

# IDENTIFYING AURORA SHAPES

## Lesson Summary:

Students apply what they have learned about aurora shapes in the classroom to the real world. Because the activity depends on aurora activity in your area, check the *Geophysical Institute Aurora Forecast* website: (<http://www.gedds.alaska.edu/AuroraForecast>) before giving the assignment. Additionally, students are expected to spend time outside on two different nights observing the aurora; please keep this in mind when assigning the activity.

## Objectives:

The student will:

- apply knowledge gained during in-class activities to the real-world;
- experience the aurora first-hand; and
- collect data about aurora shapes in their area over a period of time.

GLEs Addressed:

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Science

- [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] 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.
- [8] SA1.2 The student demonstrates an understanding of the processes of science by collaborating to design and conduct repeatable investigations, in order to record, analyze (i.e., range, mean, media, 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.
- [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.
- [9] SD3.2 The student demonstrates an understanding of cycles influenced by energy from the sun and by Earth's position and motion in our solar system by explaining the phenomena of the aurora.

## Search Terms:

- Aurora Forecast
- observation
- aurora shapes
- quiet arc
- rayed band
- long aurora rays
- patches
- data collecting

