



Oxford City Schools

# Proficiency Scale

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**GRADE LEVEL: 8      COURSE NAME: SCIENCE**

**MEASUREMENT TOPIC: EXPLAIN THE EFFECT OF NON-CONTACT FIELD FORCES**

<b>4</b>	<ul style="list-style-type: none"><li>Investigate a real world problem and solution of a field force(s).</li></ul>
<b>3</b>	<ul style="list-style-type: none"><li><b>Design and construct an electromagnet and modify the design to change its strength. (12a)</b></li><li><b>Use a model to identify factors affecting the strength of noncontact forces, including magnetic, gravitational, and electrical forces, and demonstrate that fields exist even though the objects are not in contact. (12)</b></li><li><b>Develop and use a model to construct an explanation of how electrical energy is transferred and transformed. (16)</b></li></ul>
<b>2</b>	<ul style="list-style-type: none"><li>Collect data to identify the factors that affect the strength of field forces.</li><li>Compare/contrast the orientation and strength of field forces.</li><li>Explore evidence to explain the existence of a field force.</li></ul>

**1**

With help, a partial understanding of some of the simpler details and processes and some of the more complex ideas and processes.

**Key Vocabulary:**

**magnetic field, electric field, gravitational field, forces, energy, electrical circuit, magnetism, and gravity**