WHISTLING AT THE AURORA

OVERVIEW

Lesson Summary:

Students use the scientific method to determine whether there are connections between whistling and aurora activity.

Objectives:

The student will:

- hypothesize the relationship between whistling and aurora activity;
- conduct an experiment;
- compile data on aurora activity observations;
- analyze data on aurora activity collected by student and class; and
- identify the relationship between whistling and the aurora and explain this conclusion.

GLEs Addressed:

Science

[5-8] SA1.1 The student demonstrates an understanding of the processes of science by asking questions, predicting, observing, describing, measuring, classifying, making generalizations, inferring, and communicating.

[5] SA1.2 The student demonstrates an understanding of the processes of science by using quantitative and qualitative observations to create inferences and predictions.

[6] SA1.2 The student demonstrates an understanding of the processes of science by collaborating to design and conduct simple repeatable investigations.

[7-8] SA1.2 The student demonstrates an understanding of the processes of science by collaborating to design and conduct simple repeatable investigations, in order to record, analyze (i.e., range, mean, median, mode), interpret data, and present findings.

[6] SA3.1 The student demonstrates an understanding that interactions with the environment provide an opportunity for understanding scientific concepts by gathering data to build a knowledge base that contributes to the development of questions about the local environment (e.g., moose browsing, trail usage, river erosion).

[7] SA3.1 The student demonstrates an understanding that interactions with the environment provide an opportunity for understanding scientific concepts by designing and conducting a simple investigation about the local environment.

[7] SF1.1-SF3.1 The student demonstrates an understanding of the dynamic relationships among scientific, cultural, social, and personal perspectives by investigating the basis of local knowledge (e.g., describing and predicting weather) and sharing that information.

[5] SG2.1 The student demonstrates an understanding of the bases of the advancement of scientific knowledge by reviewing and recording results of investigations into the natural world.

[6] SG2.1 The student demonstrates an understanding of the bases of the advancement of scientific knowledge by recognizing differences in results of repeated experiments.

Math

[6] S&P-3 The student demonstrates an ability to analyze data (comparing, explaining, interpreting, evaluating; drawing or justifying conclusions) by using mean, median, mode, or range (M6.2.3).

[7] S&P-3 The student demonstrates an ability to analyze data (comparing, explaining, interpreting, evaluating, making predictions; drawing or justifying conclusions) by determining mean, median, mode, or range (M6.3.3).

[7] PS-5 The student demonstrates the ability to apply mathematical skills and processes across the content strands by using real-world contexts such as science, humanities, peers, and community (M10.3.1 & M10.3.2).

[8] PS-5 The student demonstrates the ability to apply mathematical skills and processes across the content strands by using real-world contexts such as science, humanities, peers, community, and careers (M10.3.1 & M10.4.2).

Search Terms:

aurora, Northern Lights, legend, story, creative writing