Where is it colder? Comparing Alaska's weather to the lower 48

Developed by: Katie Kunze

Discipline / Subject: Science/Weather

Topic: Comparing average high and low temperatures

Grade Level: 3rd Grade (Can be adjusted for all grade levels)

Resources / References / Materials/ Teacher Needs:
~Map of Alaska
~US Map (to compare location of your school to Alaska checkpoints)
~NOAA Weather website (to check temperatures)
~Chart paper (for KWL chart)

Lesson Summary: Students will observe and document high and low temperatures in their town and compare them to temperatures in checkpoints along the trail.

Standards Addressed: (Local, State, or National)

1. 3-ESS2-1: Represent data in tables and graphical displays to describe typical weather conditions expected during a particular season.

2. 3-ESS2-2: Obtain and combine information to describe climates in different regions of the world.

Learning Objectives:	**Assessment:**
1. Students will be able to make observations and analyze their observations. 2. Students will be able to compare data recorded and draw conclusions from that data.	Completed weather comparison chart

Procedural Activities

1. Using the map, have the students locate your location and the Iditarod trail in Alaska.

2. Create a KWL chart of what the students know and want to know about the temperature in their town as well as in Alaska.

3. Introduce the students to noaa.gov and demonstrate how to use the sight to look up the high and low temperatures for both locations.

4. Each day, students will record the temperatures for their town as well as the town where their musher that they are tracking is at.

5. Check in with the students daily to see what observations they have made.

6. At the conclusion of the race, students will complete the questions and report their findings.

7. As a class, complete the final section of the KWL chart, recording what they have learned about the temperature in their town and in Alaska.

Materials Students Need:

~Record sheet
~Thermometer (to check temperature at their school)
~Tablet/Computer (to check temperatures on trail and for their school)

Technology Utilized to Enhance Learning:

~Internet (to check temperatures in checkpoints)
~Thermometer (to check temperature at school)
~Computer/Tablet

Other Information:

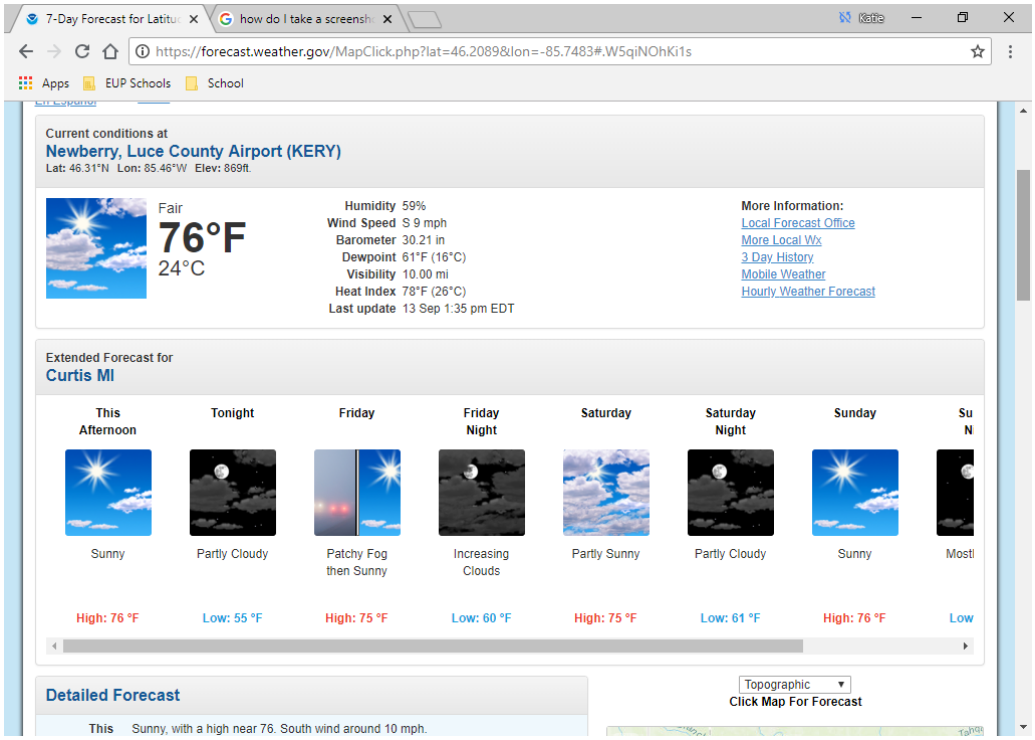
~Iditarod website which offers information links for weather data on the various checkpoints

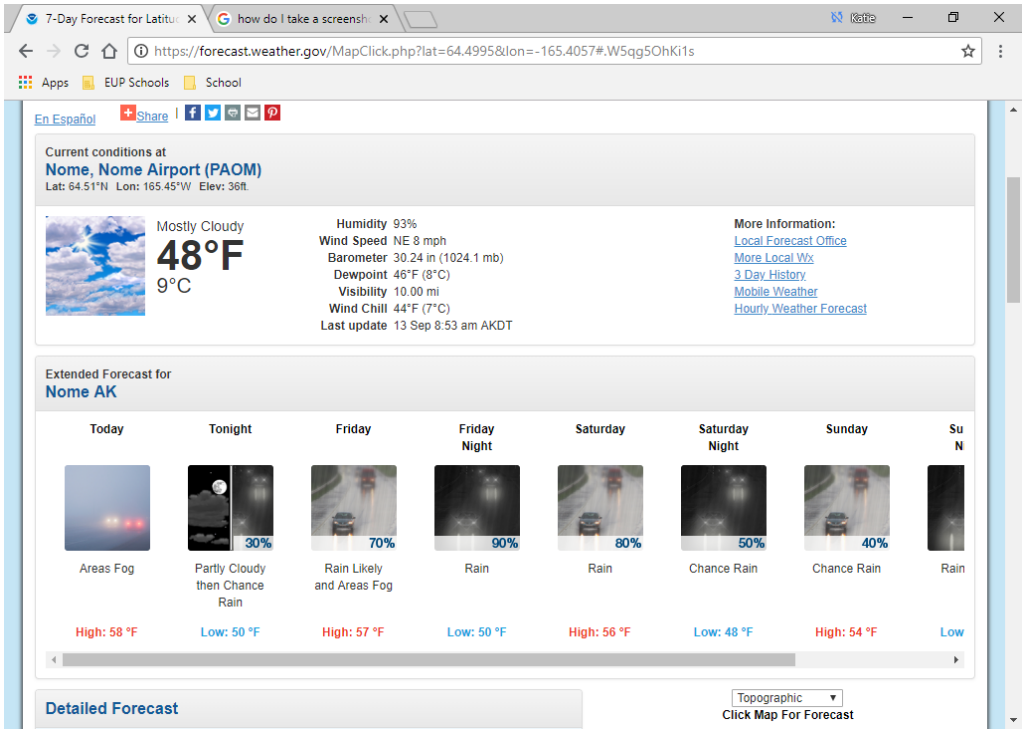
Modifications for Special Learners/ Enrichment Opportunities:

~Project can be lengthened to be a full year study of weather patterns.
~Students can create a graph, comparing the high and low temperatures of each location
~Other weather data can be tracked as well (precipitation, wind, cloud cover, etc.)

Additional Information

Screenshots of noaa.gov as reference





Name:_____

Directions: For each day, record the high and low temperatures for both the checkpoint that your musher is at and your town. Use that data to complete the questions at the end.

*Northern Route

	Date	High Temperature	Low Temperature
Anchorage			
Wasilla			
Knik			
Yentna			
Skwentna			
Finger Lake			
Rainy Pass			
Rohn			
Nikolai			
McGrath			
Takotna			
Ophir			

Cripple			
Ruby			
Galena			
Nulato			
Kaltag			
Unalakleet			
Shaktoolik			
Koyuk			
Elim			
Golovin			
White Mountain			
Safety			
Nome			

Name:_____

Directions: For each day, record the high and low temperatures for both the checkpoint that your musher is at and your town. Use that data to complete the questions at the end.

*Southern Route

	Date	High Temperature	Low Temperature
Anchorage			
Wasilla			
Knik			
Yentna			
Skwentna			
Finger Lake			
Rainy Pass			
Rohn			
Nikolai			
McGrath			
Takotna			
Ophir			

Iditarod			
Shageluk			
Anvik			
Grayling			
Eagle Island			
Kaltag			
Unalakleet			
Shaktoolik			
Koyuk			
Elim			
Golovin			
White Mountain			
Safety			
Nome			

Name:_____

Directions: For each day, record the high and low temperatures for both the checkpoint that your musher is at and your town. Use that data to complete the questions at the end.

*Fairbanks Route

	Date	High Temperature	Low Temperature
Fairbanks			
Nenana			
Manley Hot Springs			
Tanana			
Ruby			
Galena			
Huslia			
Koyukuk			
Nulato			
Kaltag			
Unalakleet			
Shaktoolik			

Koyuk			
Elim			
Golovin			
White Mountain			
Safety			
Nome			

1. What trends did you observe? What do you think caused those trends?

2. What conclusions can you draw from your observations?

3. Do you think that these trends would be the same with different locations? Defend your opinion.