Elders' Cloud Observations
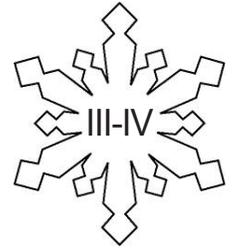
Overview:

During this activity, students visit an elder in their community to learn about long term cloud observations and local Native language words for clouds.

Objectives:

The student will:
- employ culturally appropriate interview and listening skills during a visit with a Native Elder;
- learn about the different types of clouds visible in their area during different months/seasons;
- identify different types of clouds; and
- learn the local Native language terms for clouds and cloud types.

GLEs Addressed:

Science
- [5-8] SA1.1 The student demonstrates an understanding of the processes of science by asking questions, predicting, observing, describing, measuring, classifying, making generalizations, inferring, and communicating.

Whole Picture:

Knowledge of weather phenomena is an integral part of Alaska Native culture. According to April Gale, author of "Kodiak Alutiiq Language Conversational Phrasebook," a favorite topic of the Alutiiq people is weather.

"People of Kodiak love to talk about the weather because it affects our lives in so many ways," Gale writes.

Native Elders have long been able to predict weather based on observations. Weather words, including many different descriptors for clouds, are present in all Alaska Native languages, and these words can be used as a springboard for teaching Western science.

According to Ray Barnhardt and Angayuqaq Oscar Kawagley of the University of Alaska Fairbanks it is important to *bring significance* to learning in indigenous settings. In "Indigenous Knowledge Systems and Alaska Native Ways of Knowing," they write:

"The explanations of natural phenomena are best understood by students if they are cast first in indigenous terms to which they can relate. Once the students understand the significance of the knowledge being presented, it can then be explained in western terms."

Materials:

- Pictures of cloud types (downloaded from the ACMP Web site)
- Cloud picture (drawn by student during previous activity)
- STUDENT WORKSHEET: "Elders' Cloud Observations"

Activity Procedure:

1. Go to the ACMP Website, at www.ArcticClimateModeling.org, and click on "Tools and Data" to download and print cirrus, cumulus, and stratus cloud pictures for the lesson.

2. Explain that long-term cloud observations of local Elders can help students understand and make predictions about cloud cover. To complete this activity students must visit a local Elder, and ask them to describe the different clouds overhead most frequently during each season or time of the year. Students also must ask the Elder about Native words for clouds, and record any words they learn. After students have spoken to an Elder, they will share what they learned with the rest of the class.

3. Distribute the STUDENT WORKSHEET: "Elders' Cloud Observations" and read and discuss the directions as a class. Remind students about respectful listening skills. Distribute downloaded cloud pictures for students to show Elders, and suggest each student take the cloud pictures they drew during the "Cloud Types Activity" as a thank you gift for their Elder.

4. Assist students in identifying Elders to visit. Students may visit individually or in small groups. Determine whether visits to Elders will take place during school or after school hours.

5. After student visits are complete, ask each student to share what they learned from their Elder in a brief presentation to the class.

6. Help students identify similarities among information learned from different Elders. Create a class list of Native language terms for clouds and cloud types.

Answers to Student Questions:

Answers will vary depending upon the Elder interviewed.

Name:_____

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Student Worksheet

Directions:

Visit an Elder, taking along the cloud pictures printed and created in class. Ask the
Elder to describe the different clouds that are overhead most frequently during the different seasons or months in your area. Show the Elder the cloud pictures from school. Do any of these pictures look like the clouds the Elder expects to see overhead this time of year? Are there Native words for different cloud types?

Elder Name: _____

Summarize what the Elder said below:

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