

Section Five: Teacher Notes

A community celebration concludes the unit with students sharing their projects and information.

TEACHER NOTES: SECTION FIVE

Summary:

Students prepare for a community celebration to share their plant work and information. Time permitting, students continue their plant studies, learning about plant foods from the sea, and food chains and webs.

Before planning the community celebration, read again “The Right Way to Live as an *Unangaŕ*” in the Appendix and “Elders and Experts” in the Introduction.

Objectives:

Alaska Standards

To understand the varied growing conditions needed by different plants.

To learn indigenous plants’ names and characteristics.

Science: A. 1, 9, 10, 14; B. 1; D. 1

World Languages: B. 1

Skills for a Healthy life: B. 1, 3

To understand local cultural heritage and stewardship for the environment.

English: A; B. 2, 3; C; D. 2, 3; E

Cultural: A. 3, 4, 5, 6; B. 1, 2; C. 1, 3; D. 1, 3, 4, 5; E. 1, 2

History: B. 1

Arts: A. 3; B. 8

Materials:

- log books
- invitation supplies such as paper, envelopes, poster board, pens, markers, pencils
- all projects from plant study, including Class Herbarium
- large paper to use for whole class project
- paper in 3 colors to make signs for each student to wear
- yarn or pins to hold signs on students
- yarn to make a web (several hundred feet wound into 3 or more balls)

Activities:

ACTIVITY ONE. Students prepare invitations for a community gathering to celebrate and share their work on their plant studies. They complete their projects and practice oral presentations. They review how to behave appropriately when they have guests.

Inside activity

Estimated duration: Invitations: 40-60 minutes in 2 sessions

Project completion: as needed.

Review ways to welcome and show respect for Elders, experts, and other honored guests. Develop suggestions for appropriate behavior. For example, it is the tradition to serve Elders and honored guests or have them go first when serving refreshments. Make sure they have a place to sit. After the Elders come younger guests & very young children. Young people honor the dignity of a celebration by helping out however they can and waiting their turn. These manners are part of learning how to live the right way as human beings.

TEACHER NOTES: SECTION FIVE

TIME PERMITTING:

ACTIVITY TWO. Students look at plants from the sea and discuss their uses with Elders and experts.

Inside/outside activity
 Estimated duration: 40-60 minutes field observation plus travel time

ACTIVITY THREE. Students make a food web

Inside activity
 Estimated duration: 30-40 minutes

For activities that explore food chains and food webs in Alaska, see these Alaska Wildlife Curriculum Teacher’s Guides, Alaska Department of Fish and Game, 1995. *Alaska’s Tundra & Wildlife* “Survival Links” and “Tundra Connections.” pages 99-122. *Wildlife for the Future* has a variety of activities. *Alaska Ecology Cards* describe what 270 organisms eat and are eaten by, as well as other facts.

There are many activities and explanations of food chains and food webs on the World Wide Web. Turn your browser’s search engine to “food chain” and “food web” to locate resources. These are a few:

- <http://www.si.edu/sites/educate/troprain/foodchai.htm>
- <http://www.aliexplorer.com/ecology/topic4.html>
- <http://www.geocities.com/Heartland/Ranch/2200/foodchains.htm>
 (includes interactive food web work sheet)
- <http://www.planetpals.com/foodchain.html>

Assessment opportunity: Student describes 3 links in a simple food chain from the region to the teacher.

Teacher Assessment Rubric, Section Five	Date:		
Name of student: _____			
	1 Always	2. Sometimes	3. Never
Student: Completes work.			
Is Respectful of values.			
Is Respectful of Elders.			
Understands the information.			

Section Five

A community celebration concludes the unit with students sharing their projects and information.

Unangam Hitnisangin/Unangam Hitnisangis/Aleut Plants

SECTION FIVE

Anġaġiisiġ matanaan imin iġamnakuġ. Anaġiġ ukunachin imchin ugutaasaamchim aġnaġtxichin. (E)

Anġaġiisiin sigaġ imis akuġ mal sigaan inixsiisada. (W)

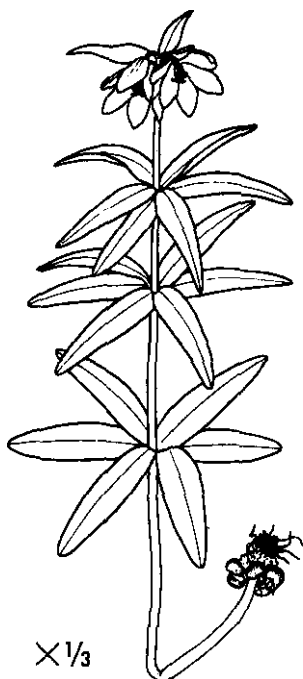
Life is gifted to you. What you make of it is your gift in return.

ACTIVITY ONE. You can prepare for a community celebration.

It's time to invite the Elders and all who have helped you into the school for a celebration of your region's plants. You can share what you know with them and with others in your community who might learn from your work.

Make a list of everyone to invite and decide how you want to deliver the invitations: posters, banners, signs, letters, phone calls. Prepare and deliver your invitations.

Plan to show your guests your Class Herbarium. Arrange to display your log books, your hammered leaf projects,



Fritillaria camtschaticensis
Alugam kangaa (UT 230)
(overground portion of)
Alugaġ (UT 57)
(root bulb of)
Saranaġ E (UT 353)[Russian loan]
Stinky flower, chocolate lily, black lily

"During sealing season we would dig the roots of stinky flower. The plants were in limited quantities on St. Paul Island, so we would have to dig a lot to make a meal. The roots were sandy and had to be washed over and over and then soaked for several days. When our mother boiled the seal meat, she would also boil the roots in a separate pot and mash them. The boiled roots would be divided into two pots, and one would be mixed with sweetened condensed milk for the children and one mixed with seal oil for the parents."

Mary Bourdukofsky, *Unangan* Elder from St. Paul

Sophie Sherebernikoff remembers not liking the taste of Saranaġ (also known as Alugam kangaa, the Stinky flower, Fritillaria camtschaticensis) because it was bitter. Her mother told her that while the ones that grow in Unalaska tasted bitter, the ones that grow in Nikolksi would taste sweet.

Sophie Sherebernikoff, *Unangan* Elder from Unalaska

VOCABULARY

Aagamagna W (UT 2) (aah gham AAG nah): Elder

Ludaaġi (UT 257) (loo THAAH ghih): Elder

Ukaanuxta E (UT 427 #3) (uk aahn NUHK tah): Elder

aġaasa E (UT 31) (ah GHAAS eh): gift

aġaaza W (UT 31) (ah GHAAS eh): gift

sig W (UT 357) (segh ah): gift

anġaġiisi (UT 75) (ang gha GHEES ih): life

kamxa (UT 227) (KUM kah): celebration

udigasalix E (UT 416) (oothe igh (ah) SA lih): to share

udixs W (UT 416) (OOTHE ihs): to share

udigda W (UT 416) (oo THIG thah): share

udigdada E (UT 416) (oo thig THAH thah): share

Unangam Anġaġiisingin E (Galaktionoff: 2001)

(oo NUNG am • an ghah ghee SING in): traditional knowledge of *Unangan*

Unangam Anġaġiisingis W (Dirks: 2001) (oo NUNG am • an ghah ghee SING is): traditional knowledge of *Unangas*

carnivore

consumer

detritivore

food chain

food web

herbivore

lichen

pollution

primary consumer

producer

secondary consumer

- seed posters, and other activities.
- Complete any science fair entries. Do
- the final work on all your experiments
- and practice describing your results in
- brief oral presentations. Finish any other
- projects you have done with this plant
- study and rehearse explaining them to
- your guests.
- Discuss the ways that you will welcome
- your honored guests into the classroom.
- What arrangement should you make for
- them? How should you show respect for

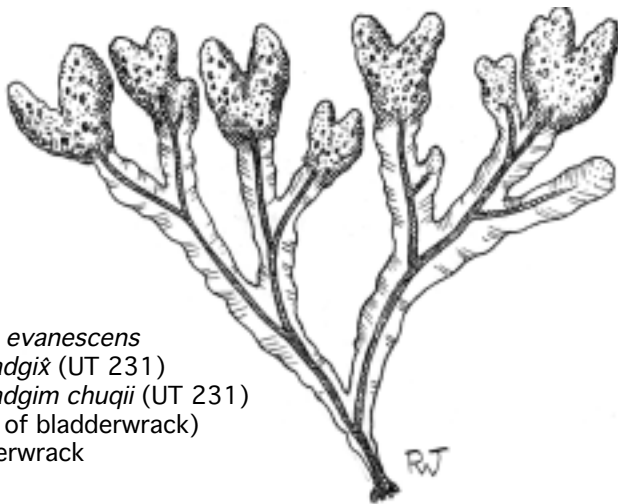
your guests? If the season is appropriate, arrange to prepare special treats for your guests from local plant foods. Remember that you are survivors of an “earthquake” and you know how to use wisely the resources of your area.

After all the invitations have been sent out and you are prepared for the community celebration, time permitting, begin these additional activities.

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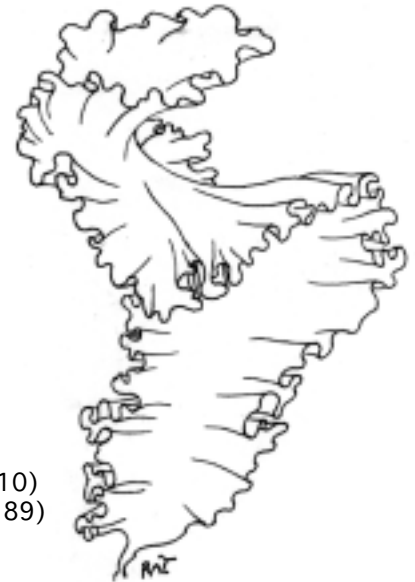


Nereocystis luetkeana
Tmagix (UT 399)
bull kelp



Fucus evanescens
Kangadgi (UT 231)
Kangadgim chuqii (UT 231)
(stalk of bladderwrack)
Bladderwrack

Ulva sp.
iiqu E (UT 210)
iklu W (UT 189)
Sea lettuce



Sea lettuce:

"We used this sea plant for a lot of things. We would gather it in the summer and dry in the attic on cardboard. Then when it was dry, we would put it in a clean cloth flour or sugar sack to store through the winter. Mom would sprinkle it on whenever she boiled rice or made stew. When dry, they are dark. When it gets wet, it turns green again."

When it was a nice day for a beach picnic, Mom used to boil a kettle or take one to boil outside to make tea. Then we would gather *aġugnan* (UT 30) (uh WOOGH nun), sea eggs, (sea urchins) to have with crackers or bread. We ate them raw out of the shell and they tasted sweet. They were almost like a dessert. We also liked to eat *chiim(i)kaayun* (cheem KAYE yoon), E (UT 14), tiny snails, *Litorina sitkana*.

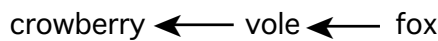
Mary Bourdukofsky, *Unangan* Elder from St. Paul

As you enjoy your region's foods with your community, think about the many ways these foods nourish all animals.

Remember, animals (humans included) cannot make their own food. They get their food by eating plants or animals that have eaten plants. Plants are known as **producers** in the **food chain**. Willow is an example of a producer. All others are known as **consumers** in the food chain. The **primary consumers** eat only plants; they are called **herbivores**. Ptarmigan are an example of herbivores. They eat the buds of willow and other plants. The consumers that eat the

herbivores are called **carnivores**. Foxes are an example of carnivores. They eat ptarmigan, lemmings and small birds.

A diagram of this three-part food chain would look like this:



To further complete the chain, you could add the **detritivores**, those who eat dead plants and animals.

A food chain is just one part of a **food web**.

Who or what eats the plants in your region? Have you seen insects eating the plants when you visited the habitats? Who or what eats the insects? Who or what eats the insect-eaters?

Are birds or hares or voles eating the plants in your region? Who or what eats the birds or

hares or voles?

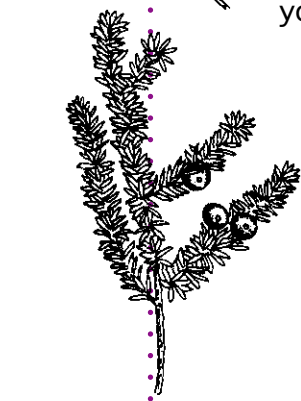
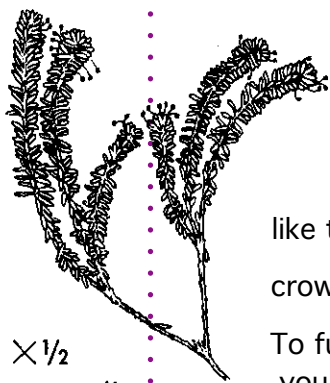
ACTIVITY THREE. You can make a food web

With your class, list all the plants you can now name now on the left side of a large sheet of paper. Leave space between each plant because your other lists might become long. Label this first list "producers." Then make a second list next to it. This list is "consumers: herbivores," the plant eaters. Write each eater's name by the plant or plants it eats. Write your list in the column going down so that you can connect it to the third list. Then make a third list of "consumers: carnivores."

This is the list of the animals (include the insects and birds and sea life and humans) that eat the herbivores. Some names will be in both lists. Draw an arrow pointing from the "eater" to the "eaten."

You may need to take a short break from the class discussion and look in your library or on the World Wide Web to build your lists.

Make a sign for each producer and consumer on your lists. Color code the signs for each of the three categories: producer, herbivore, or carnivore. Each class member wears a sign, holding it on with yarn around the neck or by pinning the sign on clothes. One student should be designated the sun and begins the food web, holding onto one end of a ball of yarn. The sun passes the yarn to a student wearing a sign for the producer. Start with one producer at a time. The plant person (or persons) passes the yarn s/he has on to an eater of the plant, based on the class list you made. The yarn is passed from eaten to eater until all eaters and foods are connected. Look at all the places the yarn crosses



Empetrum nigrum
Qaayum qaxchikluu E
 (UT 314)
 (blackberry)
Aangsuŋ W (UT 90)
Qaayuŋ (UT 314)
Kidnam qaayuu
 (UT 237)
 (bush of moss)
 Crowberry, mossberry,
 blackberry

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over. Look at the ways the yarn connects to many things or to only one thing. What happens if the yarn connection is broken because one of the foods disappears? You can show this by cutting the yarn with scissors and then consider what that animal will eat instead.

Each time you build a food web with another producer, change the roles around so that the same people are not always “eaten.”

EXTENSIONS: ACTIVITY A.

Before the community celebration, read again “The Right Way to Live as an *Unanga*” (Appendix). Choose one guideline to illustrate on a small poster that will be part of the welcoming display showing the way to the celebration.

ACTIVITY B.

You can find more information on the World Wide Web about food webs. Turn your browser’s search engine to “food chain” and “food web” to locate resources.

ACTIVITY C.

How does pollution affect your



plant's region and your local wild food?
 Although called a "moss" reindeer moss is actually a **lichen**. It is known to have many uses. Ask your Elders or local experts what they know about reindeer moss.
 To understand more about lichens, you might want to look at this web site for

lively illustrations
<http://mgd.nacse.org/hyperSQL/lichenland/index.html>

Lichens are also important in measuring the **pollution** in a region. For example, look at:

"Lichens and Acid Rain" in *Alaska's Tundra & Wildlife: Alaska Wildlife Curriculum Teacher's Guide*, Alaska Department of Fish and Game, 1995. page 133.

ACTIVITY D.

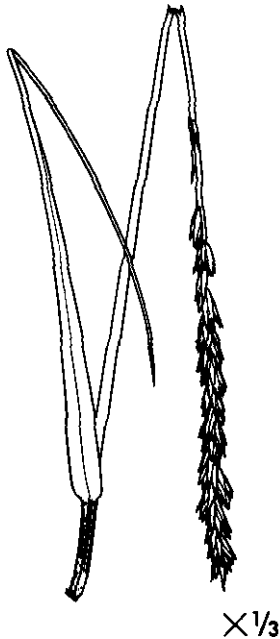
You can consult a Web site for information about nutrition in wild foods.

See: Alaska Traditional Knowledge and Native Foods database
<http://www.nativeknowledge.org/db/nutriout.asp>



Cladina rangiferina
 Huquqlux W (UT 449)
 Itxaygim kidngaa E (UT 237)
 Kigyam aliqa Attuan (UT 237)
 Reindeer moss

Section Five	Date: _____		
Name of student: _____	1 Always	2. Sometimes	3. Never
I completed all my work.			
I was respectful of Elders.			
I understood the information.			
The next time I study plants, I would like to do the following in a different way:			



Leymus mollis
 formerly known as
Elymus mollis
 Tíxyuĭ E (UT 398)
 Tígyuĭ W (UT 398)
 (basket grass)
 Wild rye, beach rye

Unangan Elder, Nick Galaktionoff, formerly of Makushin village on Unalaska Island said, "My grandmother and my mom used to make small grass baskets. They made grass rugs and window blinds too. No one does that anymore. My mom got good, long grass like they have at Eider Point and Little South America." They cut fresh grass and stored it in the warehouse to dry. Dry grass has the best smell inside. When they needed grass for the floor of the ulaĭ or sod home, they would bring it in from the warehouse and spread it on the floor. "It smelled like fresh air inside," Nick said. "I like that smell!" You would use it two or three times and then change it when you wanted it to be nice and fresh.

Nick Galaktionoff, *Unangan Elder* from Unalaska



YOU CAN HELP DOCUMENT UNANGAM TUNUU KNOWLEDGE OF THE LANGUAGE AND PLANTS:

This text gives an appropriate word when possible in Eastern and Western dialects. You may find that there is a sub-dialect word in your area for those listed. Write it down. If you can find the correct spelling, time period and place in *Aleut Dictionary/Unangam Tunudgusii*, include them with the page number.

If you find that an Elder or *Unangam tunuu* speaker can positively identify a plant with a name in the language that has not been recorded, write it down as well as you are able. Include the Latin name and whether it was identified from a real plant or a picture. If it is from a picture, specify the text source.

Please provide contact information for the speaker so that we can have a linguist or botanist contact him or her, if necessary. Include the speaker's full name, place of origin and the date. Send to: Barbara Carlson, AUE, PO Box 220196, Anchorage, AK 99522-0196 or contact us at fnblc@uaf.edu, so we can include it in future work such as sound bites for the Internet.

NOTES: