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 the Sealaska Heritage Institute in Ketchikan. Cherilyn Holter (ʼTʼáaw 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 online at sealaskaheritage.org.
K’áang
Hemlock Tree
K'åang sk'a'ii
Needle
K’áang hlůu
Hemlock Trunk
K’áang k’uj
Hemlock Bark
K'áang hlíing
Hemlock Root
Stl'áas k'ámaal
Cone
You can shake hands with a Hemlock tree.
Tools needed to complete this job.
- Clipboard
- Pencil
- Crayons: brown, dark green, light green
- String
- Links, tiles or rulers
- Ring Toss Rings
Hemlock Trees Around Our School

Work cooperatively with your partner to complete this job.
1. Find Hemlock trees. You can shake their branches. They are soft.
2. Count the hemlock tree around your school
3. Make a tally to represent each of the trees you count.
4. Write the number.

<table>
<thead>
<tr>
<th>Type</th>
<th>Description</th>
<th>Tallies</th>
<th>Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>K’áang</td>
<td>When you shake hands with the hemlock tree it soft to the touch.</td>
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**K’áang**
Hemlock
Explore a Hemlock Tree

Draw a picture of a hemlock tree.
1. Find a Hemlock tree.
2. Draw your Spruce tree.
3. Remember to include:
   - K’áang hlúu – hemlock trunk
   - Tlás – branches
   - K’áang sk’a’íi – hemlock needles
   - K’áang k’uj – hemlock bark
   - Stl’áas k’ámaal – cone
Branch Exploration

Explore the branch of a Hemlock tree.
1. Draw a branch.
2. Include the following:
   - Tláas – branch
   - K‘áang sk’a’ii – hemlock needle
Cone Exploration

How Many Cones Are on the Branch of a Hemlock Tree?
1. Find a Hemlock branch with cones
2. Place a ring on the branch. Make a tally for each of the cones in the area of the ring.

Cone Tally

There were _____________ cones on my branch.
Bark Exploration

Explore the bark of the Hemlock tree.
1. Touch, Feel, and Look at the bark
2. Make a rubbing.
   a. Place this page on trunk.
   b. Hold page in place and color firmly with a crayon.
Hemlock Tree Circumference

1. Measure the circumference of a Hemlock tree.
   a. Have a partner hold one end of the string.
   b. Walk around the tree with the string.
   c. With your pencil or crayon mark the string where the ends meet.
   d. Lay string on a flat surface and measure using links, tiles or rulers.

<table>
<thead>
<tr>
<th>Units Used</th>
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</table>

Note to teacher:
Attach bag with measuring string.
1. Color hemlock cone brown.
2. Cut out cone and seeds
3. Fold cone on the centerfold line.
4. Cut the 4 solid lines.
5. Fold on side fold lines
6. Cut on the 3 solid lines on each side.
7. Glue seeds to the circles on page 2 of this activity.
8. Put a small drop of clue on the x’s
Scientists can determine a tree's age by counting the growth rings.

1. Put an X and make a tally for each ring you count.

2. This tree was _________ year old before it was cut down.
Making Tree Cookie Play Dough or Cookies

1. Rolling out the dough.
2. Cutting shapes.
3. Cutting along the scored lines.
4. Slicing the dough into shapes.
5. Final result of the cookie.
It’s A Rotten Home for Me

Script

Storyteller:  Deep, deep in the forest, a huge hemlock tree was swaying in the wind, its branches moving like giant arms, its trunk held fast by roots deep in the soil. It was a very old hemlock tree that had lived through many seasons.

Season Chanters: Spring, summer, fall winter; spring summer fall winter, spring, summer, fall, winter, spring, summer, fall, winter

Storyteller: But as the wind blew stronger and stronger…..

Wind Blowers: Woooo-oooo-oooo

Storyteller: …and the rain lashed against the tree,….

Rain Tappers: (with fingers tapping on desks or tables), Tap, tap, tap, tap

Storyteller: …the old hemlock cracked and with a thunderous crash, fell to the forest floor. And it looked like this:
   (Storyteller opens the front flap of the box to see a new chunk of wood or a picture of new wood. Then the flap is closed.)

Storyteller: The old hemlock lay on the forest floor for many seasons.

Season Chanters: Spring, summer, fall winter, spring, summer, fall winter, Spring, summer, fall winter

Storyteller: The rain fell.

Rain Tappers: Tap, tap, tap, tap

Storyteller: The wind blew.

Wind Blowers: Woooo-oooo-oooo

Storyteller: The snow fell.

Snowflakes: (Rubbing fingers lightly together)
Storyteller: A small mouse made a nest in a hollow part of the tree’s trunk. Moss and lichens began to grow along the log. And it looked like this: (Storyteller opens the box flap to reveal a moss-covered chunk of wood or a picture of a moss-covered chunk of wood)

Storyteller: Many seasons passed.

Season Chanters: Spring, summer, fall, winter, spring, summer, fall, winter, spring, summer, fall winter, spring, summer, fall winter

Storyteller: The rain fell.

Rain Tappers: Tap, tap, tap, tap

Storyteller: The wind blew.

Wind Blowers: Woooo-fooo-fooo

Storyteller: The snow fell.

Snowflakes: (fingers gently rubbing together)

Storyteller: Mushrooms and fungus began to grow on the tree. The bark began to fall off and the wood began to change – to get soft and punky. And it looked like this: (Storyteller opens the box flap to reveal a log chunk that has a tree fungus and punky, soft wood, then closes the flap.)

Storyteller: A squirrel hid a hemlock cone in the punky soil for winter food. Seeds lay inside the cone, waiting for spring. Snow covered the old tree. The rain fell.

Rain Tappers: Tap, tap, tap, tap

Storyteller: The wind blew.

Wind Blowers: Woooo-fooo-fooo

Storyteller: The snow fell.

Snowflakes: (Rubbing fingers gently together)

Storyteller: And the seasons changed.

Season Chanters: Spring, summer, fall, winter, spring, summer, fall, winter, spring, summer, fall, winter, spring, summer, fall, winter
Storyteller: The old hemlock sheltered a new seedling that looked like this:

(The storyteller opens the box flap to reveal a new hemlock seedling growing in the soil)

Storyteller: And the seasons passed.

Season Chanters: Spring, summer, fall, winter, spring, summer, fall, winter, spring, summer, fall, winter, spring, summer, fall, winter
I saw:

□ Insects
□ Moss
□ Lichen
□ Mushrooms
□ Worms
□ ____________________
□ ____________________
□ ____________________
□ ____________________

Here’s a drawing of my favorite creepy crawly thing.
Fresh cut log

Decomposition
Stage 1
Wood with moss

Decomposition
Stage 2
Wood with lichen

Decomposition
Stage 3
Rotting log

Decomposition
Stage 4
I saw:

☐ Insects
☐ Moss
☐ Lichen
☐ Mushrooms
☐ Worms
☐ __________________________
☐ __________________________
☐ __________________________
☐ __________________________

Here’s a drawing of my favorite creepy crawly thing.
K’aang – Hemlock Unit
Lesson 6 – Activity #2

Name ______________________________________

[Diagram of a cone with instructions for folding and gluing]

Fold and glue tips

Fold

Fold

Fold

Fold

Fold
cut and glue tips

Enlarge to Legal Size
Label the mosquito’s life cycle.

<table>
<thead>
<tr>
<th>Stl'i'il't'agwaang Xiinangaa Mosquito Life Cycle</th>
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</thead>
<tbody>
<tr>
<td><strong>káw</strong></td>
</tr>
<tr>
<td><strong>gánd'í ts'úujuudqaa</strong></td>
</tr>
<tr>
<td><strong>stl'i'il't'agwaang giit'ii</strong></td>
</tr>
<tr>
<td><strong>stl'i'il't'agwaang</strong></td>
</tr>
</tbody>
</table>
Mosquito Model Directions

Materials needed to make a mosquito model
- Mosquito model pattern pieces
- ½ Red pipe cleaner
- 1 Tan pipe cleaner
- ½ Clear straw
- Hologram wrapping paper (eyes)
- 12 Q-tip tips
- Glue
- Hole punch
- Clothes pins

Head
- Glue compound eyes onto the oval head piece
- Glue straw and 2 antennae between 2 oval headpieces. Let dry.

Thorax
- Glue the 6 legs and 2 wings onto the thorax piece.

Abdomen
- Glue 12 Q-tips and 1 red pipe cleaner onto the abdomen piece.
- Make 5 holes through both abdomen pieces (breathing spiracles).

Assemble Mosquito
- Glue head to thorax.
- Glue head and thorax to the abdomen.
- Use clothes pins to keep parts together
- Let dry.

Song
- Sing this song as students work on their project.

Head, Thorax, Abdomen, Abdomen Song
Head, thorax, abdomen, abdomen
Head, thorax, abdomen, abdomen
Six legs, two antennae, compound eyes
Head, thorax, abdomen, abdomen
Cannibal Giant Note Card

1. Enlarge note card to fit 8.5” x 11” paper.
2. Write your favorite part of the Cannibal Giant Legend on the reverse side.
3. Fold note
4. Address and send home to share with families.