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Sharing Our Pathways

A newsletter of the Alaska Rural Systemic Initiative
Alaska Federation of Natives ◆ University of Alaska ◆ National Science Foundation ◆ Annenberg Rural Challenge

Alaska RSI and Annenberg Rural Challenge Plans for a New Year

by Angayuqaq Oscar Kawagley

PHOTO BY PETER METCALF

Participants at the Southeast Native/Rural Education Consortium in Juneau

There have been consortium meetings in each region this fall. I had the opportunity to attend two of the meetings. Both meetings left no question that education must change to accommodate the Native world views. The first was in Bethel with elders and educators. Educators is an inclusive term involving all within the community as teachers. The people with MOAs were apprised of the expectations for the forthcoming year.

The parameters and end process products were discussed with the group so that no misunderstandings or misconceptions arise during the new calendar year. The cultural standards elicited a lively response. Several changes were advanced by the group. The term "teacher" for the

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"Standards for the Teacher" was changed to "educator" because it included all in the village. The term "balance" was defined in Yupiaq as *pitallgerturluni* which is to say that a person walks a life that feels right. The person is living a life that they deem right to become the very best that they can be. The life essences of spirit, emotion, intellect and physical are upheld to meet the ultimate standards of the Native values and traditions.

The meeting in Unalaska was no exception in my mind. The leaders and educators expressed a need to relearn the Aleut language and dialects and to reconstruct Aleut history. As with other Alaska Native tribes, their history and language is replete with words and technology that intimately describe and suit their world views. They, as with other Native villages, recognize that interchanges of Aleut and English when speaking Aleut or vice versa debilitate the use of either language. So that many of the people and students never master either language. The Native people can be in an all or predominately English speaking community and not use "standard" English. A good question is "why"? I am sure that there are many variables to the answer but I can say, without reservation, that we will be able to answer this in the near future.

The Elders Academy was discussed and plans made for future meetings for elders and cultural camps. The term "tradition" and its definition was discussed. It was finally agreed that it was the Native ways of making a life and a living with all their concomitant rules for life, cautions and precepts for living a good life.

The regional meetings show that Alaska Native people have many world views on different paths but the ultimate vision is the same.

Alaska Native Educator Associations
and
Alaska Native Knowledge Network
invite you to participate in the

1998 Alaska Native Educator's Conference

Anchorage, Alaska
February 1–3, 1998

For further information, contact Lolly Carpluk, Alaska Native Knowledge Network, University of Alaska Fairbanks, PO Box 756730, Fairbanks AK 99775-6730. Phone: (907) 474-5086 or 474-1902. Fax: (907) 474-5208. Email: ftlmc@uaf.edu or ffrjb@uaf.edu.

Alaska Standards For Culturally Responsive Schools

The following standards provide a basis against which schools and communities can determine to what extent they are attending to the educational and cultural well-being of their students. We have published the standards for students and teachers in previous issues of *Sharing Our Pathways;* we are including the standards for curriculum and schools in this issue.

Cultural Standards for Curriculum

A. A culturally-responsive curriculum reinforces the integrity of the cultural knowledge that students bring with them.

A curriculum that meets this cultural standard:

1. recognizes that all knowledge is imbedded in a larger system of cultural beliefs, values and practices, each with its own integrity and interconnectedness;
2. insures that students acquire not only the surface knowledge of their culture, but are also well grounded in the deeper aspects of their beliefs and practices;
3. incorporates the contemporary adaptations along with the historical and traditional aspects of the local culture;
4. respects, validates and strengthens the knowledge that has been derived from cultural traditions outside the western literate tradition;
5. makes available opportunities for students to study all subjects starting from a base in the local knowledge system.

B. A culturally responsive curriculum recognizes cultural knowledge as part of a living and constantly adapting system that is grounded in the past, but is continuing to grow through the present and into the future.

A curriculum that meets this cultural standard:

1. recognizes the contemporary validity of much of the traditional cultural knowledge, values and beliefs and grounds students learning in the principles and practices associated with that knowledge;
2. provides students with an understanding of the dynamics of cultural systems as they change over time and as they are impacted by forces from outside;
3. incorporates the in-depth study of unique elements of contemporary life in Native communities in Alaska, such as the Alaska Native Claims Settlement Act, subsistence, sovereignty and self-determination.

C. A culturally-responsive curriculum uses the local language and cultural knowledge as a foundation for the rest of the curriculum.

A curriculum that meets this cultural standard:

1. utilizes the local language as a base from which to learn the deeper meanings of the local cultural knowledge, values, beliefs and practices;
2. recognizes the depth of knowledge that is associated with the long inhabitation of a particular place and utilizes the study of place as a basis for a comparative analysis of contemporary social, political and economic systems;
3. incorporates language and cultural immersion experiences wherever deep cultural understanding is necessary;
4. views all community members as potential teachers and all events in the community as potential learning opportunities;
5. treats local cultural knowledge as a means to acquire the conventional curriculum content as outlined in state standards as well as an end in itself;
6. makes appropriate use of modern tools and technology to help document and transmit traditional cultural knowledge;
7. is sensitive to traditional cultural protocol, including role of spirituality, regarding appropriate uses of local knowledge.

D. A culturally-responsive curriculum prepares students to "think globally, act locally."

A curriculum that meets this cultural standard:

1. encourages students to explore the relationship between their local circumstances and the global community and act accordingly;
2. conveys to students that every culture and community contributes to, at the same time that it receives from the global warehouse of knowledge.

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E. A culturally-responsive curriculum fosters a complementary relationship across knowledge derived from culturally divergent knowledge systems.

A curriculum that meets this cultural standard:

1. draws parallels between knowledge derived from oral tradition and that derived from books;
2. engages students in the construction of new knowledge and understandings at the same time that it helps them reconstruct the existing knowledge base as it fits into their view of the world.

Cultural Standards for Schools

A. A culturally-responsive school fosters the on-going participation of elders in all aspects of the schooling process.

A school that meets this cultural standard:

1. maintains an elders-in-residence program with elders present to work formally and informally with students at all times;
2. provides opportunities for students to regularly engage in the documenting of elders' cultural knowledge and produce print and multimedia materials that share this knowledge with others;
3. includes explicit statements regarding the cultural values that are fostered in the community and integrates those values in all aspects of the school program and operation;
4. utilizes educational models that are grounded in the traditional world view and ways of knowing associated with the cultural knowledge system reflected in the community.

B. A culturally-responsive school provides multiple avenues for students to access the learning that is offered as well as multiple forms of assessment for students to demonstrate what they have learned.

A school that meets this cultural standard:

1. utilizes a broad range of culturally appropriate performance standards to assess student knowledge and skills;
2. encourages and supports experientially-oriented approaches to education that makes extensive use of community-based resources and expertise;
3. provides cultural and language immersion programs in which student acquire in-depth understanding of the culture of which they are members.

C. A culturally-responsive school has a high level of involvement of professional staff who are of the same cultural background as the students with whom they are working.

A school that meets this cultural standard:

1. encourages and supports the professional development of local personnel to assume teaching and administrative roles in the school;
2. recruits and hires teachers whose background is similar to that of the students they will be teaching;
3. provides a cultural orientation camp and mentoring program for new teachers to learn about and adjust to the cultural expectations and practices of the community and school;
4. fosters and supports opportunities for teachers to participate in professional activities and associations that help them build their repertoire of cultural knowledge and pedagogical skills.

D. A culturally-responsive school consists of facilities that are physically and culturally compatible with the community environment in which they are situated.

A school that meets this cultural standard:

1. provides a physical environment that is inviting and comfortable for local people to enter and utilize;
2. makes use of facilities throughout the community to demonstrate that education is a community-wide process involving everyone as teachers;
3. utilizes local expertise, including students, to provide culturally appropriate displays of arts, crafts and other forms of decoration and space design.

E. A culturally-responsive school fosters extensive on-going participation, communication and interaction between school and community personnel.

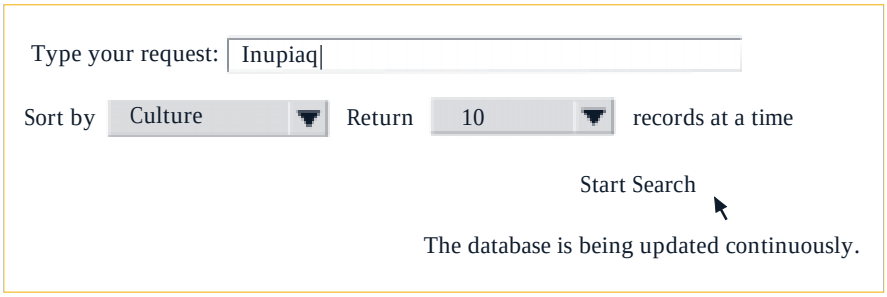
A school that meets this cultural standard:

1. holds regular formal and informal events bringing together students, parents, teachers and other school and community personnel in a deliberative review and planning process for the educational program that is being offered;
2. provides regular opportunities for local and regional board deliberations and decision making on policy, program and personnel issues related to the school;
3. sponsors on-going activities and events in the school and community that celebrate and provide opportunities for students to put into practice and display their knowledge of the local cultural traditions.

Searching ANKN's Curriculum Resources Database on the Internet

by Sean Asiqłuq Topkok

The Indigenous Curriculum Resources database is now available on the internet. For those who have access, you can go to the Alaska Native Knowledge Network website http://www.uaf.edu/ankn. Click once on the underlined text "Culturally-Based Curriculum Resources searchable database" link. In the box, you can type in what you would like to search for:



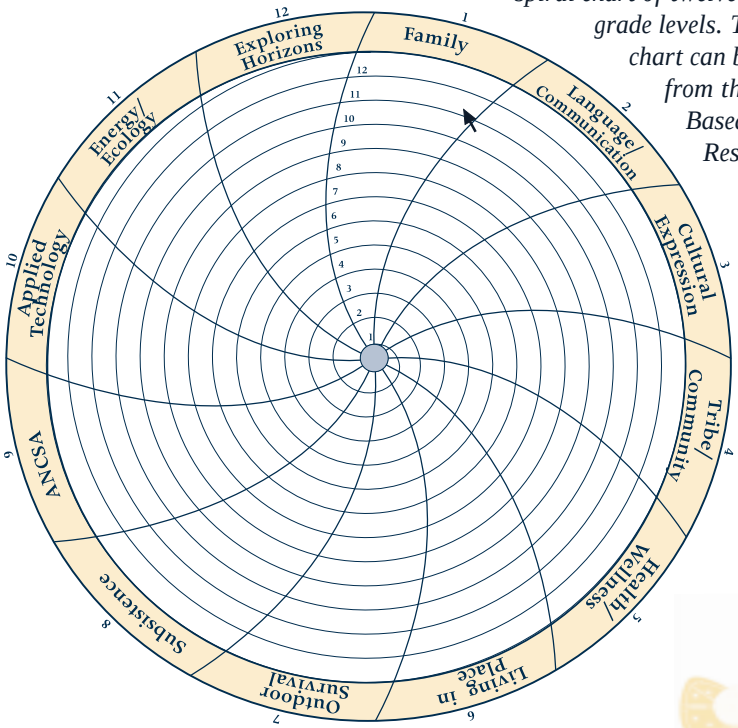
For example, for "Inupiaq", you will find resources sorted from very useful to somewhat useful. You may sort by culture, grade, or theme. You can then click on "Start Search" or press the Return/Enter key. It will give you ten resources at a time, with the title of the resource, author, rating, culture/language(s) and theme(s). If you want to see a more detailed description of the resource, then you can click once on the title. Most resources have detailed descriptions and how to acquire the resource, including an email address for more information.

You can also search the database using the spiral chart of twelve themes and grade levels. The link to the chart can be easily found from the Culturally-Based Curriculum Resources page.

You may know of a resource which might be useful to include in the database. You could contact us by filling out a simple form over the internet. There is a button "Add Resource" on the detailed webpage. If you have used a resource and want to share how well it works for your community, you could fill out a simple survey form found on the site.

If you cannot find exactly what you are looking for or have questions or comments about the searchable database, then you can email Sean Topkok at fncst@uaf.edu or call ANKN Clearinghouse at (907) 474-5897.

You can search the database using the spiral chart of twelve themes and grade levels. The link to the chart can be easily found from the Culturally-Based Curriculum Resources page.



S.P.I.R.A.L. Curriculum Chart
Outer Ring = Themes (Values)
Spiral = Annual Cycle of Learning

Alaska Intertribal Youth Practicum

by Macky A. McClung

How do we get more Alaska Native students interested in pursuing a career in natural resources? How can we help Alaska Native students better understand how tribal government works? How do we acquaint Alaska Native students with making natural resource decisions? How do we encourage students to take an active role addressing community issues?

We believe the Alaska Intertribal Youth Practicum is an effective way to address those questions. And since 1992 there have been five practicums held throughout Alaska in the southeast, central, and southcentral regions. The Tlingit and Haida Central Council, Tanana Chiefs Council and Kenaitze Indian Tribe IRA (Indian Reorganization Act) have served as hosts for the Practicum. The U.S. Park Service, U.S. Bureau of Indian Affairs, U.S. Bureau of Land Management, U.S. Geological Survey, U.S. Fish and Wildlife Service, U.S. Forest Service, Doyon Corporation and the Nature Conservancy have supported Practicum through allocated monies and/or natural resource professionals.

"What I enjoyed the most about the Practicum was that I got to meet a lot of interesting people. I also liked learning a lot of information about how the tribal government works and the problems that they have to deal with. I also enjoyed having all the resources people available and that they helped us out."

—Casie Jones, 1996 student

The Alaska Intertribal Youth Practicum is an educational exercise designed for Alaska Native students in their junior or senior year of high school. It is an eight- to ten-day camp that gives the students the opportunity to develop an understanding of tribal government; develop an understanding of natural resource management activities, disciplines and career opportunities; become acquainted with the educational processes and academic requirements for a degree or career in natural resources; develop leadership, communication, and problem solving skills; experience different Alaskan Native cultures; and earn one college credit.

Students are assigned to fictitious tribes, assume the roles of tribal government officials and resource specialists and become the government entity whose purpose is to manage its tribal land. The students are asked to develop three multiple use resource management plans. Each plan covers a ten-year period and must address issues such as natural resource management, decreased funding from governmental resources, local budget deficits, seasonal jobs, low high school graduation rates, alcoholism and family violence.

"I liked it when we were in groups and learning about each other's different thoughts. I will use my learned skills when I'm running in an election. Practicum needs to be longer."

—Seraphim Ukatish, 1996 student.

Tribal elders, tribal members and natural resource professionals are available to the students throughout the exercise for consultation of issues and plan development. Many of the students also discover ways to apply practices that are currently being used by their home tribal governments.

The students participated in field trips, presentations by tribal members and natural resource professionals, a career night and times set aside for cultural sharing. All of these activities serve to strengthen each of the students as well as each of the student tribes.

"It was leadership skills. Practicum was difficult, but I liked it. The issues weren't that difficult, but the way we solved them with a bunch of people made it difficult."

—Marilynn Beeter, 1997 student

At the end of the week, each student tribe gives a presentation before a panel of judges and all the participants of the Practicum. Their presentations include a name for their tribe, resource development of tribal land, cultural and social plans to address tribal needs and economic plans.

In their management plans over the years, the students have built lodges, designed archaeological expeditions for tourists, developed a catalog and internet site to advertise local foods and crafts, worked with an outside company to log part of the land with the stipulation that 90% of the workforce be local hire, harvested berries to sell in gift shops and built community and cultural centers.

So, has the Practicum been successful? We think so. A number of

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students have gone on to college and have chosen natural resource careers. Other students have taken a active role in their tribal governments. One student, Luther Aguchak, returned to Mountain Village following the 1996 Practicum to start a youth center.

And the successes are not limited to the students. The natural resource professionals return to their agencies with a greater understanding of tribal governments and traditional knowledge. And tribal members have an opportunity to know more about federal and state agencies through a more personal association with the natural resource professionals. Practicum is building more effective and stronger tribal relations between the tribes and federal agencies.

We are excited by the possibilities that the Alaska Intertribal Youth Practicum brings to these students. Through this intense exercise, we've seen students learn to work with others, take on leadership roles, search out knowledge from tribal elders, tribal members, and natural resource professionals, learn more about tribal government and explore possible natural resource careers.

"I am so impressed by Practicum. What an amazing team we made at this amazing program. It is so brilliant—identify the future leaders and get them to learn to know each other and to learn to think about natural resources when they are kids. It brings tears to my eyes."

—Norrie Robbins, 1997

If you would like more information about the Alaska Intertribal Youth Practicum, please contact me, Macky McClung, US Forest Service, PO Box 21628, Juneau AK 99802; phone (907) 586-7904; fax (907) 586-7843; email: mmcclung/r10@fs.fed.us.

Native Language Institute Debuts at UAF Next Summer

The Alaska Native Language Center at the University of Alaska Fairbanks (UAF) has entered into a partnership with the National Endowment for the Humanities and the Tanana Chiefs Conference to broaden opportunities to provide training for Athabascan language teachers.

Athabascan languages are recognized as some of the most endangered Native languages in Alaska; there are about 8,000 Athabascans with eleven distinct ancestral languages. The largest groups of speakers are the Koyukon and Gwich'in, each with about 300 people speaking the language. The smallest is Han with only nine.

As a response to concerns about dying Native languages in Alaska, UAF initiated both a certificate and an associate's degree in Native language education in 1992. The purpose of the program is to increase the quality of Native language education in Alaskan schools.

For students who are unable to commit to an extended course of study at UAF, the Alaska Native Language Center will provide training through the Athabascan Language Development Institute (ALDI) next summer. The two-week seminar, public lecture series and follow-up sessions will allow students to receive up to six college credits which can be applied toward the 30-credit certificate or the 60-credit associate's degree in Native Language Education.

Qualified students may be eligible for full fellowships to the summer language institute which will cover tuition, housing and registration fees. Class size is limited and preference will be given to bilingual educators. However, anyone interested in teaching and preserving Alaska's Athabascan languages is encouraged to apply.

The two-week institute and public lecture series aims to provide students with some of the basic skills needed to develop classroom materials and to teach Athabascan languages. It will also help students gain a working knowledge of language maintenance and revitalization issues so they can help their communities make informed choices about Native language education.

Speakers at the institute will include Danny Ammon and Leanne Hinton. Ammon became a fluent speaker of Hupa (an Athabascan language of California) through the Native California Network's Master-Apprentice Language Learning Program and now works for the program. Hinton is professor of linguistics at the University of California at Berkeley and was instrumental in setting up the Master-Apprentice Program. They will talk about the Native California Network's programs and how they might be tailored to fit the specific needs of Alaska's Athabascan population.

Applications for the institute will be available later this winter. For additional information contact Alaska Native Language Center ALDI Coordinator Patrick Marlow, (907) 474-7446, or Tanana Chiefs Conference Education Director Reva Shircel, (907) 452-8251.

AISES Corner (American Indian Science and Engineering Society)

by Claudette Bradley-Kawagley

On November 20, 1997 thirty-two students from Interior Alaska villages entered 21 projects into the First Annual Interior AISES Science Fair '97 held at Howard Luke Academy in Fairbanks, Alaska. The fair was sponsored by the Alaska Rural Systemic Initiative and the Annenberg Rural Challenge.

In the evening Rita Alexander of Minto led the opening prayer while all participants stood in a circle. It is an AISES tradition to begin every event with a blessing from our elders. Oscar Kawagley was the keynote speaker; Clara Johnson, director of the Interior-Aleutians campus, welcomed students to Fairbanks; and Amy Van Hattan gave a update on the activities of the Alaska RSI in the Interior. After the refreshments, Rita Alexander and Travis Cole of Allakaket led all participants in Athabascan dancing and singing. We were really proud of the science fair participants who had also attended the Fairbanks AISES Science Camp '97: Kristopher John of Fort Yukon, Sarah Monroe of Nenana, Alvina Petruska of Beaver, Barbara Solari of Beaver and Andrew Runkle of Nickolai. Rita and Travis had taught these students to dance and sing during the camp this summer. They have become very fine Athabascan dancers. The opening session was closed with a blessing by Robert Charlie of Minto.

The outstanding feature of this fair was the balance of science inquiry with Alaska Native culture. Students were asked to develop experiments or demonstration projects following the guidelines of the scientific method outlined in the handbook. Prior to coming to Fairbanks they were required to have three persons review their project using a checklist of Athabascan values. During the fair their projects were evaluated by two sets of judges: elders of the Interior region and teacher/scientists. Many of the teacher/scientists were graduate students from the Natural Science areas of study; they were selected by Professor Larry Duffy, department head of the Biochemistry Department at the University of Alaska Fairbanks.

November 21 was the day of judging. Elders spent lots of time interviewing students about their projects. They evaluated projects on how well the student maintained Native values, understood the project, presented the project to the judges, and time spent on the project. They also evaluated the projects usefulness to Native culture, village life and Native corporations.

The teacher/scientist judges talked with students in depth about their scientific method and procedure. They evaluated projects on creative ability, scientific thought/engineering goals, thoroughness, presentation to the judges and skill. These judges spent time writing valuable recommendations to students that will improve the project, when students revise it for the next fair.

Both sets of judges caucused together and selected four grand prize winners. These winners will be encouraged to revise their projects in preparation to submit to other science fairs during the winter/spring '98. The judges worked very hard at their job. We are most grateful for their integrity and sincerity to help students realize the importance of their scientific inquiry.

Peter Aloysius, Jr. and Mathew Chadbourne proudly display their science fair project "Swimming Electricity".

November 22 was the award dinner. The participants stood in a circle as Catherine Attla of Huslia led the blessing. Everyone gathered around the potluck dinner. After dinner several speakers talked to students: Susan Jones of Doyon Limited, Eleanor Laughlin of FNSBSD Alaska Native Education and John Regitano of Fairbanks Native Education

Amy Van Hattan and Claudette Bradley-Kawagley assisted the elders in handing out the elder awards. The elders selected seven projects for first place:

- *Spruce Bark Beetles Habitat* by Casey Skinner of McGrath,
- *Athabascan Medicine* by Candice Nathaniel of Chalkyitsik,
- *How do you Trap Wolves?* by Roy Wholecheese of Galena,
- *Arctic Grayling & Burbot* by Sarah Monroe of Nenana,

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- *Which (Fur) is Warmer?* by Allison Huntington and Brianna Evans of Galena,
- *Oil Spills* by Elizabeth Folger, Tyson Brown and Frederick Joseph of Tanana and
- *Moss Absorbency* by Cindy John and Amber John of Shageluk.

Elders gave second and third place awards as well. After everyone received their award the elders talked to students and everyone present about the meaning of their work and study to the Athabascan culture and people.

The elders were Rita Alexander of Minto, Fred Alexander of Minto, Catherine Attla of Huslia, Jonathan David of Minto, Howard Luke of Howard Luke Camp and Margaret Tritt of Arctic Village.

Elsie Eckman, math teacher at Eielson High School and a former AISES student at UAF, announced the winners of the teacher/scientist judges. They selected six projects for the first place, blue ribbon awards:

- *Spruce Bark Beetle Habitat* by Casey Skinner of McGrath,
- *Bridges* by Patrick Gringrich of Galena,
- *Insulating Values of Furs* by Grace Sommer of Galena,
- *Acid Rain* by Andrew Marks, Charlene Vanderpool, and Courtney Moore of Tanana,
- *Catching Snowshoe Hares: Trap or a Snare?* by Andrew Runkle of Nikolai and
- *Fingerprints* by Mandy Vosloh of Galena.

The second place, red ribbon awards and third place, white ribbon awards were announced as well.

Oscar Kawagley announced the Grand Prize winners. The winners were:

- *Spruce Bark Beetle Habitat* by Casey Skinner of McGrath,
- *Arctic Grayling and Burbot* by Sarah Monroe of Nenana,
- *Which (Fur) is Warmer?* by Allison Huntington and Brianna Evans of Galena and
- *Catching Snowshoe Hares: Trap or a Snare?* by Andrew Runkle of Nikolai.

These students will be encouraged to enter their projects in other fairs, such as the statewide fair in Anchorage and the AISES National Fair in Rapid City, South Dakota.

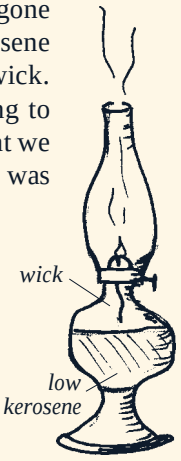
The presentation of awards was followed by Athabascan singing and dancing led by Rita Alexander and Travis Cole with David Ingles of Minto as an invited dancer. The fair ended with a prayer led by Robert Charlie. The First Annual Interior AISES Science Fair '97 was a melding of Western science with Native culture and village science application.

Village Science

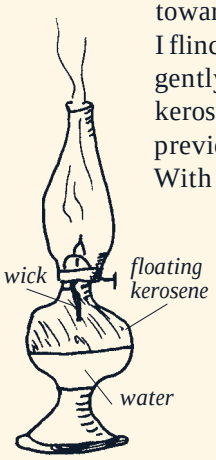
by Alan Dick

In the mid sixties, before TV, electricity and telephones, we often visited on long winter nights. As newcomers to the village of Sleetmute, it wasn't uncommon to have four or five different people in our house every evening.

One particular January night, most of the people had gone home, but Matfi remained. I grew nervous. The level of kerosene in our only lamp was dropping below the level of the short wick. I glanced often at the lamp wondering when he was going to leave, but he chatted on. I was too embarrassed to admit that we had no more kerosene and didn't know how to tell him it was time to go home.



Finally Matfi told me, "Your wick is burning." Indeed, we were burning cotton, not kerosene. I broke down and admitted that we had no more kerosene. Matfi pulled a small flashlight from his pocket, handed it to me, blew out the charred wick and unscrewed the base that held the wick and chimney of the lamp. He went to the water bucket and filled the dipper with water. When he came towards the lamp with the dripping dipper, I flinched and said, "That's water!" (As if he didn't know.) He gently poured the water into the base of the lamp until the kerosene floated on the water, two inches higher than it's previous level. He reassembled the lamp, lit it again and left. With the wick bathed again in kerosene, we could have visited several hours more. It was so simple and yet so profound.



I have often wondered where Matfi learned that. I am certain that it wasn't in science class or from a book, as he had never been to school. He had no idea of immiscability or specific gravity, yet he made the connections to arrive at the synthesis and application of significant knowledge. That event, 30 years ago, was one of my introductions to village science.

Aleut Region

by Leona Kitchens

Hi! My name is Leona Kitchens. I am a Yup'ik Eskimo from the Bristol Bay region. I recently received my bachelor of arts in elementary education from University of Alaska Anchorage. I worked for some time with the Johnson O'Malley and Indian Education programs in the Matanuska-Susitna Valley as a cultural heritage resource person and as a tutor. I am excited about joining such an exciting and rewarding project and to have the opportunity to work with a most wonderful group of people. The team here at the Alaska Rural Systemic Initiative has been generous in their welcome and patient as I get my feet wet in Unalaska. I would like to take the time to thank Moses Dirks for the wonderful work he has done as the coordinator for the last two years. I feel fortunate that I have had him break the trail for me. Thank you Moses and best of luck teaching!

The Aleut Region is swimming with activity. The Aleut Academy of Elders, Aleut Teachers Association, Aleut cultural camp and Aleut regional meetings were held on December 2 through December 5, 1997 in Unalaska. Our memorandum of agreement (MOA) partner, Aleutian/Pribilof Island Association, involved quite an impressive group of elders for the academy. We are blessed with our elders involvement and knowledge. The teachers who will form the teachers' association will come to us from communities throughout the islands. The two groups should be phenomenal together as they work on the Unangan science camp as well as their respective agendas. We had quite a rewarding and productive gathering in December.

The Alutiiq Region held their regional meeting December 1–2, 1997 in Kodiak. Our MOA partner, the Kodiak Area Native Association, has been active implementing 1997 initiatives. The Alutiiq Academy of Elders Cultural Camp was held on Afognak Island in August in association with the Kodiak Island Borough School District. The camp was well attended by both Kodiak school teachers and Alutiiq elders. The cultural camp was located at the Dig Afognak facilities on Afognak Island.

Our year three initiatives are *Village Science Applications and Careers* and *Living in Place*. Our region is enthusiastically looking forward to our participation in both initiatives. Our goals with the *Village Science Applications and Careers* will be to encourage local Native students to pursue science-related careers. The American Indian Science and Engineering Society (AISES) chapters have been formed in other regions and have been highly successful. We are forecasting a chapter in this region. *Village Science* should be an exciting project as we are flooded with science! The *Living in Place* initiative includes nurturing individual and community well-being. Some of the goals that are involved with the *Living in Place* initiative are:

- to encourage the schools to use the surrounding environment—both cultural and physical—upon which to build the curriculum;
- to implement an urban survival experience;
- to involve the reflection of Native values in the schools and communities;
- to integrate experiential learning activities in the schools; and
- to include the strengths that Native teachers and parents have in the educational environment.

Welcome to Leona Kitchens, Aleut RC!

Leona Kitchens has recently been hired as the Aleut Regional Coordinator for the Alaska Rural Systemic Initiative and the Alaska Rural Challenge. Leona was born in Bristol Bay and is a new resident of Amaknak Island on the Aleutian Chain. She can be reached at (907) 581-5472; her email address is snowbank@arctic.net.

Yup'ik Region

by Barbara "Mak" Liu

Hello to readers! Unit building and coalition ideas came about through the *Culturally-Aligned Curriculum Adaptation* initiative that has been the focus of the Yup'ik region last year. In the new year, we're taking on the initiative *Indigenous Science Knowledge Base.*

Stephanie Hoag facilitated a unit building workshop in Bethel, October 14–15 for the Yup'ik/Cup'ik region. Teachers, a curriculum specialist and elders came together from the following school districts: Yupiit, Lower Kuskokwim (LKSD), Lower Yukon (LYSD), St. Mary's and Southwest Region (SWRSD).

I observed teachers from different sites working on unit topics in fisheries, plants, camping and weather. Elders came from Akiachak, Toksook Bay, Hooper Bay and Manokotak to work with teams. Unit team members will be meeting again after the holidays with Stephanie Hoag and Peggy Cowan.

The regional consortium held this fall following the curriculum workshop was also attended by school district MOA partners from Yupiit, Kashunamiut, LKSD, LYSD, St. Marys, and SWRSD. Elder participants were Olinka George, Joshua Phillip, Paul John, Martina John, Neva Rivers and Henry Alakayak.

Recently, a talking circle workshop was held at the St. Mary's Conference Center, facilitated by John Pingayak. Four elders—Joe Tuluk, Helen Friday and Julia Cholok from Chevak and Nancy C. Morgan from Aniak—participated with teachers from the following school districts: LYSD, St. Mary's, Kashunamiut and Kuspuk.

One activity I hope to actively participate in locally is the *Alaska Onward To Excellence* process being initiated under Lower Kuskokwim School District. I traveled to Juneau to attend the Axe Handle Academy and saw demonstrations of the Southeast Cultural Atlas project. I look forward to the AKRSI staff meeting in January 1998.

As we move into new initiatives the next three years, Y/Cup'ik student and elder participation will be more evident in schools through academies and projects.

Wishing everyone a safe and eventful year. *Tua-ingunrituq*

Southeast Region

by Andy Hope

The Southeast Native/Rural Education Consortium regional planning meeting took place on October 2–3 in Juneau. Representatives from all of the consortium members participated: Sealaska Heritage Foundation, Chatham School District, Hoonah City School District, Sitka Native Education Program, Sheldon Jackson College, Raven Radio, University of Alaska Southeast and the Southeast Region Elders Council. The meeting participants were presented with a comprehensive report on program developments to date and initiatives on line for 1998. The group will conduct quarterly teleconference meetings.

Tentative plans for 1998 call for Regional Science/Cultural Camps, Academy of Elders/Camp, the Axe Handle Academy, the Alaska Native History Text, support for the Southeast Native Educators Association and the Village Reawakening Project. I am thinking that the best approach to ensure long term impact would be to develop an interdisciplinary team of educators from our consortium partners to work on developing curricula over the next three years.

The field test version of the *Tlingit Country Map and Tribal List* is out of print. Jeff Leer and Roby Littlefield are heading up the revision and proofreading of the Tribal list and the revised map/list will be published in early 1998. Tom Thornton of UAS and I are working on a *Tlingit Source Book*, that we hope to publish by late spring. Copies of the *Tlingit Math Book* are still available.

Iñupiaq Region

by Elmer Jackson

The week of November 17 was a busy one for MOA partner, Northwest Arctic Borough School District (NWABSD). On November 18 & 19, the Iñupiaq Regional planning meeting was held at the Kotzebue Technical Center. A total of twenty-two participants from the Iñupiaq region attended.

The first annual Native Science Fair was held on November 20–22. Thanks to elders, teachers and students for making the fair educational and scientific in the *Native Ways of Knowing*. A total of twenty-one students, some working on team projects, presented thirteen science fair projects. Some schools sent in projects for display during the fair. Poor weather conditions and other school activities kept many students from participating.

Students in grades five through eight presented the following science team projects: *Nunanaik Kipitirrun—Alder Willow Dye; Furs That Keep Us Warm; Why Don't Wolf and Wolverine Furs Frost Like Other Furs?* and *Uses of Low Wattage Electric Bulb by Using an Inverter*.

Eight students in grades five through eight, had individual projects. They were the *Deering Salted Salmon; A Caribou's Life Cycle; Caribou Antlers; How Do Leaves Change Color; Air—The Effect of Smoking On Our Lungs; Northern Lights; Alcohol and You* and a first grade science project *Ptarmingan: An Arctic Bird*.

The NWABSD, Alaska Rural Systemic Initiative and the National Science Foundation sponsored the fair. On Friday night an awards ceremony and a feast was held. A combination of Native food and pizza was served. The evening's highlight was the awesome Eskimo dancing by the Kotzebue Northern Lights Dancers.

Taikuu (thank you) to the Northwest Arctic Borough for the use of their facility and the Northwest Arctic Borough School District for feeding and accommodating the participants. The science fair was planned through teleconferencing, the AISES planning committee deserves a thank you. Thanks especially to Ruth Sampson, Mike Dunleavy and Debra Weber-Werle who helped make the science fair was a success. And to the students and their teachers: you made history by participating in the First Annual Arctic Region AISES Science Fair.

On November 22–23 two teams, one from Barrow and the other from Bering Straits, participated in the Science and Math Unit Building workshop. Kit Peixotto, the program director for the Mathematics and Science Education Center of the Northwest Regional Educational Laboratory located in Portland, Oregon, facilitated the workshop. The Barrow team did their science unit on whaling while the Bering Straits team worked on developing a unit on plants.

The initiative for 1998 is *Culturally-Aligned Curriculum Adaptations*. A culturally balanced and integrated curriculum of Native and non-Native knowledge and skills will be utilized, using local examples and resources wherever possible, while at the same time articulating with state and national standards.

NWABSD sponsored the Subsistence Curriculum Development Workshop in Kotzebue December 10–12. Native educators and elders started curriculum development for teachers in the Iñupiaq region. Lesson units in subsistence will be shared with teachers in various school districts. A report on the workshop will be available, listing the units that were developed.

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Athabascan Region

by Amy Van Hatten

In the Native world everything has a reason or value. One just needs to stop and think about it for a while. Prior experiences in any culture helps one distinguish between general knowledge and an awareness of that same culture along with the ability to articulate it clearly to others who had no prior knowledge. In carefully choosing these few words I want to help make clear images of some things that are happening, including particular findings (gaining life principles through local Native traditional activities) that don't easily fit with earlier theories of what education should be for Native people.

After our recent Athabascan Unit Building workshop, the word "potluck" came up. As a Native person trying to gather resources that are usually stored in people's minds, I usually say "Come as you are!" when I invite local Native elders, parents, council members, etc. to our meetings. We never know what substance surfaces from the depths of each heart. For instance, at a village potluck with all kinds of different foods, we feel like we are leaving with substance in our bellies, mind and something for the soul.

During the Christmas season I am thinking of garlands, either as a wreath or a woven chain of flowers and leaves to be worn on the head or used as decoration. In relating that word to my insatiable search of Native people's achievements and accomplishments I would like to use *garland* as a symbol of honor or special recognition for so many others who have remarkable collections of stories, poems, Native songs and dances, handicraft skills, Native ways of preserving tasteful treats and survival skills. Elders possess a special talent for passing on that knowledge in their respective communities with strengths we only hope will be passed on from generation to generation.

Happy (snowshoeing) trails to you! Thank you for your time.

Athabascan Curriculum Unit Building: Snowshoes

by Susan Rogers

On October 27–28 three teams of coalition educators and elders gathered at the University of Alaska Fairbanks to work on units incorporating Native knowledge and Western science using best educational practices. Remarks by Oscar Kawagley and Ray Barnhardt reminded us of the Native ways of knowing and the scope of the Alaska RSI project. Claudette Bradley-Kawagley and Sean Topkok respectively described the AISES summer camp and progress made on the Alaska Native Knowledge Network. Workshop facilitator Kit Peixotto from the Northwest Regional Educational Laboratory in Portland outlined the task before the teams and we set to work for the time remaining in our two-day session.

One team gathered by Project Learning Tree coordinator Susan Rogers included two outreach teachers with Tanana Chiefs/Alaska Cooperative Extension Zelma Joseph-Dick and Sarah McClellan, Alaska Bird Observatory biologist Sara McDaniel, Amy Van Hatten and elder Catherine Attla. After Catherine suggested that we use snowshoes as the topic for our unit, the rest of us listened hard to acquire information about traditional ways to measure materials for snowshoe construction, different uses of snowshoes and their designs. Alan Dick also contributed some *Village*

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Creating Culturally-Based Units For The Classroom

by Phyllis J. Kardos

Wild Berries In And Out Of The Classroom is the name assigned to the three-week culturally-based curriculum unit developed at the unit building workshop held October 27–28 in Fairbanks. The unit was designed by the four member team from the Iditarod Area School District (IASD): Mary Walker, Holy Cross elementary teacher; Cora Maguire, McGrath elementary aide; Donna "Mac" Miller, bilingual/bicultural consultant; and Phyllis Kardos, IASD curriculum director.

The IASD team selected berries as a theme for a couple of reasons: one, the district had a berry unit that was developed years ago and was in need of being updated and two, the team knew that berries were available for fall gathering and was an important subsistence activity at all nine school sites. This last factor was important since the team wanted to create a unit that could be used throughout the district.

The team divided the unit down into several components: goals, objectives, student daily activities/projects, materials and resources and assessments. The first step was to establish a set of goals that complimented the state science and math standards and the indigenous math and science knowledge networks. The team also considered the English content standards as being important to this unit. The team set the following six goals:

1. Students will work with Native elders and teachers in berry gathering, preparation and preservation;
2. Students will learn to appreciate and respect the beliefs, customs and relationships among people with regards to the land, environment and ecosystems;
3. Students will understand the traditional and Western knowledge and values of participating in this activity;
4. Students will acquire scientific and mathematical principles through this traditional activity;
5. Students will be able to speak and write well for a variety of purposes as a result of participating in this activity;
6. Students will improve their observational and data gathering skills.

One of the more important elements of this whole unit building was brainstorming. As the team progressed through the goals, it spent substantial time discussing and noting activities that would fit under each of the goals.

The team established objectives under each goal as a second step. Since this unit is still a "work in progress," the following is only a summary overview of three of the objectives:

Objectives under Goal 1

Consists of students acquiring respect for land through the telling of traditional stories, traditional beliefs about berries gained through talking with elders and understanding traditional as well as contemporary preservation methods (drying, burying in birchbark baskets, sugaring in wooden barrels, jarring and canning, freezing and vacuum packing.) Students will gain scientific knowledge through an understanding of bacteria growth by combining heat, moisture and oxygen.

Objectives under Goal 3

Consists of students gaining an understanding of the Athabascan value system of sharing, being respectful, conserving, use of foods for ceremonies, nutritional and medicinal value of food, community bonding, spirituality and working together.

Objectives for Goal 4

The Western math and science knowledge objectives consists of patterning, classification, odd/even numbers, sorting, weights, comparing, research, recording data, estimating, predications, mapping, counting and reasoning.

The best part of the unit building session was arriving at student activities. An example of a student activity over this three week unit is two field trips with elders and community members to a berry gathering site. Among a variety of activities students will plot out a nine-foot square in a berry

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Science information about choosing a good tree from which to make snowshoes.

The unit will reference information which has already been written with the addition of lesson plans using Native traditional and Western measurement systems. Students will practice both types of skills in activity-based learning, data collection and graphing, making a survey of snowshoes in their community, constructing emergency snowshoes and using them and collecting information from knowledgeable elders in their village. Standards which are addressed are math, language arts and science.

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field, grid the plot, identify compatible plants, gather plant samplings, predict weight, volume or number of berries from each plot and compare with other plots being taken. Students will also gather berries for preservation and other activities in the classroom. Activities would include a variety of student stations, scientific and math stations, plant pressing station, journals, maps and a presentation/research station. Students would rotate through these stations until the unit was complete.

A culminating activity would consist of a tea party for elders and parents using products made from the berries plus students will perform an original berry dance created as part of the berry unit. Students would also be required to compile and present an oral and written presentation that would include an audio/visual component.

One interesting determination that came out of the workshop was differentiating between culturally-relevant and culturally-based. It is relatively easy to design curriculum that is culturally relevant, but it takes a heartfelt respect, appreciation and knowledge of Native culture and traditions to create a curriculum that is truly culturally-based.

The challenge in developing a culturally-based instructional unit is in developing a unit that blends Western curriculum content standards and traditional Indigenous knowledge, specifically math and science standards and knowledge. Alaska State Content Standards and Athabascan values were used a foundations for designing this unit. A unit of this nature takes an understanding and appreciation of both world views and systems, plus it takes collaboration within the team and respect for the knowledge base of Native elders and teachers who willingly share their experiences.

Moose In Our Local Environment

by Rita O'Brien

Interior educators met with representatives of the Alaska Rural Systemic Initiative (AKRSI), 4-H and Department of Natural Resources Division of Forestry at a unit building workshop hosted by the State Department of Education with Kit Peixotto of the Northwest Regional Educational Laboratory as the workshop facilitator. Two of our four group members had some experience writing science curriculum. Most of us were familiar with the moose, so we chose this for our topic. Moose people were myself (Rita O'Brien), teacher/Association of Interior Native Educators (AINE) assistant; Linda Green, teacher/Fairbanks North Star Borough School District; Caroline Frank, teacher/Arctic Village; and Beth Leonard, AKRSI .

The first things we were asked to do was to choose two to four standards from the State of Alaska Science Content Standards (we chose more). We were also asked to choose a grade level—grades eight to ten was our choice. Standards were chosen from parts A, B and D of the Alaska Content Standards. Two standards, 14 and 15 were chosen from list A (Science Facts, Concepts, Principles and Theories). Here are the specifics for standard 14:

14A. understand the interdependence between living things and their environments,

14B. that the living environment consists of individuals, populations and communities, and

14C. that a small change in a portion of and environment may affect the entire environment (interdependence).

Standard 15 reads: Use science to understand and describe the local environment (local knowledge).

Then our group discussed what the student should know regarding possessing and understanding the skills of scientific inquiry, list B. Standards 1, 4 and 5 were chosen.

Standard 1: Use the process of science; observing, classifying, measuring and interpreting data.

Standard 4: Understand that personal integrity, skepticism, openness to new ideas, creativity, collaborative effort and logical reasoning are all aspects of scientific inquiry.

Standard 5: Employ ethical standards including unbiased data collection and factual reporting of results.

Next, the group chose standards that related to how students should apply scientific knowledge and skills to make reasoned decisions about the use of science and scientific innovations. These standards were taken from list D.

Standard 1: Apply scientific knowledge and skills to understand issues and everyday events.

Standard 2: Recommend solutions to everyday problems by applying scientific knowledge and skills.

Standard 3: Participate in reasoned discussions of public policy related to scientific innovations and proposed technological solutions to problems.

Secondly, clarification was needed on what students needed to know and apply with regards to the unit topic.

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Moose Unit Building (coninued from previous page)

For example, the goal for the first session or day: Students will learn about the moose environment/habitat near their village. The objective being that students will create a local map, 10 to 30 square miles, using Alaska maps from the United States Geological Survey (USGS). Also, students will use the vocabulary words: marsh, lakes, streams, bogs, etc. and will label their maps with the Native name for such locations.

Thirdly, we brainstormed the activities, the best place to learn about the topic, who can teach the various aspects and the resources and materials needed. One related activity we discussed would be to make a simulated birch bark canoe out of paper stock and fake moose sinew. The school classroom with the local elders teaching, sharing stories and experiences centered around the activity with a couple of days camping was one of several settings we chose for this topic. Here is a list of some of our resources: local elders (elders, videos, books written by elders (see AKRSI website), topographic maps, books including Project Wild and Old Moose, Wildlife Curriculum Series Alaska Department of Fish & Game (ADF&G), professionals from ADF&G, ADF&G regulations and population statistics, AINE videos on moose tanning, local subsistence hunters, Moose Song video (by Archie Moses, Rasmuson Library), outfitters, guides, air taxi operators and attorneys.

Finally, lesson plans were written that included goals, time allowance, objectives, resources, activities and the standards being met for each session or day for ten days. It was difficult to stay within our scope because we had so much information and ideas. We also learned a lot. How many of you know that moose have an extremely difficult time traveling or escaping predators when the snow is crusted in the spring and in the spring they also go to the south side of the hills where the snow is melting and not as deep.

It was a great time brainstorming and exchanging our ideas with one another over a lot of great snacking. Our group would like to thank elders Catherine Attla and Effie Kokrine for their valuable input on their knowledge of moose, the State Department of Education for hosting this workshop, and Patty Bowen for sending the moose bone tools and Moose Song video that our group used. If you would like to try your hand at writing a unit but don't know how, we can send you a copy of the State Content Standards along with the unit design worksheet. Write A.I.N.E., PO Box 756720, Fairbanks AK 99775-6720, email: fnrco@uaf.edu or call us at (907) 474-6041.

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