### Relevant Primary Connections Unit

- Minimising fossil exploitation - Biological Sciences (adapted unit available June 2013)
- Change Beneath Us - Chemical Sciences (adapted unit available September 2013)
- Earthquake Exposed - Earth and Space Sciences (adapted unit available April 2013)
- It’s Unfolding and Essential Energy - Physical Sciences (Essential Energy available end of January 2013)

### Supplementary Resources

- BBC Biology interactive activities
- Sketch Science - Pearson Education
- A+ Science (Books and notes online)
- National Digital Resources
- NESCA Science
- BBC Earth Science clips
- Waka Ngärua

**Content Descriptors**

<table>
<thead>
<tr>
<th>SCIENCE UNDERSTANDINGS</th>
<th>SCIENCE AS A HUMAN ENDVOUR</th>
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</thead>
<tbody>
<tr>
<td><strong>Biological Sciences</strong></td>
<td><strong>Nature and Development of Science</strong></td>
<td><strong>Questioning and Predicting</strong></td>
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<tr>
<td>- Investigating the growth of fungi such as yeast and bread mould in different conditions</td>
<td>- Investigating how knowledge about the effects of using the Earth’s resources has changed over time</td>
<td>- With guidance, plan activities to verify practical problems or in scientific investigations and predict what the findings might mean in an investigation context</td>
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<tr>
<td>- Investigating the role of animals in the environment</td>
<td>- Investigating how understanding of the causes and effects of major natural events has changed as new evidence has become available</td>
<td>- Discussing in groups possible solutions to investigate or identify problems that relate to students’ lives</td>
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<td>- Investigating the effects of pollution in the environment</td>
<td>- Investigating the role of electricity, including exploring the effects of changes to electric circuits</td>
<td>- Exploring ways that scientific understanding may help in new situations by drawing ideas about what may happen in an investigation context</td>
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<tr>
<td>- Investigating the roles of living organisms in the environment</td>
<td>- Considering how gathering evidence helps predict the effect of major geoscientific or climatic events</td>
<td>- Examining causes and consequences of natural disasters and events in investigations</td>
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**Important contributions to the advancement of science have been made by people from a range of cultures**

**Scientific knowledge is used to inform present and future decisions.**

-addressing how models can be used to represent scientific ideas and construct physical models to demonstrate an aspect of scientific understanding

**SCIENCE UNDERSTANDINGS**

- exploring how reversible changes can be used to recycle materials
- describing what happens when materials are mixed
- Changes to materials can be reversible such as melting, freezing, evaporating; or irreversible such as rusting

**Chemical Sciences**

- Investigating the growth of fungi such as yeast and bread mould in different conditions
- Investigating how changing the physical conditions for plants impacts on their growth and survival such as
  - observing the growth of plants such as peas and broad beans in different conditions
  - investigating how temperature affects plant growth and survival
  - observing the effects of temperature changes on plant growth and survival
  - investigating the effects of changes to light intensity on plant growth and survival

**Physical Sciences**

- Investigating the effects of changes to light intensity on plant growth and survival
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**Using the Influence of Science**

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**SCIENCE UNDERSTANDINGS**

- exploring the features of electrical devices such as switches and light globes
- Investigating different electrical conductors and insulators
- Electrical circuits provide a means of transferring and transforming electricity.

**Processing and Analyzing Data and Information**

- Understanding how models can be used to represent scientific ideas and construct physical models to demonstrate an aspect of scientific understanding

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