

**TRADITIONAL WEATHER FORECAST: OCEAN AND TIDES GR: PREK-2 (LESSON 2)**

**Elder Quote/Belief:**

*“What’s the importance of going out for supplies? How important is it to go out today? You need a reason to go out, using safety and local knowledge. For example, if the weather is bad, do we really need firewood or can we wait? Are we already prepared if the weather turns? It is better to be prepared.” - Patrick “Swen” Selanoff, Valdez*

**Grade Level: PreK-2**

**Overview:**

The communities in Chugach Region are on the coastline and the majority of the travel is by boat. When traveling or hunting, the combination of wind and tides can make the water very dangerous. Our Elders were observant to the ocean’s movement and direction of waves and tides to determine when it was safe to travel. They knew how to be prepared and how much they could harvest while they were traveling so they could make it safely home. The Elders’ TEK that has been passed down through generations and they want to stress is to be very observant to the ocean before traveling because you do not want to get caught in rough weather.

**Standards:**

<i>AK Cultural:</i>	<i>AK Content Science:</i>	<i>CRCC:</i>
<b>F2:</b> Promotes active involvement of students with elder in the documentation and preservation of traditional knowledge through a variety of print and multimedia formats.	<b>D3:</b> Develop an understanding of the cyclical changes controlled by energy from the sun and by Earth’s position and motion in our solar system.	<b>S7:</b> Weather and Tides- Weather forecasts influence decisions concerning human activity. Go/No go decisions made for land and sea travel are usually based on weather information.

**Lesson Goal:**

Students will learn to observe the ocean and tides for safety before they travel on the water for subsistence gathering or hunting.

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

- Learn the Sugt’stun and Eyak vocabulary words.
- Observe the oceans waves for safety
- Learn to predict the ocean behavior by looking at a list of pictures when the ocean waves are calm or rough
- Students will use learn to use their common sense while observing the ocean to tell when it’s safe to travel by boat.

**Vocabulary Words:**

Sugt’stun Dialects

English:	Prince William Sound:	Lower Cook Inlet:	Eyak:
big ground swells that are breaking on the beach across the bay		Nmerneret	

Wave		Qailiq	
Low tide		Ken'aq	
High tide		Tung'iq	
Wave breaks		Qagerluni	
Weather is calm		Pinarlluku	
Tide goes out		Kenlluni	
Tide comes in		Tung'irluni	

**Materials/Resources Needed:**

Construction paper, **red and green colored** crayons, pencils or markers

**Books:**

*Tlingit Moon and Tide* by Dolly Garza, Chapter 3, pages 31-48

**Teacher Preparation:**

- Invite an Elder or Recognized Expert to share their TEK on weather forecasting based on oceans and tides and Sugt'stun or Eyak words.
- Review the ways to show respect for guests with the students before the Elder arrives.
- Gather the materials and supplies needed. Handout and red
- Make a copy of the activity worksheet attached for each student.
- Review the book *Tlingit Moon and Tide* and mark the pages so readily available to read to the students.

**Opening:**

Our Elders have stressed the importance of being smart and safe regarding traveling on the ocean. We will be learning about the importance of observing the weather, ocean and tides before going out on a boat. Traditionally, our ancestors predicted the weather to determine whether or not they would go out on boats. Learning to be keenly aware of the wind direction, ocean's movement of tides and waves were indicators used to ensure safe travels. Elders have emphasized being prepared and knowing whether to travel or not. They shared many stories of people who have gotten stranded, hurt or perished because they travelled in bad weather or was not prepared if the weather changed while they were out on the water. Here are some quotes we would like to share...

*"Using the right boat to travel. The size of boat and distance from point A to point B. If you travel you should travel in pairs for using smaller boats." Tom Anderson, Cordova.*

*"When you are traveling by boat, leave earlier so you don't have to travel in the dark." Tom Anderson, Cordova.*

*"When there is a big swell breaking on the beach across the bay it means there are big waves outside the bay." Ben Meganack Sr., Port Graham.*

*“Paying attention to the full moon is when to expect big tides, high and low tides.” Stella Meganack, Port Graham.*

To emphasize when to travel on the water, we are going to play an activity game called “Green Means Go!” You all will receive an activity sheet for your answers. I will be showing you various pictures of the ocean and weather. Then I will ask you questions for each picture and you will circle the box on low and high tides and good and bad weather. The teacher will read through the questions for each picture and the students will circle the box with the correct answer.

There will be an activity sheet made up and the teacher will make copies and pass them out to students. The teacher will read through the questions and help the students circle the correct boxes and explain to the students the correct and incorrect decisions made.

### **Activities:**

#### **Class I:**

- 1) Introduce the Elder to share their TEK regarding watching the weather and ocean before traveling.
- 2) Read out loud the chapter out of *Tlingit Moon and Tide*
- 3) Distribute the activity worksheet with the pictures of good and bad weather and low and high tides.
- 4) After all the students received a copy of the picture worksheet, read the questions to the students one box at a time and explain that they will decide for themselves which one is right or wrong.
- 5) Ask the students to circle the box they think is the correct answer with a green marker and circle the incorrect answer box with a red marker.
- 6) When they students finish the activity, have a discussion on when was the correct times that they could travel. The students can keep the picture as future reference and show their parents what they learned.

### **Assessment:**

- Students can describe when it is safe to travel by observing the weather and ocean tides and waves.
- Students can correctly say the Sugt’stun and Eyak vocabulary words.
- Students can explain how to play the “Green Means Go” activity game that emphasized when it was safe to travel on the ocean.

## “GREEN MEANS GO”

For each question please circle the picture with green for your answer and circle red if it is not the answer.

**1. If you were going to go out on the water today, would you leave the dock when it is incoming tide or outgoing tide?**



Incoming tide - Tung'irluni



Outgoing tide - Kenlluni

**2. Would you go out in the boat if it was calm weather or rough weather?**



Calm Seas - Pinarlluku



Rough Seas - Qagerluni

3. Question: If you wanted to go out on the beach at low tide to gather seafood which tide should you leave?



**Low Tide- Ken'aq**



**High Tide- Tung'iq**

4. If you wanted to get in a skiff or boat and go out on the water, what is a good time to go? Please give your answers below.

a.) \_\_\_\_\_

\_\_\_\_\_

b.) \_\_\_\_\_

\_\_\_\_\_

c.) \_\_\_\_\_

\_\_\_\_\_