

**TRADITIONAL WEATHER FORECAST: ANIMAL BEHAVIOR GR: 3-5 (LESSON 6)**

**Elder Quote/Belief:**



*“When crows eat small rocks on the road is a sign that it is going to be getting cold.”*  
*-Stella Meganack, Port Graham*

**Grade Level: 3-5**

**Overview:**

Every year, during the seasons, the animals have the same behavioral patterns. Examples are like in the spring; the birds return, black bears start coming out of hibernation with their cubs, and the fish start to return. The closer we get to the summer season, more salmon species swim back in and the animal life becomes more active.

In this lesson, we will learn about how our ancestors were able to traditionally predict weather by closely observing animal behavior and the weather patterns during different seasons.

**Standards:**

<i>AK Cultural:</i>	<i>AK Content Science:</i>	<i>CRCC:</i>
<b>D4</b> Culturally-knowledgeable students are able to engage effectively in learning activities that are based on traditional ways of knowing and learning.	<b>C2</b> 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.	<b>SS5</b> Subsistence students should be familiar with baits and behavioral characteristics of traditional subsistence animals, fish, and birds: -Migration patterns -Seasonal/cycles for safe use/eating

**Lesson Goal:** Students will learn how to predict the weather by observing animal behavior and by reading and asking for Elder TEK. Observing animals during the seasons will show how to predict the weather because of their behavior/activity during different seasonal weather patterns.

**Lesson Objective(s):** Students will:

- Learn Sugt’stun/Eyak vocabulary words.
- Learn how to observe animal behavior to predict the weather.
- Create a seasonal poster that shows how to predict the weather by animal observation.
- Interview an Elder or Recognized Expert for animal behavior predicting seasons.

**Vocabulary Words:**

## Sugt'stun Dialects

English:	Prince William Sound:	Lower Cook Inlet:	Eyak:
Eagle	Kuskalaq	Saqrtuliq	<a href="#">guujgAIAG</a> , <a href="#">GuujgAIAG</a>
Seagulls	Mahuwaq	Naruyaq	
Crow	Qanitiisaaq	Qanitiisaaq	ts'AxeeL
Black bear	Tan'erliq	Tan'erliq	<a href="#">ts'iyuh</a>
Magpie	Qallqanaaq	Qallqanaaq	Geets'guXAq'
Red salmon	Nikliq	Nikliq	<a href="#">cha'ch'</a>
Dog salmon	Alimaq	Alimaq	<a href="#">tiitl'</a>
Pink salmon	Amartuq	Amartuq	giyah sdilahL, kaashk'
Silver salmon	Qakkiyaq	Qakkiyaq	<a href="#">AdAte'ya'</a>
King salmon	Luqqakaq	Luqqakaq	<a href="#">te'ya'lee</a>

**Materials/Resources Needed:**

Construction paper, pencils, scissors and glue sticks  
 Pictures of animals and seasonal weather  
 Seasonal Information Sheet

**Books:**

*Pocket Guide to Weather Forecasting* by Ron Cordes  
*Nupuet Sugt'stun Book*: page 72 "Seasonal Calendar;" page 107 is the English translation  
*Disappearing Lake* by Debbie S. Miller

**Teacher Preparation:**

- Invite an Elder or Recognized Expert to share animal behavior that tells of seasonal change to come
- Prepare students of ways we respect our guests in the classroom before he/she arrives
- Review the books *Disappearing Lake* and *Nupuet Sugt'stun*
- Locate the seasonal calendar and make copies for each student
- Locate the sheet of animal pictures

**Opening:**

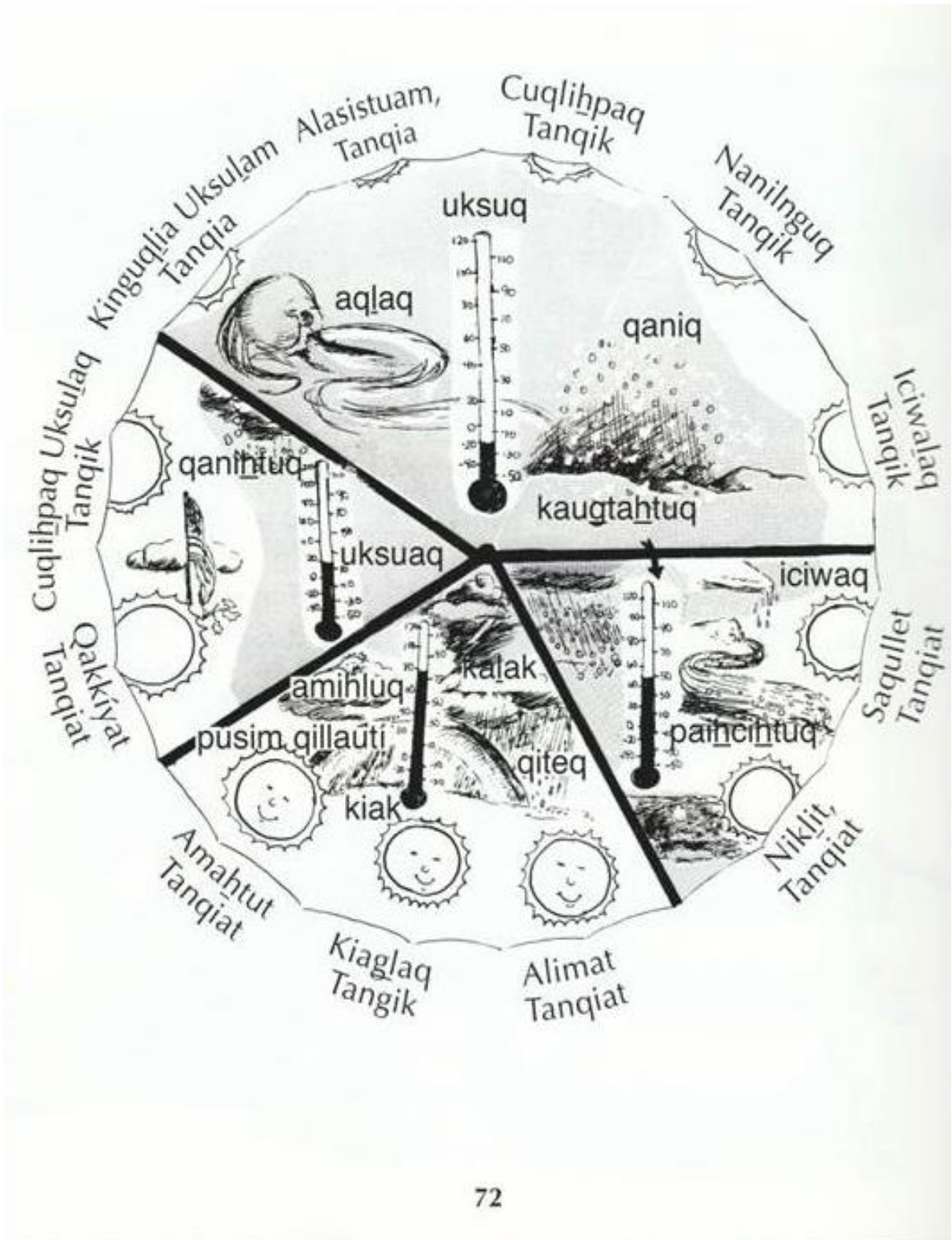
Today, we will learn how our Elders traditionally predicted the weather by observing the animal behavior such as the migration patterns and animal activity. By watching animal behavior and relating what they observed to the time of year it is, all indicators can predict the weather.

**Activities:****Class I:**

1. Pass out the information sheet with the seasonal weather patterns to use as a guide and construction paper.
2. Ask the students to draw a big circle on a sheet of large construction paper.
3. Have the students write down the four seasons; Spring, Summer, Fall and Winter.
4. Allow time for the students to find and cut out pictures of the animals that can be found in the Chugach Region along with pictures of weather for each season.
5. The students will glue the cut out pictures of animals and weather on the season, based on what they know and observed in that season.
6. Discuss questions to ask an Elder or family member at home to share animal behavior predictors of weather. (i.e.) The geese flying in a V formation means fall/winter is coming.
7. Assign the students their homework to get an Elder/family member observation and indicator of animal behavior to predict weather to come. They will need to bring back the observation back to class and add to their seasonal calendars.
8. Optional: For a yearlong project, the students can make a journal or poster where they write down the seasonal changes throughout the year. They will add more cut and paste more pictures of animals, Elder observations and the weather patterns for each season.

**Assessment:**

- Students explain how the Elders TEK predict the seasons by observing animal behavior.
- Students can recite the Sugt'stun and Eyak vocabulary words.
- Students created a seasonal poster that indicates different animal behaviors during each season that helped to predict the weather.
- Students were able to include an Elder/ community member's TEK of animal behavior that predicts weather.



\*Seasonal Calendar taken from *Nupugot* book

