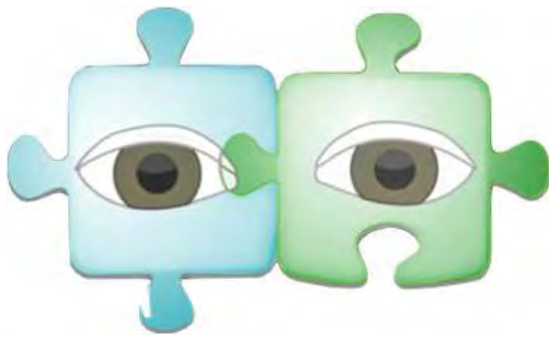


TWO-EYED SEEING WORKSHOP for SCIENCE EDUCATION FOR CHILDREN AND YOUTH

- 2007
 - community and science education outreach
-



Integrative Science organized and hosted a one day workshop on May 24, 2007, at Cape Breton University to build a foundation for development of science education modules using “Two-Eyed Seeing”.

The Institute for Integrative Science & Health worked in conjunction with diverse developmental partners including Mi’kmaw Elders and educators from both Aboriginal and non-aboriginal communities. The workshop was designed for all those – Elders, scientists, educators and others – with interests in a “Two-Eyed Seeing” approach to science education for children and youth. Mr. Lindsay Marshall of the Mi’kmaq College Institute at CBU emceed the event.

Financial support came from the Canada Research Chair in Integrative Science at CBU as funded by SSHRC (Social Sciences and Humanities Research Council) of Canada and also from a discretionary funding grant from the Atlantic Office of NSERC (Natural Sciences and Engineering Research Council) of Canada. Our workshop was featured in NSERC-Atlantic’s Annual Report 2006-2007 (attached at the end of this document).

The workshop was designed in two parts (part one in the morning and part two in the afternoon) followed by a Sweat Lodge Ceremony in the evening. Parts one and two were attended by 80-100 people, including Mi’kmaw Elders (18), scientists, educators, education students and science students. Entities and organizations represented included Mi’kmaw reserves in Nova Scotia and New Brunswick, Unama’ki Institute of Natural Resources, Union of Nova Scotia Indians, Confederacy of Mainland Mi’kmaq, various Mi’kmaw Kina’matnewey schools, Harbourview Montessori school, schools within the Cape Breton Victoria Regional School Board, universities (Cape Breton, Dalhousie, St. Mary’s, New Brunswick, and York), the federal government (Fisheries and Oceans, Environment Canada, Parks Canada), the Nova Scotia provincial government (Education, Aboriginal Affairs), and various community groups.

THE MORNING was structured to share understandings about “Two-Eyed Seeing” as it has been developed in Cape Breton – Unama’ki by Mi’kmaq Elders and university researchers working together over the past decade.

- Mi'kmaq Elder Albert Marshall of Eskasoni First Nation was the first speaker; he is the person who has provided the phrase "Two-Eyed Seeing" to help enrich the labels for and understandings within Integrative Science (which is the bringing together of scientific knowledges from Aboriginal / Indigenous and Western / mainstream world views). Two-Eyed Seeing refers to a traditional Mi'kmaq teaching that highlights the importance of an individual striving to see from more than just one perspective. It emphasizes that we humans need to learn to see from our one eye with the strengths of Aboriginal / Indigenous knowledges and from our other eye with the strengths of Western / mainstream scientific knowledges.
- Clifford Paul from the Membertou First Nation was the second speaker. Clifford is a senior student in Integrative Science at Cape Breton University and the moose management program co-ordinator for Unama'ki Institute of Natural Resources. He talked about using Two-Eyed Seeing as a Mi'kmaq scientist and provided numerous examples to illustrate his understandings.
- Cheryl Bartlett, Canada Research Chair in Integrative Science in the Department of Biology at Cape Breton University, was the final speaker in the morning. She talked about Two-Eyed Seeing with an emphasis on science as "dynamic, pattern-based knowledge" that draws upon our various human pattern smarts. She focused on big picture (big pattern) understandings about the relational approach of Indigenous science and the theory-based approach of Western science.

THE AFTERNOON was structured to create ... new understandings, new relationships, and new science education modules. It began with interactive exhibits on our human "pattern smarts" (as per the multiple intelligences theory of Dr. Howard Gardner of Harvard University); this part of the afternoon was developed by Sana Kavanagh (a research assistant for Integrative Science at Cape Breton University, and a Master of Environmental Studies student at Dalhousie University) and Jane Meader and Laurianne Stevens (teachers at Membertou Elementary School). The afternoon then progressed by way of sharing circles in which many stories, observations and directions emerged from groups of people who would likely never meet under other circumstances. The deliberations of these break-out groups were to be fashioned into educational modules for elementary and junior students by a summer student research assistant; circumstances prevented this from occurring, unfortunately. Some of the explanations that Sana developed to explain multiple intelligences theory, and that were used at the workshop, are included in this document.

THE EVENING featured a Sweat Lodge Ceremony in Membertou First Nation for interested participants.

Two-Eyed Seeing Workshop for Science Education for Children and Youth

This **one day workshop** on May 24, 2007, at Cape Breton University (CBU) is hosted by the Institute for Integrative Science & Health at CBU in conjunction with partners that include the Mi'kmaq College Institute (CBU), Mi'kmaq Elders, and educators from both Aboriginal and non-Aboriginal communities. The workshop is for Elders, scientists, educators and others who are interested in a "Two-Eyed Seeing" approach to science education for children and youth. Funding is from NSERC (Natural Sciences and Engineering Research Council) of Canada in conjunction with the Canada Research Chair in Integrative Science at CBU as funded by SSHRC (Social Sciences and Humanities Research Council) of Canada.

- In the **morning** the Workshop will focus on sharing by way of key presentations on bringing together Indigenous and Western scientific knowledges, with the hope that all participants can enrich and expand their own personal and professional understandings.
- In the **afternoon** the Workshop will focus on doing, with the hope that by working together we can create some new science education modules for children and youth.
- The **evening**, for those interested, will have a Sweat Lodge Ceremony in Membertou First Nation.

Key Concepts for the Workshop

Integrative Science: the "bringing together" of Indigenous and Western scientific knowledges and ways of knowing ... for science education, research, applications, and outreach to youth and community.



Two-Eyed Seeing: the "guiding principle" for Integrative Science ... which refers to learning to see with the strengths in our two world views. Thus, from our one eye we need to learn to see with the strengths of, or the best in, Indigenous Science and from our other eye we need to learn to see with the strengths of, or the best in, Western Science. Furthermore, we need to learn to see with both eyes, together ... to motivate people, Aboriginal and non-Aboriginal alike, to use all our gifts so we leave the world a better place and do not compromise the opportunities for our children and youth (in the sense of Seven Generations).



More information at: www.integrativescience.ca

CAPE BRETON
UNIVERSITY



**NSERC
CRSNG**



Mi'kmaq College Institute
Mi'kmaq Espi Kina'matno'kuom



Membertou
Elementary



CAPE BRETON-VICTORIA
Regional School Board

Two-Eyed Seeing Workshop

for Science Education for Children and Youth

Cape Breton University, Sydney, Nova Scotia

You are Invited to Attend

May 24, 2007, Royal Bank Lecture Theatre

9:00 am – 4:30 pm (includes lunch 12 – 1)

The Integrative Science team at Cape Breton University, in conjunction with CBU's Mi'kmaq College Institute and key Mi'kmaq Elders and educators from both Aboriginal and non-Aboriginal communities, will host an all day workshop at the university for scientists, educators, and interested others.

In the morning, we will share our understandings about bringing together Indigenous and Western scientific knowledges and ways of knowing for the purpose of Two-Eyed Seeing science education for children and youth.

Lunch will be provided.

In the afternoon, we will work together to create Two-Eyed Seeing science education modules for children and youth for use in science camps or school curricula.

Supper is not provided.

In the evening, those who are interested may participate in a Sweat Lodge Ceremony in Membertou First Nation.

We use **Two-Eyed Seeing** as the guiding principle for our journey of working together while here on Mother Earth. Mr. Albert Marshall, Elder (Eskasoni Mi'kmaq First Nation, Cape Breton) gives voice to this principle in explaining that it refers to learning to see from one eye with the strengths of Indigenous knowledges and ways of knowing, and from the other eye with the strengths of Western knowledges and ways of knowing ... and to using both these eyes together, for the benefit of all.

The workshop is being funded by:

NSERC (Natural Sciences and Engineering Research Council)

SSHRC (Social Sciences and Humanities Research Council)

CRC (Canada Research Chair in Integrative Science)



Social Sciences and Humanities
Research Council of Canada

Conseil de recherches en
sciences humaines du Canada

Canada

Registration is Required!

Please complete and return the registration form to intsci@cbu.ca by **May 14, 2007**.

For more information contact:

Cheryl Bartlett

902-563-1624

cheryl_bartlett@cbu.ca

OR

Annamarie Hatcher

902-563-1822

annamarie_hatcher@cbu.ca

More information on Integrative Science and Two-Eyed Seeing can be found at www.integrativescience.ca



CAPE BRETON
UNIVERSITY



Two-Eyed Seeing Workshop for Science Education for Children and Youth Cape Breton University, Sydney, Nova Scotia

AGENDA

Location: Royal Bank Lecture Theatre and nearby rooms; Emcee: Mr. Clifford Paul

MORNING: SHARING AND LEARNING ABOUT TWO-EYED SEEING FOR SCIENCE

- 8:30 Registration, coffee and tea
- 9:00 Opening Events
Smudge Ceremony: Jane Meader
Opening Prayer: Albert Marshall
Welcome and Overview of Day: Lindsay Marshall
Cheryl Bartlett
Drumming: 3D Drummers, Membertou Elementary School
- 9:40 Elder Albert Marshall (Eskasoni First Nation, and Unama'ki Institute of Natural Resources): Two-Eyed Seeing from the perspective of a Mi'kmaq Elder, with an emphasis on working together for the benefit of our children and youth
- 10:15 Mr. Clifford Paul (Membertou First Nation, Moose Management Coordinator for Unama'ki Institute of Natural Resources, and senior science student at Cape Breton University): Two-Eyed Seeing from the perspective of a Mi'kmaq scientist, with an emphasis on Indigenous Science
- 11:00 Break
- 11:15 **We Are All Related/Msit No'kmaq:** activity
- 11:30 Dr. Cheryl Bartlett (Canada Research Chair in Integrative Science and Professor of Biology, Cape Breton University): Two-Eyed Seeing from the perspective of a non-Aboriginal scientist, with an emphasis on "big picture" understandings
- 12:30 LUNCH (in Multi-Purpose Room)

AFTERNOON: DOING AND CREATING TWO-EYED SEEING SCIENCE EDUCATION MODULES FOR OUR CHILDREN AND YOUTH ... **LOVE AND RESPECT MOTHER EARTH**

- 1:30 Our pattern smarts ... nourishment for Talking Circles and Break-Out Group Discussions (in the Great Hall)
- 2:30 Talking Circles and Break-Out Group Discussions (various nearby rooms) ... small groups of 6 people maximum
- 4:00 Collective Sharing of Circle and Group Synopses (Royal Bank Lecture Theatre)
- 4:30 Closing Prayer: Albert Marshall

NOTE: Participants are responsible for their own supper; there is no banquet.

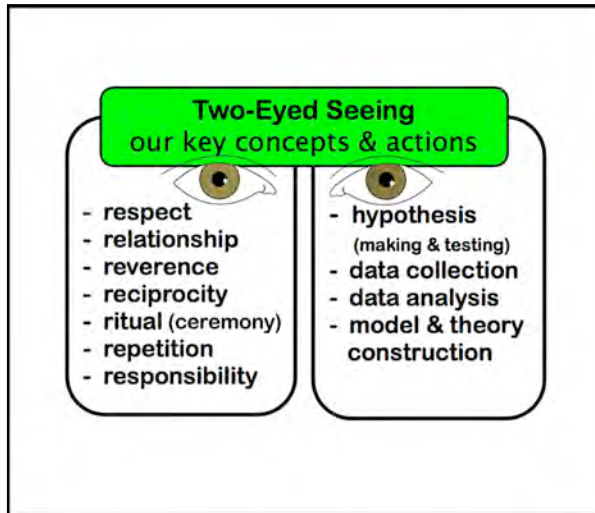
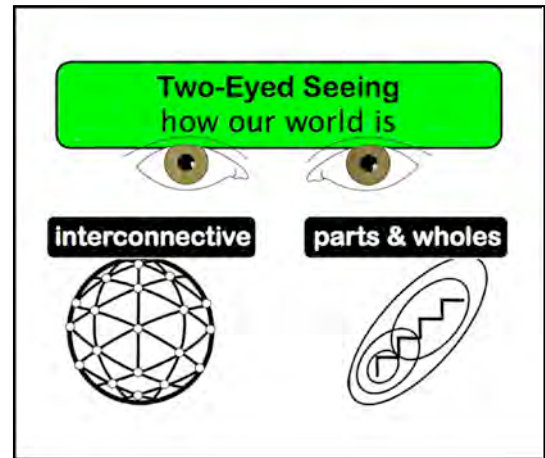
7:30 pm EVENING SWEAT LODGE CEREMONY IN MEMBERTOU FIRST NATION

If you are interested in participating, please bring a large, thick towel for use during the sweat. In addition, women should wear a "long flannel night gown" (or something akin, e.g. a loose cotton shirt and long skirt). Men should wear a T-shirt and shorts. More information will be provided during the day events at Cape Breton University.



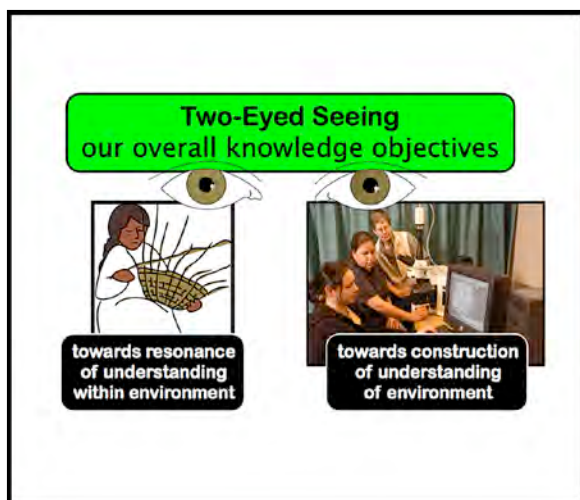
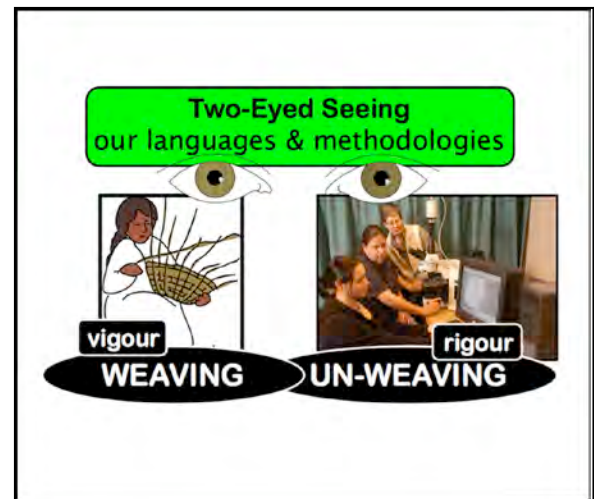
Big Patterns in our Ways of Knowing: “landmark understandings” to help navigate Integrative Science via Two-Eyed Seeing

Our World: We share a desire for our knowledges to have an overarching understanding of “how our world is”, albeit with differences as to the version seen: Indigenous as “interconnective”, and Western as “parts and wholes, systems and emergences”.



Our Key Concepts and Actions: We both identify “key concepts and actions” for our language and methodology albeit with differences as to what: Indigenous as “respect, relationship, reverence, reciprocity, ritual (ceremony), repetition, and responsibility” and Western as “hypothesis making and testing, data collection and analysis, and model and theory construction”.

Our Languages and Methodologies: We both identify key words for “our language and methodology” albeit with differences as to what: Indigenous as “vigour and weaving” of patterns within nature’s patterns (via creative relationships and reciprocities among life, love, and the land) and Western as “rigour and un-weaving” of nature’s patterns to cognitively reconstruct them (via analytic and mathematical language).



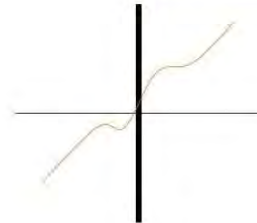
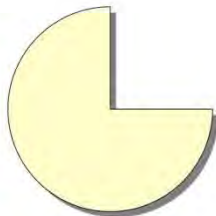
Our Overall Knowledge Objectives: We share a desire for our knowledges to have “overall objectives” albeit with differences as to what: Indigenous as “towards resonance of understanding with and within environment” and Western as “towards construction of understanding of environment”.

Logical-Mathematical Intelligence

MATH SMARTS

People with well-developed math smarts work well with:

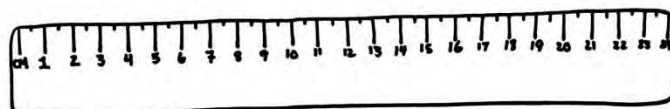
- Numbers and symbols
- Graphs
- Calculation
- Measurement
- Sequences and Patterns
- Analysis and Logic



1, 1, 2, 3, 5, 8,
13, 21, 34, 55,
89, 144, 233,
377, 600, 977...

Math smarts can be developed through activities that encourage people to:

Count, sequence, classify, map, analyze, test, sequence, classify, order, solve, figure, map, generalize, plan, abstract, experiment, prioritize, estimate, deduce, debate, analogize, induce, discern, number, predict, count, calculate, extract, evaluate, use symbols.



Math Smarts Activity

BASKETRY

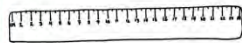
Mi 'kmaq craftspeople use wooden splints made from Wisqoq (Black Ash, Fraxinus nigra) and other trees to weave baskets. Basket making uses Math Smarts, such as when a basket maker must determine the length of splint needed to form the rim of the basket.



Using the groups of tools below, can you figure out the length of splint needed to stretch around the rim of the basket? How many different ways can this problem be solved?

GROUP 1:

- Ruler
- Basket
- Equation

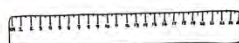


$$C = 2 \pi r$$

C = Circumference
 π = 3.14
 r = radius

GROUP 2:

- Ruler
- Basket
- String



GROUP 3:

- Splints
- Basket
- Your hands



CREATE AN ACTIVITY

Can you create a tree-related activity that draws on Math Smarts (Logical Mathematical Intelligence)?

Math Smarts Example

MEASUREMENT

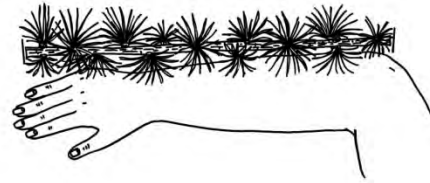
Tamarack or Larch (*Larix laricina*) is a cone-bearing tree with needle shaped leaves that turn yellow in autumn and are shed in the winter. The soft needles grow in tufts along the branch.



Tamarack is a Mi 'kmaq Medicine for high blood pressure.



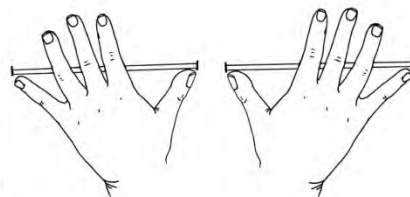
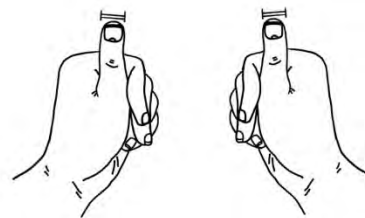
Branches are measured along the arm from the elbow to the tip of the little finger to determine the dose.



Using this measurement, the dose is proportional to body size.

Other Mi 'kmaq measurements are:

- across the thumb
- Across the hand



How does this compare to some common Western forms of measurement?

Can you think of the strengths of each approach?



Kinesthetic Intelligence

BODY SMARTS

People with well-developed Body Smarts will:

- enjoy learning through touch, movement, manipulation, physical experience
- learn by doing
- demonstrate creativity through construction, physical movement and expression
- show coordination, sense of movement, timing, balance



Body Smarts can be developed through activities that encourage people to: role play, act out/dramatize, use physical movement, participate in group games, take field trips, make visits, design and make activities, play sports and dance patterns.



Body Smarts Activity

SWEATLODGE



A Sweatlodge is a small dome shaped structure which is heated with hot rocks, and water tossed over the rocks which creates steam. The Sweatlodge is used for physical and spiritual healing. The Sweatlodge is built using alder or willow because these woods are supple and can be bent into a curved shape.



The model Sweatlodge (on the table) was built by a Mi'kmaq student. This project engaged Body Smarts through:

- construction with the hands
- touch, manipulation, and coordination
- learning by doing

ACTIVITY

Use your Body Smarts to find out which twigs are most supple and most stiff. Which twigs would you use to make a Sweatlodge? Why?

Which are most supple and which are least supple?

Can you create another tree-related activity that draws on Body Smarts (Kinesthetic Intelligence)? Are there other science concepts which could be taught through construction of a Sweatlodge?

Body Smarts Example

SNOWSHOES

Wisqoq or Black Ash (Fraxinus nigra) is a small tree with soft corky bark and leaves with 7-11 toothed leaflets on a central stalk. Wisqoq grows in swampy woodlands and can survive in standing water for weeks. The wood of Wisqoq is valued because it is straight-grained and splits well, and also because it will hold its shape when bent. Snowshoes are one of many Mi'kmaq tools made from Wisqoq. The wood is quartered then bent into the frame. The center is woven rawhide.

Making snowshoes requires Body Smarts. A craftsman must use their hands with control and experience in order to bend the wood into the right shape at the right speed without breaking it. Similarly, the rawhide netting must be woven and tightened without knots.

The design of the snowshoes also demonstrates Body Smarts. Round shoes are easiest to use, but a long wooden tail propels the wearer forward when he/she is moving quickly. The toe of the snowshoe can be shaped to make movement easier in soft snow or snow with a hard crust. The Mi'kmaq designed and used several varieties of snowshoes.



Musical Intelligence

MUSIC SMARTS

People with well-developed Music Smarts will:

- Discern patterns in sound and enjoy experimenting with them
- Show sensitivity to mood changes in sound
- Have a sense of rhythm and be able to respond artistically to music
- Be curious about music and seek to develop their own categories and preferences
- Enjoy improvising and experimenting



The following activities nourish and foster Music Smarts:

Listening
Sounding out
Playing with instruments
Mimicking sounds
Singing
Tapping rhythms
Recording



Try incorporating the following into lessons and activities:

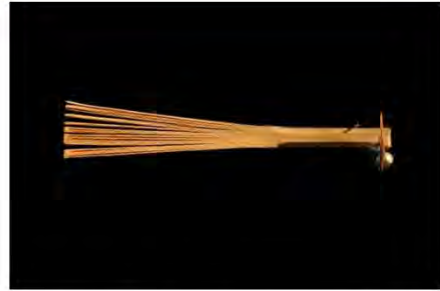
Raps
Rhymes
Songs
Jingles
Dramatic readings
Musical memory aids
Music to inspire a mood



Music Smarts Activities

MUSICAL INSTRUMENTS

A Ji 'kmaq is a Mi 'kmaq musical instrument made from ash wood, which has been pounded on one end until it separated into thin layers.



(Black Ash, Fraxinus nigra) and other trees were often pounded to make splints for baskets. The clacking and vibrating during the pounding of splints may have at one point inspired a musically-minded person to create this instrument! **Try playing the Ji 'kmaq.**



Step outside, find a place to sit, and slip on a blindfold. What nature sounds do you hear? How many different sounds can you discern? Can you mimic them with your voice or an instrument? What do you think is making the sounds?

CREATE AN ACTIVITY

Can you create a tree-related activity that draws on Music Smarts (Musical Intelligence) using tree sections, sticks and other natural objects? What does your activity teach about music? What does your activity teach about nature? What can you learn about the wood through making and listening to sounds?

Naturalistic Intelligence

NATURE SMARTS

People with well-developed Nature Smarts will:

- Be at home in and enjoy nature
- Learn by interacting with nature
- Learn from plants, animals and other organisms
- Show awareness of the interrelatedness, change and time in the environment
- Recognize and classify living things
- Be attuned to the natural environment and be sensitive to harmony and disharmony there
- Categorize species and discern significance in patterns of relationships within and between species
- Use nature for food, medicine, and other needs
- Feel love for and stewardship of plants, animals other organisms



Nature smarts can be developed through:

Outdoor activities, such as camping, hiking, fishing

Time spent with Elders learning about traditional ecological knowledge, values and activities

Science field trips and activities

Nature Smarts Activity

SEASONAL PATTERNS

The Mi'kmaq calendar shows seasonal patterns, natural events that happen in the same order and around the same time every year.



The patterns highlighted by the Mi'kmaq calendar are:

- | | |
|--------------------------------------|--|
| Punamuiku's (Tom Cod Spawning Time) | Peskewiku's (Birds Shedding Feather Time) |
| Apiknajit (Bright Sun Time) | Kisikewiku's (Berry Ripening Time) |
| Si'ko'ku's (Maple Sugar Time) | Wikumkewiku's (Mate Calling Time) |
| Pnatmuiku's (Birds Laying Eggs Time) | Wikewiku's (Animal Fattening Time) |
| Squoljuiku's (Frogs Croaking Time) | Keptewiku's (Rivers Starting to Freeze Time) |
| Nipniku's (Trees Fully Leafed Time) | Kesikewiku's (Chief Moon Time) |

What are some other natural events that happen at the same time each year? Create a picture to represent the natural event and place it alongside the Mi'kmaq calendar.

Example: It is time to collect bark when the sap is running, at this time the bark pulled away from the tree more easily. The fireflies come out at this time.

CREATE AN ACTIVITY

Can you create an activity that develops awareness of patterns in nature?

Nature Smarts Example

WALTES

Yellow Birch tree (*Betula alleghiensis*) has shiny brownish yellow bark with papery shreds. The leaves are oval, with parallel veins and a toothed edge.

Waltes is an traditional Mi ' k maq game with bone dice and a wooden bowl made from a yellow birch burl (or another hardwood burl).

A burl is a hard rounded lump growing on a tree. Burl wood is strong and the grain is twisted in many directions.

When playing Waltes, the bowl is banged on the group to toss the dice. The Waltes bowl is strong and won ' t split because of the multi-directional grain in the burl wood.

The Waltes bowl demonstrates Nature Smarts because the unique characteristics of the yellow birch burl are recognized and used.



Interpersonal Intelligence

PEOPLE SMARTS

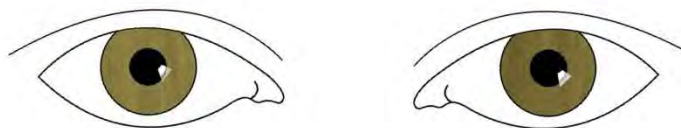
Individuals with well-developed People Smarts will:

- See issues from several perspectives
- Form, develop, and maintain a variety of social relationships with others
- Work in teams
- Listen to, acknowledge and respect the views of others
- Influence or teach others



People smarts can be developed through:

- Working in groups
- Learning about many cultures
- Teaching to learn
- Active listening
- Storytelling
- Interviewing others



People Smarts Activity

LESSONS

Are there other ecological understandings that can be used as lessons for people?

Using Charlie Labrador ' s quote as a guide, create your own lesson based on something you know about nature, or based on some information on the table.

CREATE AN ACTIVITY

How would you connect “ Trees ” and People Smarts in an activity?

Create an activity that encourages People Smarts (listening, working together, playing games, seeing things from more than one perspective, teaching).



People Smarts Example

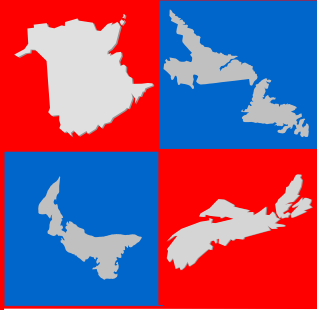
PEOPLE SMARTS

Individuals with People Smarts value multiple perspectives, working together, and teaching others. The statement below, a quote of the late Mi 'kmaq Chief Charlie Labrador, uses an understanding of ecology to encourage people of different backgrounds to cooperate.



“ Go into a forest, you see the birch, maple, pine.
Look underground and all those trees are holding
hands. We as people must do the same. ”

Late Mi 'kmaq Chief, Spiritual Leader, and Healer, Charlie Labrador



NSERC-Atlantic Annual Report 2006-2007



Message from the Manager

Having completed its third year of operation, the NSERC-Atlantic office has continued to be active throughout Atlantic Canada. This annual report highlights NSERC-Atlantic activities with regards to our mandate of Presence, Program Participation and Promotion in the region.

This past year, our staff participated in almost twice as many events as the previous year and significantly increased the number of visits with both industry and academic institutions.

We also completed a full fiscal cycle with the Discretionary Grant Fund (DGF), recently re-named the Regional Opportunities Fund (ROF). We are quite pleased with the response from our stakeholders; we received 25 applications and spent most of our \$100K allocated to support activities promoting the natural sciences and engineering in Atlantic Canada.

Looking back at the past fiscal year, the Atlantic research community succeeded in increasing its funding in the NSERC Grants and Scholarships competitions, collecting more in number and value than the ratio of its population with the rest of Canada.

Since its opening in 2004, NSERC-Atlantic has seen a sharp increase in the number of applications to the Research Partnerships Programs, and we want to continue encouraging such research collaborations in our region.

These are all excellent reasons to celebrate the successes achieved by our researchers and innovators at universities, colleges and industries across Atlantic Canada.



Regional Opportunities Fund

The NSERC-Atlantic Discretionary Grant Fund has a new name. To better reflect its goal, it is now called the **Regional Opportunities Fund**.

Each year, NSERC-Atlantic manages \$100,000 in available funds to support regional initiatives that help bring science and engineering closer to our local community.

In 2006-07, the most popular type of applications were for meetings, workshops and conferences, followed by requests for product development such as brochures, displays and Web sites.

NSERC-Atlantic welcomes applications from academic institutions, indi-

viduals, student groups and others to support special events and activities related to the natural sciences and engineering. There is no deadline, but applicants are encouraged to contact NSERC-Atlantic as early as possible before the event or activity to obtain the guidelines and application form.

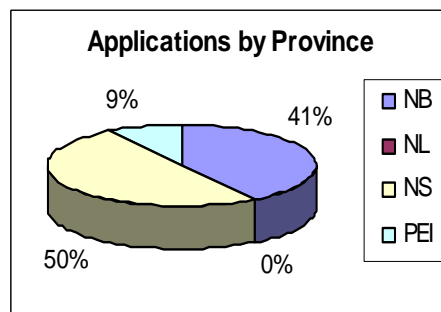
Regional Opportunities Fund 2006-07

By the Numbers...

Dollars spent: \$98,385
Number of requests: 25
Number of funded requests: 22
Average amount awarded: \$4,000

Target Groups Funded

Industry-Academia link: 7
University/College researchers: 7
Children: 4
University/College students: 3
Aboriginals: 1



Canadian Undergraduate Physics Conference 2006

NSERC-Atlantic staff attended the **Canadian Undergraduate Physics Conference (CUPC)** held at the University of New Brunswick in Fredericton, October 20-24, 2006. Close to 200 students and faculty attended this annual event organized exclusively by students of the host university.

The goal of the CUPC is to promote social and intellectual growth while forming and strengthening ties within the physics community.

Noted guest speaker Dr. Robert Romer (PhD, Princeton) captivated students with his insights and humorous thoughts on what it means to be a physicist “in the real world” and talked about his experience as an editor with the *American Journal of Physics*.

Dr. Alain Haché, Assistant Professor at the Université de Moncton, gave an informative presentation titled *The Physics of Hockey*, where he discussed the numerous

elements of physics as they relate to one of Canada’s most popular sports.

NSERC-Atlantic helped sponsor this event, set-up a kiosk and presented NSERC’s scholarships and fellowships student programs to the audience.



Research & Development Forum

Petroleum Research Atlantic Canada (PRAC), hosted its first-ever Atlantic Research & Development Forum in St. John’s, N.L., in May 2007.

The event attracted over 150 industry leaders, scientists, engineers, government leaders and other conference participants to discuss the challenges facing the petroleum industry in Atlantic Canada, and how research and development can help.

University researchers and industry representatives shared examples of successful collaborations, and a wrap-up panel led a discussion on future directions.



Left to right: Catherine Vardy, NSERC-Atlantic; Dave Finn, President, PRAC; Theresa Anderson, NSERC.

Two-Eyed Seeing Workshop for Science Education for Children and Youth

Dr. Cheryl Bartlett, Canada Research Chair in Integrative Science, and the Institute for Integrative Science & Health at



Cape Breton University hosted a one-day workshop in May 2007 to start building science education modules for youth.

Two-Eyed Seeing is an approach co-developed by university researchers and Mi’kmaq Elders to encourage cross-cultural science communication and collaboration between traditional scientists and Aboriginals.

Sponsored in part by NSERC-Atlantic, more than 80 Mi’kmaq Elders, scientists, educators, education students and science students participated in the event.

A network has been created to promote and evaluate the use of the Two-Eyed Seeing modules for science education in our region.

