

Details

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Local and Traditional Knowledge & Risk

Introduction

This activity is 4 of 4 in a series that exposes students to the concepts of and work done by the HERMYs Project (Historical Ecology and Risk Management: Youth Sustainability):

1. A Narrative Pantomime
2. Environmental Risk Assessment
3. Risk Hazard Identification
4. Local and Traditional Knowledge & Risk

“Historical accounts of remote Alaska can only offer documentation of events that have taken place in the last 150 years or so. Ancient cultures, on the other hand, have documented thousands of years through oral history and storytelling. Although there is some added fiction to make the stories more fun, this local and traditional knowledge (LTK) allows us to examine REAL events from the perspective of ancient cultures.” – Hollis Yenna

Objective

Students will understand the role that oral history plays in understanding historical ecology and ancient cultures.

Procedure

1. Read the 3 short stories about Local and Traditional Knowledge (LTK) and answer the questions regarding each story.
2. After the stories are finished, explain to the students that traditional stories were, for many years, the only means for recording history – many cultures had no written language. As a result, many stories were passed on by word of mouth and, as a result, many traditional stories have a lot of truth to them. For this

Materials

- Blank sheets of paper
- Pencils
- Pictures of the following Eskimo Terms:
 - Umiak
 - Seals
 - Caribou
- An imagination
- Emergency Management Table
- LTK Stories
- LTK Writing Assignment

reason, LTK can actually be used to explain the historical past of many cultures.

3. Provide resources about Teen CERT and review phases of disasters, that is, preparedness, mitigation, response and recovery. Show several videos about Teen CERT. See <http://www.fema.gov/community-emergency-response-teams/teen-community-emergency-response-team>

Which phase is continued prior to, during, and after a disaster? (Mitigation)

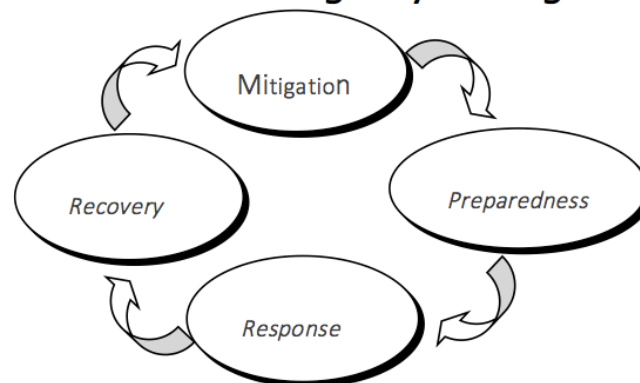
For Risk and Disaster Research and Emergency Management, LTK is very useful and is applied to Mitigation Strategies, Decisions, and Options.

The Phases of Disasters are for Animals too!

See Disaster Phases Diagram from Animals in Disasters Training Module.

http://view.officeapps.live.com/op/view.aspx?src=http%3A%2F%2Fwww.training.fema.gov%2FEMIWeb%2Fdownloads%2Fis10_unit3.doc

The Four Phases of Emergency Management



Extension

Not applicable

Assessment

Not applicable

Author / Credits

This lesson was developed by PolarTREC teacher Hollis Yenna <yennahjh@gmail.com>.

Standards

None, not applicable



References

Mitigation of Natural Hazards and Disasters: International Perspectives
2005, pp 209-239

Climate Change and Natural Hazards in Northern Canada: Integrating Indigenous Perspectives with Government Policy

John Newton, C.D. James Paci, Aynslie Ogden

http://link.springer.com/chapter/10.1007%2F1-4020-4514-X_11

Local and Traditional Knowledge in Understanding Arctic Change

ARCUS State of the Arctic Abstract

Mark A. Parsons, Shari Gearherad, Chris McNeave, Henry Huntington

Local and traditional knowledge (LTK) provides rich information about the Arctic environment at spatial and temporal scales that scientific knowledge often does not have access to (e.g. localized observations of fine-scale ecological change potentially from many different communities, or local sea ice and conditions prior to 1950s ice charts and 1970s satellite records). Community-based observations and monitoring are an opportunity for Arctic residents to provide 'frontline' observations and measurements that are an early warning system for Arctic change. The Exchange for Local Observations and Knowledge of the Arctic (ELOKA) was established in response to the growing number of community-based and community-oriented research and observation projects in the Arctic. ELOKA provides data management and user support to facilitate the collection, preservation, exchange, and use of local observations and knowledge.

Managing these data presents unique ethical challenges in terms of appropriate use of rare human knowledge and ensuring that knowledge is not lost from the local communities and not exploited in ways antithetical to community culture and desires. Local Arctic residents must be engaged as true collaborative partners while respecting their perspectives, which may vary substantially from a western science perspective. At the same time, we seek to derive scientific meaning from the local knowledge that can be used in conjunction with quantitative science data. This creates new challenges in terms of data presentation, knowledge representations, and basic data description. This paper reviews these challenges, some initial approaches to addressing them, and overall lessons learned and future directions.

<http://soa.arcus.org/abstracts/local-and-traditional-knowledge-understanding-arctic-change>

North by 2020

Perspectives on Alaska's Changing Social-Ecological Systems

Edited by Amy Lauren Lovcraft and Hajo Eicken

Distributed for University of Alaska Press © 2011

Originating from a series of workshops held at the Alaska Forum of the Fourth International



Polar Year, this interdisciplinary volume addresses a host of current concerns regarding the ecology and rapid transformation of the arctic. Concentrating on the most important linked social-ecological systems, including fresh water, marine resources, and oil and gas development, this volume explores opportunities for sustainable development from a variety of perspectives, among them social sciences, natural and applied sciences, and the arts. Individual chapters highlight expressions of climate change in dance, music, and film, as well as from an indigenous knowledge-based perspective.

<http://www.press.uchicago.edu/ucp/books/book/distributed/N/bo12373683.html>

Iñupiaq Ethnohistory

Selected Essay by Ernest S. Burch, Jr.

Edited by Erica Hill

Distributed for University of Alaska Press © 2013

It took more than a century for colonialism to reach Alaska after the first Europeans set foot in what would become the continental United States. The complex society of the Iñupiaq, settled at the very top of the world, remained unknown and undisturbed longer than many other Native tribes in America. Ernest S. Burch Jr. dedicated most of his life and career to understanding this precolonial period and the lives of Northwest Alaska Natives. Iñupiaq Ethnohistory finally collects in one place Burch's critical research in this area, bringing to light work that had once been buried in scholarly books or scattered across journals. It is a fascinating and accessible window into a now-vanished world.

<http://www.press.uchicago.edu/ucp/books/book/distributed/I/bo16802609.html>

Arctic Climate Impact Assessment

Local and Traditional Knowledge in the Context of Alaska and Arctic Climate Change

The Arctic Climate Impact Assessment (ACIA) published by the International Arctic Science Committee (IASC) in 2005 provides a comprehensive review of the perspectives of Native peoples in the Arctic on climate change. Chapter 3 of this report described the development and nature of what was termed "indigenous knowledge" and its use and application, provided observations of climate change, and presented nine case studies, including ones for the Kotzebue area and Aleutians/Pribilof Islands region of Alaska. The summary below is taken from that chapter. The full report is available in pdf form at <http://www.acia.uaf.edu>. The references to studies that support the excerpted statements below are included in the report.

<http://view.officeapps.live.com/op/view.aspx?src=http%3A%2F%2Fwww.coseealaska.net%2Ffiles%2Falaska%2FLTK1.doc>

Local and Traditional Knowledge Stewardship: Managing Data and Information from the Arctic

ELOKA, an NSF Arctic Observing Network (AON) project, is a data management research support service that specializes in working with arctic communities and researchers in the collection, preservation, and use of local and traditional knowledge (LTK) and community-based monitoring (CBM) data and information.



<http://www.arcus.org/witness-the-arctic/2013/2/article/19956>

Exchange for Local Observations and Knowledge of the Arctic (ELOKA).

<http://eloka-arctic.org/about/manual/index.html>

The following table briefly describes each of these phases.

The Four Phases of Emergency Management

Mitigation Preventing future emergencies or minimizing their effects	<ul style="list-style-type: none">: Includes any activities that prevent an emergency, reduce the chance of an emergency happening, or reduce the damaging effects of unavoidable emergencies.: Buying flood and fire insurance for your home is a mitigation activity.: Mitigation activities take place before and after emergencies.
Preparedness Preparing to handle an emergency	<ul style="list-style-type: none">: Includes plans or preparations made to save lives and to help response and rescue operations.: Evacuation plans and stocking food and water are both examples of preparedness.: Preparedness activities take place before an emergency occurs.
Response Responding safely to an emergency	<ul style="list-style-type: none">: Includes actions taken to save lives and prevent further property damage in an emergency situation. Response is putting your preparedness plans into action.: Seeking shelter from a tornado or turning off gas valves in an earthquake are both response activities.: Response activities take place during an emergency.
Recovery Recovering from an emergency	<ul style="list-style-type: none">: Includes actions taken to return to a normal or an even safer situation following an emergency.: Recovery includes getting financial assistance to help pay for the repairs.: Recovery activities take place after an emergency.

READ THIS ALOUD TO STUDENTS:

According to the *Ecology and Society* online journal:

“Local and traditional ecological knowledge (LTK) is increasingly recognized as an important component of scientific research, conservation, and resource management. Especially where there are gaps in the scientific literature, LTK can be a critical source of basic environmental data; this situation is particularly apparent in the case of marine ecosystems, about which comparatively less is known than terrestrial ones.”

Each of the stories we read focused on some aspect of “risk hazards.” Often times, Alaskan culture had to endure many tough times due to extreme weather conditions. Have each student take a few minutes to think about one story that they have heard passed on from their parents or grandparents that deals with a risk hazard. If they can’t think of one, this could be a story of their own. Have them write down, in one page or less, their story. Be sure to emphasize several times that this is a story about a risk hazard. It may help to provide a list of the risk-hazards from the **disaster rank** activity on the whiteboard (chalkboard) for students to see.

Story #1 -- The Thinking Image

Once there was a woman who was an outcast from the village. Her husband and all her relatives were dead and she had no son to bring home meat for her. She was a slave to everybody in the village and so she was very unhappy.

One day, she was going along in an umiak. She had been rowing all day and was very tired and cold. By and by she notices that she was coming to a point of land with some big stones on it. “I shall go ashore and rest,” she said to herself. So she beached the umiak and climbed onto the shore. She sat down on a big stone and, resting her chin on her hand, she began to think.

“How tired I am!” she said to herself. “I do nothing but work for others, and no one works for me. I wish I were dead and my work all over.”

The woman sat thinking these gloomy thoughts for a long time. By and by she began to look at the stones that lay all around her.

“How wearisome my life is!” she said. “Even these stones are happier than I. They can rest always, but there is no rest for me. I wish that I were a stone so that I could rest for ever and ever and never be tired any more.”

While the woman was sitting thinking these things a crow flew over her. He made three circles and cawed three times. The woman looked up and saw him and knew that her torngak (helping spirit) had sent the crow to help her.

“I shall soon be a stone,” she thought, “My feet are stones already. They can feel nothing. Not long ago they were very cold and tired, but now they are stones. I cannot she was really changing into st them.”

By and by the woman tried to move her hands but she could not. Then she knew that she was turning into stone and she was glad.

“I shall never be tired or cold again,” she said. “I shall never work hard and be hungry.”

Gradually the woman turned into stone and there she sits to this day with her chin in her hand, thinking.

Sometimes the Eskimos who go by the point of land stop and give gifts to the “Thinking Image”, as they call the stone woman. They give her needles, spices (tobacco), and matches. Some of the women have even put a necklace of beads around her neck.

Perhaps they are sorry the poor woman had such a hard life and they are trying to make her happy now.

QUESTIONS:

1. Why was the old woman so sad?
2. Why did the woman wish would happen to herself?
3. What did the woman turn in to?
4. Do you think this story really happened?

Many traditional eskimo stories are meant to explain the hard times and lifestyle of the people. Life would have been very difficult for traditional eskimos, especially for a woman with no husband or children to help her hunt and do work. Although people cannot really turn into stone, as the story suggests, the story reflects the hard life and difficult times that a single eskimo woman would surely have endured – so there is much truth to the woman’s feelings and, furthermore, this story is meant to explain an actual rock formation that resembles a sitting woman with her chin resting on her hand.

Resource:

Morrison, Dorothy. "The Thinking Image." Tales the Eskimos Tell. School Aids and Textbook Publishing Co., Ltd. Regina and Toronto, page 43-45. <http://www.archive.org/details/taleseskimostell00morr>

Story #2 -- An Eskimo Tells How the Caribou Lost Their Large Eyes

Look, here is a little bone -- a bone taken from a caribou's ankle! I will tell you a story about it.

A long time ago, when the Eskimo first found the caribou they had very large eyes. They could see a great distance and were very savage. So it was hard to get close enough to shoot them with bows and arrows. As a result, the Eskimos often had no meat.

By and by they asked Torngarsoak to help them. "Oh, Torngarsoak," they said, "help us, for we are starving! The caribou are strong and swift and keen of sight. Oh, Torngarsoak, our hunters are as young children -- they cannot kill the caribou! Therefore, have pity on us (we are hungry), have pity on us and tame the caribou so that our hunters may kill them and so that our children may have meat.

Presently one of the caribou became very thoughtful. He said in caribou language to the others, "I wish our eyes were not so large. Then we should be better looking."

So the other caribou said, "Sew up our eyes, then."

The thoughtful caribou took this little bone from his foreleg. He said, "This will make a good needle." Then he took a piece of sinew and said, "This will make good thread."

"How handsome we shall look when our eyes are small!" said all the caribou, and they stood in line waiting to have their eyes sewed up.

The thoughtful caribou took his needle and thread and sewed up the corners of all the caribou's eyes. After that the caribou could not see so far and they became tamer.

Now that the caribou were tamer, the Eskimo hunters could take them more easily. So the people had more meat to eat and more skins to make clothing. And this was all because Torngarsoak made the caribou thoughtful.

This is indeed true -- see, this is the very bone that the thoughtful caribou used to sew up the eyes of his brothers!

QUESTIONS:

1. Do you think caribou can *really* talk to each other?
2. Why would a thoughtful caribou make it easier for hunters to shoot the caribou?
3. Do think this story really happened?

It is common belief in the eskimo culture that animals surrender themselves to hunters. There are numerous instances where hunters recall animals 'giving themselves' to the hunter by coming too close and remaining still for the hunter to kill it. This story, though not real, is a way to explain how animals give themselves to hunters in order to provide for humans.

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Story #3 -- The Monstrous Child

There was a family with a small child and a brand new little baby. The Winter was long and, this year, did not bring many seals to be hunted. As the father would catch small animals to eat, there was very little food for his family and the little baby did not have any food to eat. The little baby would cry and cry, "Mother, feed me!" But the mother had no food for the child. Again, the child would cry, "Mother feed me!" But the Mother still had no food to feed the little baby.

One day the little baby became so upset, he was crying and crying. His Mother and Father approached the little baby to comfort him but the baby ate his mother and father. "What have I done? I've eaten my own mother and father!" cried the little baby. "But I had no food to eat and my stomach was hurting!"

QUESTIONS:

1. What did the little baby eat?
2. Why did he eat his parents?
3. Do you think this story really happened?

Of course this story is not real, little babies are NOT able to eat their parents! This story serves as a powerful tool to show how difficult life would have been for eskimo families that did not have a good hunting season. Though the animals are plentiful, it is often very difficult to hunt with extreme weather conditions and temperatures, and it can be difficult for a whole village to get the food that is needed for all of their people. If a family missed the location or specific timing of an animal migration, it would be very difficult to hunt. It was not uncommon for young children to die during times of famine, as they were not as strong as the adults and adults were the first to eat when food was caught.

Umiak – A traditional seal-skin boat, used by women to move possessions OR is used by men to hunt whale and walrus.



Seals



Caribou



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