

**Traditional Lifeways Curriculum: GATHERING**  
**Upper Kuskokwim Region of Interior Alaska, K-12**



Alaskan Clipart by Alan Dick

*Jija uniya.  
She's picking berries.*

A Culturally-based Curriculum created by  
Telida Traditional Council's  
Indian General Assistance Program  
Environmental Protection Agency

*Traditional language translations (Dinak'i) Betty Petruska and Ray Collins*

Curriculum and Supplemental Resources available at [www.ukpreservation.com](http://www.ukpreservation.com)

***TRADITIONAL LIFEWAYS CURRICULUM FOR GRADES K-12  
A UNIT STUDY APPROACH***

*Also in the series:*

*FISHING*

*TRAPPING*

*GATHERING*

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*MOOSE HUNTING*

*ENVIRONMENTAL HEALTH FOR RURAL COMMUNITIES  
SOLID WASTE MANAGEMENT FOR RURAL COMMUNITIES*

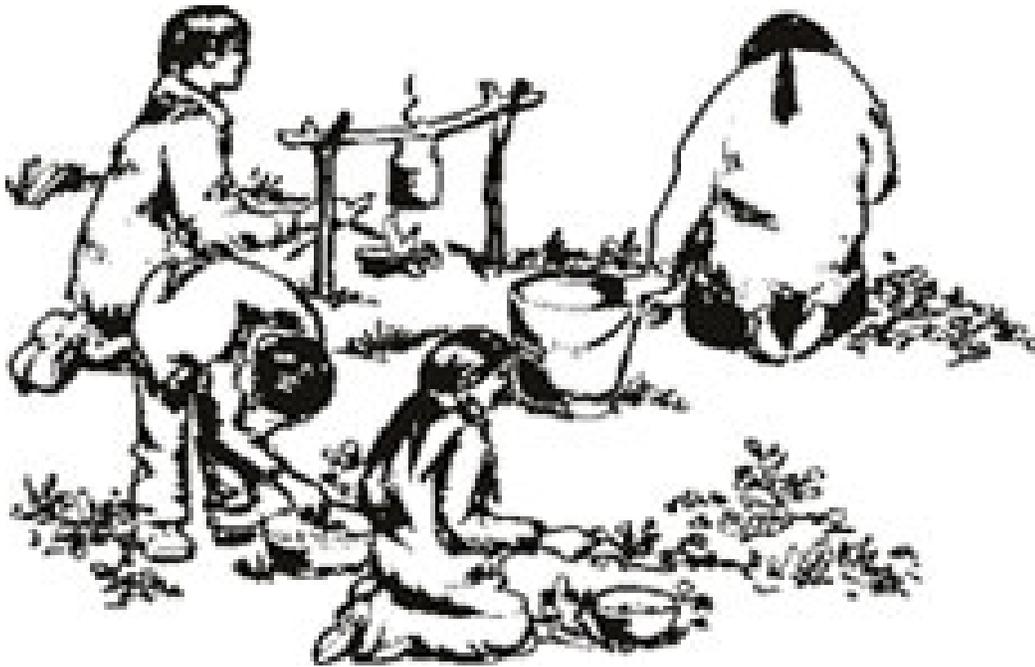
*Additional Curriculum Coming Soon*

A Culturally-Based Curriculum created by  
Telida Traditional Council's  
Indian General Assistance Program  
Environmental Protection Agency

*Traditional language translations (Dinak'i) by Steven Nikolai Sr.*

Curriculum and Teaching Resources available at [www.ukpreservation.com](http://www.ukpreservation.com)

**These education lessons are dedicated to the next generation to help protect our traditional way of life.**



Alaskan Clipart by Alan Dick

*Dina'ena tsaye ghinet tu hidinelghwts'  
jija huniya deno.*

*People are boiling water for tea  
while they are picking berries.*

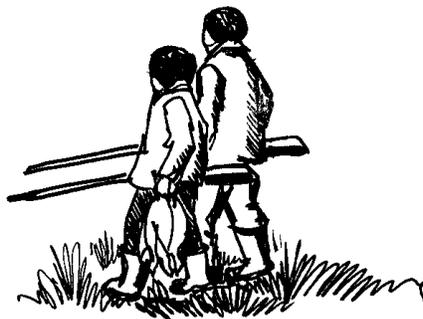
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**Table of Contents**

<b>Foreword</b> .....	vi
<b>Curriculum Development Team</b> .....	vii
<b>Acknowledgements</b> .....	viii
<b>Introduction</b> .....	ix
<b>Alaska Cultural and State Standards</b> .....	xi
<b>Sources of Information</b> .....	xx
<b>Skills and Knowledge</b> .....	xxiii
<b>Elders in the Classroom by Roby Littlefield</b> .....	xxiv
<b>The Story of the Upper Kuskokwim People and Gathering Plants</b> .....	xxvi
<b>Subsistence Gathering Education Unit</b> .....	1
<b>Unit Outline</b> .....	3
<b>Lesson One – Plant Gathering in the Upper Kuskokwim</b> .....	4
Activity 1 – Why We Gather and What We Gather.....	12
Activity 2 – Village Area Topography.....	14
<b>Lesson Two – Berries</b> .....	17
Activity 1 – How Berries were Important.....	31
Activity 2 – Berry Identification.....	32
Activity 3 – Berry Gathering Day.....	34
Activity 4 – Preparing Berries Traditionally.....	36
Activity 5 – Berry Medicine.....	41
<b>Lesson Three – Trees</b> .....	44
Activity 1 – The Boreal Forest Trees: A Few Survivors.....	65
Activity 2 – The Spruce and Birch: Which is the Most Valuable?.....	67
Activity 3 – Spruces Roots.....	68
Activity 4 – Our Other Trees Are Special, Too!.....	72

<b>Lesson Four – Other Plants</b> .....	74
Activity 1 – The Common and Abundant Willow.....	87
Activity 2 – Plant Medicine.....	89
Activity 3 – Shopping in Nature’s Store.....	90
Activity 4 – A Natural Buffet.....	92
<b>Additional Curriculum Resoures</b> .....	94
<b>Reference Resources</b> .....	94
<b>Gathering in the Upper Kuskokwim Appendices</b> .....	96
<b>KWL Chart</b> .....	97
<b>Land Cover Types near McGrath Area</b> .....	98
<b>Land Cover Types near Nikolai Area</b> .....	99
<b>Land Cover Types near Takotna Area</b> .....	100
<b>Land Cover Types near Telida Area</b> .....	101
<b>Teacher Resources</b> .....	102

## Foreword



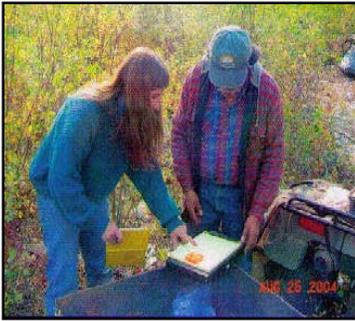
Alan Dick, Alaska Native Clipart

Telida Village has developed a series of subsistence education lessons that will keep the tribal members healthy and the environment clean for the future generations, fulfilling the Indian General Assistance Program’s objective to reduce the risk to human health and the environment.

The “Gathering in the Upper Kuskokwim, Interior Alaska” education unit is composed of four education lessons with a total of 15 activities. The lessons focus on (1) Plant Gathering in the Upper Kuskokwim Region, (2) Berries, (3) Trees, and (4) Other Plants. Educational activities include the Elders sharing on the history of gathering and how it has changed, traditional stories about gathering; how the plants are used; how to harvest the plants; and how to preserve them.

The education lessons meet the Alaska State Content Standards and Alaska Standards for Culturally Responsive Schools. The activities in the lessons are based on “Translating Standards to Practice: A Teacher’s Guide to Use and Assessment of the Alaska Science Standards” developed by the Alaska Rural Systemic Initiative and on the Alaska Native Interior Educator’s Association’s K-12 Student’s and Teacher’s Resources books. The project was funded by a grant from the Environmental Protection Agency Indian General Assistance Program.

## Curriculum Development Team



**Charlene Dubay** (Team Leader, Contributor) is the IGAP Environmental Director for Telida Traditional Council overseeing the development of the culturally-based Traditional Lifeways curriculum. Ms. Dubay has a Master’s Degree in Cross-Cultural Studies from the University of Alaska Fairbanks and a Bachelor’s of Science Degree in Wildlife Biology from the University of Massachusetts Amherst. Charlene has been integrating subsistence and language issues into preservation and outreach programs for over 20 years. She can be reached at [charlenedubay@hotmail.com](mailto:charlenedubay@hotmail.com).



**Steven Nikolai Sr.** (Native Cultural Specialist) was born and raised in the Upper Kuskokwim region and is a First Speaker of Upper Kuskokwim Athabascan (UKA). Mr. Nikolai has taught bilingual classes at the Nikolai School in the Iditarod Area School District and is an experienced subsistence hunter, trapper and fisherman. Steven Sr. also worked with the Alaska Native Language Center. Steven Nikolai Sr. was Chief of the Telida Tribal Council for many years and has a heart for economic and social development as well as preserving traditional ways of living in the U.K. region. Steven provided UKA translations in the Series.



**Teresa Hanson** (Researcher, Contributor) holds a Masters Degree in Northern Studies and a Bachelors Degree in History from the University of Alaska Fairbanks. She currently consults curriculum development projects, as well as develops grant proposals for Alaskan cultural issues such as language preservation. Teresa homeschooled her four children and other small groups for over 15 years. Her Oral History collection Master’s thesis: “Homeschooling in Alaska” interviews are housed in the Oral History collection in the UAF Archives at Rasmuson Library. If you would like contact her about curriculum development or other educational consulting services, she can be reached at [teresiconsulting@hotmail.com](mailto:teresiconsulting@hotmail.com).



**Susan L. Brown** (Contributor) holds a Bachelor of Science in Education with endorsements in Special Education and Speech Pathology from the University of Central Arkansas. She also has completed graduate work in Education, Alaskan History, and Cross-Cultural Communication from the University of Alaska, University of Wisconsin and the University of Arkansas. As a former special needs teacher, homeschool educator and tutor, Susan specializes in curriculum development and educational consulting as well as grant writing. Susan has lived in Alaska for 22 years. She can be reached at <mailto:newsongarise@hotmail.com>.



Spruce boughs create a healthy environment for people when they are placed on tent floors.

Photo Courtesy of  
Teresa Hanson and Phylcia Hanson

## **Acknowledgements**

Telida Village would like to thank the following people and organizations for their contributions to this project:

Steven Nikolai Sr. from Telida Village who assisted the tribe with the gathering lessons. He served as the Alaska Native Knowledge Consultant for the project.

Denali National Park Service which gave us permission to use Ray and Sandy Jo Collins “Nikolai-Telida Village History Report.”

Alestine Andre, Priscilla Kari Russell and the other individuals and organizations who generously allowed us to use their materials in our education lessons.

The Alaska Rural Systemic Initiative work showed us why “math and science education must reflect—and strengthen—the values and wisdom of traditional Native Alaskan cultures.” (Boyer, 2005:.2)

The Alaska Native Interior Educator’s Association’s K-12 Student and Teacher’s Resource’s books formed the basis for the culturally relevant, education lessons.

The Alaska Department of Fish and Game who allowed us to use written information and images from technical reports and the “Alaska Wildlife Notebook Series.”  
The EPA Indian General Assistance Program funded the project.

## Introduction to Traditional Lifeways Curriculum Series



Alan Dick, Alaska Native Clipart

The wisdom of any culture lies not in the monuments constructed or the books written but rather within the skills it gives to its children for their continued survival.

When a community teaches co-operation, sharing and respect for the natural world it insures that the earth will continue to provide the necessities to nurture both the body and spirit of its people. From their earliest years the children of the Upper Kuskokwim Region are taught respect for land, water and the creatures of the earth.

Young children are encouraged to watch what others are doing. In this way they are learning what to do for themselves. They are being taught to be self-sufficient and when necessary to improvise with what is at hand. This ability to make independent decisions may someday be necessary for their own survival or that of another person.

Within the Upper Kuskokwim Region subsistence is necessary for day-to-day living. Hunting, trapping, fishing, gathering and gardening are crucial activities for the majority of the native population.(State of Alaska Website) Understanding rural issues such as sanitation, healthy drinking water and responsible solid management are necessary for the health of the environment and the individual.

The curriculum provided is not intended to replace the training of the elders but rather to provide a method which supports this training.

### **Pattern of Life (Collins, Ray)**

“The people of the Upper Kuskokwim area developed a pattern of life that was determined to a large extent by their environment. There were no permanent, year-round villages in the past. People had to move seasonally to harvest food and would winter in different locations to keep from depleting the resources such as food, fur, and firewood in any given place. As with other Athabaskans who reside near the head of a river system surrounded by mountains, they share a number of environmental constraints.

The climate is that of the Alaskan Interior with cold winters and relatively warm summers. The boreal forest provides a number of micro-environments. Black spruce and moss lie over areas of frozen ground that requires a hot fire to clear and thaw, thus allowing willow and birch to move in. The thawed ground along the rivers is covered with stands of white spruce and birch on the higher cut bank side of the river, with thick stands of willow and alder on the sandbars. Cottonwood are found along the river and aspen on the higher ground. Cross-country travel is difficult in much of the lowland area because of numerous swamps and boggy areas drained by small streams that flow into the major rivers. The rivers are the main highways for travel both in summer and winter.

Food resources vary in type, quantity and habitat. Three species of salmon ascend the Kuskokwim streams: Chinook (King), Chum (Dog), and Coho (Silver). Whereas hundreds of thousands, and even millions, of salmon enter the Kuskokwim River, but by the time they reach the headwaters only a few thousand or even a few hundred are left to spawn in any given stream.

Until the late 1800's and early 1900's moose were absent in most of the area. The large animals most harvested were Dall sheep, caribou, Black bear and Grizzly bear. Dall sheep habitat is limited to the Alaska Range. Caribou also spend much of the year in the mountains, moving down to the lowlands primarily during the winter. Today, moose is widely hunted.

Small game species such as rabbits, grouse and ptarmigan are widely dispersed but their populations are cyclic and in some years they are very scarce.

Ducks and geese pass through the area by the thousands in the spring when the headwaters of the rivers first open, but most move on to nest elsewhere. During the fall migration, when there is plenty of open water, most fly over the area without stopping except for a brief rest.

### **Yearly Cycle of Subsistence Activities, (Collins, Ray)**

"A yearly cycle in one of these territories might begin with relocating to a fishing site in the late spring to take advantage of the fish runs that began moving upriver at breakup.

The original method for catching these fish was by constructing a fence and wire in a shallow side stream that was utilized for spawning. They were more difficult to catch in the main Kuskokwim River until the fishwheel was introduced in the 1900's, and large twine and nylon fish nets became available.

Nikolai and Telida were suitable sites for winter villages. Other sites that were used at times included East Fork, Big River and Vinasale. During the winter some families dispersed to trapline cabins. As trade goods and industry such as mining became more available at McGrath, Takotna and Medora, trapping began to play a bigger role in the yearly cycle.

## **Alaska Content Standards**

### **Cultural Standards:**

#### **A. Culturally-knowledgeable students are well grounded in the cultural heritage and traditions of their community.**

##### **Students who meet this cultural standard are able to:**

1. assume responsibility for their role in relation to the wellbeing of the cultural community and their life-long obligations as a community member;
2. recount their own genealogy and family history;
3. acquire and pass on the traditions of their community through oral and written history;
4. practice their traditional responsibilities to the surrounding environment;
5. reflect through their own actions the critical role that the local heritage language plays in fostering a sense of who they are and how they understand the world around them;
6. live a life in accordance with the cultural values and traditions of the local community and integrate them into their everyday behavior.

#### **B. Culturally knowledgeable students are able to build on the knowledge and skills of the local cultural community as a foundation from which to achieve personal and academic success throughout life.**

##### **Students who meet this cultural standard are able to:**

1. acquire insights from other cultures without diminishing the integrity of their own.
2. make effective use of the knowledge, skills and ways of knowing from their own cultural traditions to learn about the larger world in which they live.
3. make appropriate choices regarding the long-term consequences of their actions.
4. identify appropriate forms of technology and anticipate the consequences of their use for improving the quality of life in the community.

#### **C. Culturally knowledgeable students are able to actively participate in various cultural environments.**

##### **Students who meet this cultural standard are able to:**

1. perform subsistence activities in ways that are appropriate to local cultural traditions;
2. make constructive contributions to the governance of their community and the well-being of their family;
3. attain a healthy lifestyle through which they are able to maintain their own social, emotional, physical, intellectual and spiritual well-being;
4. enter into and function effectively in a variety of cultural settings.

**D. Culturally knowledgeable students are able to engage effectively in learning activities that are based on traditional ways of knowing and learning.**

**Students who meet this cultural standard are able to:**

1. acquire in-depth cultural knowledge through active participation and meaningful interaction with Elders.
2. participate in and make constructive contributions to the learning activities associated with a traditional camp environment.
3. interact with Elders in a loving and respectful way that demonstrates an appreciation of their role as culture-bearers and educators in their community.
4. gather oral and written history information from the local community and provide an appropriate interpretation of its cultural meaning and significance.
5. identify and utilize appropriate sources of cultural knowledge to find solutions to everyday problems.
6. engage in a realistic self-assessment to identify strengths and needs and make appropriate decisions to enhance life skills.

**E. Culturally-knowledgeable students demonstrate an awareness and appreciation of the relationships and processes of interaction of all elements in the world around them.**

**Students who meet this cultural standard are able to:**

1. recognize and build upon the inter-relationships that exist among the spiritual, natural and human realms in the world around them, as reflected in their own cultural traditions and beliefs as well as those of others;
2. understand the ecology and geography of the bioregion they inhabit;

## **Science Standards:**

**A10** - A student who meets the content standard should understand that living things are made up mostly of cells and that all life processes occur in cells (Cells).

**A12** - A student who meets the content standard should distinguish the patterns of similarity and differences in the living world in order to understand the diversity of life and understand the theories that describe the importance of diversity for species and ecosystems (Diversity).

**A14a** - A student who meets the content standard should understand the interdependence between living things and their environments (Interdependence).

**A14b** - A student who meets the content standard should understand that the living environment consists of individuals, populations, and communities (Interdependence).

**A14c** - A student who meets the content standard should understand that a small change in a portion of an environment may affect the entire environment (Interdependence).

**A15** - A student who meets the content standard should use science to understand and describe the local environment (Local Knowledge).

**B1** - A student who meets the content standard should use the processes of science; these processes include observing, classifying, measuring, interpreting data, inferring, communicating, controlling variables, developing models and theories, hypothesizing, predicting, and experimenting.

**B3** - A student who meets the content standard should understand that scientific inquiry often involves different ways of thinking, curiosity, and the exploration of multiple paths.

**B4** - A student who meets the content standard should understand that personal integrity skepticism, openness to new ideas, creativity, collaborative effort, and logical reasoning are all aspects of scientific inquiry.

**C3** - A student who meets the content standard should understand that society, culture, history, and environment affect the development of scientific knowledge.

**C4** - A student who meets the content standard should understand that some personal and societal beliefs accept non-scientific methods for validating knowledge.

**D5** - A student who meets the content standard should participate in reasoned discussions of public policy related to scientific innovation and proposed technological solutions to problems.

## **Math Standards:**

- A. A student should understand mathematical facts, concepts, principles, and theories.**

**A student who meets the content standard should:**

2. select and use appropriate systems, units, and tools of measurement, including estimation;

- B. A student should understand and be able to select and use a variety of problem-solving strategies.**

**A student who meets the content standard should:**

1. use computational methods and appropriate technology as problem-solving tools;

- E. A student should be able to apply mathematical concepts and processes to situations within and outside of school.**

**A student who meets the content standard should:**

2. use mathematics in daily life; and
3. use mathematics in other curriculum areas.

## **Geography Standards**

- A. A student should be able to make and use maps, globes, and graphs to gather, analyze, and report spatial (geographic) information.**

**A student who meets the content standard should:**

1. use maps and globes to locate places and regions.

- B. A student should be able to utilize, analyze, and explain information about the human and physical features of places and regions.**

**A student who meets the content standard should:**

1. know that places have distinctive geographic characteristics;
2. analyze how places are formed, identified, named, and characterized;
3. relate how people create similarities and differences among places;
4. discuss how and why groups and individuals identify with places;
5. describe and demonstrate how places and regions serve as cultural symbols;

6. make informed decisions about where to live, work, travel, and seek opportunities;
7. understand that a region is a distinct area defined by one or more cultural or physical features; and
8. compare, contrast, and predict how places and regions change with time.

**E. A student should understand and able to evaluate how humans and physical environments interact.**

**A student who meets the content standard should:**

1. understand how resources have been developed and used;
2. recognize and assess local, regional, and global patterns of resource use;
3. understand the varying capacities of physical systems, such as watersheds, to support human activity;
4. determine the influence of human perceptions on resource utilization and the environment;
5. analyze the consequences of human modification of the environment and evaluate the changing landscape; and
6. evaluate the impact of physical hazards on human systems.

**History Standards**

**A. A student should understand that history is a record of human experiences that links the past to the present and the future.**

**A student who meets the content standard should:**

1. understand chronological frameworks for organizing historical thought and place significant ideas, institutions, people, and events within time sequences;
2. know that the interpretation of history may change as new evidence is discovered;
3. recognize different theories of history, detect the weakness of broad generalization, and evaluate the debates of historians;
4. understand that history relies on the interpretation of evidence;
5. understand that history is a narrative told in many voices and expresses various perspectives of historical experience;
6. know that cultural elements, including language, literature, the arts, customs, and belief systems, reflect the ideas and attitudes of a specific time and know how the cultural elements influence human interaction;
7. understand that history is dynamic and composed of key turning points;

8. know that history is a bridge to understanding groups of people and an individual's relationship to society; and
9. understand that history is a fundamental connection that unifies all fields of human understanding and endeavor.

**B. A student should understand historical themes through factual knowledge of time, places, ideas, institutions, cultures, people, and events.**

**A student who meets the content standard should:**

1. comprehend the forces of change and continuity that shape human history through the following persistent organizing themes:
  - a. the development of culture, the emergence of civilizations, and the accomplishments and mistakes of social organizations;
  - b. human communities and their relationships with climate, subsistence base, resources, geography, and technology.

**C. A student should develop the skills and processes of historical inquiry.**

**A student who meets the content standard should:**

1. use appropriate technology to access, retrieve, organize, and present historical information;
2. use historical data from a variety of primary resources...
3. apply thinking skills...
4. use historical perspective to solve problems, make decisions, and understand other traditions.

**D. A student should be able to integrate historical knowledge with historical skill to effectively participate as a citizen and as a lifelong learner.**

**A student who meets the content standard should:**

1. understand that the student is important in history;
2. solve problems by using history to identify issues and problems, generate potential solutions, assess the merits of options, act, and evaluate the effectiveness of actions;
3. define a personal position on issues while understanding the historical aspects of the positions and roles assumed by others;
4. recognize and demonstrate that various issues may require an understanding of different positions, jobs, and personal roles depending on place, time, and context;

5. base personal citizenship action on reasoned historical judgment with recognition of responsibility for self and others; and
6. create new approaches to issues by incorporating history with other disciplines, including economics, geography, literature, the arts, science, and technology.

### **English/Language Arts Standards**

#### **B. A student should be a competent and thoughtful reader, listener, and viewer of literature, technical materials, and a variety of other information.**

##### **A student who meets the content standard should:**

1. comprehend meaning from written text and oral and visual information by applying a variety of reading, listening and viewing strategies; these strategies include phonic, context, and vocabulary cues in reading, critical viewing, and active listening;
2. reflect on, analyze, and evaluate a variety of oral, written, and visual information and experiences, including discussions, lectures, art, movies, television, technical materials, and literature; and
3. relate what the student views, reads, and hears to practical purposes in the student's own life, to the world outside, and to other texts and experiences.

#### **C. A student should be able to identify and select from multiple strategies in order to complete projects independently and cooperatively.**

##### **A student who meets the content standard should:**

1. **make choices about a project after examining a range of possibilities;**
2. organize a project by
  - a. understanding directions;
  - b. making and keeping deadlines; and
  - c. seeking, selecting, and using relevant resources;
3. select and use appropriate decision-making processes;
4. set high standards for project quality; and
5. when working on a collaborative project,
  - a. take responsibility for individual contributions to the project;
  - b. share ideas and workloads
  - c. incorporate individual talents and perspectives;
  - d. work effectively with others as an active participant and as a responsive audience; and
  - e. evaluate the processes and work of self and others.

#### **D. A student should be able to think logically and reflectively in order to present and explain positions based on relevant and reliable information.**

**A student who meets the content standard should:**

1. develop a position by
  - a. reflecting on personal experiences; prior knowledge, and new information;
  - b. formulating and refining questions;
  - c. identifying a variety of pertinent sources of information;
  - d. analyzing and synthesizing information; and
  - e. determining an author's purposes;
2. evaluate the validity, objectivity, reliability, and quality of information read, heard, and seen;
3. give credit and cite references as appropriate; and
4. explain and defend a position orally, in writing, and with visual aids as appropriate.

**E. A student should understand and respect the perspectives of others in order to communicate effectively.**

**A student who meets the content standard should:**

1. use information, both oral and written, and literature of many types and cultures to understand self and others;
2. evaluate content from the speaker's or author's perspective;

**Mathematics Standards**

**A. A student should understand mathematical facts, concepts, principles, and theories.**

**A student who meets the content standard should:**

2. select and use appropriate systems, units, and tools of measurement, including estimation;
6. collect, organize, analyze, interpret, represent, and formulate questions about data and make reasonable and useful predictions about the certainty, uncertainty, or impossibility of an event.

**B. A student should understand and be able to select and use a variety of problem-solving strategies.**

**A student who meets the content standard should:**

1. use computational methods and appropriate technology as problem-solving tools;
3. formulate mathematical problems that arise from everyday situations;
4. develop and apply strategies to solve a variety of problems.

**C. A student should understand and be able to form and use appropriate methods to define and explain mathematical relationships.**

**A student who meets the content standard should:**

1. express and represent mathematical ideas using oral and written presentations,  
physical materials, pictures, graphs, charts, and algebraic expressions.

**E. A student should be able to apply mathematical concepts and processes to situations within and outside of school.**

**A student who meets the content standard should:**

2. use mathematics in daily life; and
3. use mathematics in other curriculum areas.

## **Lifeways Curriculum: GATHERING**

### **Sources of Information Adapted for Gathering**

Alaska Department of Fish and Game Ecosystems  
([www.wc.adfg.state.ak.us/index.cfm?adfg=ecosystems.borealwhere](http://www.wc.adfg.state.ak.us/index.cfm?adfg=ecosystems.borealwhere)) (Alaska Department of Fish and Game), pages 1-5.

Alaska Native Knowledge Network, [www.ankn.uaf.edu](http://www.ankn.uaf.edu)

Alaska Science Forum: [www.gi.alaska.edu/ScienceForum/plants.html](http://www.gi.alaska.edu/ScienceForum/plants.html)

Alaska's Trees and Shrubs by Viereck and Little

Athabascan Digging and Preparing Spruce Roots Unit Study.  
[www.ankn.uaf.edu/curriculum/units/spruce.html](http://www.ankn.uaf.edu/curriculum/units/spruce.html)

Athabascan Snowshoe Unit Study.  
[www.ankn.uaf.edu/curriculum/units/snowshoe.html](http://www.ankn.uaf.edu/curriculum/units/snowshoe.html)

Alan Dick, Alaska Native Clipart, Alaska Native Knowledge Network

Alan Dick, Birch Tree Clipart, Alaska Native Knowledge Network

Alestine, Andre and Fehr, Alan, Gwich'in Ethnobotany, Plants used by the Gwich'in for Food, Medicine, Shelter and Tools, (Gwich'in Social and Cultural Institute and Aurora Research Institute, Inuvik, Northwest Territories) 2000. pg.10

Boyer, Paul, (2005), Alaska Rural Systemic Initiative, Rebuilding Native Knowledge, Washington D.C.: National Science Foundation, page 2.

Collins, Ray. (Revised 2004) Dichinanek'hwt'ana, A History of the People of the Upper Kuskokwim Who Live in Nikolai and Telida, Alaska National History and Culture U.S. Department of the Interior Website.

Collins, Ray, and Betty Petruska. 1979. *Dinak'i (Our words). Upper Kuskokwim Athabascan Junior Dictionary*. Anchorage. NBMDC.

Davis, Neil T., Cottonwood and Balsam, Alaska Science Forum: July 1, 1981, Article #493, (Geophysical Institute, University of Alaska Fairbanks).  
[www.gi.alaska.edu/ScienceForum/ASF4/493.html](http://www.gi.alaska.edu/ScienceForum/ASF4/493.html)

Resource web site for forestry terminology:  
<http://www.sfrc.ufl.edu/Extension/ssfor11.htm>

Garibaldi, Ann, Medicinal Flora of the Alaska Natives, (Alaska Heritage Program, Environment and Natural Resources Institute, University of Alaska Anchorage, Anchorage, Alaska) 1999, page 3.

Helfferich, Carl, Trees for a Cold Climate, Alaska Science Forum: April 1, 1992, Article #1277, Geophysical Institute, University of Alaska, Fairbanks), [www.gi.alaska.edu/ScienceForum/ASF11/1127.html](http://www.gi.alaska.edu/ScienceForum/ASF11/1127.html).

Holen, Davin L., William E. Simeone, and Liz Williams 2006 “Lake Minchumina, Telida, Nikolai and Cantwell Subsistence Community Use Profiles and Traditional Fisheries Use,” Alaska Department of Fish and Game Division of Subsistence, Technical Paper No. 296. Juneau, Alaska 2004, [www.subsistence.adfg.state.ak.us/TechPap/tp296.pdf](http://www.subsistence.adfg.state.ak.us/TechPap/tp296.pdf) page 111, 115 and 85.

Hanson, Teresa and Phylcia Photos

Hosley, Edward; Factionalism and Acculturation in an Alaskan Athapaskan Community, (University of California, L.A.) 1966 Ph.D Dissertation

Jones, Eliza and Anderson, Katherine, *Roots of Northern Athabascan Life – The Birch Tree* (Reprinted by the Iditarod Area School District, Alaska) 1984  
Dena’ina K’et’una – Tanaina Plantlore by Priscilla Kari

Kari, Priscilla, R. comp, Dena’ina K’et’una – Tanaina Plantlore, (Adult Literacy Laboratory, University of Alaska Anchorage, Anchorage, AK) 1977

Nelson, Richard K., et al; Tracks in the Wildland A Portrayal of Koyukon and Nunamiut Subsistence (University of Alaska Fairbanks, Alaska) 1982, page 54.

Nikolai Elementary Students; *Athabaskan Recipes*, (Iditarod Area Schools, Bilingual/Bicultural Program) 1980

Pratt, Verna E., Alaska’s Wild Berries and Berry-like Fruit, (Alaskakrafts, Inc., Anchorage, AK) 1995

Schofield, Janice J, Alaska’s Wild Plants – A Guide to Alaska’s Edible Harvest, (Alaska Northwest Publishing, Portland, OR) 1999

Snowshoe Education Unit: [www.ankn.uaf.edu/curriculum/units/snowshoe.html](http://www.ankn.uaf.edu/curriculum/units/snowshoe.html)

Spruce Education Unit: [www.ankn.uaf.edu/curriculum/units/spruce.html](http://www.ankn.uaf.edu/curriculum/units/spruce.html)

Stanek, Sheryl and Butcher, Barbara, Collecting and Using Alaska's Wild Berries and Other Wild Products, (Alaska Cooperative Extension, College of Rural Alaska-University of Alaska Fairbanks, Fairbanks, AK) 1998

State of Alaska Website, Community Descriptions of McGrath, Takotna, Nikolai, and Telida

Steinbright, Jan ed.; From Skins, Trees, Quills and Beads: The Work of Nine Athabascans, (Institute of Alaska Native Arts) 1985

Stokes, Jeff; "Natural Resource Utilization of Four Upper Kuskokwim Communities," Alaska Department of Fish and Game Division of Subsistence, Technical Paper No. 86. Juneau, Alaska 1984, page 305. **(All Stokes references are : Source of Information: Alaska Department of Fish and Game)** Also found online at: [www.subsistence.adfg.state.ak.us/TechPap/tp086.pdf](http://www.subsistence.adfg.state.ak.us/TechPap/tp086.pdf)

Sullivan, Robert J., The Ten'a Food Quest, (The Catholic University of America Press, Washington, D.C.) 1942, Ph.D. Dissertation, page 35-36.

Viereck, Eleanor G., Alaska's Wilderness Medicines – Healthful Plants of the Far North, (Alaska Northwest Books, Portland, OR) 1987

Viereck, Leslie A., and Little, Elbert L., Alaska Trees and Shrubs, (Snowy Owl Books, University of Alaska Press, Fairbanks, AK) 2007 2<sup>nd</sup> Edition.

Zasada, John, Tamarack—Not a Dead Spruce, Alaska Science Forum: April 29, 1985, Article #713. Geophysical Institute, University of Alaska, Fairbanks).

## **Skills and Knowledge:**

- Categorize plants and trees that are alike (ie. same family) what are their similarities...differences.
- Learn the habitats that will contain certain plants or trees.
- Read topographic maps.
- Draw maps that covers 1 mile out from the village and plot where they found certain plants and trees.
- Identify the actual plants and trees found in the same area.
- Study seasonal cycles of the plants and trees, and their interdependence with environment they inhabit.
- Students will interview Elders and other community members to learn traditional practices of subsistence gathering.
- Study plants and trees growth patterns.
- Experiment with plants and trees to see how and why they are used for medicinal value.
- Collect stories of traditional gathering.
- Cook and arrange a potlatch to display dishes made with plants and trees.
- Recite a traditional story about some sort of berry picking event, starvation survival by using plants and trees, or medicinal use that helped heal or save someone.
- Express personal beliefs about a phenomenon, compare that with scientific beliefs.
- Participate in Bilingual subsistence activities.

## **Assessments:**

- Charts
- Student Logs
- Class participation
- Graphs
- Tables
- Worksheets
- Written and Oral Stories
- Gathering Participation

## **Elders in the Classroom**

**by Roby Littlefield**

All students can benefit from inter-generational contracts. In Alaska Native cultures, grandparents were held in high regard as they contributed to the community by passing on knowledge and skills. Children learned by listening to and watching Elders and often didn't realize they were in training. Bringing grandparents in to share personal knowledge when studying subjects like nutrition, customs, plants, biology, and history can benefit the entire class.

To get started, first look to your class members. Send home a note or survey expressing your desire to include parents, grandparents, and Elders in your lessons. Get referrals for possible speakers from organizations that work with Natives and/or the Elderly.

The way to ask Native American Elders for help is different from Western customs. Initial and subsequent contact should be subtle. Visit with them, allowing time for the conversation to wander. Allow for extended pauses, giving them time to think and decide. If their hearing is poor, sit on the side of their better ear and make sure your lips can be seen. Direct eye contact should be limited. Standing or sitting at an angle can increase an Elder's comfort level. Keep your questions basic and specific.

Begin the request by telling a little story about your class and how the Elder could help. If you are not sure if the Elder is interested, hint strongly that you would like to have their help and ask if she or he knows of someone who might be willing to participate. Custom teaches that it is rude to give someone a frank "no" to a request for help, so you need to recognize that a noncommittal response might mean "no," or it might mean that the request is being considered. If at some point the Elder changes the subject more than once while you are explaining your request, you should be aware that she or he might be trying to say "no." Don't force a response; if it is clearly not a "yes," let it go, or suggest they can contact you after they've thought about it.

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It is important to ask before a meeting for permission to make audio or video recordings. Don't show up with the equipment; you may force consent and cause bad feelings. Permission to listen to or tape a story or lecture does not give you any right to rebroadcast or write the story with you as author.

If an Elder has agreed to participate in a classroom, suggest an activity or topic outline so they know what you are expecting. Provide them with optional dates and the logistics. It is helpful to explain the routine, consequences for students' misbehavior, and possible options if problems come up during the lesson. It is your responsibility to ensure discipline is maintained. Be aware, however, that Elders generally do not support strict discipline in a public setting. Discuss how to make a smooth transition to help the Elder leave the class. Agree on some visual signs and ground rules.

When the Elder arrives, properly introduce her or him so the Elder understands your respect for them. The teacher should be alert for visual cues from the Elder during the visit and be prepared to give unspoken signals back. The teacher should stay in the room.

Give the Elder a chance to use traditional discipline. Be prepared to move a child to sit by an adult who can role model how to listen respectfully. If you have problems with students degrading or ignoring an Elder, have a teacher's aide or adult Native quietly intervene.

Most traditional stories are like a round, crocheted pot holder. The story teller goes round and round the subject until it all comes together and finally comes to the lesson or point. Be patient; allow the Elders to share their culture in their own way. Your students are learning how to listen. Students should refrain from interrupting to ask questions. There will be a proper time to ask questions.

As a thank-you, Elders usually appreciate students and teacher letters, pictures, and story booklets, which are treasured and shown to friends and relatives. This may also encourage other Elders to participate in classroom projects.

Sometimes you will find a resource person who is available for a wide variety of subjects and projects. If you use an Elder more than once, the school should provide some type of stipend in appreciation of the energy and knowledge the Elder is contributing. Be careful not to burn out your Elders. Whenever you make a request, be sure the Elder understands she is not obligated.

Keep your lessons flexible in case the Elder can't come at the last minute. Once an Elder has agreed on a time to come into your classroom, avoid changing or postponing the visit.



*Jija uniya.<sup>a</sup>*  
*She's picking berries.*

The Upper Kuskokwim People and  
Gathering Plants in the Upper Kuskokwim

### **Gathering Plants**

“The Upper Kuskokwim River that we live on is located in the Boreal Forest in the Interior of Alaska. The Boreal Forest is made up of many kinds of forests that include aspen stands, bogs with meadows, marshes, rivers and lakes. Many different kinds of animals such as bear, moose, and rabbits also live there.

We have many White Spruce and Black Spruce trees in the Boreal Forest. We also have Balsam Poplar, Paper Birch and Aspen trees that grow along the south side of the river bars and recent burns. Alder, blueberry, Highbush cranberry, Labrador tea, rose and willow grow in the forest while grasses, lichens, and mosses cover the ground. Horsetail grows in the forest.” (Alaska Ecosystems: Alaska Department of Fish and Game Website)

Our people use the plants for food, homes, travel and medicine. We eat plants like cranberries, Indian Potatoes, and wild carrots and use alder and willow for smoking fish.

The homes we live in are built from spruce trees and we heat them with firewood.

We use the bark from birch trees to make baskets for carrying water and picking berries and also use it to cover canoes. Horsetail, stinging nettle, wormwood and yarrow are used for medicine.

When we harvest the plants, we are careful to only pick the plants that we will use and to always leave some of the plants in the area. We do not take all of the plant unless we need to and do not strip all the bark on the inside or the outside of the tree because it will die.

We believe we must respect the plants we pick. Some Elders say that you should talk to the plant and tell it what you are going to use it for while. Other Elders say you should leave something after you take the plant, and pray while you pick and prepare medicinal plants.

Our people need to know when to pick the plant during the year because some parts of the plant are stronger at certain times of the year than others. Also, we need to decide whether we will use the plant for food or for medicine because that will help us to know when to gather it.

When we gather plants, we go with someone who knows how to use them! This is because everyone's body is different and someone may not be able to eat certain plants or may only be able to eat a certain amount of the plant. (Garabaldi 1999:3)



*Netl' silak'a nighenil.<sup>b</sup>*

*She gave me some cranberries.*

### **Picking, Preserving and Using Berries**

Berries are one of our most important wild food plants. The berries that we eat and use for medicine are Blueberries, Salmonberries, Lowbush cranberries, Highbush cranberries, Raspberries, Kinnikinnick berries, Timberberries, and Wild Rose hips.

How many berries we pick depends upon the temperature, the rain and snowfall, and the birds and the animals that eat them. When there is too much or too little rain in the springtime, a late spring frost, or lower than normal temperatures, we are not able to pick as many berries. The black bears and birds also affect how many berries we can gather during a low berry year.

During the summer and fall, our women and older girls usually pick the berries and the men come along to protect them from the bears. We pick berries for part of the day near our community or the place we go fishing at. Other times, we may walk several miles or go upriver by boat for many miles to find a good berry picking site. Sometimes,

people stay after fish camp ends to wait for the blueberries and low bush cranberries to ripen so that they can pick them. (Stokes 1985:292)

Long ago, the women would go out in groups of four or five to pick berries just before the snow flew so that they would freeze and stay fresh. When the women got lots of berries, they packed them in baskets, sewed a birch bark covering over them, and then cached the berries in the hills. Once the ground was covered with snow, people brought the berries back to the village by dog team, usually when they came back from winter camps for the mid-winter celebrations. (Sullivan 1942:35-36)

Our people used berries mostly for food. We also ate the berries and stored them in many different ways long ago. Because berries like raspberries (dwh nikotl') and currants (nodzihnihhaltl'una) spoiled quickly, they were hard for us to keep over the winter. We cooked the berries, mixed them with grease, and occasionally added fish eggs. This made a jam that we could put in birch baskets to keep cool or frozen.

Another way we kept the berries was to put them in an ice cream called nemaje that was made with berries, grease, and fish or animal meat. To make the ice cream, we cooked the meat, squeezed the juice out of it, and then broke the meat into little pieces. We stirred the meat and the grease together until it made a smooth paste and then added the berries. We also added sugar, Indian potatoes and caribou moss to the mixture. We ate the nemaje fresh or froze it to use later.

Our people stored the berries in an animal stomach that was prepared as a container. The animal stomach was put in a cache under the ground or in a hole in the bottom of a lake and then dug back up before the lake froze. After the weather got cold, the berries were safe for the winter.

Because we needed to prepare for hard times, our people also picked the dry berries like bearberries with lots of seeds and that did not taste good. We dried the berries, mixed them with grease and let the mixture harden. Once the mixture was hard, we sliced it like a sandwich or stored it for the winter. Sometimes, this food kept us from starving.

Today, the berries are easy for our people to keep over the winter because we freeze them or make them into jams. We also eat the berries raw or pack berries like blueberries that have lots of juice in them in layers of sugar, cover them, and then keep them cool

Our people also use berries for other purposes such as hot packs for aches and pains. We also boil the berries and use the juice to dye grass for mats, porcupine quills and other things. (Kari 1971:31-33)



*Noygw highnede il eko tazyo.<sup>c</sup>  
He went for spruce boughs for the tent floor.*

## **Harvesting and Using Trees**

“Trees are the plants that our people utilize the most. They are used for heating homes, preserving meat and flavoring, building construction, and making other wooden things.

White spruce is our most important tree because it is the best tree for building log cabins. White spruce also makes good firewood. During the spring and early summer, people cut down the trees that they will use for log cabins and peel them.

In the winter, people cut the trees for firewood. Many people use green white spruce for burning. However, trees that are dead or dry standing and seasoned make better firewood.

“Black Spruce (Ts’ima) which is also called a "gee-pole" spruce, isn’t used as much as the White spruce. Because the black spruce is small and there are many of them in one area they make a poor source of firewood. But it is a strong, tough wood that can be used as poles used in the construction of fishwheels, fish drying structures, trap sets and tent poles.” (Stokes 1985:298-299)

Spruce trees have many other uses. Spruce boughs make a good camp bed, and are also used to cover the roofs of small buildings. They make good floor coverings in a tent. (Kari 1977:5-6)

Spruce is also used as medicine. Collect the very tips of young spruce trees and chew them raw or boil them for tea. The tea helps relieve bone aches, itchy throats, colds, flu and tuberculosis. The sap makes a good spring tonic (Stanek 1998:5-6). Old spruce cones can be used to dry up ear infections and cones from young spruce trees can be made into a tea that will help get rid of coughing and sore throats (Andre, Fehr 2000:17-18). The scent of spruce boughs in the tent keeps people healthy. Spruce boughs can be boiled to make a steam to breathe in that relieves cold symptoms and keeps people healthy. (Kari 1977:5-6)

Birch trees which grow in the Upper Kuskokwim drop their leaves every fall and grow about 60 to 70 feet tall with white bark. Its wood is the hardest and longest lasting and is good for carving and making things that need to last a long time. The wood also bends well and holds its shape so it is good for making toboggans, sleds, snowshoes, and boards for lumber.

In the old days, we lived completely by hunting and fishing and spent a lot of time on snowshoes. We also traveled by dog team pulling a sled or toboggan. Birch was used in traps and snares, bows and arrows, and was carved into kitchen and eating utensils. In the summer we made our canoe frames out of birch wood and covered it with birch bark.

Birch bark is gathered in the spring while the sap is running and the bark hangs looser and peels off easy. The bark folds up and can be made into watertight baskets without cracking. Before we had metal pots we cooked in birch bark baskets by filling them with water and putting hot rocks into it to make the water boil. (Jones and al 1984:3, 4, 6-9, 13-160)



*K'esht'r'esh<sup>d</sup>*

### **Birchbark Canoe**

Birch is also used as food too. Long ago, the sap was really good for getting fresh vegetables and vitamins in the early spring. Now, we still collect the sap as it rises in the tree during the spring to make syrup. The sap is also good to put on boils and sores as medicine. Birch root tea can be made for washing the eyes of people with snow blindness. A mouthwash can also be made from the leaves. (Kari 1977:14-15)

Alder (k'isr) is part of the birch family and is somewhere between a tree and a shrub. The bark is very dark and it is a favorite wood for smoking fish. It gives the fish a good flavor. It is good firewood also. Because it will grow high up in the mountains, alder is sometimes the only firewood is available. It has also been used to build shelters at mountain squirrel camps and to make squirrel snare sticks.

Alder is useful for making poles and digging sticks, and if there is no other wood available, you can make snowshoes with it. Alder branches with leaves make good roofs on camp shelters. They are good steambath switches too! (Kari 1977:20)

Both poplar and cottonwood trees grow well in river bottoms and sand bars in our area. (Davis 1981: Article # 483) The winter buds are medicine for sores, rashes or

frostbite. They are dried and mashed into a powder. Mix the powder with oil and use it as a salve. The buds can also be cooked with grease over low heat for about 10 minutes. This takes the sap out of the buds and it goes into the grease. Throw the buds away and use the grease as a salve. The salve is really good for baby rash. The buds can be picked all winter and into the early spring before the leaves come out. The salve can be stored all summer in a cool place. Aspen branches are useful for beaver bait. (Kari 1977:16, 19)

Tamaracks (łat'ighazya) are found throughout the Upper Kuskokwim area in small numbers and usually are found near swamps and low-lying areas. It has needles for leaves like a spruce but it drops them in the fall like a birch. Its wood is hard and is good for boat ribs and sled runners. Emergency snowshoes can be made from tamarack. Otherwise they have little value except as an occasional source of firewood. This wood makes lots of hot heat. (Stokes 1985:301)



*Kayih highne nan' di'el'anh.<sup>e</sup>  
Go and get moss for the house.*

### **Using Willows and Other Plants**

We have several species of willows in our area including Bebb willow, Arctic willow, Alaska Bog willow, Skeleton Leaf willow and Gray Leaf willow. They can be hard to tell apart if you have not been taught by your Elders.

Long ago, we used the willow fibers from the inner bark for thread or binding twine for small fish nets, fish traps, and dipnets. (Stokes 1985:301) We also used larger willow branches for tent poles and also stuck into the bottom of a river or creek for fish traps. The wood also made good smoke for drying meat, making spoons and forks, and frames for drums.

Now, we continue to make beaver stretchers (mitoy'dineltr'esh heye) from willows. (Andre, Fehr 2000:51-52) We also use willows to make tent pegs and hangers for teapots when cooking over a campfire. (Stokes 1985:301) We bend over thick willows to create rabbit snares. Because young willows are strong, we use also them to hang fish. (Andre, Fehr 2000:51-52)

We mix willow branches (k'wy' dilo') with the spruce boughs in a tent. They don't dry up as easy and they smell good too. They can serve as the flooring until spruce

boughs are cut and laid. (Andre, Fehr 2000:51-52) We have a number of other plants that we gather in the area for food and medicine. The plants include wild grass, moss, White Wet moss, Caribou moss, birch punk, wormwood, horsetail, dandelion, nettle, fireweed, Labrador tea, Indian potato, and yarrow.

Grass (ch'itsan') is found around our homes where the ground has been disturbed. Once the grass dries in the fall, we harvest it before the first snow. It is cut with a knife just above the roots and then bundled up with string and stored in a dry place. We use grass mostly used for lining dog houses during the winter months. In the past, grass was used as a lining or insole for moccasins and winter boots. (Stokes 1985:302)

We use moss for building moss houses, to insulate log homes, and to lay against the side of tents to help with the wind. (Stokes 1985:303) Sphagnum moss is a light, green colored moss that grows in wet places. It can be used for toilet paper, diaper liners and birch bark cradles. If you go to an area where there isn't any wood to burn, you can dry the moss and use it to make a fire. (Kari 1977:148; Andre, Fehr 2000:60-61).

Caribou moss which is caribou and reindeer eat is a lichen that grows close to the ground in open areas. We boil the moss for food and eat it plain or mix it with berries, fish eggs or grease. Men also drank the tea before they went to the mountains because it gave them strength and helped them to walk a long ways. We also used it for cleaning pots and pans. (Andre, Fehr 2001:60) Be careful if you eat or drink this plant because it can cause stomach problems if you do not cook it long enough. (Kari 1977:151) It is best to have an Elder or adult help you prepare it.

There are four kinds of punk that grow on birch trees. They are a brown punk, a hard white punk, a soft white punk, and a black burl. (Kari: 1977:159-162) We burn the

brown punk in the stove and then mix the ashes with tobacco. (Stokes 1985:302) Brown and hard white punk can be used to repel mosquitoes. In the old days, we made bullets from the soft white punk to put into popguns that were made from False elder.



*Dul nodilghwch.<sup>f</sup>*

### **He's hauling firewood.**

In the past, we were able to dry and pound black burls into a fire starter and to carry fire with us from one place to another by lighting one end of the burl and letting it smolder. We also put it in our boots and mittens to help keep our hands and feet warm. (Kari 1977:159-162)

Horsetail is a plant that has been here since the dinosaurs lived on the earth. It is a jointed grass that grows in wet places and is eaten by ducks and geese. Although we do not eat the plants, we do eat the root tubercles raw.

Horsetails can be used for medicine. When a person is sick, we steam the leaves and stems and breathe them in for colds and stomach troubles. Baskets are decorated with dry horsetail stems. When we want to trap an animal, we rub the horsetail between our hands until it becomes a powder that can be used to conceal the trap. (Kari 1977:75-76; Schofield 1999:24)

Fireweed is about three feet tall with purple and pink flowers that bloom from the bottom of the flower cluster up to the top. Winter arrives shortly after the flowers

finish blooming. Fireweed is one of the first plants that grows on the land after a fire. We eat the young stems and the leaves raw, boil them or boil them with fish eggs. Also, we eat the flowers and mix them in with salads or make them into honey or jelly. The plant can also be used as medicine for cuts, burns and upset stomachs.

A light green tea can be made from the leaves that are on the plant before it begins blooming. The tea has a sweet taste. (Kari 1977:116; Andre, Fehr 2000:55; Schofield 1999:63)

Labrador tea is a plant with woody stems, leaves that are green on the top and brown underneath, and white flowers. When you crush the leaves, they give off a strong smell. The leaves stay green during the winter.

We boil the leaves and the branches until the water turns dark. The tea can be used for a hot drink, medicine for colds, arthritis, and a wash for sores. Also, the tea also be used to marinade meat or the leaves and stems can be put into a pot and cooked with the meat for a fishy brown bear taste.

Scientists warn that people can get sick if they drink too much of it. However, we have been using it for generations. Do not drink a lot of tea at once if you are not used to it. Also, do not use the tea if you have problems with your heart/and or high blood pressure because it can cause heart palpitations, cramps, or drowsiness.

Warning: There is a plant called bog rosemary that looks a look like Labrador tea. There is a very toxic plant, bog rosemary, that looks a lot like Labrador tea but it has white under the leaves and doesn't produce a strong odor. Don't pick that plant!

(Schofield 1999:53, Kari 1977:99-100)

Indian Potato which is also known as Wild Carrot grows about two feet tall. The plant is branched, sprawling, and grows from a horizontal root. The leaves are pinnately divided, the flower stalks are long and have light pink to purple flowers that look like they flow down one side of the stem.



*Ch'ita', tozi<sup>g</sup>*

### **Soup**

We eat the roots for food. When we dig up the roots, we use a sharp pointed stick or our hands because a shovel will cut the roots. The best time to dig the roots is during the spring after the ground thaws or after the first frost when they are juicy and soft.

However, we have to know what we are doing because this plant looks a lot like bear's Indian potato or Wild Sweet pea which is very poisonous for people. It is easier for us to recognize the plant during the summer. However, this is when the roots taste the worst and are tough and dried out.

We eat Indian potato raw, boil it, bake it or fry it. It can be boiled with berries and mixed with grease. It can be used in nemaje. The roots are best stored below ground or in grease so they don't dry out.

In the old days we dug and stored lots of the roots. Sometimes in the early spring we would run out of food and have to dig for these roots to keep from starving. They would have to clear the snow and burn a fire over the area all day to thaw the ground, and then they dug the potatoes. (Kari 1977:103-105) We also use wormwood, stinging nettle, and yarrow for various medicines. It is important to work with an Elder or an older person when gathering and preparing these plants for use.

**Notes** - for “The Story of the Upper Kuskokwim People and Gathering”:

1. The story was adapted from the references that were listed after each section in the story. The full references are found in the Gathering Bibliography on page 137.
2. Upper Kuskokwim translations for this section were provided by Ray Collins and Betty Petruska in the Upper Kuskokwim Athabascan Junior Dictionary. The reference for the dictionary and the page numbers for the translations that were taken from the dictionary are provided below:

**Dictionary Reference-** Collins, Ray, and Betty Petruska. 1979. *Dinak’i (Our words)*.

*Upper Kuskokwim Athabascan Junior Dictionary*. Anchorage. NBMDC.

**Page numbers-** for the translations taken out of the dictionary:

- a. She’s picking berries, page 7.
- b. She gave me some cranberries, page 21.
- c. He went for spruce boughs for the tent floor, page 97.
- d. Birch bark canoe, page 8.
- e. Go to get moss for the house, page 65.
- f. He’s hauling firewood, page 33.
- g. Soup, page 95.