PLASMA: IT MATTERS

OVERVIEW

Lesson Summary:

Many people know about the three states of matter: solid, liquid, and gas. The fourth state, plasma, is less understood. Plasma plays a significant role in the aurora phenomenon. Students classify characteristics and examples into four categories that represent the states of matter.

Objectives:

The student will:

- recall and record items from a visual aid;
- assign categories to a list using inductive reasoning;
- identify examples of the four states of matter; and
- compare chemical units of matter (molecules, atoms, electrons, protons, neutrons) and states of matter.

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] SB1.1 The student demonstrates an understanding of the structure and properties of matter by comparing models that represent matter as solids, liquids, or gases and the changes from one state to another.

[6] SB1.1 The student demonstrates an understanding of the structure and properties of matter by using models to represent matter as it changes from one state to another.

[6] SB3.1 The student demonstrates an understanding of the interactions between matter and energy and the effects of these interactions on systems by recognizing that most substances can exist as a solid, liquid, or gas depending on temperature.

[9] SB1.1 The student demonstrates an understanding of the structure and properties of matter by describing atoms and their base components (i.e., protons, neutrons, electrons).

Search Terms:

- matter
- plasma
- solid
- liquid
- gas
- aurora
- Northern Lights
- inductive reasoning
- chemical units
- molecules
- atoms
- electrons
- protons
- neutrons