

## Physical Science (Electromagnetism)

Grade 8 Science    Grade 8 Science

Start Date: May 05, 2014

End Date : May 23, 2014

<p>Unit Overview</p> <p>This topic focuses on forces and motion within, on and around the Earth and within the universe.</p>	<p>Content Elaborations</p> <p>A field model can be used to explain how two objects interact without touching. An object is thought to have a region of influence around it. When a second object with an appropriate property enters this region, a force is exerted on it and can cause changes in the motion of the object.</p> <p>Electric fields exist around objects with charge. When two objects with electric field, the two objects experience electric forces that depend on the charges involved. Electric force weakens rapidly as distance increases.</p> <p>Magnetic fields exist around magnetic objects. When two objects with magnetic field, the two objects experience magnetic forces that depend on the objects involved. Magnetic force weakens rapidly as distance increases. Magnetic field lines can be seen when iron filings are sprinkled around a magnet.</p>	<p>Unit Resources</p> <p>Textbook: Chapter 18          Study Island Enrichment          Gizmo Lab: <b>Electromagnetic Induction</b>          Gizmo Lab: <b>Magnetism</b></p>
<p>Unit Vocabulary</p> <p>Magnet          Magnet Pole          Magnetic Force          Electromagnetism          Electromagnet          Solenoid          Electric Motor          Electromagnetic Induction          Electric Generator          Transformer</p>	<p>Enduring Understandings (Big Ideas)</p> <p><b>Forces between objects act when the objects are in direct contact or when they are not touching.</b></p> <p>Magnetic, electrical and gravitational forces can act at a distance.</p>	<p>Connections</p>

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## Standards

Student Assessment	Unit Reflection
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## Electromagnetism

Content	Skills	Assessment
A. Electromagnetism	A. Electromagnetism <ol style="list-style-type: none"><li>1. Describe the properties of magnets</li><li>2. Explain why some materials are magnetic and some are not</li><li>3. Describe kinds of magnets</li><li>4. Give two examples of the effect of Earth's magnetic field</li><li>5. Identify the relationship between an electric current and a magnetic field</li><li>6. Describe an electromagnet</li><li>7. Describe how electromagnetism is involved in the operation of doorbells, electric motors, etc.</li><li>8. Explain how a magnetic field can make an electric current</li><li>9. Explain how electromagnetic induction is used in a generator</li></ol>	