Mi'kmaw Kina'matnewey: "Language and Culture"
Community Education Strategic / Operational Planning Symposium
Park Place Ramada – Dartmouth; 11 March 2010











#### **Albert Marshall**

Elder and HonDLitt Eskasoni community Mi'kmaq Nation

#### **Cheryl Bartlett**

Canada Research Chair in Integrative Science Professor of Biology Cape Breton University

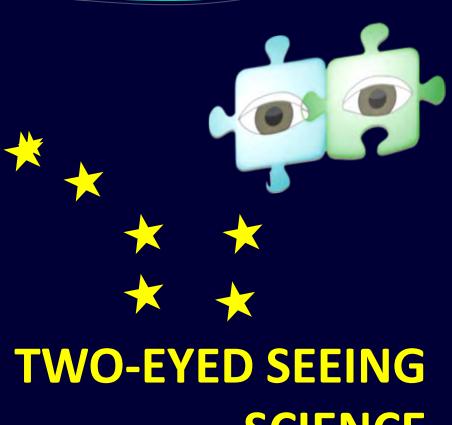
## TWO-EYED SEEING tlett SCIENCE

**CURRICULA** 



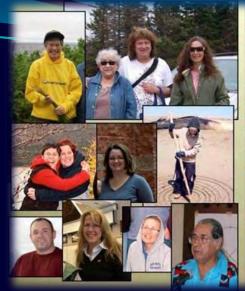
## Outline of Presentation

- introduction
- resources
- theory
- examples



TWO-EYED SEEING
SCIENCE
CURRICULA







#### Mi'kmaq Elders & Students & Research Team







Canada Research Chairs

Chaires de recherche du Canada





Social Sciences and Humanities Research Council of Canada

Conseil de recherches en sciences humaines du Canada



## Thank you / Wela'liog





Fondation canadienne pour l'innovation

Canada Foundation for Innovation



Mi'kmawey Debert

















of Nova Scotia

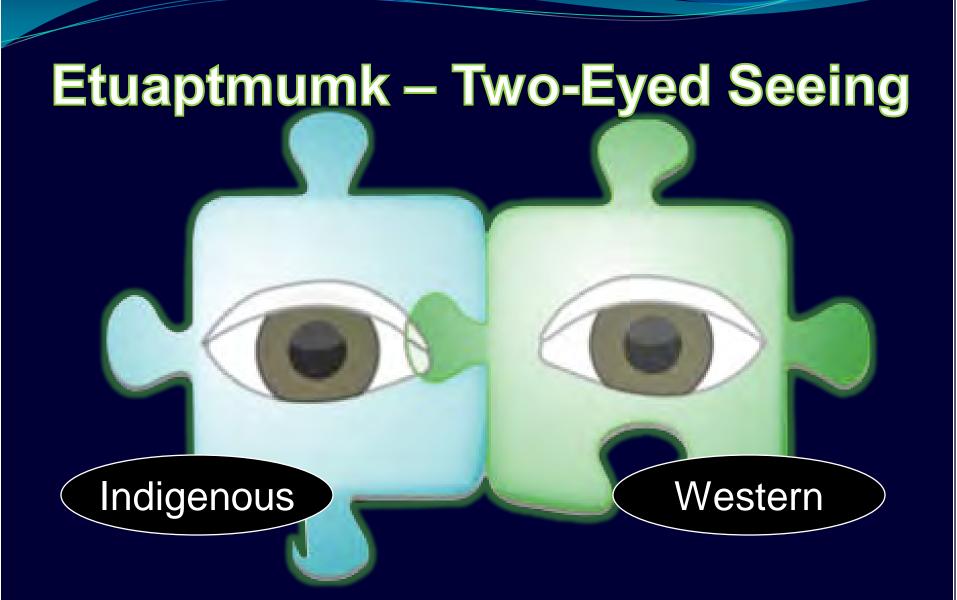
Membertou Elementary



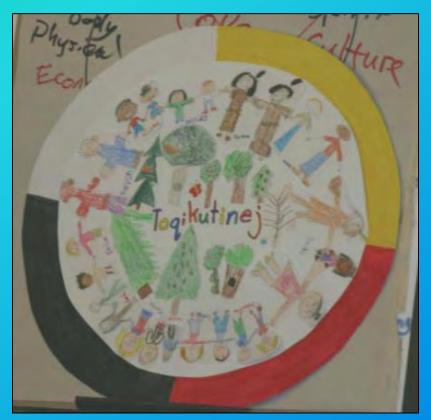
Eskasoni First Nation Detachment Royal Canadian Gendarmerie royale Mounted Police du Canada



The support of various partners and funding agencies is gratefully acknowledged.



# Education to our young has to be reflective of how to maintain balance and harmony with our natural world.

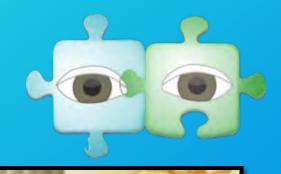








We must, through example, inspire our students to be critical in their thinking.

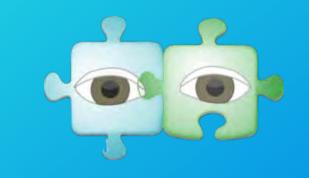






What is "SUCCESS"?

Knowledge is not a tool but rather it is a spirit.



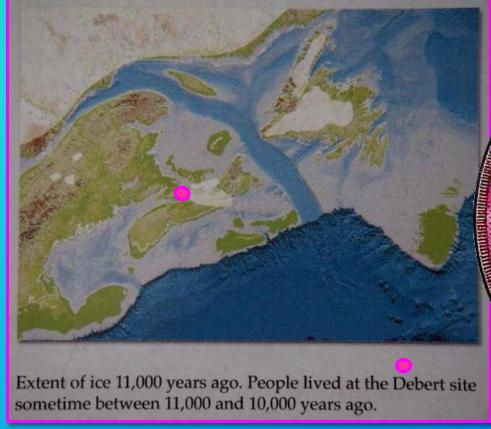
It transforms the holder. It also reminds us that we have responsibilities to the spirit of that knowledge.

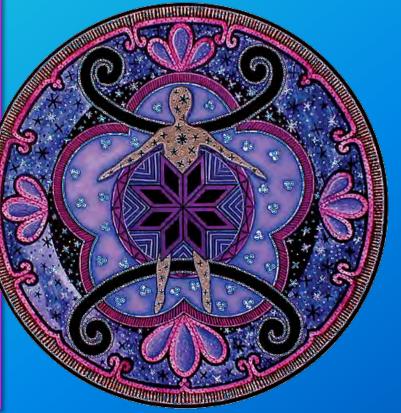
We must pass it on.



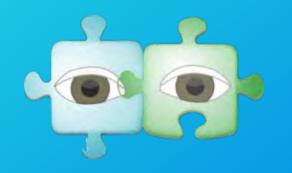
## This is living knowledge.

"Principle for Humility" is based on Lnu'k knowledge that has been evolving for the past 10,000 years.



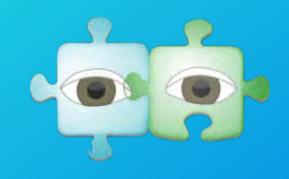


It is not enough to go through life with one perspective; we must embrace all the tools we have ...





Our language teaches us that everything alive is both physical and spiritual.



The onus is on the person to look at our natural world with two perspectives.

Modern science sees objects, but our language teaches us to see subjects.



artist Basma Kavanagh

### Consciousness of Knowing





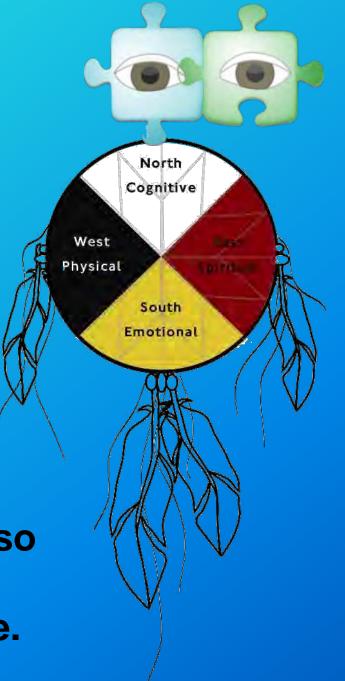
artist Basma Kavanagh

... especially our inter-dependence on each other and on Mother Earth

All people must learn
"Two-Eyed Seeing"
so that knowledge of
the physical is
not separated from
wisdom of the spiritual.

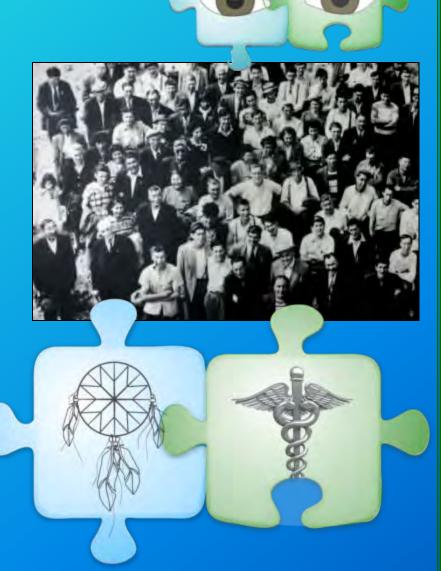
Through utilization of the Gifts from Creator we can become whole. We can take care of our needs: living, dwelling, physical, and spiritual.

Education is critical because we have been disconnected from the natural world so the lessons need to be transferred to the young so they too can address conservation and culture.



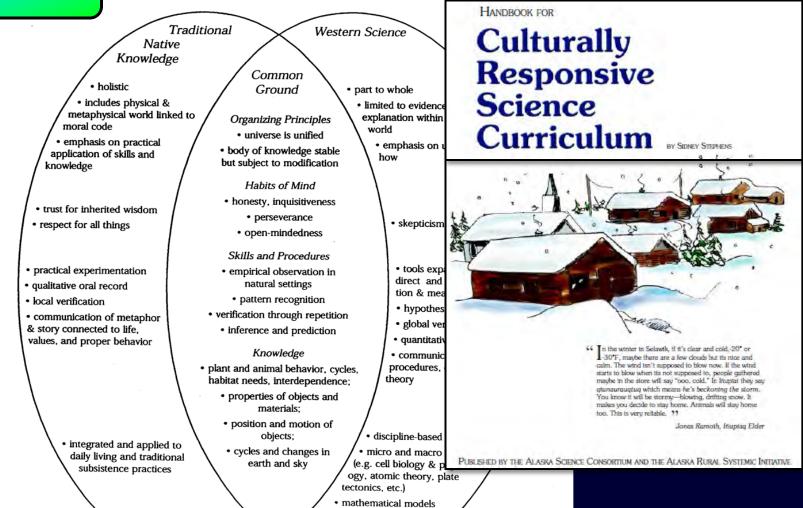
#### As Elders in Our Time

We seek to be a conduit for wisdom of our Ancestors. We seek to see with "Two-Eyes" ... to take the accomplishments of the white man's ways further by blending it with the wisdom of our Ancestors.





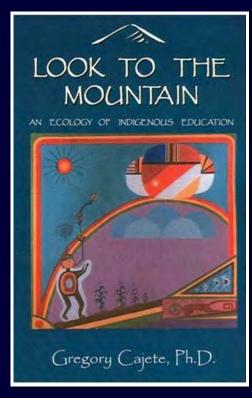
#### SEEING COMMON GROUND Indigenous Knowledge & Western Science

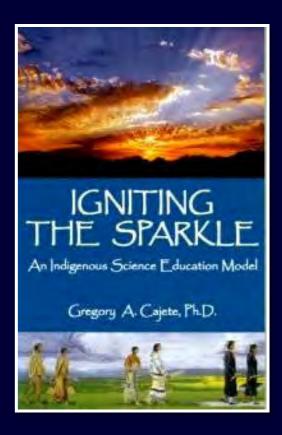


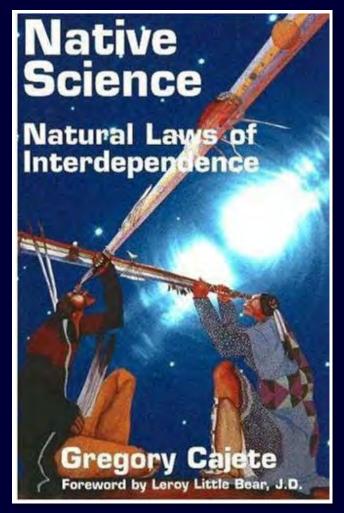
#### Alaska Native Knowledge Network

from: Handbook For Culturally Responsive Science Curriculum, by Sidney Stephens (<a href="www.ankn.uaf.edu/UNITS/index.html">www.ankn.uaf.edu/UNITS/index.html</a>); Alaska Rural Systemic Initiative & Alaska Native Knowledge Network

#### Author: Dr. Gregory Cajete







## Green Teacher

Fall 2009 Issue 86

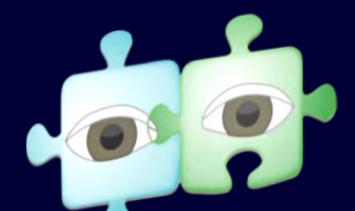
Two-Eyed Seeing: Integrative Science





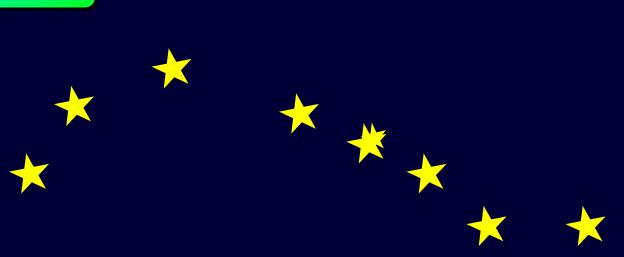
Vitamin CTrees: Traditional Medicine Integrative Science with Native Elders Earth Alive! Ecosystem Deities Te

e Linking Astronomy and Legend Resanctifying Nature through Story Teaching Solstices and Equinoxes













- numbers (logical-mathematical)
- language (linguistic)
- music (musical)
- body (body-kinesthetic)
- spatial (spatial)
- other people (interpersonal)
- ♦ self (intrapersonal)
- naturalist (naturalist)
- spiritual / existential \*











#### pattern-based







dynamic pattern-based stories of our interactions with and within nature







dynamic pattern-based stories of our interactions with and within nature

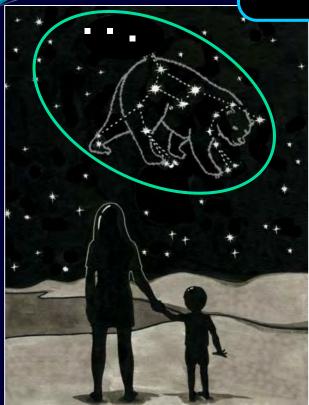




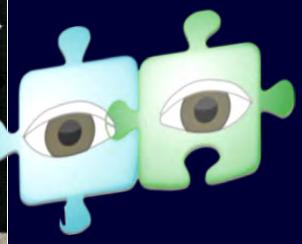
- various ways to connect the dots
  - variety in our stories



dynamic pattern-based stories of our interactions with and within nature



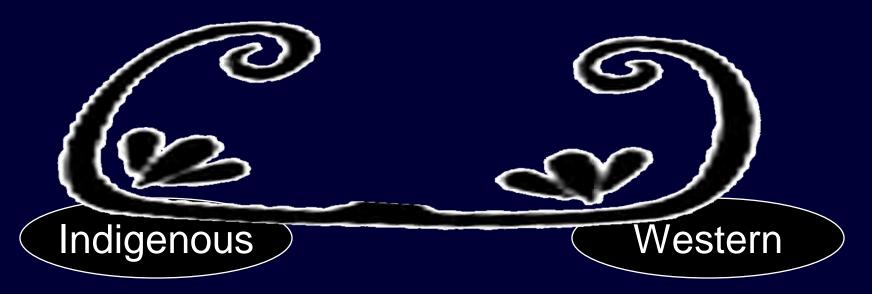




- various ways to connect the dots
  - variety in our stories

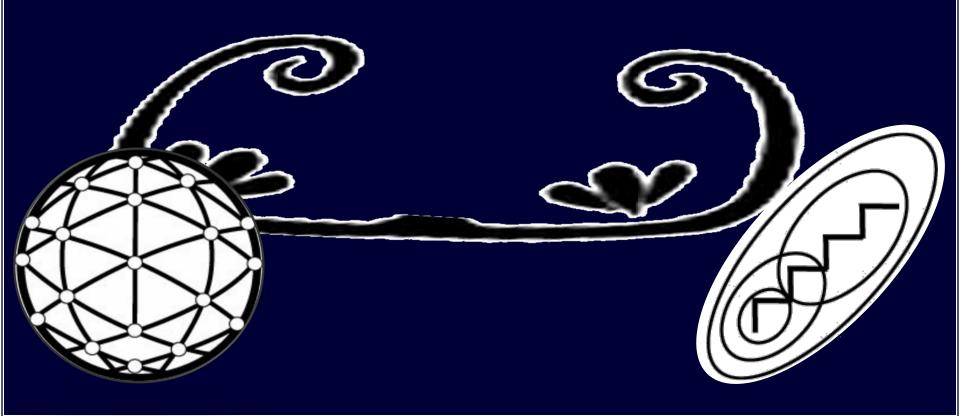
## The foundational basis for any relationship is an exchange of stories.

(Mi'kmaq Elder Albert Marshall)

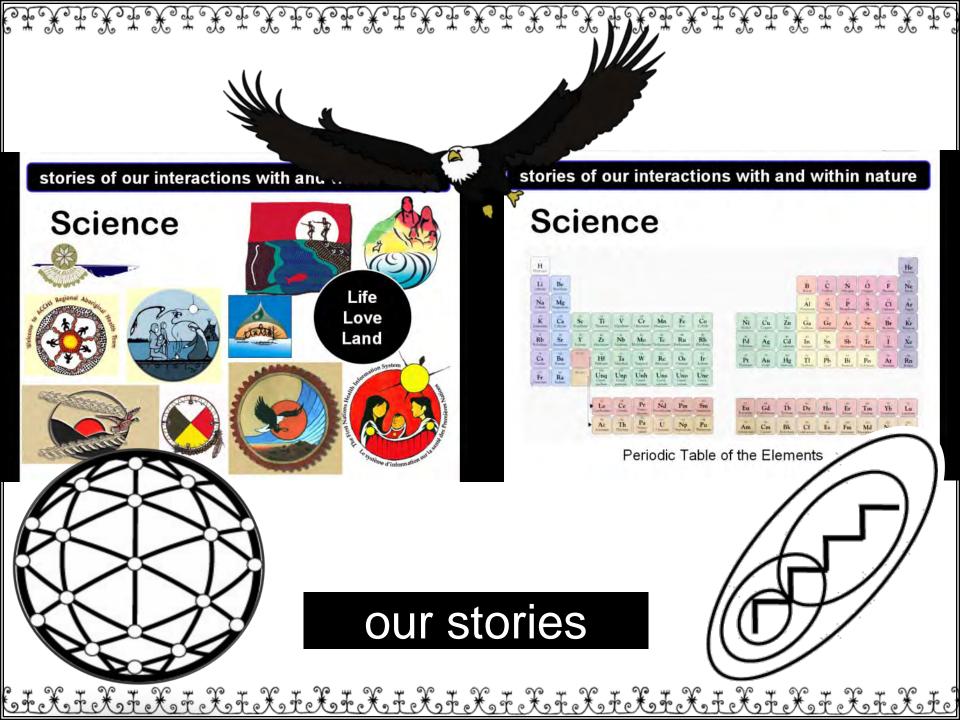


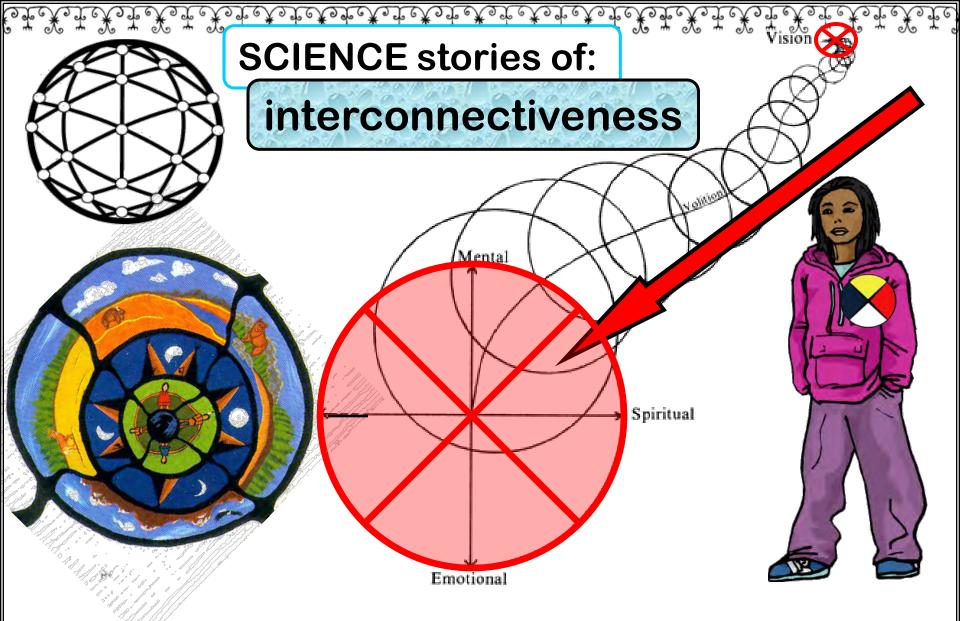
## for any tronship is an exchange of stories.

(Mi'kmaq Elder Albert Marshall)



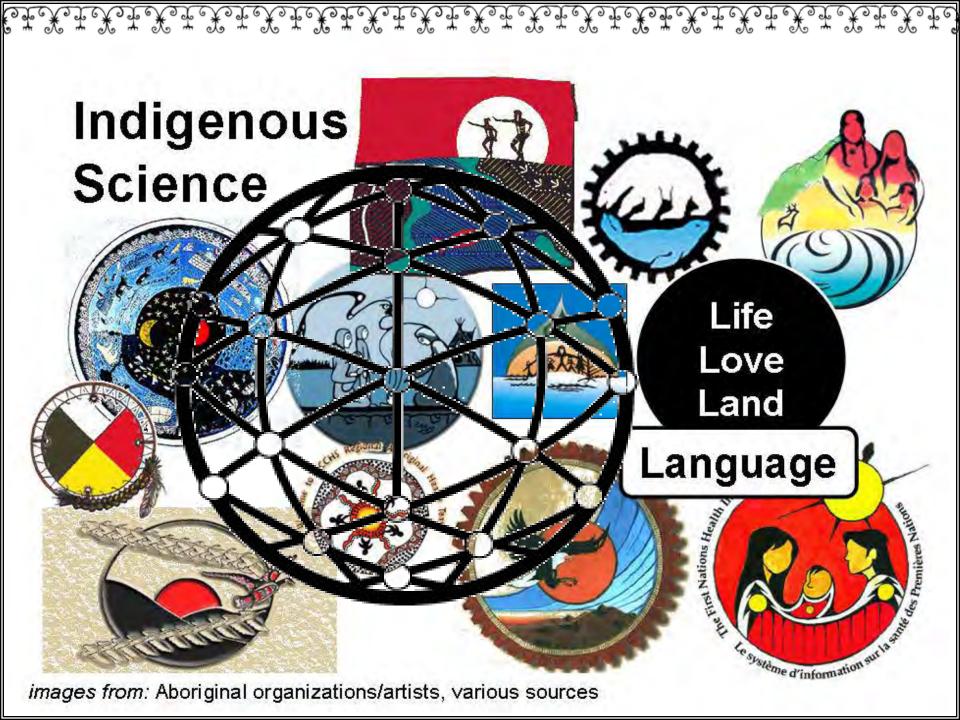




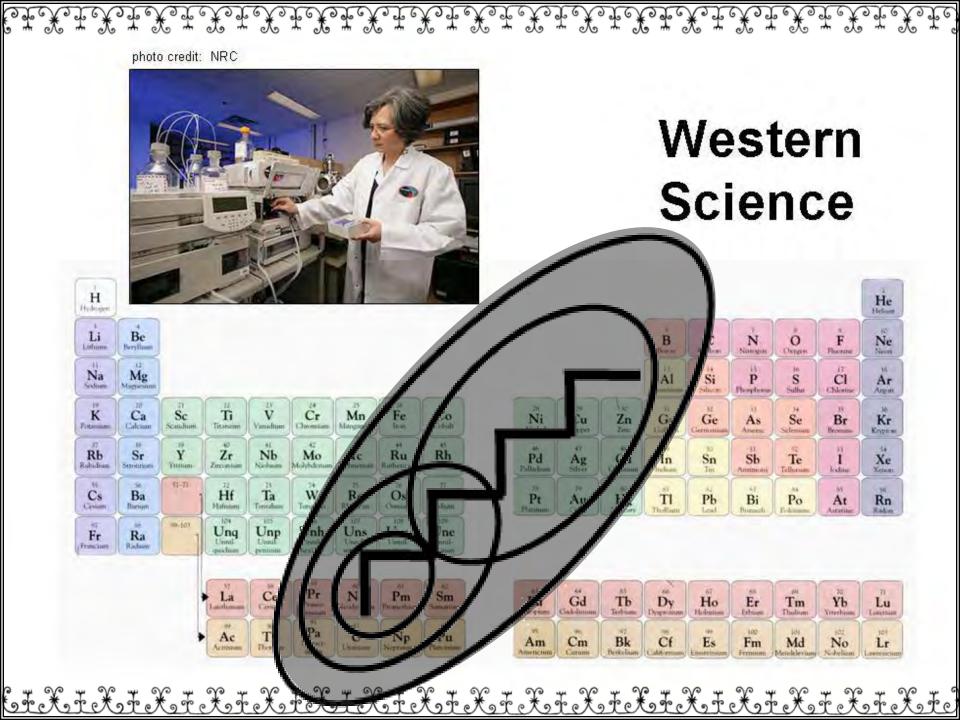


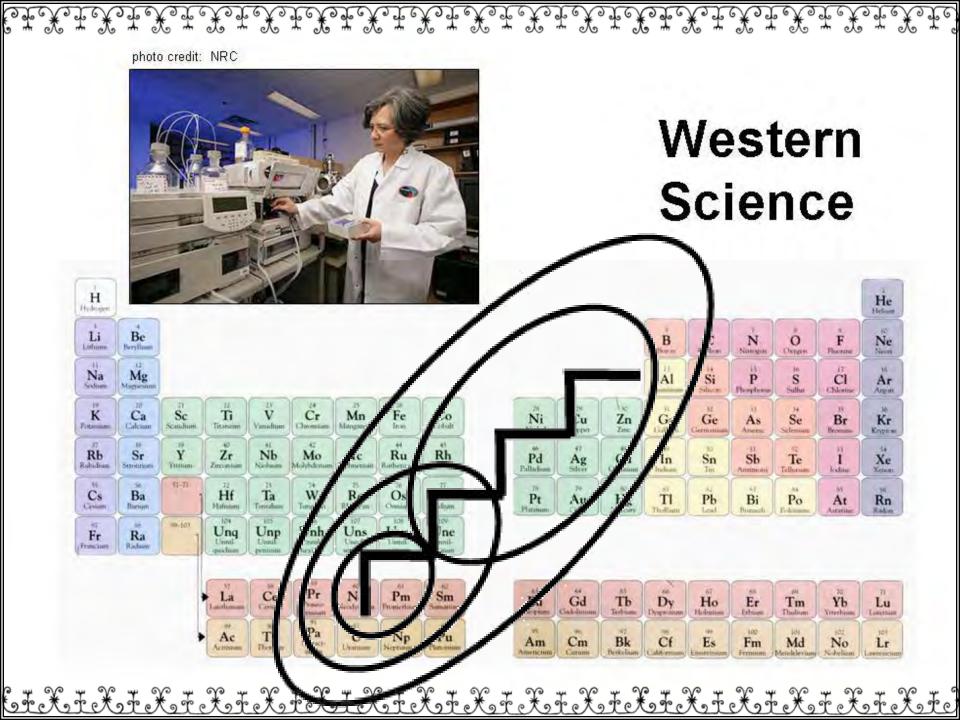
my world is "all my relations" (subjects)







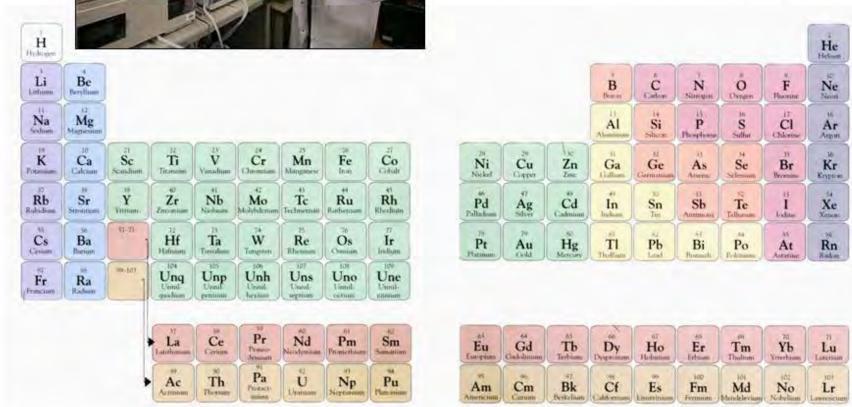




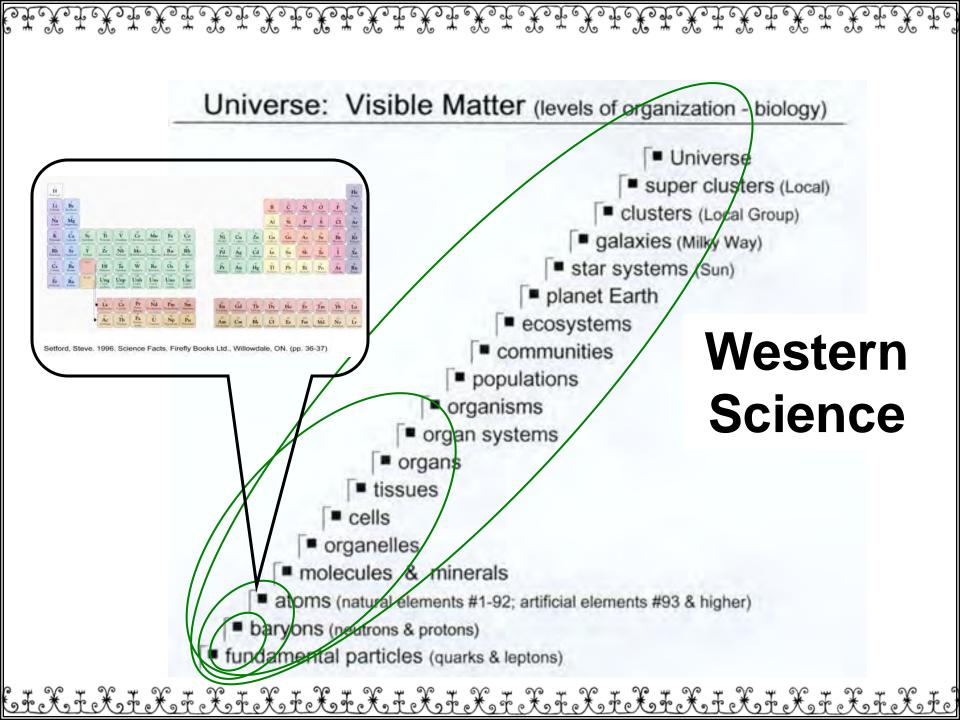


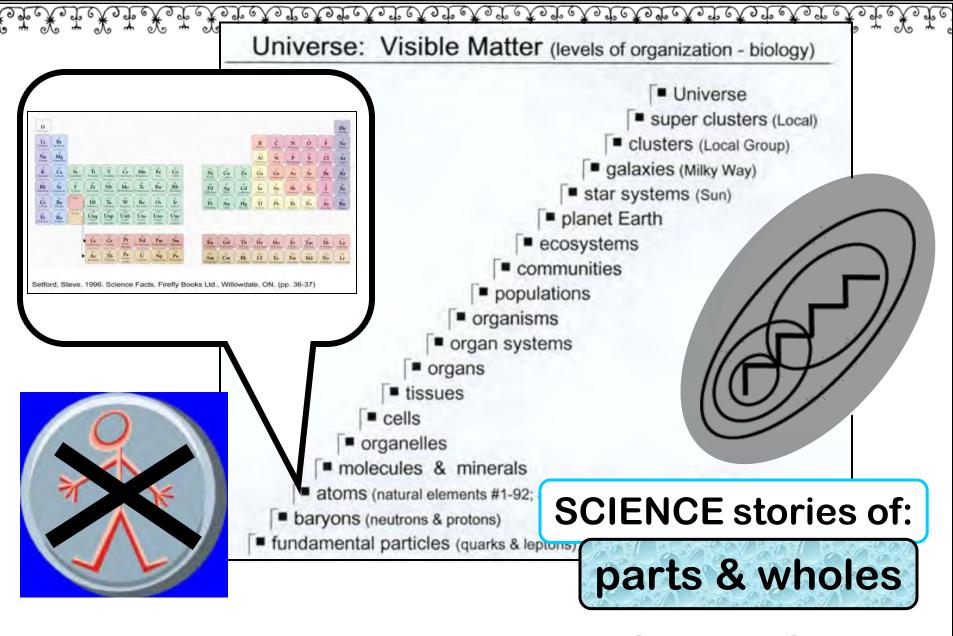


# Western Science

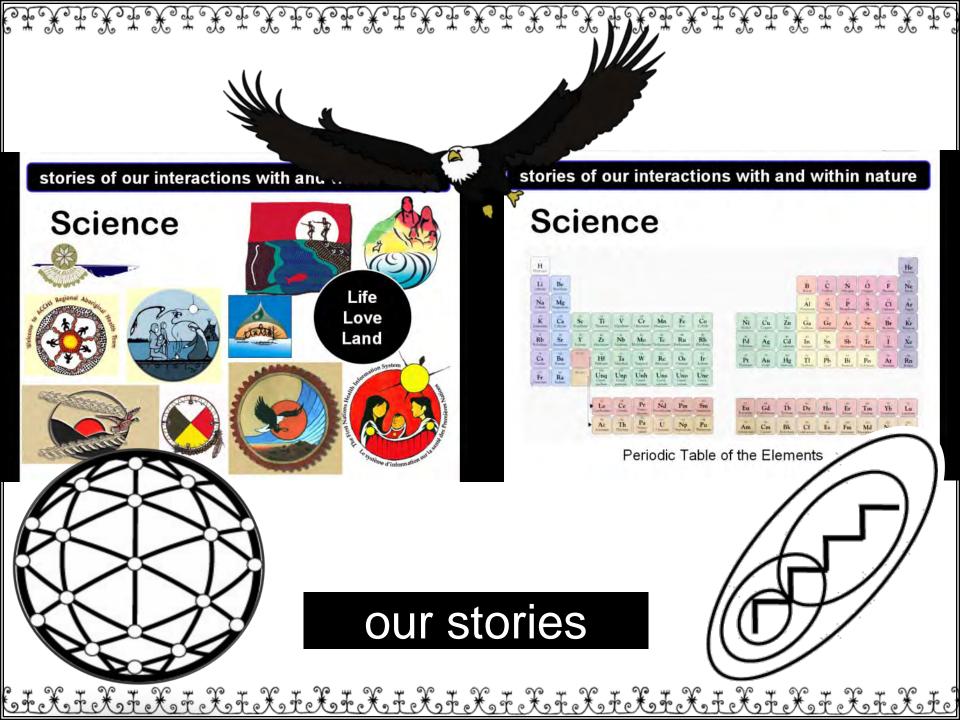


#### Universe: Visible Matter (levels of organization - biology) Universe super clusters (Local) clusters (Local Group) galaxies (Milky Way) star systems (Sun) planet Earth ecosystems Western communities populations Science organisms organ systems organs tissues cells organelles molecules & minerals atoms (natural elements #1-92; artificial elements #93 & higher) baryons (neutrons & protons) fundamental particles (quarks & leptons)

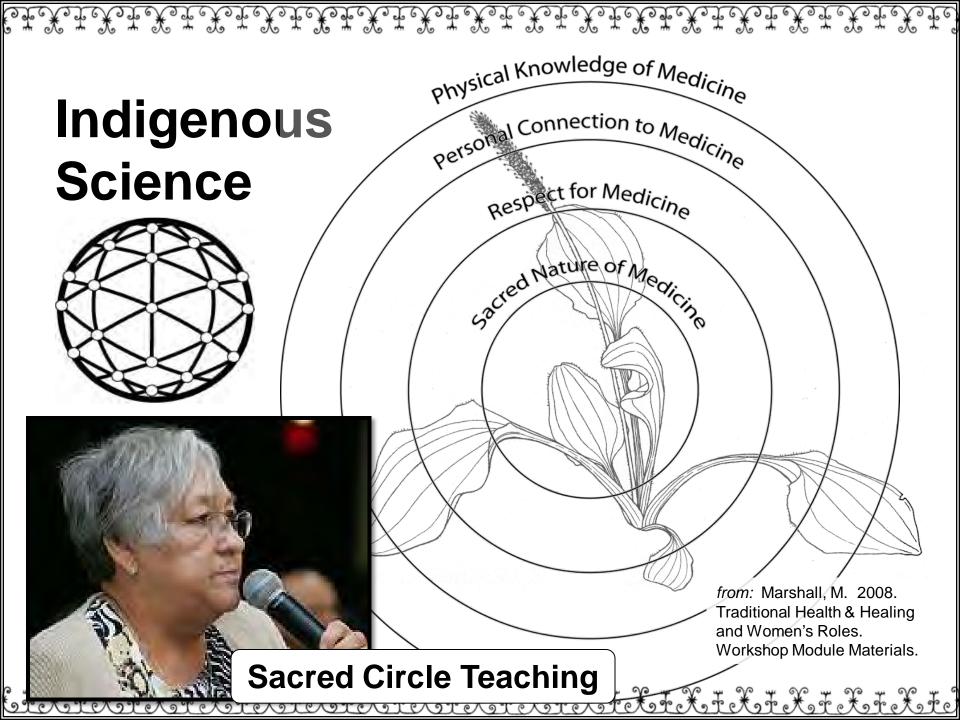




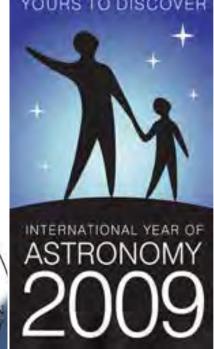
#### my world is many "its" (objects)



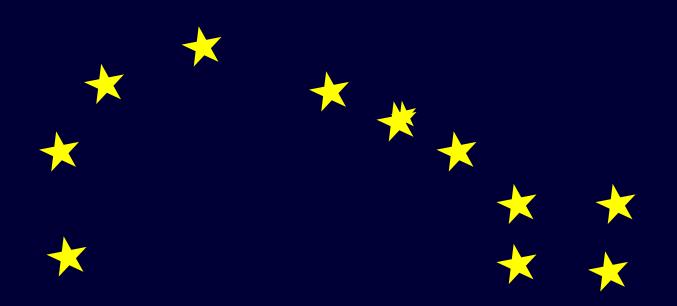
















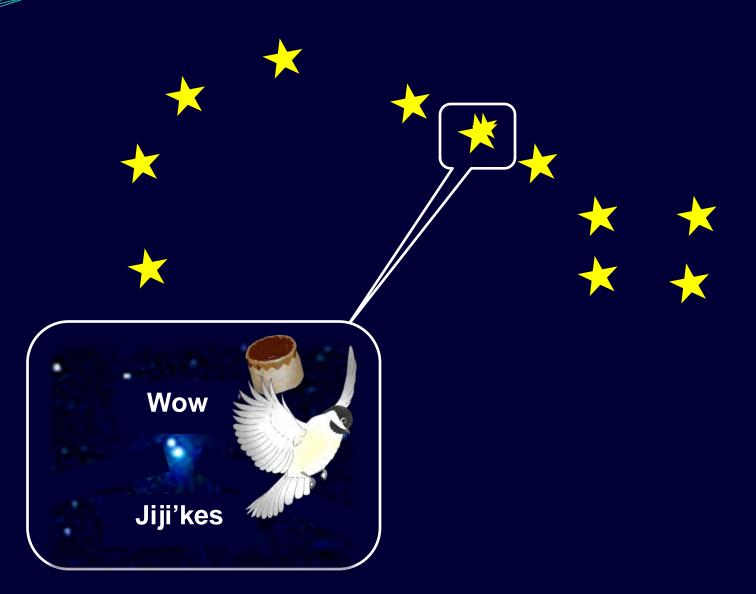
Muin and the Seven Bird Hunters: a Mi'kmaq Night Sky Story ... interconnectiveness of space-time-life-knowledge-spirit

Lillian Marshall Elder, Potlotek







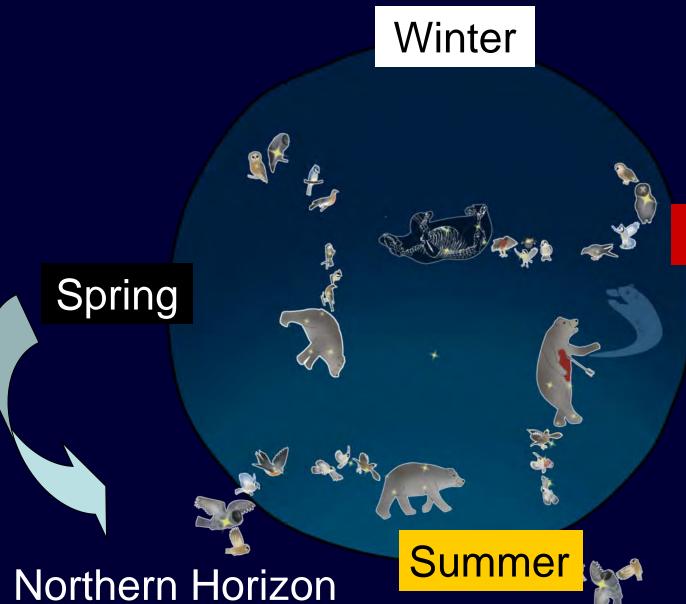




### ScienceDaily 13 Dec 2009

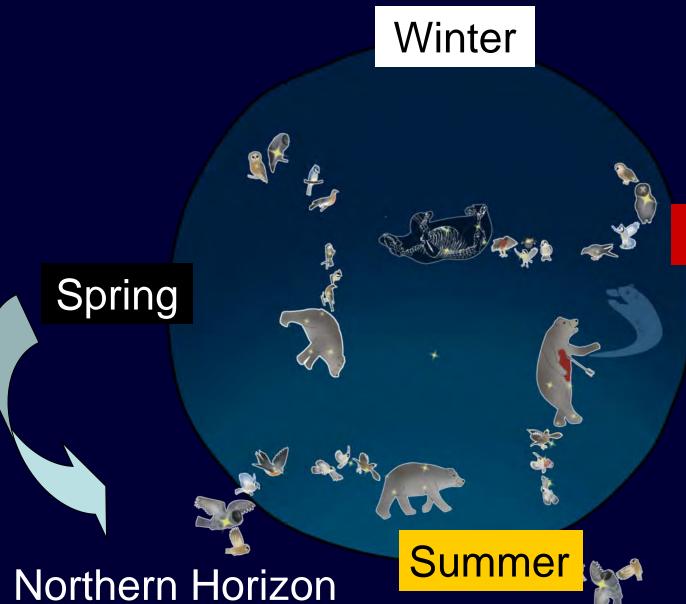
In ancient times, people with exceptional vision discovered that one of the brightest stars in the Big Dipper was, in fact, two stars so close

together than most people cannot distinguish them. The two stars, Alcor and Mizar, were the first binary stars -- a pair of stars that orbit each other -- ever known.



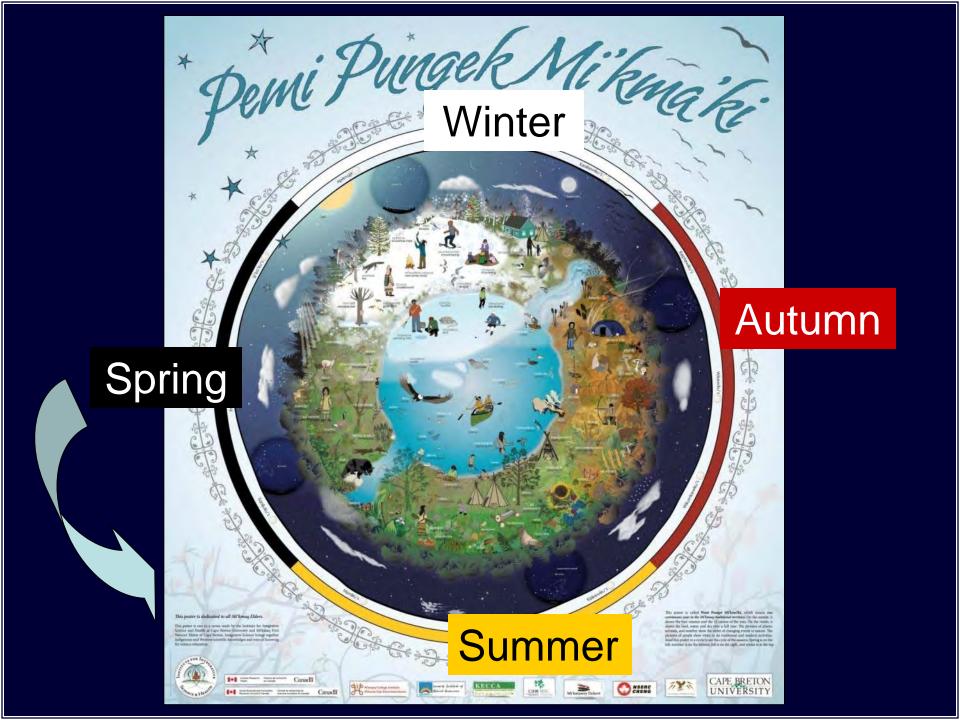
Autumn





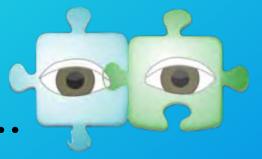
Autumn





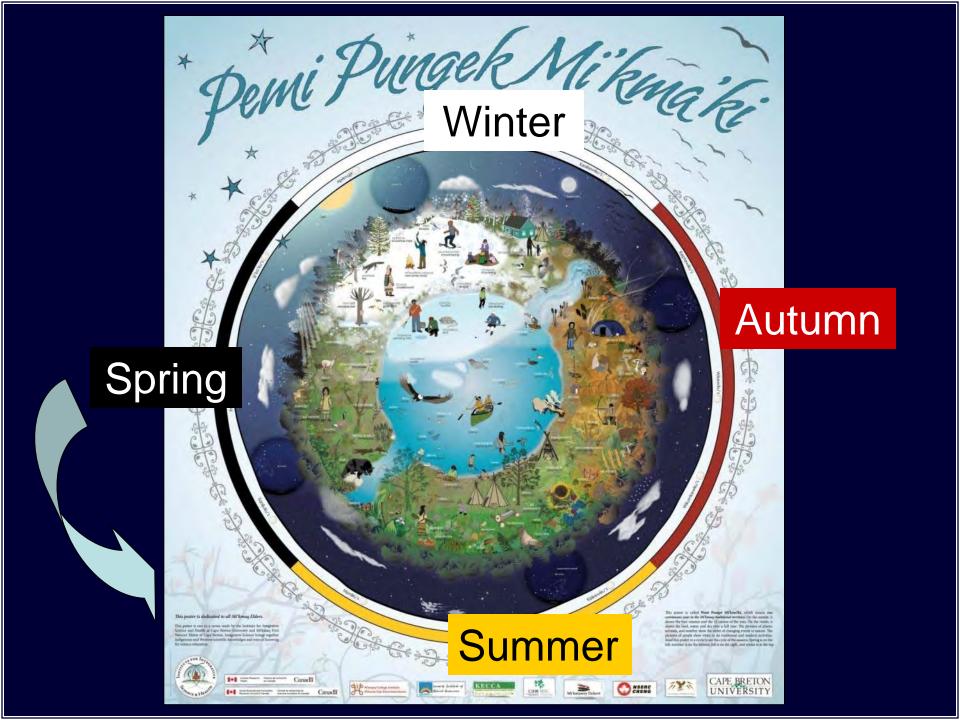


# Our seasons follow the cycles of **Mother Earth** ...

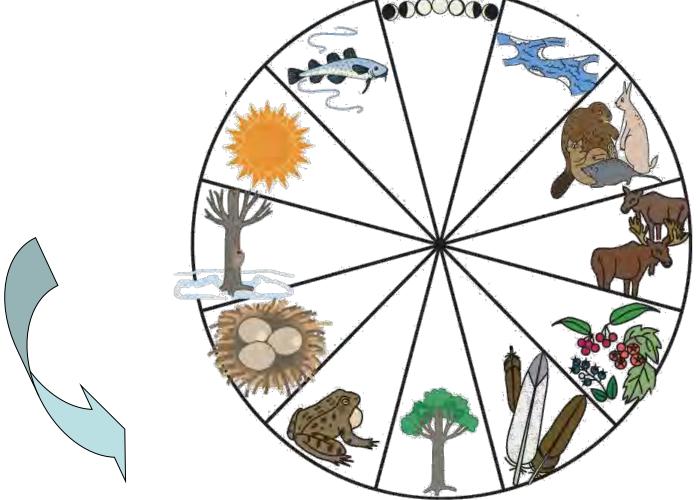




... so that our children will always be reminded of the beauty of creation, and of our dependence on her.

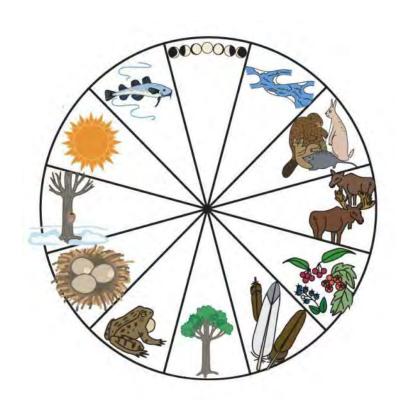


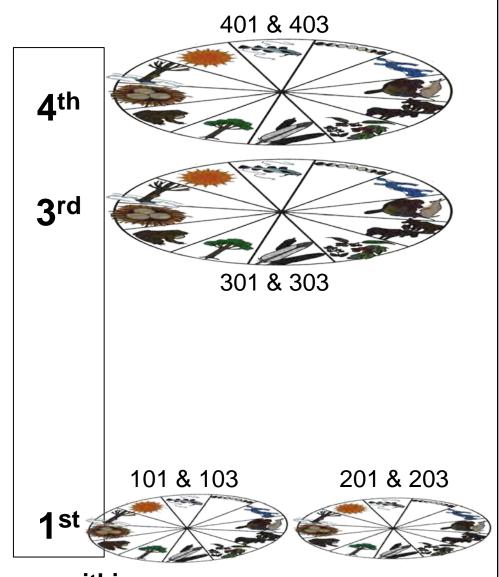






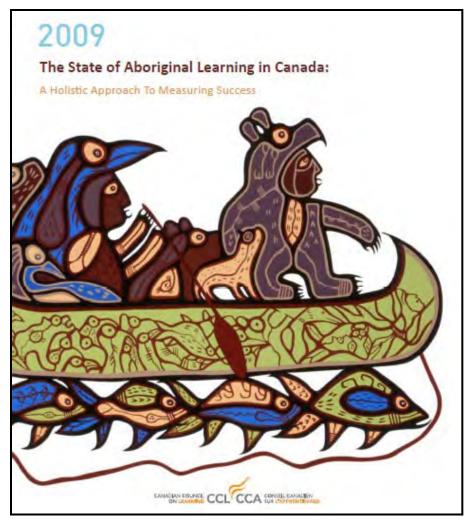
# MSIT university science courses







http://www.ccl-cca.ca/pdfs/StateAboriginalLearning/SAL-FINALReport\_EN.PDF

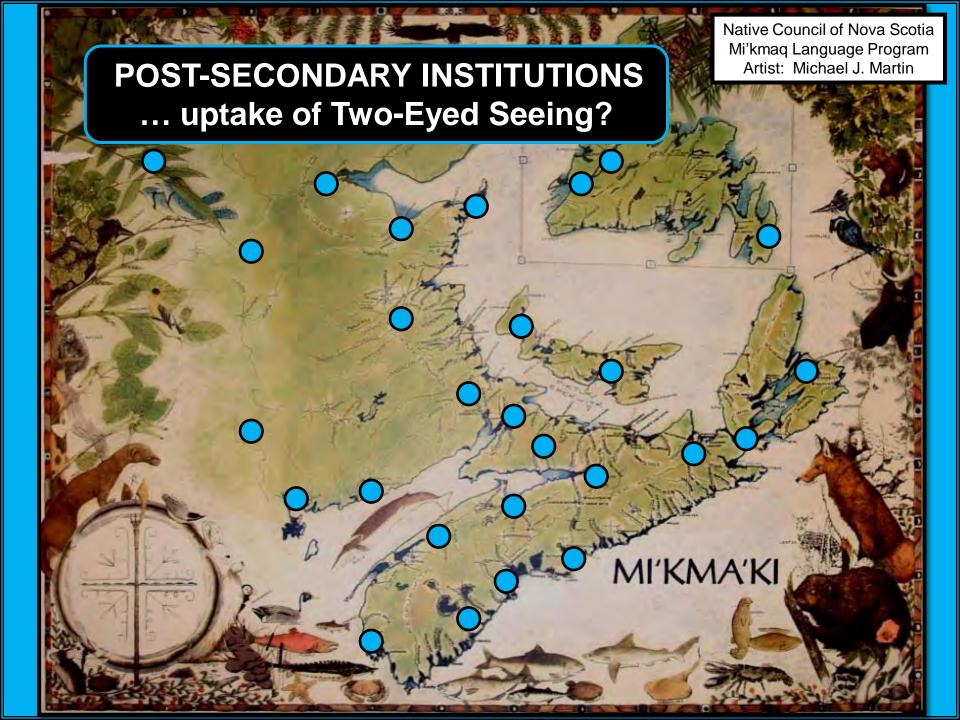


#### A Holistic Approach to Measuring Success

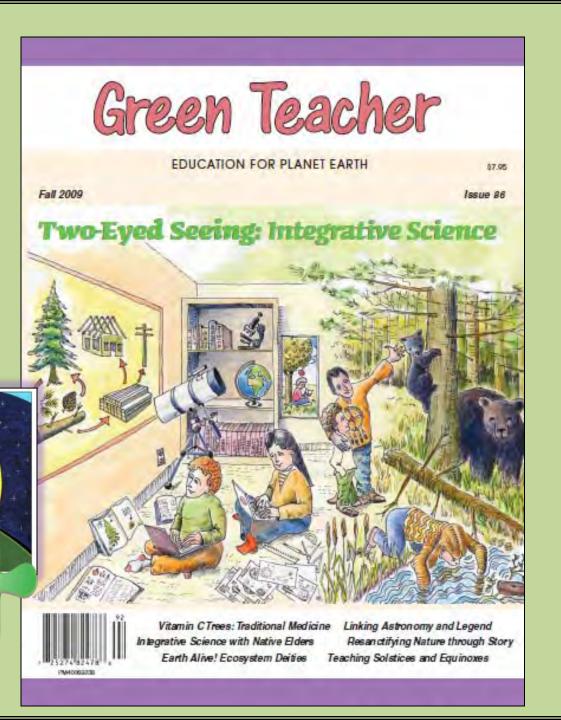
2009 report by:

Canadian Council on Learning

### What is "SUCCESS"?



### Fall 2009: Five Articles











TWO-EYED
SEEING
SCIENCE
CURRICULA

### Green Teacher

EDUCATION FOR PLANET EARTH

\*\*\*\*\*\*

Fall 2009

Issue 86

Two-Eyed Seeing: Integrative Science

#### Two-Eyed Seeing: A cross-cultural science journey



by Annamarie Hatcher, Cheryl Bartlett, Murdena Marshall and Albert Marshall represents the coming together of Indigenous and Western sciences in a type of co-existence, a functioning of both systems side by side, as recommended by Battiste. This bridge building began as a way to address the serious under-

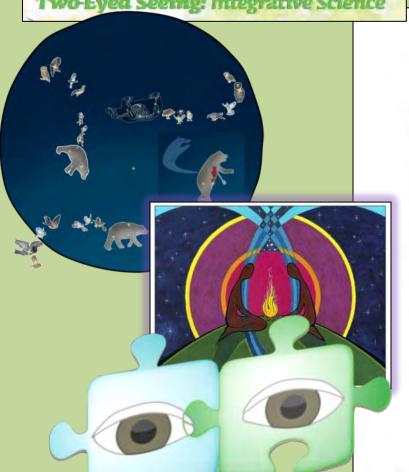
### Green Teacher

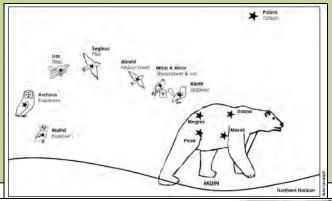
**EDUCATION FOR PLANET EARTH** 

Fall 2009

Issue 86

Two-Eyed Seeing: Integrative Science







#### **Traditional Legends:** Meanings on many levels

A lesson in astronomy and storytelling for high school students

by Annamarie Hatcher, Sana Kavanagh, Cheryl Bartlett and Murdena Marshall

or Kukukwes; and little Saw-whet Owl, or Kupkwe'j). Muin's den is what others know as Corona Borealis.

# Green Teacher EDUCATION FOR PLANET EARTH Fall 2009 Issue 86 Two-Eyed Seeing: Integrative Science

### MSIT: Transdisciplinary, cross-cultural science

An Integrative Science unit on birds for high school students





by Annamarie Hatcher and Cheryl Bartlett

Seeing" approach of integrating Western and Aboriginal world views. The classroom mirrors the world outside the

# Green Teacher EDUCATION FOR PLANET EARTH Fall 2009 Issue 86 Two-Eyed Seeing: Integrative Science

#### Traditional Medicines: How much is enough?

An integrative science activity for senior elementary and junior high students



by Annamarie Hatcher and Cheryl Bartlett

resins and essential oils. However, conifer needles contain other compounds that are toxic if consumed in large quan-

### Green Teacher

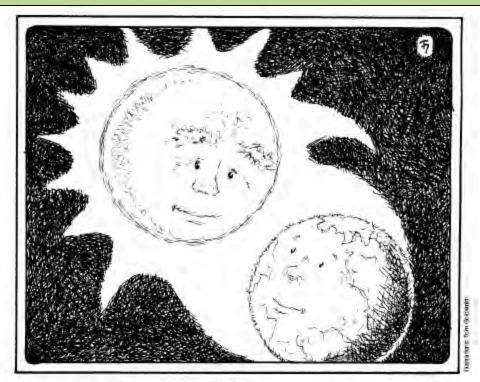
EDUCATION FOR PLANET EARTH

Fall 2009

Issue 86

Two-Eyed Seeing: Integrative Science





Mother Earth, Grandfather Sun

A "two-eyed seeing" activity that integrates Western and Aboriginal world views in teaching about solstices and equinoxes

by Cheryl M. Bartlett

Sun — and thereby enable him to see the Earth (Mother Earth). The exercise also provides an experiential founda-









TWO-EYED
SEEING
SCIENCE
CURRICULA



#### **OUR KEY CONCEPTS and ACTIONS**

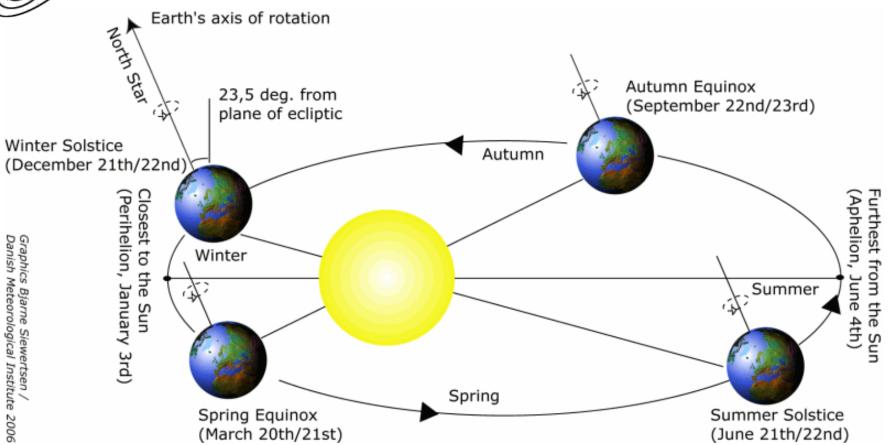
- respect
- relationship
- reverence
- reciprocity
- ritual (ceremony)
- repetition
- responsibility

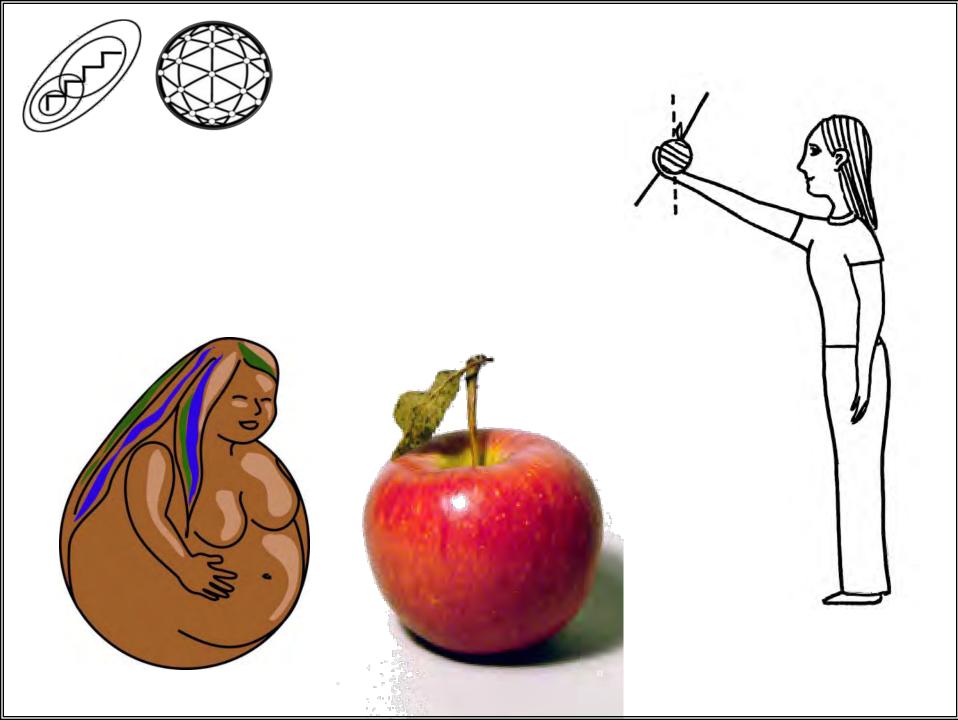
- hypothesis (making & testing)
- data collection
- data analysis
- model & theory construction

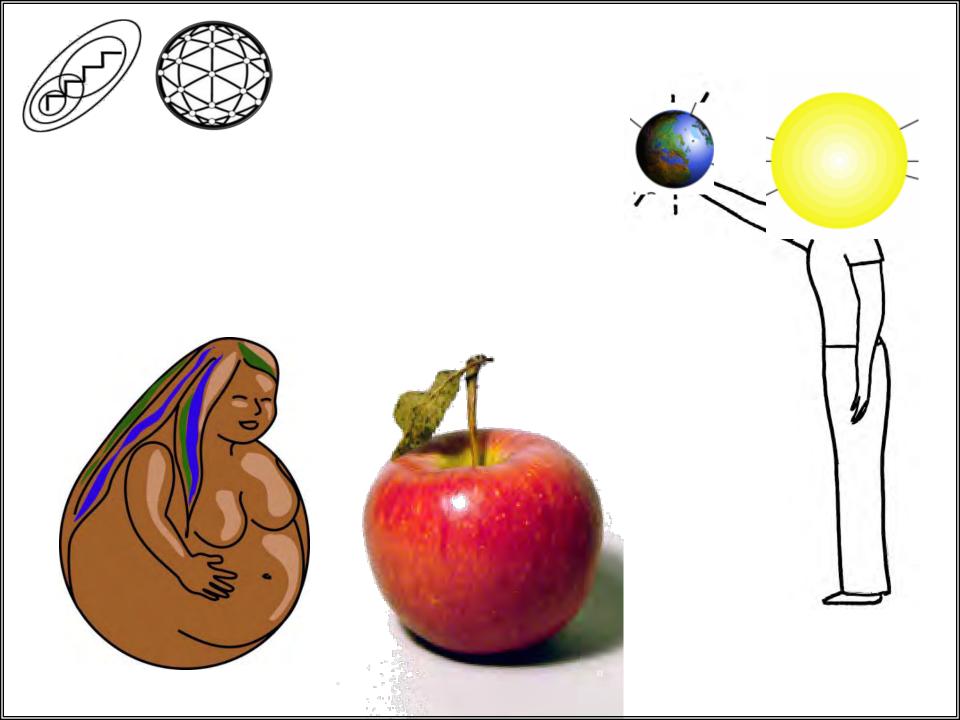
J. Archibald, 2001, Can. J. Native Ed. 25(1):1-5

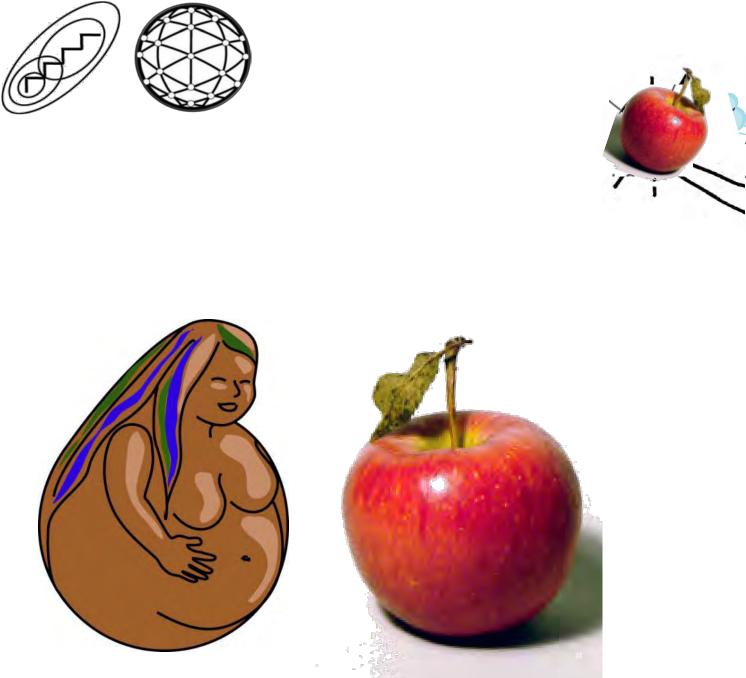


#### Our seasons can be modeled ...

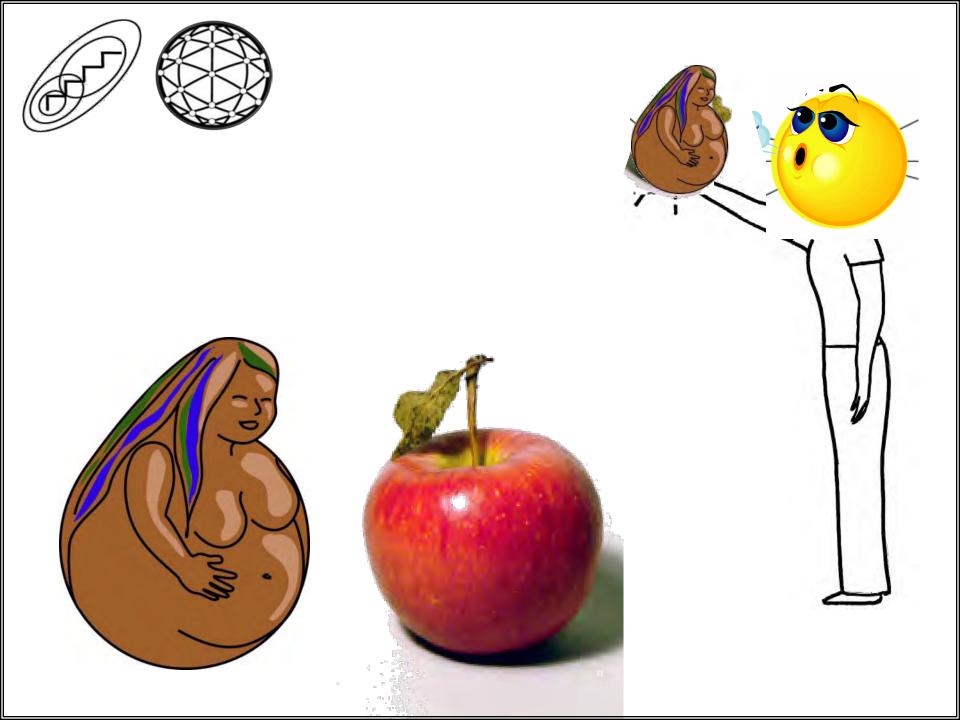








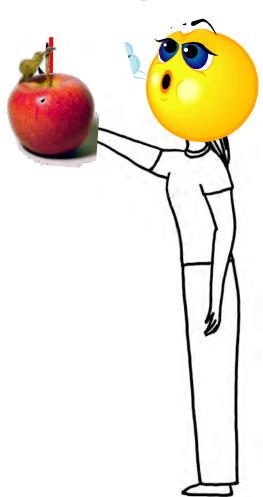


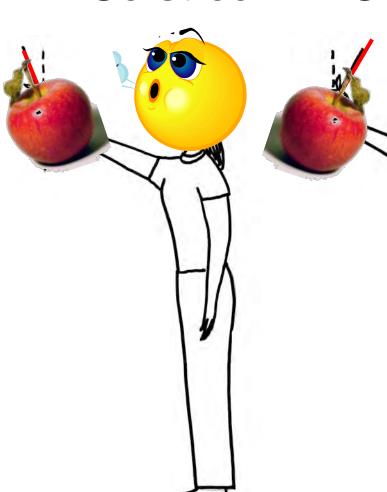


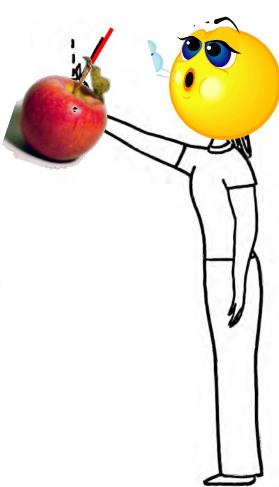
## **Equinox Spring / Fall**

### Winter Solstice

### **Summer Solstice**



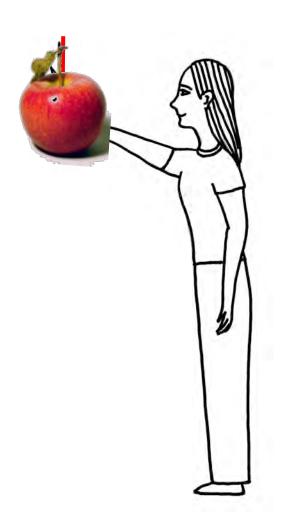


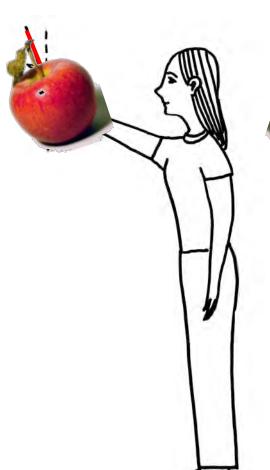


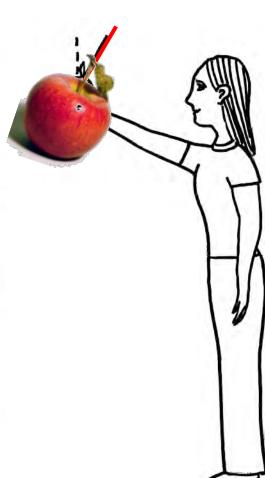
## **Equinox Spring / Fall**

### Winter Solstice

### **Summer Solstice**



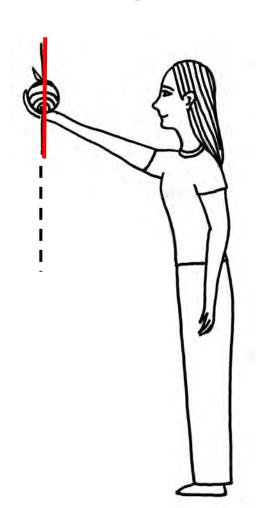


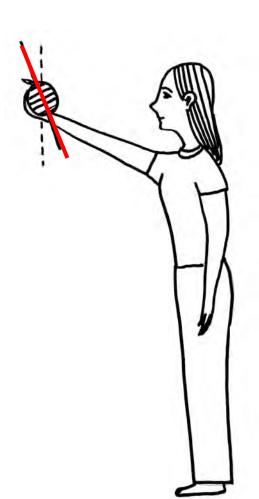


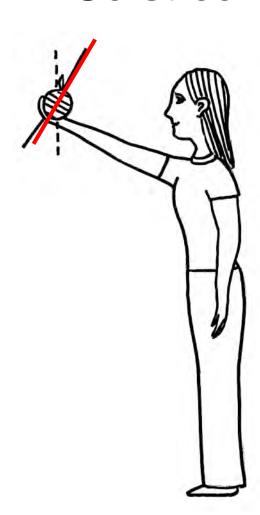
# **Equinox Spring / Fall**

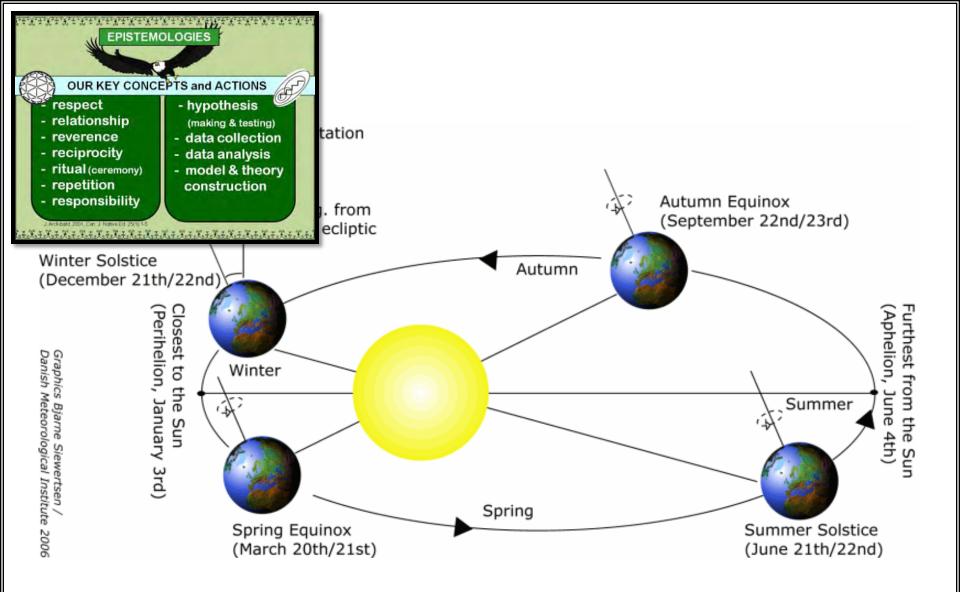
### Winter Solstice

### **Summer Solstice**



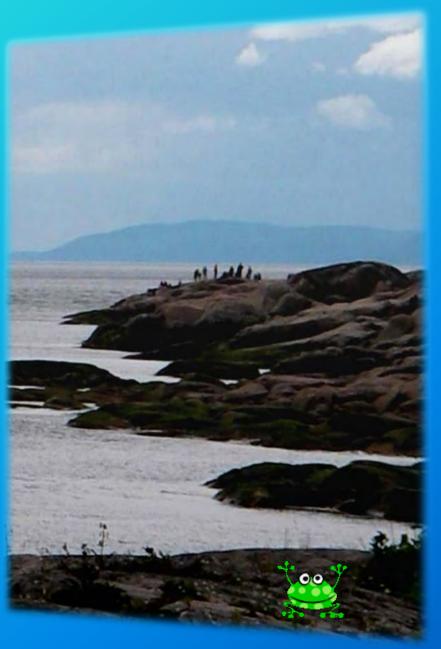






### Wela'lioq Thank you







Canada Research Chairs Chaires de recherche du Canada Canadä Canadä



Social Sciences and Humanities Research Council of Canada

Conseil de recherches en sciences humaines du Canada

### CAPE BRETON UNIVERSITY

#### Thank you / Wela'lioq





Canada Foundation for Innovation

Fondation canadienne pour l'innovation

Mi'kmawey Debert



















Eskasoni First Nation Detachment Royal Canadian Gendarmerie royale Mounted Police du Canada



The support of various partners and funding agencies is gratefully acknowledged.

#### **TENTATIVE**

#### Community Education Strategic/Operational Planning Symposium Mi'kmaw Kina'matnewey

Theme: "Language and Culture"
Park Place Ramada, Dartmouth
March 10, 11, & 12, 2010

#### Wednesday, March 10, 2010 (DAY 1)

12:00-1:00	Lunch	
1:00-1:45 p.m	Opening prayer and remarks by Eleanor Bernard, Executive Director, Mi'kmaw Kina'matnewey (MK)	
	Guest Speaker –Sr. Dorothy Moore, Education Consultant, Membertou	
	Review Agenda - Outline goals and objectives for Symposium- John J. Paul	
1:45-2:15	Session Number One	
	Highlights of MK's 2009-2010 Strategic/Operational Plan	
2:15-4:00	Session Number Two	
	Highlights of Individual Community Operations 2009-2010 (10 minutes- see template)	
4:00-4:30	Discussions on Presentations (questions, comments, suggestions etc.)	
5:30	<b>Buffet Dinner</b>	

#### **Thursday, March 11, 2011** (DAY 2)

7:00-9:00 a.m.	Full Breakfast	
9:00-9:15	Welcome to Day 2	John Jerome Paul
9:15-10:00	Session Number 3	Two-Eyed Seeing Albert Marshall/Cheryl Bartlett
10:15-11:00	Session Number 4	Mi'kmaw Language and Technology George Marshall/Chris Andrews

11:15-11:30	Tea/Coffee Break		
11:30-12:15	Session Number 5	Bluenose Marathon Tex Marshall/Kerrie Copeland	
12:15-1:00	Lunch		
1:00-1:45	Session Number 6	Mi'kmaw Immersion Jane Meader	
1:45-2:45	Community Breakout Sessions		
2:45-3:00	Break		
3:00-3:30	Continuation of Breakout Sessions/Wrap up for the day		
5:00	Dinner/Waltes/Games		
8:00	Social/Entertainment- Music by Darren Stevens		

#### Friday, March 12, 2010 (DAY 3)

7:00-9:00 a.m. Buffet Breakfast

9:00-10:30 Community Breakout Sessions

Community Operational Plan 2010-2011

10:30-11:45 MK Operation Planning Session 2010-2011

11:45 Closing remarks and prayer

Eleanor Bernard

#### **Strategic Planning**

Strategic Planning has been a major focus of attention. A blueprint of goals and objectives is critical to effective operation. There are many critical junctures expected to be faced in First Nation educational initiatives...

The process of planning must also involve each community looking at its goals, objectives, governance, and resources. Mi'kmaw Kina'matnewey is available to assist communities by holding information sessions or facilitating planning sessions. This year Molly Den Heyer and a group of MBA students have been retained to be facilitators for the communities.

This process will provide facilitation and feedback mechanisms to help the communities and MK to develop/update their five year strategic plans and develop new updated operational plans. These mechanisms include: planning and facilitation of meetings; advisement with regard to program management; and involvement with the written reports.

The project is designed so that the content is driven by MK and member communities. Second, the process helps to build long-term capacity within MK. and its member communities. Lastly this joint planning session develops a communal relationship among MK member communities in addressing issues in Mi'kmaw Education.