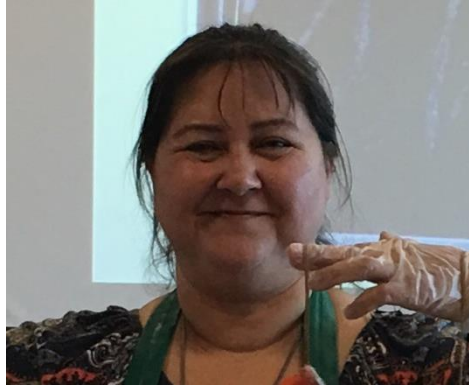


TRADITIONAL WEATHER FORECAST: ANIMAL BEHAVIOR GR: PREK-2 (LESSON 4)

Elder Quote/Belief:



“When you observe animals, look at how ruffled their necks are, the more ruffled they are means how cold the winter will be.”

-Diane Selanoff, Valdez

Grade Level: Pre-K-2

Overview: Traditionally, the hunters from the Chugach Region could predict the weather by observing wild animal behavior. The animals have adapted to survive in the wild and its harsh environment. Careful observation of various animal adaptations helped the hunter’s ability to predict the weather and seasonal changes by watching the animal’s behaviors, such as; migration, foraging, color change, etc. in their environment and as they migrate.

Standards:

<i>AK Cultural:</i>	<i>AK Content Science:</i>	<i>CRCC:</i>
D1 Acquire in depth cultural knowledge through active participation and meaningful interaction with Elders.	C3 Concepts of life science. A student should understand and be able to apply the concepts, models, theories, facts, evidence, systems, and process of life science.	SS5 Students should be familiar with habits and behavior characteristics of traditional subsistence animals, fish, and birds: Migration patterns, seasonal/cycles for safe use/eating.

Lesson Goal:

Students will learn that observing animal behavior can be used to indicate changes in the weather or seasons.

Lesson Objective(s): Students will:

- Learn the Sugt’stun/Eyak vocabulary words.
- Learn the Elder traditional ecological knowledge (TEK) to predict the weather and seasonal change by observing animal behavior.

Vocabulary Words: Sugt’stun Dialects

English:	Prince William Sound:	Lower Cook Inlet:	Eyak:
Summer	Kiak	Kiak	GALxa'L

Winter	Uksuaq	Uksuq	XAlaag
Spring	Icuwaq	Iciwaq	xahLch'aad
Fall	Uksuaq	Uksuaq	XAlaagLch'aad
Black bear	Tan'erliq	Tan'erliq	ts'iyuh
Sea Otter	Ikam'aq	Ikam'aq	sahs
Eagle	Kuskalaq	Saqrtuliq	GuujaAIAG

Materials/Resources Needed:

- School supplies; scissors, glue, pencils and paper
- Pictures of birds/animals that change colors during seasons, such as; ptarmigans, ermine and rabbits, etc.

Books:

- *Disappearing Lake, Natures Magic in Denali National Park* written by Debbie S. Miller
- [Chugach Eskimo](#), page 160, “The Brown Snipe and the Weather Which Changed Most Opportunely”

Websites for Bird/Wildlife photos:

- U.S. Fish & Wildlife Service:
 - Seasons of Wildlife https://www.fws.gov/refuge/Alaska_Peninsula/seasons_of_wildlife/index.html
 - Alaska Peninsula and Becharof Bird List https://www.fws.gov/uploadedFiles/APB-Bird_List.pdf
- Alaskan Animals: 40 Species <https://greenglobaltravel.com/alaskan-animals-species/>
- Alaska Photo Graphics:
 - Wildlife <https://alaskaphotographics.photoshelter.com/gallery-collection/Wildlife/C0000EZKo7bpVEFs>
 - Birds <https://alaskaphotographics.photoshelter.com/gallery/Birds/G0000s1SP70iq5eI/C0000EZKo7bpVEFs>

Teacher Preparation:

- Invite an Elder or Recognized Expert to share their knowledge about animal behavior
- Locate and review the book *Disappearing Lake*
- Locate the [Chugach Eskimo](#) book, mark page 160 to read story out loud to students.
- Locate and make copies of bird and animal pictures that depict correlate changes of their fur or feathers during the changing seasons to help them adapt and camouflage with their environment.

Opening:

(Introduce the Elder if available). Today, we will be learning how the Chugach Region ancestors closely observed animal and bird behaviors to help predict weather and seasonal changes. One traditional ecological knowledge (TEK) passed on through generations was to observe how the animal prepares for the changing seasons. Do you know of any changes or behaviors that animals or bird do during seasons? For example, a ptarmigan or spruce grouse changes their feather colors so they can camouflage in summer or winter. What color do you think they would be in the summer? What about winter? Have you heard of any behaviors that relate to weather predications or seasonal changes? Listen carefully to some Elder quotes:

- *“Eagles flying up high in the sky mean it’s going to get windy.”*
-Ben Meganack Sr. Port Graham
- *“When crows eat small rocks on the road is a sign that it is going to be getting cold.”*
-Stella Meganack, Port Graham
- *“When you observe animals, look at how ruffled their necks are, the more ruffled they are means how cold the winter will be.”*
-Diane Selanoff, Valdez

Please listen carefully to the story about “The Brown Snipe and the Weather Which Changed Most Opportunely” out of the *Chugach Eskimo* book. (If the Elder is available, ask them to read the excerpt.)

Activities:

Class I:

1. Read the excerpt from *Chugach Eskimo*, “The Brown Snipe and the Weather Which Changed Most Opportunely” p. 160.
2. Say the Sugt’stun/Eyak words out loud and ask the students to repeat each word several times.
3. Have a discussion with students on the various behaviors or color changes of animals/birds that they know or heard about.
4. Read the book *Disappearing Lake* to the students.
5. If available, show photos up on white board and hand out photos of animals that change their fur or feathers when seasons change and animals that prepare for winter hibernation.
6. Hand out a blank sheet of paper to each student.
7. As the book is being read and showing pictures, pause and ask the students to glue one animal down at a time. Then move on to the next animal. Continue reading to the students until all the animals have been cut out and glued on the blank paper, so that the students can see which animals to observe due to changing weather and seasons.
8. Ask the students to finish cutting out the pictures of animals or birds that they heard either in the traditional story or Elder quotes/beliefs that also describing the changes or behaviors of birds/animals during changing weather or seasons.
9. Allow time to finish.
10. Discuss each student’s poster and display.



Assessment:

- Students will give examples animal indicators/ behaviors traditionally used to predict the weather.
- Students can correctly pronounce the Sugt'stun/ Eyak vocabulary words