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| **Alaska Temperatures- 6.NS.6** | |
| **Domain** | **The Number System** |
| **Cluster** | **Apply and extend previous understandings of numbers to the system of rational numbers.** |
| **Standard(s)** | **6.NS. 6** Understand a rational number as a point on the number line. Extend number line diagrams and coordinate axes familiar from previous grades to represent points on the line and in the plane with negative number coordinates.  **6.NS.6a** Recognize opposite signs of numbers as indicating locations on opposite sides of 0 on the number line; recognize that the opposite of the opposite of a number is the number itself, e.g., –(–3) = 3, and that 0 is its own opposite.  **6.NS.5** Understand that positive and negative numbers are used together to describe quantities having opposite directions or values (e.g., temperature above/below zero, elevation above/below sea level, credits/debits, positive/negative electric charge); use positive and negative numbers to represent quantities in real-world contexts, explaining the meaning of 0 in each situation. |
| **Materials** | Activity sheet |
| **Task** | **Alaska Temperatures**  Last week the high temperatures in Alaska were as follows:  Monday: 5 degrees above 0 degrees Celsius  Tuesday: 3 degrees above 0 degrees Celsius  Wednesday: 5 degrees below 0 degrees Celsius  Thursday: 2 degrees below 0 degrees Celsius  Friday: 2 degrees above 0 degrees Celsius  Part 1: Make a number line and plot the points on the number line.  Part 2:  Which days have a high temperature that is a negative number? Which days have a high temperature that is a positive number?  Part 3: On which days were the temperatures the same distance from 0? Explain how you know. |

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| **Rubric** | | |
| **Level I** | 1. **Level II** | **Level III** |
| Developing Proficiency   * Student uses inappropriate solution strategy and does not get the correct answer. | Not Yet Proficient   * There are one or two errors. | Proficient in Performance   * Accurately solves problem * Part 1: The number line has points plotted correctly. * Part 2: Negative temperature- Wednesday and Thursday; Positive temperature- Monday, Tuesday, and Friday. * Part 3: Monday and Wednesday are the same distance from 0. Thursday and Friday are also the same distance from 0. The explanation should be clear and accurate. |

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| **Standards for Mathematical Practice** |
| **1. Makes sense and perseveres in solving problems.** |
| **2. Reasons abstractly and quantitatively.** |
| **3. Constructs viable arguments and critiques the reasoning of others.** |
| 4. Models with mathematics. |
| 5. Uses appropriate tools strategically. |
| **6. Attends to precision.** |
| 7. Looks for and makes use of structure. |
| 8. Looks for and expresses regularity in repeated reasoning. |

**Alaska Temperatures**

Last week the high temperatures in Alaska were as follows:

Monday: 5 degrees above 0 degrees Celsius

Tuesday: 3 degrees above 0 degrees Celsius

Wednesday: 5 degrees below 0 degrees Celsius

Thursday: 2 degrees below 0 degrees Celsius

Friday: 2 degrees above 0 degrees Celsius

Part 1:  
Make a number line and plot the points on the number line.

Part 2:

Which days have a high temperature that is a negative number? Which days have a high temperature that is a positive number?

Part 3:  
On which days were the temperatures the same distance from 0? Explain how you know.