Name Date

Vocabulary

STUDENT RESOURCE **7.1**
INFORMATION SHEET

electric current the flow of electric charges through a closed circuit

When electric current flows through a wire in a closed circuit, it produces a magnetic field around the wire.

electromagnet a magnet made by passing electric current through a coil of wire wrapped around an iron core

Electric current passing through a wire produces a magnetic field around the wire. If the wire is wrapped around a piece of iron, the iron becomes a magnet. The iron stops being a magnet when the current is turned off.

magnetic field the area around a magnet where magnetic forces act

The magnetic field exists all around a magnet, but it is strongest at the magnet's poles. A magnetic field also exists around a wire that current is flowing through. This makes the wire act as a magnet.

temporary magnet a material that acts as a magnet for only a short time

An electromagnet is a temporary magnet. It is only a magnet when electric current is flowing through the wire. When the current stops flowing, the electromagnet is no longer a magnet.