. Explain that the class will be going into the forest to make band aids.

**Activity #2**

**Field trip to make Haida band aids**

Take an outdoor field trip to a familiar forest area and to a nearby location where you can start and maintain a fire. Prior to the field trip have a volunteer parent start a small fire in barbecue at the location of the field trip. Talk with the class about field trip rules and proper behavior when you are near a fire.

Take students on a field trip to the spruce tree forest they learned, explored and named in Lesson #3. They will use their spoon, thank the tree, and put a small amount of pitch from the tree on their spoon. At the same time each child gather a leaf and hold onto it. Have an adult put the sponge around the fire. As a class, watch the spoons full of pitch liquefy. See how long it takes. Then have children gather and wash their leaves and cut a piece of string or soak spruce root in water.

Have an adult to remove the spoons from the fire and place the pitch on the clean leaf. Let the leaf cool. Using the spruce root tie the band-aid onto a pretend wound.

As you are talking about how they were made, reinforce the importance of being respectful to living things - an important traditional tribal value.

**Assessment**

Observe the student participation in band aid making. Did they successfully make a Haida Band Aid? Did they follow directions? Did they cooperate with classmates in the process?

**Optional Extension Activity**

Ask students to talk to their parents and grandparents or aunts/uncles to see if they ever made Haida band aids or if they ever heard of them. Record any stories that students share from their families.

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**Lesson #1**

**Let’s Learn about Spruce Trees**

**Objectives**

Students:
- Learn the names for the parts of a tree in Haida and English

**Time**

45 minutes

**Materials**

- Prior to class gather parts of a tree: bark, cone, pitch, needles, roots, branch
- Traditional uses of spruce tree sheet (See Resources)
- Spruce tree coloring page with Haida/English labels
- Large spruce tree poster
- Haida/English labels of tree parts
- Small tree coloring page and tree part label activity - one per student
- Crayons, markers, pencils
- Tree part patterns, cut out of brown paper.
- Brown and green butcher paper to make trunk tunic, headband, and branches
- Stapler

**Haida Vocabulary**

- ƛ̓įid, ƛ̓įdaay (the) spruce tree
- ƛ̓ilaas, ƛ̓ilaajaay (the) branch
- ƛ̓įid ƛ̓įj, ƛ̓įdaay ƛ̓įj (the) cone
- ƛ̓įs’āas, ƛ̓įs’āajaay (the) pitch/sap
- ƛ̓įs’ā’i, ƛ̓įdaay ƛ̓įs’a’i (the) spruce needle
- hlíing, hlíngaay (the) spruce root
Haida Phrases

Kjídaay iig hl stlaajou.  Point to the spruce.
Tlæaay hl dìi kjínda.  Show me the branch.
Kjídaay kjúj hl tlát’aa.  Touch the spruce bark.
St’t’as k’amalaay hl k’wáayandaa.  Count the cones.
K’as gw is us?  Is this pitch/sap?
Gíisd uu kjídaay sëj’a’i da’aang?  Who has the spruce needles?
Tl’æn uu hiling iijang?  Where are some spruce roots?

Activity #1
Learning the part of a spruce tree

Use parts of a tree previously gathered by you – the cone, branch etc. – to verbally introduce students to the spruce tree by showing them each part. Ask them to imagine how each of the parts might be used by Haida people.

Activity #2
Parts of a spruce tree

Prior to introducing this activity draw a large construction paper spruce tree.

Distribute tree parts cards to individual students until every student has one. Use the phrase Áa uu tláas iijang / Here is a branch to reinforce student learning of the names of the parts of a tree in both English and Haida. Call on one student and have him/her say the phrase, and as he/she does, add a picture to the large spruce tree.

Áa uu tláas iijang.  Here is a branch.
Áa uu kjídd s’uj iijang.  Here is some spruce bark.
Áa uu st’t’as k’amalal iijang.  Here is a cone.
Áa uu kjídd s’aj iijang.  Here is some pitch/sap.
Áa uu kjídd s’ag’i iijang.  Here are some spruce needles.
Áa uu hiling iijang.  Here are some spruce roots.

Continue practicing until all students holding cards have put their tree part card on the tree. After practicing for a short time, distribute the individual tree coloring and labeling sheets so that students complete them individually. (see resources)

Activity #3
Dress-up like a spruce tree

After students have learned the names for the parts of a spruce tree, ask one student volunteer

Haida Vocabulary

sdláagwaal, sdláagulaay  (the) spoon
kug, kugáay  (the) firewood
da kúnhlaaw, da kúnhlaawaay  (the) matches
xíl, xiláay  (the) leaves
ts’aanuu, ts’aanuwaaay  (the) fire

Haida Phrases

Sdláagulaay hl ‘láag isdáa.  Give her the spoon.
Kugáay iig hl stlaajou.  Point to the firewood.
Da kúnhlaawaay hl k’wáayandaa.  Count the matches.
Gíisd uu xiláay da’aang?  Who has the leaves?
Ts’aanuwaaay hl ñíng.  Look at the fire.

Activity #1
Learning how Haida band aids were made

Prior to this lesson collect pitch from a near by spruce tree and a leaf from an alder tree. Ask students what they’ve learned about spruce trees. Make a list of what they know.

Ask the children: “Did you know that Haida people make medicine from the pitch of the spruce tree? How do you think it was done?”

I’m going to show you how Haida band aids are made.”

Demonstrate to the class:
1. You must take a knife or spoon and remove the pitch from the tree. (Gather before class.)
2. Thank the tree for providing you with the pitch that is going to help you make a band aid. You might say: “Háw’aa, ñíit, I’m going to make a band aid out of what you have given me.”
3. Put the pitch in a sea shell or keep it on the spoon and place it near the edge of the fire (or on an electric hot plate, if you cannot be outside near a fire). We’ll watch the pitch liquefy.

What does it mean when something liquefies?
dents the steps of gathering roots so they are familiar with the process prior to the field trip.

Find a healthy spruce tree in a nearby location. Look for healthy spruce trees that are growing in a sandy area — they are the best for getting the roots.

Near the outer edge of the branches carefully dig a few inches down into the moss or dirt to look for pencil sized, reddish colored roots. Make sure the area isn’t rocky. Roots found in a rocky area will be crooked and unsuitable for weaving. Carefully dig and pull the roots from the ground. Try not to break the outer bark. Long roots are desirable. Run your gloved hand gently down the root to remove tiny root hairs and dirt. Place roots in a plastic bag. The roots need to stay moist.

Now build a fire. Have a roasting stick and de-barking stick ready (Éenaa — Two tongs laced together that the roots are pulled through to remove the outer bark.) Roast the roots in an open fire until they sizzle. Remove the roots. The roots look like burnt marshmallow.

Quickly untie root and run them through the éenaa to remove the outer bark tool. The outer bark comes of the root like pulling off the burnt part of a marshmallow. Wash roots in rainwater. Split the roots in half, lengthwise.

Activity #2
Guest weaver visit
Invite a local weaver to visit the class to demonstrate root splitting and weaving. Before she/he arrives ask the children what they would like to learn about using spruce roots to weave. Record their questions on a big sheet of paper or the chalkboard and leave it posted during the weaver’s visit.

Assessment
Observe student interacting with the guest weaver. Do they ask appropriate questions? Do they know the names of the tools she is using?

Lesson #9
Haida Band Aids

Objectives
Students:
• Learn the Haida way to make a band-aid, by using spruce pitch, spruce roots and leaves.

Time
45 - 60 minutes

Materials
• Metal spoon
• Small barbeque
• Fire wood
• Matches
• Leaves
• Water

to come forward to be dressed as a spruce tree. Using the paper patterns provided, create brown slippers for tree roots, brown tunic or vest for bark and a branch headband. Recall the Haida and English names for these tree parts as you assemble them and then put each part on the student.

Once the “tree” is dressed, children can make the sound of the wind blowing to make the tree sway to and fro. After the activity put the tree “costume” in a Forest Center in the classroom so that other children can practice dressing as a tree.

Assessment
Observe student participation as they identify the parts of the spruce tree. Check each student’s tree labeling sheet to determine if he/she has labeled the tree parts correctly. Ask individual students to say the names of the tree parts in Haida and record their answers on a checklist. Determine if more time is need for review.

Reference Materials and Websites
• http://www.arborday.org/kids/carly/lifeofatree/
• http://www.urbanext.uiuc.edu/trees1/flash/index.html

Lesson 2
Let’s Explore the Forest

Objectives
Students:
• Experience and acquire knowledge about the physical features of a tree.
• Learn to say the Haida words and phrases pertaining to spruce tress and forests

Time
45 minutes

Materials
• Tape
• Waterproof pens
• Tree name tags
• Paper doll
• Paper tree parts
Lesson #8
Spruce Root Gathering

Objectives
Students:
• Learn the importance of thanking and showing respect for trees
• Learn how to gather spruce roots
• Understand the importance of the spruce tree to Haida people

Time
45 minutes

Materials
• Spruce Root Gathering Study Prints
• Root gathering tools
  o pocket knife
  o net picker or a tent stake puller
  o plastic bag
  o gardening gloves

Haida Vocabulary
díagw, díagwáay  (the) digging stick
ya’áats’ ñ’udgungáas, ya’áats’ ñ’udgungáas  (the) pocket knife
gwáahl, gwáalaay  (the) bag

Haida Phrases
Tl’áan uu diágg gyaa díagwáay iijang?  Where is your digging stick?
Ya’áats’ ñ’udgungáas hl diágg isdáa.  Give me the pocket knife.
Gwáalaay iig hl isdáa.  Put it in the bag.

Activity #1
Learn about gathering and caring for spruce roots
Gathering roots is a fun, but hard and challenging job. According to Haida people, we must
be respectful to the trees before we take their roots. We need to thank them for their use.
Roots are used traditionally by Haida people to make baskets, hats, rope and for lashing tools
together.

Plan a half day field trip to gather spruce roots. Invite several parents and an Elder/Culture
Bearer to join the class on this trip. Before you go, use the study prints to explain to the stu-
trees. Tell students about the rules of behavior in a museum – no running, use quiet voices, look carefully, and treat everything with care.

After 15-20 minutes, gather students together in the meeting area. Ask them what they found, calling on individual children to discuss their findings.

**Assessment**
Collect student’s Spruce Tree Treasures Scavenger Hunt Activity Sheets. Review them to see if each student completed the form and correctly identified the items on the sheet.

**Optional Extension Activity**
Invite family members to visit the class and share family treasures made from spruce trees to share.

Make a classroom display of treasures made from spruce trees.

Invite a scientist who works with trees to come in and talk to the class about his/her job and what happens with trees in the forests of Southeast Alaska.

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**Lesson 3**

**Get to Know a Tree**

**Objectives**

- Students:
  - Further expand their knowledge about the physical features of a spruce tree
  - Learn to use appropriate Haida words and phrases
  - Show respect for the natural environment when on a forest walk

**Time**

45 minutes

**Materials**

- Copies of student tree journal
- Pencils/crayons
- Tape
- Ball(s) of string/scissors
- Measuring tapes

**Haida Phrases**

- ¡kid uu Hi ḷiγan. I found a spruce tree.
- ¡kidaaay Hi ḷyaatγan. I named the spruce tree.

**Activity #1**

**Getting to know a spruce tree**

Return to the forest you visited earlier with the students. Children should find their marked trees. Direct them to make an observation drawing of their tree in their journals with pencils and crayons.

After they have finished drawing, have each student cut a length of string from the string ball to measure the tree. Then they record the inch/foot measurement in their journals. Using the side of the pencil or crayon, students make a bark rubbing of the tree on a journal page. Children can give a name to their trees.

**Activity #2**

**Sharing your favorite tree**

Ask children to share the information they gathered in their journals with each other, in pairs preferably. They should describe their tree, say where they found the tree, tell what made them choose that particular tree, estimate how tall it is, how round it is, what the bark felt like, whether any animals or birds might like that tree, etc.

**Assessment**

Listen for children’s experiences and knowledge of the forest and trees. Can they work independently to record information in their journals? Can they work cooperatively in pairs or small groups, telling each other about what they know about their tree?
Lesson #4
What Do Trees Need to Grow?

Objectives
Students:
• Learn about the life cycle of a tree from seedling to maturity
• Use Haida words and phrases about trees

Time
45 minutes

Materials
• Tree Life Cycle Book and Cards
• Student Tree Journals
• Crayons, pencils
• Earth books from the school library with pictures of the sun, rain and soil
• Life Cycle of a Pine Tree, Rourke Classroom Resource

Haida Vocabulary
máahl, máahlaay (the) seed
xayáay sunshine
ñ’wíi, ñ’wiyáay (the) soil
cándl, cándlaay (the) water

Haida Phrases
Máahlaay hl k’wáayandaa. Count the seeds.
Xayáay aa hl ñ’áwaa. Sit in the sunshine.
Ñ’wíi hl díig isdáa. Give me some soil.
Dáa gw cándl da’áa us? Do you have some water?

Activity #1
How does a tree grow?
Show the class the tree life cycle cards while describing the growth of the tree from seed to death. Ask children if they have seen trees in each of these stages.

Have you ever seen a seedling?
Have you ever seen a Christmas tree?
Have you ever seen a 100 year old tree?

Optional Extension Activity
Use the Haida song CD to sing an eagle song. Use a drum and dance to the song.

Reference Materials and Websites

Lesson #7
Find Tree Treasures at the Museum

Objectives
Students:
• Experience and acquire information from a visit to a museum
• Learn museum behavior etiquette
• Practice using the Haida words and phrases they have learned in a setting outside the classroom

Time
60 minutes

Materials
• Study Prints
• Museum Activity Sheet (1 per student)
• Pencils

Activity #1
Field trip to the museum
Walk or take a bus to the Alaska State Museum. (Prior to this day make sure you have sent home permission slips and made arrangements with the museum, 465-2901). Gather students in the clan house on the first floor or in a central meeting place. Share pictures and/or artifacts that students can see and hold. Museum staff can explain some of the tools (canoe poles, fish clubs) and treasures like spruce root hats and baskets.

Ask students to generate questions about what they see and respectfully ask the museum staff their questions.

Find the eagle tree and ask students to recall what they know about eagles and the way they nest.

Activity #2
Museum scavenger hunt activity

Introduce the museum activity page. (see resources) Explain to the students that it is their job to complete this activity to explore/find items in the museum that are used/made out of spruce.
Haida Vocabulary

ts’áak’, ts’áak’aay (the) eagle

gúud, gúudaay (the) juvenile eagle
ts’áak’ giit’ii (the) fledgling eagle
hltálg, hltálgaay (the) nest
ts’áak’ ñáw, ts’áak’aay ñáw (the) eagle’s egg

Haida Phrases

Tl’áan uu ts’áak’aay iíjang? Where is the eagle?
Gúud gw is us? Is this a juvenile eagle?
Dáa gw ts’áak’ giit’ii iíng us? Do you see a fledgling eagle?
Hltálgaay hl díi ñíndaa. Show me the nest.
Ts’áak’aay ñáw hl k’wáayandaa. Count the eagle’s eggs.

Activity #1
Listen to an eagle story

Read the book, Eagle’s World to the children. Talk about the bravery of the young eagle as he tried to get out of the egg, wait for food, and finally tried to fly. Ask the children if they have ever seen an eaglet. Have children share familiar eagle stories from their own lives or from what they have heard. Ask an Elder to join in the conversation, telling a personal story or a traditional legend about an eagle.

As you read the story again, ask students to note the eagle, eaglet, egg, and nest to be found in the pictures.

Activity #2
Make eagle hats

Using the patterns (see resources), students make paper eagle hats and wings to use to role play the eagles in the story. They can also make an eagle’s nest to put in the Forest Center.

Activity #3
Dramatize a story

Act out the story using the eagle hats and wings.

Assessment

Listen to children’s expressions of being frightened and brave. Can students talk about these human feelings? Do they recognize that animals seem to have similar feelings?

Activity #2
What trees need to grow


In their journals, children now draw the elements needed for trees to grow (sun, soil and water). Have library books available so students can see how different illustrators show these elements in books.

Assessment

Do children understand the concept of “life cycle”? Listen for evidence of this understanding by group and individual responses.

Ask children individually to tell what a tree needs to grow and record their correct answers on a checklist.

Ask students to place growth cards in sequential order.

Optional Extension Activities

Schedule time for children to go to the Forest Center and make a drawing or painting of the life cycle of a tree.

Gather samples of spruce cones and seeds and hemlock cones and seeds for children to observe with hand lenses.

Sprout some lima beans so children can see larger seeds sprouting and observe another plant’s life cycle.

Lesson # 5
Who Needs Trees?

Objectives

Students:
- Recognize a squirrel midden in the forest.
- Learn words and phrases to a Haida song about a squirrel.

Time

45 minutes

Materials
- Spruce cones master
- Squirrel tail pattern
- Brown construction
- Yarn
- Scissors, crayons
- Library books about squirrels

Invite the students to help you put the tree life cycle cards in sequential order.
Activity #1
Finding a Midden

Teacher Preparation:
You will need to find a midden before this lesson. A midden is a squirrel’s pinecones remnants – the discarded parts of the pinecone once the seeds are removed and stored. They are most often found around the base of a spruce or hemlock tree.

Activity
Take the class on another field trip to the forest, leading them to the midden you have previously identified. Ask the students if they know what this pile of spruce cone litter is:

Who made this pile?
Why are there so many spruce cone parts?
Who has been here?

Provide information when it is needed during the following discussion about the pile of spruce parts. Some students may already know about squirrel middens being the “left-overs” after the squirrels have removed the spruce seeds for eating or storing for winter. Tell students about the squirrel’s winter storage (pantry) and the kinds of food found stored there. Ask them to compare what a squirrel stores to what their family stores in the winter.

What kinds of food do you have stored in your pantry for the winter? In your freezer?

Activity #2
Squirrel tail and pine cone
Use the squirrel pattern piece and pine cone coloring page included in the Resources, complete props – like the squirrel tail – to perform a squirrel song for family, friends or another classroom.

Assessment
Listen for acquired information about squirrels, squirrel middens and winter storage of food.

Optional Extension Activity
Schedule time for children to go to the Forest Center to look at school library books about squirrels and listen to taped stories or poems about squirrels.

Lesson 6
Whose Home is This?

Objectives
Students:
• Learn about the growth cycle of an eaglet.
• Learn to say Haida words and phrases about eagles in nests

Time
45 minutes

Materials
• Eaglet’s World, by Evelyn Minshull, published by Albert Whitman & Company
• Eagle Hat and Wing Patterns and Paper
• Construction Paper
• Scissors, glue
• Library books with illustrations of eagles

Midden
Activity #1
Finding a Midden

Teacher Preparation:
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Use the squirrel pattern piece and pine cone coloring page included in the Resources, complete props – like the squirrel tail - to perform a squirrel song for family, friends or another classroom.

Assessment
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Optional Extension Activity
Schedule time for children to go to the Forest Center to look at school library books about squirrels and listen to taped stories or poems about squirrels.

Lesson 6
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Objectives
Students:
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• Learn to say Haida words and phrases about eagles in nests

Time
45 minutes

Materials
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- Eagle Hat and Wing Patterns and Paper
- Construction Paper
- Scissors, glue
- Library books with illustrations of eagles

Midden
Activity #1
Listen to an eagle story

Read the book, Eagle’s World to the children. Talk about the bravery of the young eagle as he tried to get out of the egg, wait for food, and finally tried to fly. Ask the children if they have ever seen an eaglet. Have children share familiar eagle stories from their own lives or from what they have heard.

Ask an Elder to join in the conversation, telling a personal story or a traditional legend about an eagle.

As you read the story again, ask students to note the eagle, eaglet, egg, and nest to be found in the pictures.

Activity #2
Make eagle hats

Using the patterns (see resources), students make paper eagle hats and wings to use to role play the eagles in the story. They can also make an eagle’s nest to put in the Forest Center.

Activity #3
Dramatize a story

Act out the story using the eagle hats and wings.

Assessment

Listen to children’s expressions of being frightened and brave. Can students talk about these human feelings? Do they recognize that animals seem to have similar feelings?

Lesson # 5
Who Needs Trees?

Objectives

Students:
• Recognize a squirrel midden in the forest.
• Learn words and phrases to a Haida song about a squirrel.

Time

45 minutes

Materials

• Spruce cones master
• Squirrel tail pattern
• Brown construction
• Yarn
• Scissors, crayons
• Library books about squirrels
Lesson #4
What Do Trees Need to Grow?

Objectives
Students:
• Learn about the life cycle of a tree from seedling to maturity
• Use Haida words and phrases about trees

Time
45 minutes

Materials
• Tree Life Cycle Book and Cards
• Student Tree Journals
• Crayons, pencils
• Earth books from the school library with pictures of the sun, rain and soil
• Life Cycle of a Pine Tree, Rourke Classroom Resource

Haida Vocabulary
máahl, máahlaay  (the) seed
xayáay  sunshine
ñ'wíi, ñ'wiyáay  (the) soil
cándl, cándlaay  (the) water

Haida Phrases
Máahlaay hl k'wáayandaa.  Count the seeds.
Xayáay aa hl ñ'áwaa.  Sit in the sunshine.
K'wií hl diig isdáa.  Give me some soil.
Dáa gw cándl da'áa us?  Do you have some water?

Activity #1
How does a tree grow?
Show the class the tree life cycle cards while describing the growth of the tree from seed to death. Ask children if they have seen trees in each of these stages.

Have you ever seen a seedling?
Have you ever seen a Christmas tree?
Have you ever seen a 100 year old tree?

Optional Extension Activity
Use the Haida song CD to sing an eagle song. Use a drum and dance to the song.

Reference Materials and Websites

Lesson #7
Find Tree Treasures at the Museum

Objectives
Students:
• Experience and acquire information from a visit to a museum
• Learn museum behavior etiquette
• Practice using the Haida words and phrases they have learned in a setting outside the classroom

Time
60 minutes

Materials
• Study Prints
• Museum Activity Sheet (1 per student)
• Pencils

Activity #1
Field trip to the museum
Walk or take a bus to the Alaska State Museum. (Prior to this day make sure you have sent home permission slips and made arrangements with the museum, 465-2901). Gather students in the clan house on the first floor or in a central meeting place. Share pictures and/or artifacts that students can see and hold. Museum staff can explain some of the tools (canoe poles, fish clubs) and treasures like spruce root hats and baskets.

Ask students to generate questions about what they see and respectfully ask the museum staff their questions.

Find the eagle tree and ask students to recall what they know about eagles and the way they nest.

Activity #2
Museum scavenger hunt activity
Introduce the museum activity page. (see resources) Explain to the students that it is their job to complete this activity to explore/find items in the museum that are used/made out of spruce
trees. Tell students about the rules of behavior in a museum – no running, use quiet voices, look carefully, and treat everything with care.

After 15-20 minutes, gather students together in the meeting area. Ask them what they found, calling on individual children to discuss their findings.

**Assessment**

Collect student’s Spruce Tree Treasures Scavenger Hunt Activity Sheets. Review them to see if each student completed the form and correctly identified the items on the sheet.

**Optional Extension Activity**

Invite family members to visit the class and share family treasures made from spruce trees to share.

Make a classroom display of treasures made from spruce trees.

Invite a scientist who works with trees to come in and talk to the class about his/her job and what happens with trees in the forests of Southeast Alaska.

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**Lesson 3**

**Get to Know a Tree**

**Objectives**

Students:
- Further expand their knowledge about the physical features of a spruce tree
- Learn to use appropriate Haida words and phrases
- Show respect for the natural environment when on a forest walk

**Time**

45 minutes

**Materials**

- Copies of student tree journal
- Pencils/crayons
- Tape
- Ball(s) of string/scissors
- Measuring tapes

**Haida Phrases**

- Kiid uu Hi ḷiigán. I found a spruce tree.
- Kiidaay Hi kyaatgán. I named the spruce tree.

**Activity #1**

**Getting to know a spruce tree**

Return to the forest you visited earlier with the students. Children should find their marked trees. Direct them to make an observation drawing of their tree in their journals with pencils and crayons.

After they have finished drawing, have each student cut a length of string from the string ball to measure the tree. Then they record the inch/foot measurement in their journals. Using the side of the pencil or crayon, students make a bark rubbing of the tree on a journal page. Children can give a name to their trees.

**Activity #2**

**Sharing your favorite tree**

Ask children to share the information they gathered in their journals with each other, in pairs preferably. They should describe their tree, say where they found the tree, tell what made them choose that particular tree, estimate how tall it is, how round it is, what the bark felt like, whether any animals or birds might like that tree, etc.

**Assessment**

Listen for children’s experiences and knowledge of the forest and trees. Can they work independently to record information in their journals? Can they work cooperatively in pairs or small groups, telling each other about what they know about their tree?
Lesson #8
Spruce Root Gathering

Objectives
Students:
- Learn the importance of thanking and showing respect for trees
- Learn how to gather spruce roots
- Understand the importance of the spruce tree to Haida people

Time
45 minutes

Materials
- Spruce Root Gathering Study Prints
- Root gathering tools
  - pocket knife
  - net picker or a tent stake puller
  - plastic bag
  - gardening gloves

Haida Vocabulary

dlagw, dlagwáay  (the) digging stick
ya’áats’ ½’udgangáa, ya’áats’ ½’udgungáas (the) pocket knife
gwáahl, gwáalaay (the) bag

Haida Phrases

Tl’áan uu dáng gyaa dlagwáay íijang? Where is your digging stick?
Ya’áats’ ½’udgungáas hl dig isdáa. Give me the pocket knife.
Gwáalaay ig hl isdáa. Put it in the bag.

Activity #1
Learn about gathering and caring for spruce roots

Gathering roots is a fun, but hard and challenging job. According to Haida people, we must be respectful to the trees before we take their roots. We need to thank them for their use. Roots are used traditionally by Haida people to make baskets, hats, rope and for lashing tools together.

Plan a half day field trip to gather spruce roots. Invite several parents and an Elder/Culture Bearer to join the class on this trip. Before you go, use the study prints to explain to the students:
dents the steps of gathering roots so they are familiar with the process prior to the field trip.

Find a healthy spruce tree in a nearby location. Look for healthy spruce trees that are growing in a sandy area—they are the best for getting the roots.

Near the outer edge of the branches carefully dig a few inches down into the moss or dirt to look for pencil sized, reddish colored roots. Make sure the area isn’t rocky. Roots found in a rocky area will be crooked and unsuitable for weaving. Carefully dig and pull the roots from the ground. Try not to break the outer bark. Long roots are desirable.

Run your gloved hand gently down the root to remove tiny root hairs and dirt. Place roots in a plastic bag. The roots need to stay moist.

Now build a fire. Have a roasting stick and de-barking stick ready (Éenaa—Two tongs laced together that the roots are pulled through to remove the outer bark.) Roast the roots in an open fire until they sizzle. Remove the roots. The roots look like burnt marshmallow.

Quickly untie root and run them through the éenaa to remove the outer bark tool. The outer bark comes of the root like pulling off the burnt part of a marshmallow.

Wash roots in rainwater. Split the roots in half, lengthwise.

Activity #2
Guest weaver visit

Invite a local weaver to visit the class to demonstrate root splitting and weaving. Before she/he arrives ask the children what they would like to learn about using spruce roots to weave. Record their questions on a big sheet of paper or the chalkboard and leave it posted during the weaver’s visit.

Assessment
Observe student interacting with the guest weaver. Do they ask appropriate questions? Do they know the names of the tools she is using?

Lesson #9
Haida Band Aids

Objectives
Students:
• Learn the Haida way to make a band-aid, by using spruce pitch, spruce roots and leaves.

Time
45 - 60 minutes

Materials
• Metal spoon
• Small barbecue
• Fire wood
• Matches
• Leaves
• Water

Once the “tree” is dressed, children can make the sound of the wind blowing to make the tree sway to and fro. After the activity put the tree “costume” in a Forest Center in the classroom so that other children can practice dressing as a tree.

Assessment
Observe student participation as they identify the parts of the spruce tree. Check each student’s tree labeling sheet to determine if he/she has labeled the tree parts correctly.

Ask individual students to say the names of the tree parts in Haida and record their answers on a checklist. Determine if more time is need for review.

Reference Materials and Websites
• http://www.arborday.org/kids/caryl/lifeofatree/
• http://www.urbanext.uiuc.edu/trees1/flash/index.html

Lesson 2
Let’s Explore the Forest

Objectives
Students:
• Experience and acquire knowledge about the physical features of a tree.
• Learn to say the Haida words and phrases pertaining to spruce trees and forests

Time
45 minutes

Materials
• Tape
• Waterproof pens
• Tree name tags
• Paper doll
• Paper tree parts
**Haida Phrases**

- **Kjidaay iig hl stlaajou.** Point to the spruce.
- **Tlaajaay hl dii kjinda.** Show me the branch.
- **Kjidaay k\’uj hl tlat\’aa.** Touch the spruce bark.
- **St\’aas k\’amaalaay hl k\’waayandaa.** Count the cones.
- **K\’aas gw is us?** Is this pitch/sap?
- **Gliid uu kjidaay s\’aj a’ii da’aang?** Who has the spruce needles?
- **T\’aan uu hiling iijang?** Where are some spruce roots?

**Activity #1**

**Learning the part of a spruce tree**

Use parts of a tree previously gathered by you – the cone, branch etc. – to verbally introduce students to the spruce tree by showing them each part. Ask them to imagine how each of the parts might be used by Haida people.

**Activity #2**

**Parts of a spruce tree**

Prior to introducing this activity draw a large construction paper spruce tree. Distribute tree parts cards to individual students until every student has one. Use the phrase **Aa uu tlaas iijang / Here is a branch** to reinforce student learning of the names of the parts of a tree in both English and Haida. Call on one student and have him/her say the phrase, and as he/she does, add a picture to the large spruce tree.

- **Aa uu tlaas iijang.** Here is a branch.
- **Aa uu kjiid k\’uj iijang.** Here is some spruce bark.
- **Aa uu st\’aas k\’amaal iijang.** Here is a cone.
- **Aa uu kjidaay s\’aj a’ii iijang.** Here is some pitch/sap.
- **Aa uu kjiid s\’aj\’ee iijang.** Here are some spruce needles.
- **Aa uu hiling iijang.** Here are some spruce roots.

Continue practicing until all students holding cards have put their tree part card on the tree. After practicing for a short time, distribute the individual tree coloring and labeling sheets so that students complete them individually. (see resources)

**Activity #3**

**Dress-up like a spruce tree**

After students have learned the names for the parts of a spruce tree, ask one student volunteer to dress up like a spruce tree, using parts of the tree previously gathered by you – the cone, branch etc. – to verbally introduce students to the spruce tree by showing them each part. Ask them to imagine how each of the parts might be used by Haida people.

**Haida Vocabulary**

- **Sdlagulaay** (the) spoon
- **Kug**, **Kugáay** (the) firewood
- **Da kúnhlaaw**, **Da kúnhlaawaay** (the) matches
- **Xíl**, **Xiláay** (the) leaves
- **Ts’aanuu**, **Ts’aanuwaay** (the) fire

**Haida Phrases**

- **Sdlagulaay hl ‘láag isdáa.** Give her the spoon.
- **Kugáay iig hl stlaajou.** Point to the firewood.
- **Da kúnhlaawaay hl k’waayandaa.** Count the matches.
- **Gliid uu xiláay da’aang?** Who has the leaves?
- **Ts’aanuwaay hl ijing.** Look at the fire.

**Activity #1**

**Learning how Haida band aids were made**

Prior to this lesson collect pitch from a near by spruce tree and a leaf from an alder tree. Ask students what they’ve learned about spruce trees. Make a list of what they know.

Ask the children: “Did you know that Haida people make medicine from the pitch of the spruce tree? How do you think it was done?”

“I’m going to show you how Haida band aids are made.”

**Demonstrate to the class:**

1. You must take a knife or spoon and remove the pitch from the tree. (Gather before class.)
2. Thank the tree for providing you with the pitch that is going to help you make a band aid. You might say:
   “Háw’aa, kjit, I’m going to make a band aid out of what you have given me.”
3. Put the pitch in a sea shell or keep it on the spoon and place it near the edge of the fire (or on an electric hot plate, if you cannot be outside near a fire). We’ll watch the pitch liquify.

   What does it mean when something liquifies?
4. Using an oven mitt remove the spoon from the hot plate.
5. Place the liquefied pitch on a clean leaf.
6. After the pitch has cooled down (about 2-3 minutes) place the leaf on one student’s arm.
   The pitch will be against the skin.
7. Ask the students:
   What should we do to keep the band aid in place?
   If you get a cut how does your band aid stay on?
   Is there something that the spruce tree provides that we can use as a tie?
8. We’re going to use this piece of string to tie the band aid into place. During traditional times we would have used spruce roots to tie the band aid in place.
   Ask students to list the steps of making the band aid. Write the steps on chart paper.
9. Explain that the class will be going into the forest to make band aids.

Activity #2
Field trip to make Haida band aids

Take an outdoor field trip to a familiar forest area and to a nearby location where you can start and maintain a fire. Prior to the field trip have a volunteer parent start a small fire in barbecue at the location of the field trip. Talk with the class about field trip rules and proper behavior when you are near a fire.

Take students on a field trip to the spruce tree forest they learned, explored and named in Lesson #3. They will use their spoon, the tree, and put a small amount of pitch from the tree on their spoon. At the same time have each child gather a leaf and hold onto it. Let an adult put the spoon around the fire. As a class, watch the spoons full of pitch liquefy. See how long it takes. Then have children gather and wash their leaves and cut a piece of string or soak spruce root in water.

Have an adult to remove the spoons from the fire and place the pitch on the clean leaf. Let the leaf cool. Using the spruce root tie the band-aid onto a pretend wound.

As you are talking about how they were made, reinforce the importance of being respectful to living things - an important traditional tribal value.

Assessment
Observe the student participation in band aid making. Did they successfully make a Haida Band Aid? Did they follow directions? Did they cooperate with classmates in the process?

Optional Extension Activity
Ask students to talk to their parents and grandparents or aunts/uncles to see if they ever made Haida band aids or if they ever heard of them. Record any stories that students share from their families.

Lesson # 1
Let’s Learn about Spruce Trees

Objectives
Students:
• Learn the names for the parts of a tree in Haida and English

Time
45 minutes

Materials
• Prior to class gather parts of a tree; bark, cone, pitch, needles, roots, branch
• Traditional uses of spruce tree sheet (See Resources)
• Spruce tree coloring page with Haida/English labels
• Large spruce tree poster
• Haida/English labels of tree parts
• Small tree coloring page and tree part label activity - one per student
• Crayons, markers, pencils
• Tree part patterns, cut out of brown paper.
• Brown and green butcher paper to make trunk tunic, headband, and branches
• Stapler

Haida Vocabulary

<table>
<thead>
<tr>
<th>Haida</th>
<th>English</th>
</tr>
</thead>
<tbody>
<tr>
<td>ḭıld, ḭídąay</td>
<td>(the) spray tree</td>
</tr>
<tr>
<td>tłaas, tłaająay</td>
<td>(the) branch</td>
</tr>
<tr>
<td>ḭił’d’ųj, ḭídaay ḭ’ųj</td>
<td>(the) cone</td>
</tr>
<tr>
<td>stl’áas k’ámal, stl’áas k’ámalaay</td>
<td>(the) cone</td>
</tr>
<tr>
<td>ḭ’áas, ḭ’aqjiay</td>
<td>(the) pitch/sap</td>
</tr>
<tr>
<td>ḭ’il’d’s’á’i, ḭídaay s’á’i</td>
<td>(the) spruce needle</td>
</tr>
<tr>
<td>hlíing, hlíingąay</td>
<td>(the) spruce root</td>
</tr>
</tbody>
</table>

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.
In Lesson #4, What do Trees Need to Grow? students learn about the life cycle of a spruce tree.

In Lesson #5, Who Needs Trees? students learn about squirrels in the forest. They also learn a Haida song about a squirrel.

In Lesson #6, Whose Home is this? students listen to and dramatize a story about a young eagle’s life from egg to fledging.

In Lesson #7, Let’s Find Tree Treasures in the Museum, students discover traditional objects and artifacts made from parts of spruce trees.

In Lesson #8, Spruce Root Gathering, students learn how to gather and prepare spruce roots.

In Lesson #9, Let’s Make Haida Band Aids, students learn the traditional Haida way to make a band-aid, using spruce pitch, spruce roots and leaves.

**Alaska State Standards**

**English/Language Arts**
- A1) Apply elements of effective writing and speaking
- B3) Relate what is viewed, read, and heard to practical purposes in the student’s own life, to the world outside, and to other texts and experiences.

**Math**
- A2) Select and use appropriate systems, units, and tools of measurement, including estimation.

**Science**
- A12) Distinguish patterns of similarity and differences in the living world in order to understand the diversity of life
- A14a) Understand the interdependence between living things and their environments
- B15) Use science to understand and describe the local environment

**Cultural Standards**
- A3) Acquire and pass on the traditions of the community through oral and written history
- C1) Perform subsistence activities in ways that are appropriate to local cultural traditions
- D1) Acquire in-depth cultural knowledge through active participation and meaningful interaction with Elders
- D3) Interact with Elders in a loving and respectful way that demonstrates an appreciation of their role as culture-bearers and educators
- E2) Understand the ecology and geography of the local bioregion
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 #S555A03004, 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. Cherilyn 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 Folsa, a cultural curriculum specialist with years of experience developing and teaching thematic, child-centered curriculum in rural Alaska also contributed to lessons and Anne Collins edited final drafts of the units.

All units are available at sealaskaheritage.org.