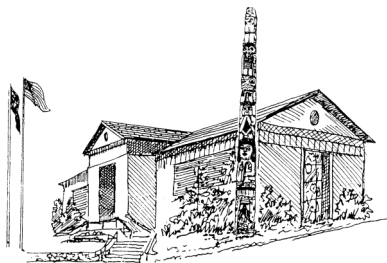


KAXDEGOOWU HÉEN SHÁALI

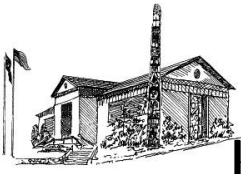
MONTANA CREEK FISH TRAP



A JUNEAU-DOUGLAS CITY MUSEUM PLACE-BASED HISTORY KIT GRADE 5



DEVELOPMENT OF THIS EDUCATION KIT FOR THE JUNEAU-DOUGLAS CITY MUSEUM WAS MADE POSSIBLE BY THE ALASKA STATE MUSEUM GRANT-IN-AID PROGRAM.



Juneau-Douglas City Museum

Kaxdegoowu Héen Sháali (Montana Creek Fish Trap)

GRADE: 5th

TIME: 1 hour 30 minutes



KIT INCLUDES:

- Lesson Guide
- Water bottle trap and marble
- Close up image of **Kaxdegoowu Héen Sháali** at excavation site.
- 9 Teaching Boards
- Book: "Prince and the Salmon People" by Claire Rudolf Murphy

MATERIALS NEEDED:

- Scissors
- A variety of building materials: paper cups, plastic bottles, paper towel rolls, Kleenex boxes, Dixie cups, cereal boxes, craft sticks, etc.
- Binding materials: tape, glue, yarn, string, etc.
- Optional: Juneau-Douglas City Museum Brochure on the trap .

KIT DESCRIPTION:

Students try a funnel trap, describe what a trap is, what its purpose is, and what makes it effective.

Students observe the Kaxdegoowu Héen Sháali (Montana Creek Fish Trap), learn about traditional Tlingit fishing and the making of the replica trap housed at the Juneau City Museum.

Students design a trap using everyday materials and present their findings.

VOCABULARY:

English

Funnel	Cylindric
Hoop	Stave
Lashing	Weir(Qit)

Tlingit

Kaxdegoowu Héen	
Kaxdegoowu Héen dei	
Sháal	Kítx
Óot'	Diagwáa
Xáat	Héen
S'ixwaadáa	

STANDARDS:

NGSS:3-5 ETS1 Engineering Design

Students who demonstrate understanding can: Define a simple design problem reflecting a need or a want that includes specified criteria for success and constraints on material, time or cost.

Alaska Content Standards: History/Social Studies- AH.ICGP 3

The student demonstrates an understanding of the historical rights and responsibilities of Alaskans by: explaining and analyzing tribal and western concepts of land ownership and how acting upon those contributes to changes in land use, control and ownership.

Alaska Content Standards: Speaking and Listening 5.4

Report on a topic or text or present an opinion, sequencing ideas logically and using appropriate facts and relevant, descriptive details to support main ideas or themes; speak clearly at an understandable pace.

CONTENT CONNECTIONS:

Social Studies
History
Tlingit Culture

OBJECTIVES: Students will...

- Explain the significance of salmon and salmon stream ownership to the Tlingit people
- Demonstrate how a cylindrical funnel trap works.
- Design a trap
- Describe what makes a trap efficient

ASSESSMENT CRITERIA: Students will be able to answer:

- Did you learn something new? What?
- Did this experience change how you think about the topic?
- Is this something you can use in the future?

PREPARE:

Collect trap making materials

Paper cups, plastic bottles, paper towel rolls, kleenex boxes, dixie cups, cereal boxes, craft sticks, tape, glue, yarn, string, etc

Optional extension activity: Look up and preview YouTube video: "water bottle fish trap"

Try the "encounter" activity, getting a marble into the trap.

Make copies of the student sheet: one per "team" of students. Can be between 2-4 students per team.

Schedule a trip to the Juneau-Douglas City Museum

ENCOUNTER:

Part One: Concept of a “trap” class discussion questions (15 minutes)

- What is a trap?
- What is its purpose? (*To catch something and hold it*)
- What makes a trap successful? (*Easy to get in but hard to get out of*)

Marble Trap Demonstration: Show the water bottle marble trap. Ask a student to get the marble in the bottle and then try to remove it without taking the water bottle apart.

- *Can they do it?*
- *Was it easier to get the marble in or out?*
- *Could you get it out?*
- *What makes it easier or harder to get it in or get it out?*

This is a **funnel trap**, the entrance to the trap is a funnel. The wide opening at one end makes it easier for things to get in and the narrower opening at the other makes it harder to get back out of.

Making an object to trap another object needs to do two things—it should be easy to get into and hard to get out of.

Optional Extension Activity: Look up “water bottle fish trap” on YouTube to share videos of this trap actually catching fish. Be sure to preview the videos before sharing with your class.

Part Two: “Artful Teaching” routine: **See, Think, Wonder** (5-10 minutes)

Show the “See, Think, Wonder” board with the image of **Kaxdegoowu Héen Sháali** at the excavation site.



- **What do you see?**
Ask students to sit quietly and observe the image for 1-2 minutes while thinking about what they see.

Next, ask students to share things they see. One way to help focus only on what they see is to ask them to be able to point at the photo while they share.
- Ask: **What do you think about the things you see?**
Now students have an opportunity to share their connections to prior knowledge and to make interpretations.
- Ask: **What do you wonder about?**
Now students will think about questions they have about the image/object.

If students do not mention a fish trap, be sure to lead them to wondering: *Is it a trap? What might it trap?*

Part Three: Teaching Boards (15-45 minutes)

Read “Prince and the Salmon People” by Claire Rudolf Murphy (adds at least 30 minutes, maybe read at another point in the day)

Use the following teaching boards to share information with students.

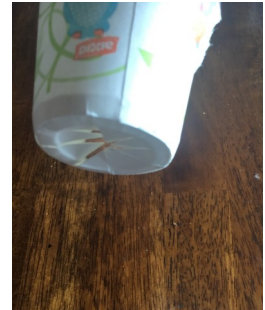
- Traditional Tlingit Fishing
- Kaxdegoowu Héen Sháali
- Kaxdegoowu Héen Sháali Location
- The Replica

ENGAGE:

The Challenge Hands-On learning Activity (30 minutes)

- Use the Challenge Teaching board

Optional Teacher Example: two Dixie cups taped together, one end has slits cut in it. A penny can be pushed through with pressure but does not fall out when flipped over down.



You may choose to share this example with your students or not.

Hand out the **student sheet** and review with the class before they are released to begin the challenge. Be sure to discuss the presentation expectations outlined on the student self evaluation checklist on the back of the handout.

REFLECT:

Student Presentations: (30 minutes)

Students present their traps to the class explaining the characteristics of the object they chose to trap (size, weight, etc) and the materials they used to design their trap. They will demonstrate whether or not the trap worked. They will also describe the process they went through, did it work on the first try, if not, what modifications were made, were they able to get it to work at all? If not, why do they think the trap was not successful.

After experiencing making a trap, describe what things the Tlingit people considered when designing a salmon trap?

ASSESSMENT:

Use "Self Evaluation Checklist" on the "Fish Trap Student sheet"

EXTENSIONS

- Invite a Tlingit elder or knowledge bearer to the class to discuss the significance of salmon to the culture.
- Eat salmon in class.
- Visit the Juneau-Douglas City Museum to see **Kaxdegoowu Héen Sháali** in person as well as the replica.

LINKS:

Juneau-Douglas City Museum brochure

<http://www.juneau.org/parkrec/museum/documents/FishTrapBrochurer.pdf>

Article from Northwest Coast Archaeology

<https://qmackie.com/2010/04/07/montana-creek-fish-trap-alaska/>

Artful teaching routine

http://www.artfulteaching.org/uploads/6/9/4/1/69414177/at_see_think_wonder.pdf

Names of Team Members:

Date:

Instructions

Design a trap

- Choose an object to trap such as a marble, a linking cube, a coin, etc
- Using the materials you have gathered, design a trap that the object can be forced into but does not come out of easily.

Things to consider

- How heavy is the object you are trapping?
- How much pressure will have to be applied to get the object into the trap?
- How much pressure would have to be applied to get the object out?

Make a plan

- Brainstorm some ideas with your team.
- Decide on some materials to try and list them.
- Make a sketch of your idea **before** you begin to build.

When you are finished you will:

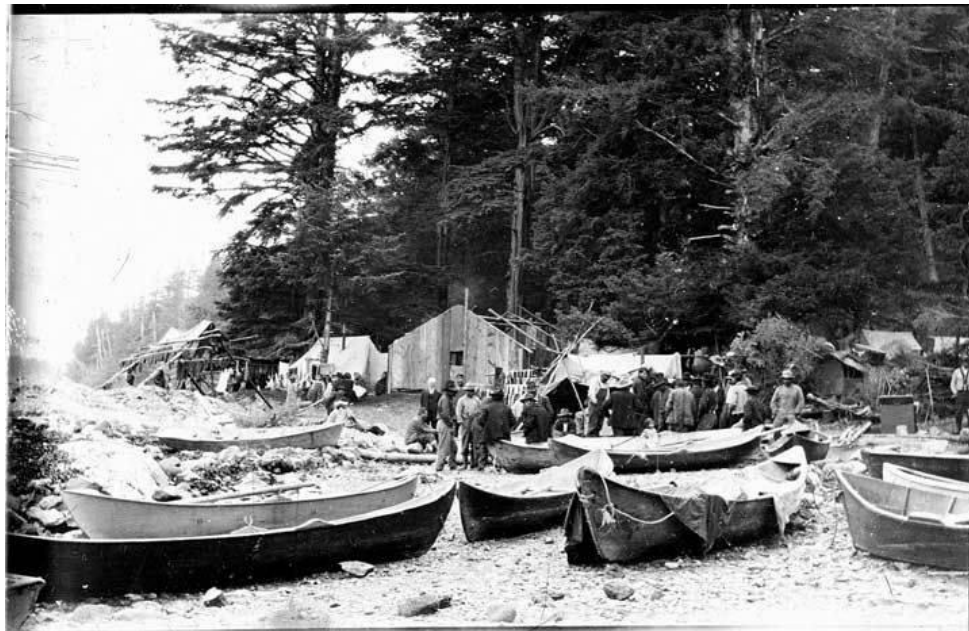
- Present your trap to the class:
 - Explain the characteristics of the object you choose to trap (size, weight, ect)
 - Explain the materials you used to design their trap.
 - Demonstrate whether or not the trap worked.
 - Describe the process you went through,
 - Did it work on the first try?
 - If not, what modifications were made?
 - Were you able to get it to work at all?
 - If not, why do you think the trap was not successful?
- After experiencing making a trap, describe what things the Tlingit people considered when designing a salmon trap.

Self Evaluation Checklist:

YES	NO	
		Our team brainstormed ideas together and all voices were heard.
		We created a sketch and included a materials list.
		We tried our trap and made modification if needed.
		We thoughtfully discussed what the designers of Tlingit fish trap must of considered when designing the cylindrical fish trap.
		We spoke loudly and clearly when presenting our traps.
		We listened carefully and respectfully to other teams presentations.

Traditional Tlingit Fishing

- In 1786 when La Pérouse visited Lituya Bay near Yakutat he and his crew observed this type of cylindrical basket traps being used. He noted:
“In this it will be seen, that the salmon, coming up the river, are stopped by the stakes; unable to leap over them, they turn back towards the sea; in the angles of the dike are placed very narrow wicker baskets, closed at one end, into which they enter, and being unable to turn in the, they are thus caught.” ~ The Tlingit Indians by George Thornton Emmons page 106
- Salmon are a staple food of the Tlingit. Fishing creeks and bays were **owned** by **clans** which gave them **exclusive fishing rights to that area**
- There are many fishing techniques including gaff, spears, hook and line, and various types of traps.
- Fish trap: sháal



Alaska State Library - Historical Collections

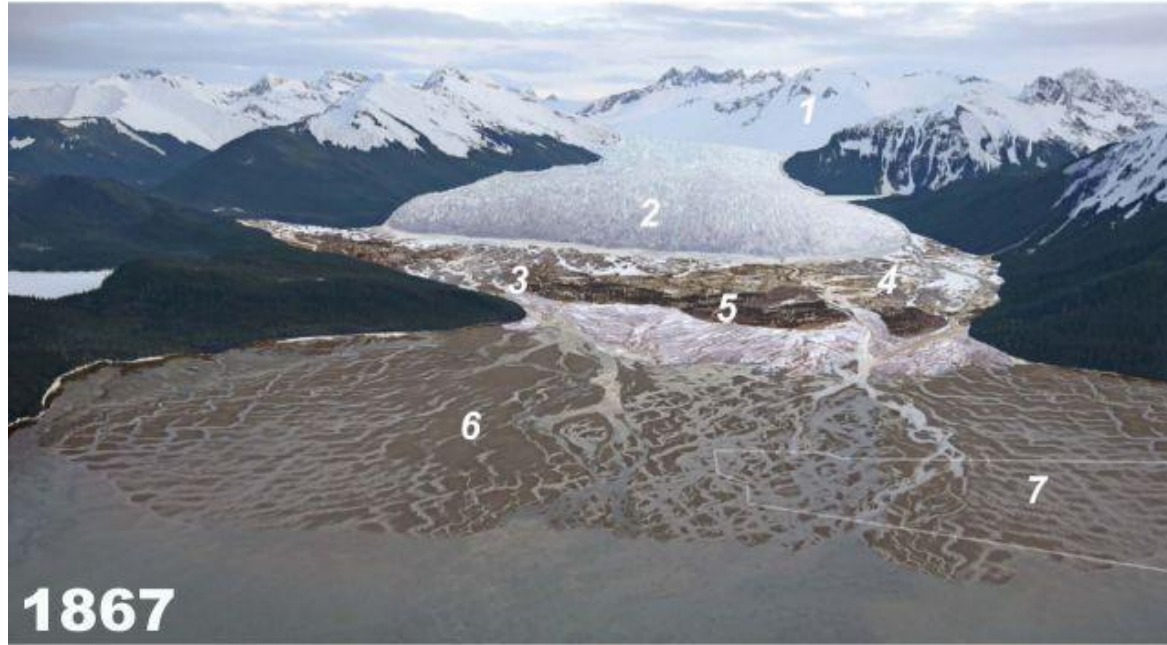
Title	Alaska native fish camp.	Identifier	ASL-P226-427
Collection Name	William R. Norton. Photographs. ca. 1890-1920. ASL-PCA-226		
Description	Crowd behind canoes pulled up on shore, tents, half-finished wood house, fish drying on racks.		

Kaxdegoowu Héen Sháali

- The **funnel** trap was first spotted in 1989 on the banks of Montana Creek in Juneau by Paul Kissner.
- The traditional caretakers of Montana Creek are members of the Dipper House of the L'eeneidí (Dog Salmon Clan) from the Raven moiety.
- An emergency excavation conducted by Wally Olsen) and Steve Henrikson, who removed the top part of the trap to prevent its loss due to erosion.
- Remainder of the trap salvaged in 1991
- Trap is 2.8 meters (9.2 feet) long, 1 meter (3.3 feet) wide.
- Analysis indicates longitudinal **staves** of hemlock, hoops of spruce branch , and lashings of spruce root.
- Radiocarbon dating indicates the trap is 500-700 years old.
- First trap of its kind to be excavated on the Northwest Coast.
- made by ancestors of the Tlingit people.



Kaxdegoowu Héén Sháali Location



Digitally manipulated photo by Richard Carstensen to show the area in 1867.. Number 3 indicates where the fish trap was found and how the area would have looked then.

The Replica

- Full scale detailed replica of the **cylindrical funnel** trap made with traditional techniques and materials of split hemlock ribs/staves to the spruce branch hoops using split spruce root twine.
- Replica made by Janice Criswell and Steve Henrickson.
- Tlingit art of spruce root basketry is still practiced today by many artists including Janice Criswell.
- Janice Criswell teaches Northwest Coast basketry at the University of Alaska Southeast. She learned to weave Raven's Tail robes and basketry from Cheryl Samuel and Delores Churchill.
- Steve Henrickson is the Curator of Collections at the Alaska State Museum in Juneau.



The Challenge

Think back to the **cylindrical funnel** trap used to trap the marble, what made it effective?

Design a trap:

- Choose an object to trap such as a marble, a linking cube, a coin, ect
- Using the materials you have gathered, design a trap that the object can be forced into but does not come out of easily.

Things to consider:

- How heavy is the object you are trapping
- How much pressure will have to be applied to get the object into the trap
- How much pressure would have to be applied to get the object out



Vocabulary

Funnel

Cylindrical

Hoop

Stave

Lashing

Weir(Qit)

Vocabulary Definitions

Funnel: a utensil that is usually a hollow cone with a tube extending from the smaller end and that is designed to catch and direct a downward flow

Cylindrical: relating to or having the form or properties of a cylinder.

Hoop: horizontal pieces of trap (spruce brunch on Montana Creek trap)

Stave: longitudinal pieces of trap (hemlock on Montana Creek trap)

Lashing: string-like material used to bind the hoops and staves together (spruce root on Montana Creek trap)

Weir (Qít): fences built across shallow rivers or angled to guide fish into traps. Some weirs were removable or partially removable and others were built into the riverbed.

Tlingit Vocabulary

Kaxdegoowu Héen

Kaxdegoowu Héen dei

Sháal

Kítx

Óot'

Dlagwáa

Xáat

Héen

S'ixwaadáa

Tlingit Vocabulary Translations

Kaxdegoowu Héen: Montana Creek

Kaxdegoowu Héen dei: trail to Montana Creek (literally 'going back clear water trail')

Sháal: fish trap

Kítx: short, cylindrical basket trap

Óot': rock pile fish trap

Dlagwáa: harpoon for salmon

Xáat: salmon

Héen: water, river, stream, creek

S'ixwaadáa: basket

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