



Magnets and Electricity Generation

Duration: 1 hour

Purpose: To support and teach the concepts of magnetic influences on the world around us. This project will utilize various strength magnets and LED lights to demonstrate the ability to generate electricity.

Key elements to the project include:

1. Magnet strength
2. Proximity of fields and their strengths
3. LEDs of various volts/watts to see how these magnetic fields light the components
4. Three loops of wire to simulate coils found throughout everyday life

Required materials:

1. LEDs with various voltage and wattage requirements
2. Four or more rare earth magnets about ½ inch x ½ inch
3. Any type of metal "U" bracket, various widths to change magnetic fields
4. 300 feet magnet wire
5. Ceramic ring magnets
6. Magnetic field model (shows magnetic lines of force) or magnetic field observation window kit

Course objectives:

- Demonstrate how magnetic fields are generated
- Understand what it takes to make electricity using magnets
- Understand what factors effect the generation of electricity