

# COMPLETE THE CIRCUIT

## Lesson Summary:

Students compare the components of a generator to the dynamics of the aurora.

## Objectives:

The student will:

- identify components of the aurora phenomenon; and
- compare components of a generator to the aurora.

## 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.
- [7] SB4.2 The student demonstrates an understanding of motions, forces, their characteristics, relationships, and effects by recognizing that electric currents and magnets can exert a force on each other.
- [10] SB4.2 The student demonstrates an understanding of motions, forces, their characteristics, relationships, and effects by explaining that different kinds of materials respond to electric and magnetic forces (i.e., conductors, insulators, magnetic, and non-magnetic materials).
- [11] SB4.2 The student demonstrates an understanding of motions, forces, their characteristics, relationships, and effects by conducting an experiment to explore the relationships between magnetic forces and electric forces to show that they can be thought of as different aspects of a single electromagnetic force (e.g., generators and motors).
- [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:

- generator
- electroboard
- circuit
- conductor
- magnetic field
- plasma sheet
- positive terminal
- negative terminal
- solar wind
- magnetosphere
- model
- aurora
- Northern Lights