

<b>Title:</b>	
<b>Is It Still Summer?</b>	
<b>Developed by:</b> Jane Blaile 2008 Wells Fargo Teacher on the Trail	
<b>Discipline/Subject:</b> science, writing	
<b>Topic:</b> comparing local seasonal weather to the calendar and to Alaskan seasonal weather	
<b>Grade Level:</b> 3-8	
<b>Resources/References/Materials Teacher Needs:</b> "Seasons" game guide	
<b>Lesson Summary:</b> Students compare how long they "feel" seasonal weather compared to the calendar seasons and how long people "feel" seasonal weather in Alaska.	
<b>Standards Addressed:</b>	
<b>National standards:</b>	
NL-ENG.K-12.4 Students adjust their use of spoken, written, and visual language (e.g., conventions, style, vocabulary) to communicate effectively with a variety of audiences and for different purposes	
<b>Alaska state standards:</b>	
SD3.1 [4] Students develop an understanding of cycles influenced by energy from the sun and by Earth's position and motion in our solar system by recognizing changes to length of daylight over time and its relationship to seasons	
W2.2.2 [5] The student writes for a variety of purposes and audiences by writing in a variety of nonfiction forms using appropriate information and structure	
<b>Arizona state standards:</b>	
S4-S6-C3-PO6 Compare weather conditions in various locations (e.g., regions of Arizona, various U.S., coastal vs. interior geographic regions)	
W5-S3-C2-PO2 Students will compose expository writing that describes, explains, informs, or summarizes ideas and content. Students write an expository paragraph that contains a topic sentence, supporting details, and relevant information	
<b>Learning Objectives:</b>	<b>Method of Assessment for Learning:</b>
The students will: <ul style="list-style-type: none"> <li>○ recall calendar dates that mark the beginning of each of the 4 seasons. (knowledge)</li> <li>○ deduce that weather that feels like each season doesn't always match the calendar season (analysis)</li> <li>○ infer the dates of when they experience weather that "feels" like each season. (analysis)</li> <li>○ compare length of seasonal weather between their home state and Alaska. (analysis)</li> <li>○ evaluate factors which make the seasons feel different for each state (evaluation)</li> </ul>	Observe student participation. Assess paragraph written by students for thoughtful and accurate comparison.

**Procedural Activities:**

1. Review with students season start dates according to the calendar. (March 20, June 21, September 22, December 21)
2. Through discussion, elicit from students the actual dates that the weather feels like spring, summer, winter, or fall in their home state. In Phoenix, for example, we are experiencing swimming weather in March and the 100s before school lets out as well as long into September.
3. Ask students if they think everywhere in the world has the same 4 seasons. Inform them that Alaska has the same four seasons as their state.
4. Play the "Seasons" game with students to illustrate the difference in the lengths of the seasonal weather experienced in Alaska as compared to their home state.
5. As a class, discuss what factors have influence over the weather. (latitude, topography, wind patterns, humidity, hours of daylight, etc.)
6. Students write a comparative paragraph noting differences and similarities between the seasons as experienced in their home state to those experienced in Alaska.

**Materials Students Need:** none

**Technology Used to Enhance Learning:** Excel for extension activity

**Other Information:** This activity is based on "typicals". Encourage students to think about how seasons would feel in different latitudes in Alaska.

Not all places on Earth experience 4 seasons. Places in the far north or south as well as along the equator have 4 calendar seasons, but no change or one change (dry/wet) in the weather.

This activity is bodily-kinesthetic which has appeal to most students.

**Modifications for Special Learners/Enrichment Opportunities:**

A science/math extension would be to keep a side by side temperature graph for the entire or remainder of the year comparing the highs each day or average monthly highs between a city in Alaska and your city.

For younger students, do the Seasons game for just the calendar seasons and Alaskan weather seasons.

As an extension, have the students use Excel to make a circle graph for each place, Alaska and their home state, showing the amount of each year that the weather "feels" like the season.

Use Jon Van Zyle's "Arctic Lights, Arctic Nights" book and read the 21<sup>st</sup> each month.