

SPEED OF SOLAR WIND

Lesson Summary:

Students determine when a solar blast will hit Earth's magnetic field (magnetosphere) based on current solar wind speeds.

Objectives:

The student will:

- research current space weather conditions; and
- convert units to determine the actual time of an auroral display.

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.
- [11] 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 exploring causes and effects related to phenomena (e.g., the aurora, solar winds, Coriolis Effect).

Math

- [6] MEA-4 The student demonstrates ability to use measurement techniques by calculating elapsed time (minutes, hours) (M2.2.5).
- [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:

- solar wind
- Earth's magnetic field
- space weather
- Kp Index
- mathematics
- aurora
- Northern Lights