TRADITIONAL HOUSING AND SHELTER: CIKLLUAQ (SOD HOUSE) GR: 6-12 (7 LESSONS)

Elder Quote/Belief:

"The Aleuts built sod houses. They built a wooden frame with driftwood. The wooden frame was covered in grass, moss and mud. For heat, they would have a fire in the middle and a hole on top to let the smoke out. The windows were made out of bear intestine. The size of the house depends on how many people are going to stay in it." - Herman Moonin, Nanwalek[i]

Barbara means a meeting place. Them days, they had big barabaras and in the middle, they had big holes, and in the hole was a fire. The ceiling had a hole in it too, so the smoke from the fire would go out the hole. We weren't successful sometimes! Some people lived in them sometimes. Our people used Russian culture heritage, so maybe they're the ones who taught us how to make banyas, smokehouses, and mud huts. Then we followed their culture so we lost ours.

- Lydia Robart, Port Graham[ii]

Grade Level: 6-12

Overview:

The Chugach people have inhabited Prince William Sound and the Lower Kenai Peninsula areas since the last ice age. Before the Russian explorers arrived, the Chugach people lived in traditional houses called ciklluaq, also known as sod houses or smoke houses. The Russians called the ciklluaq a barabara. These shelters were built to withstand the strongest storms both in summer and winter.

The ciklluaq (sod house) was traditionally built from materials readily available to the people which would consist of the frame made of driftwood then covered it all with branches, grass, moss and mud for insulation. These traditional houses would have a hole in the middle of the roof to allow the smoke to go out when using a fire for warmth or cooking. The window would be made from animal intestine or stomach.

The house would be built to the size of the person's family. Archeologists have found that most of the sod houses had been built to fit up to 20 people. The house was built in a location close to a river so fresh water was easily accessible and abundant wildlife. The Chugach people were travelers and were always moving from one seasonal camp to another, they would migrate through the region searching for an area where the wildlife was plentiful and easy to harvest. When the wildlife became scarce they would move back to where they were before or find a new location. The Chugach people had created many seasonal camps and a lot of them knew where they were built so that they can return to them or use them as a safe shelter during traveling. One item that was always left behind in the cikllauq (sod house) was the seal oil lamp. The Chugach people would leave a seal oil lamp upside down so the next traveling people would be able to use it.

After the Russian explorers settled in Alaska the Chugach people began to adapt by influence of the Russian culture and heritage. The Chugach people started to build their homes like the Russians design, more like the houses you see today.

Standards:

AK Cultural:	*AK Content Science*:	*CRCC*:
A (3) Culturally-knowledgeable students are well grounded in the cultural heritage and traditions of their community	**G (2)** History and Nature Science. A student should understand the history and nature of science.	**Survival S (3)** Students should know how to start a fire, prepare signals, and make temporary shelters.

Lesson Goal: The students will learn how to build a traditional house, ciklluaq, also known as a barabara, sod house or a smoke house.

Lesson Objective(s): Students will:

- Learn how to build traditional house-ciklluaq
- Discover what and why materials were used and how a location is chosen for the ciklluaq
- Learn the Sugt'stun/Eyak vocabulary words

Vocabulary Words: Sugt'stun Dialects

English:	Prince William Sound:	Lower Cook Inlet:	Eyak:
Sod house	ciklluaq	Ciklluaq	
Shelter built on the Beach	maqqiiguasaq (bathhouse)	Kawartarwik	qi'Adk'udAxahL (sweathouse)
Grass	We'get	We'get	
mud	qikuq	Qikuq	
Tree	napaq	Napaq	lis
Driftwood/log	Tep'aq	Tep'aq	
Moss			k'uhdL

Materials/Resources Needed:

Construction Hand Tools:

- Measuring tape
- Carpenter Pencil
- Shovels
- Pick axe
- Hand saws
- Hammer and nails
- Rope (1/2" diameter)
- String line
- Plumb bob
- Level- 4 foot

Books and Documents:

- *Chugach Eskimo*
- *The Native People of Alaska Traditional living in a Northern Land* by Steve J. Langdon
- *Fireweed Cillqaq - Life and Times in Port Graham,* Vol. 1, Page 33
- *Alexandrovsk- English Bay in its Traditional Way,* Vol. 2, Page 53

Videos and recordings:

- Jukebox, *Simeon Kvasnikoff, Port Graham Interview:*
  - Shelter cabins http://jukebox.uaf.edu/mp3s/nanpg/23507-01.mp3
  - Traveling and Shelters http://jukebox.uaf.edu/mp3s/nanpg/23507-02.mp3
- Round house being built, same method as a Sod house https://vimeo.com/253542695
- Finding Sod Houses on Kodiak https://www.youtube.com/watch?v=6oM9M8B_s8k
- Traditional Sod House, Inuit https://www.youtube.com/watch?v=lBdYkPMLA5M

Websites:

- Barabara photo – Seldovia, Alaska
  - http://vilda.alaska.edu/cdm/search/searchterm/Barabara/mode/all/order/title
- Alaskan sod houses
  - http://vilda.alaska.edu/cdm/search/searchterm/Sod%20buildings/mode/exact

Teacher Preparation:

- Invite an Elder or Recognized Expert who can share about traditional ciklluaq (sod house) dimensions, materials, construction, and locations.
- Review proper respect etiquette with guest in classroom.
- Review YouTube videos, books and documents.
- Determine the actual size of traditional house/shelter going to build.
- Gather materials and tools needed.
- Scout out where best to build.

Opening:

How many of you know what a ciklluaq is? Ciklluaq is the Sugt'stun word for a traditional sod house which is also known as a smoke house or barabara. Ciklluaq (sod houses) were the traditional houses that ancestors lived. During this lesson, we will be researching information on what materials were used to build a ciklluaq, how and where locations were chosen to build and descriptions on how to build these traditional houses.

After we have gathered enough information, we will create a step-by-step guide to correctly and successfully build a ciklluaq. We will also build a traditional sod house as a group.

Activities:

Class I: Research

1. Ask the students to research materials that were traditionally used to build a sod house.
2. Listen to Simeon Kvasnikoff from Port Graham describing shelters:
   - Shelter cabins http://jukebox.uaf.edu/mp3s/nanpg/23507-01.mp3
   - Traveling and Shelters http://jukebox.uaf.edu/mp3s/nanpg/23507-02.mp3

3. Watch the following YouTube videos listed above on how a sod house is built.
4. In groups (or individually) create a material list for the material needed to build a ciklluaq.
5. Assign students to create a step-by-step guide that will help them build the ciklluaq.

Class II: Field trip

1. The students will find a location where building material would be easily accessible, a beach with lots of driftwood would be best.
2. The students will start by gathering driftwood logs that are 6”-8” in diameter.
3. The ciklluaq (sod house) was built to fit twenty people, but for this lesson, build shelter to fit 5-8 people.

Class III - VII: Construction

Measuring and marking the site

1. Suggest building the ciklluaq to be 10 feet long and 8 feet wide. **10’0” X 8’0”**.
2. The traditional houses were partially subterranean meaning it was partially buried. Therefore: mark out where the house is going to be located using stakes and string line.
3. Use a string line to see the building layout, pound a stake in the ground two feet away from where your mark is, this will help give you room to work with later.
4. Pound in a stake, tie the string line to it, measure over 2 feet and make a mark, then from that mark measure out 10 feet and make another mark, then add two feet and stake in the ground and tie off.
5. Next, stake in another string line, this will be the width line.
6. Where marks at length line, cross over that mark with this string line. One end will be staked down; the other end will be staked down after the corner is made square.
7. Dig out the building layout enough to give the feel of a subterranean dwelling.

Squaring the Corner; suggest using a framing square but to check accuracy, use the mathematical squaring technique.

8. When squaring the corner it is important to keep it square, and at a 90 degree angle. To achieve this, make a measurement on the length line, from the intersection of lines crossing, measure 3’0” and make a mark.
9. Now on the width line, from the intersection where the lines cross, measure 4’0” and make a mark.
10. Now, with one end of the string staked off, there will be another person holding the other stake and will move and adjust the width line where the one person is holding it.
11. Have someone in the middle of those lines with a measuring tape, one person can hold the end of the tape on the 3’0” mark, the person in the middle will instruct the other person to move left or right with the line until the person in the middle holding the measuring tape will read 5’0” on the 4’0” mark. That creates a 90 degree angle and the corner is square.
12. When it is square, stake that side off and do the same steps to the other side and mark out your line from the intersection point.

13. When you have both the width walls set in place, set up the other string line for the length
14. Last step to squaring. Measure the diagonal length, corner to corner of the string lines.
15. 10'0" X 8'0" your diagonal line should be 12'9 11/16"measure bother inside corners
16. After it is square you can mark out where your pilings will be.

Setting the Pilings;

1. Pre-cut the pilings, the two pilings in the front will be taller than the pilings in the back. Cut the pilings in the front to 6'0", middle piling at 5'6" and the back pilings to be 5'0". The houses roof was built at an angle.
2. Start from the intersection of the lines and dig out 2'0" for the front pilings, if you need to go deeper you can go to 3'0"
3. Prior to placing the top piling on, measure out where the posts will line up and cut out a notch so that the posts will fit in the top place and secure it by nailing it down. Traditionally, there were no nails so everything had to be cut to fit very snug and compacted to hold in place. When connecting the middle top piling to the end pilings cut it evenly so it sits on the middle piling. If the piling is long enough, you do not have to cut it.
4. Cut pilings so that they will be 5'6' feet off of the ground, depending on front or back. To do this, measure the depth of the hole and then add whatever length needed so it will be 6'0" off the ground for front.
5. After the first two pilings are set, dig in the back pilings and put them in at 5'0".
6. Next, dig in a middle piling that will be 5'6" and put in place.
7. When holes are all dug, put in the pilings and bury them. Make sure they are plum, meaning straight up and down, to be sure, use a level.

Secure Top Plate and build walls;

1. Secure top plate by nailing a stick to the top place and a stake in the ground.
2. To do this, have a student hold the level so that the post stays level and then another student will nail in the stake to the ground on both sides so the wall stays sturdy.
3. Do this for both the length walls and then one of the width walls.
4. After the top post has been assembled, then the roof will need to be built.
5. Traditionally, the roof was built by laying a large stick both in width and length across the top, so do accordingly.
6. The walls were built the same way with sticks lying across them spread out to cover the whole wall. The sticks will be standing up and set side by side.

   NOTE: the entryway wall will be different so there are a few more steps that have to be taken.
7. The entryway was built so that one had to crawl through a tunnel to get inside. It was built this way to serve as a wind break and storage area because they did not have doors.
8. The entry wall will be built by attaching the wall to the existing front posts. The entry wall will be set after the top post is set across from one piling to another.

9. Locate the middle of the wall and set two posts for the entry about 3 feet wide apart.
    a. Set the doorway posts half way in the center of the piling so that it is underneath the top post and use the remaining post to lay out the entryway post.
10. Next, cover up the entryway wall the same way as the other walls, laying the sticks standing up and side by side until the wall is filled in.
11. For creating the entryway, measure out 4 feet and dig to set in the posts the same width of the door.
12. Make the posts lower than the existing wall so that it will be at a downward angle.
13. Connect the top post to the pilings standing up and do the same process as the walls and roof.
14. Now that the walls are built start covering them.
    a. First gather branches and lay them out covering all areas of the walls and roof.
    b. Next, gather sod, sod is a layer of grass that has been cut from the ground and lay that across the entire house making sure to cover all areas.
    c. Gather moss to fill in the cracks/gaps of the house.
15. Document the process and produce a step-by-step videotape to share.
16. Submit the final video to Chugachmiut Heritage Preservation Department to upload onto website.

Assessment:

- Students can correctly pronounce and understand the Sugt'stun/Eyak vocabulary words.
- Students able to describe a traditional ciklluaq (sod house), what materials were used and how to build one.
- Students successfully constructed a traditional ciklluaq.

[i] *Alexandrovsk- English Bay in its Traditional Way*
[ii] *Fireweed Cillqaq No. 1 Life and Times in Port Graham.*

Portage Bay, Alaska Peninsula, 1909 Photo courtesy of the Alaska State Library (PCA 24-109)

SOD HOUSE

According to Herman Moonin, the Aleuts built sod houses. They built a wooden frame with driftwood. The wooden frame was covered with grass, moss and mud.

For heat they would have a fire in the middle and a hole in the top to let the smoke out.

The windows were made of dried bear intestines.

The size of the sod house depends on how many people are going to stay in it.

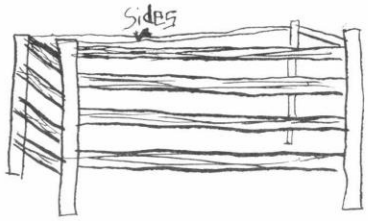
We built a model sod house in our class, and this is the way we did it.

Material list

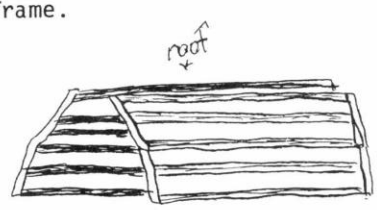
Strips of dirftwood 1' long
2' x 2' plywood
Glue
Wheat paste
Oatmeal
Paint (Green-Brown)
Moss
Newspaper

Step 1. Mix wheat paste. Place a full sheet of newspaper on the plywood.

Step 2. Build four walls that are 6' by 12'-on the fourth wall build a door.



Step 3. Build a barn-style roof frame.



Step 4. Attach the frame work together. Glue them and set to dry.

Step 5. Apply strips of newspaper and wheat paste to the frame work until it is completely covered. Then add newspaper to the sides to make it look bumpy. Let it dry overnight.

Step 6. After it dries, paint the sod house brown and the ground around it green. Then paint a second coat.

Step 7. After it dries, add moss around the sides and roof to make it look like grass growing. Glue on with Elmer's glue.

Step 8. It is finished except for the touch-up work.

Story by *Vincent Evans and Paul Swenning*
As told by *Herman Moonin*
Layout by *Paul Swenning*

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Article taken from *Alexandrovsk*, Vol. 2, Page 53

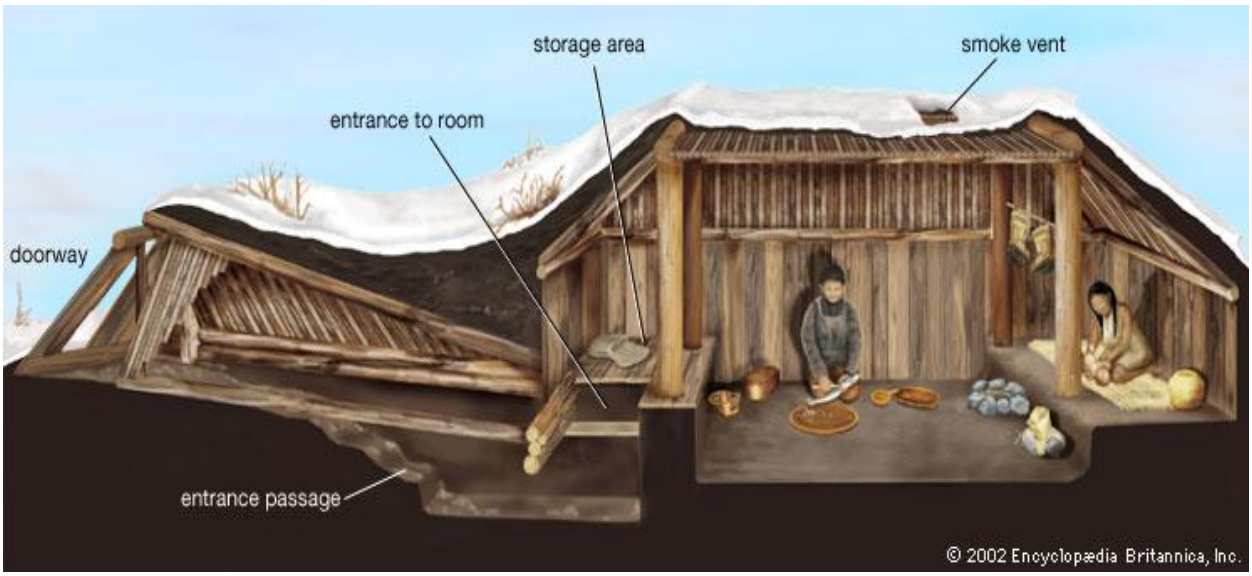

Photo Courtesy of the Kodiak Alutiiq Museum


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Kenai Fjords National Park Service of barabara, 1901, above Seldovia.