



Primary Investigations

NSW Science and Technology K-6 Syllabus and *Primary Investigations*

This table shows how lessons in the Australian Academy of Science's *Primary Investigations* program relate to the *Science and Technology K-6 Syllabus Content Strands and Learning Processes*.

The basic philosophy of *Primary Investigations* and the instructional model used are entirely compatible with the **values and attitudes** subset of the syllabus and can play a significant role in helping to achieve those outcomes.

The learning outcomes for the four stages of the syllabus are related to *Primary Investigations* as follows:

- Early Stage 1: *Primary Investigations* Book 1;
- Stage 1: *Primary Investigations* Books 1, 2 and 3;
- Stage 2: *Primary Investigations* Books 3, 4 and 5;
- Stage 3: *Primary Investigations* Books 5, 6 and 7.

The overlap of books across stages facilitates the use of *Primary Investigations* for combined classes.

Like the syllabus, *Primary Investigations* recognises that 'not all learning outcomes will be achieved by all students at the same time' and that many outcomes will need to be revisited several times. For this reason, the same outcome may be addressed in the table two or three times – sometimes in the same book and sometimes in several books across the course.

Most lessons contribute to a number of outcomes and the extent to which particular outcomes are met is influenced by the emphasis placed on particular parts of lessons. It is therefore important to have the desired outcomes in mind when planning lessons.

Although not included in this table, many lessons contribute to learning outcomes in **Human society and its environment**. Some lessons also contribute to outcomes in other key learning areas, particularly **Mathematics** and **English**, thus providing opportunities for integration.

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For more information about *Primary Investigations* call the Australian Academy of Science toll free on 1800 67 3383, email us at aas@science.org.au, or visit our website at www.science.org.au/pi.

Early Stage 1 Outcomes	Book . Lesson
Content strands	
<p>Built environments <i>BE ES1.1</i> Explores and identifies ways in which built environments suit their users.</p>	<p>1.9, 1.18, 1.21</p>
<p>Information and communication <i>IC ES1.2</i> Recognises and uses various means of communication.</p>	<p>1.7, 1.8, 1.10, 1.18, 1.19</p>
<p>Living things <i>LT ES1.3</i> Identifies ways in which living things are different and have different needs.</p>	<p>1.2, 1.3, 1.4, 1.5, 1.6, 1.11, 1.13, 1.14</p>
<p>Physical phenomena <i>PP ES1.4</i> Explores and identifies ways some forms of energy are used in their daily lives.</p>	<p>1.11, 1.16, 1.17</p>
<p>Products and services <i>PS ES1.5</i> Recognises the relationship between everyday products and people's needs.</p>	<p>1.11</p>

Early Stage 1 Outcomes	Book . Lesson
<p>Earth and its surroundings <i>ES ES1.6</i> Explores and identifies ways the environment influences their daily lives.</p>	<p>1.10, 1.22, 1.23, 1.24</p>
<p>Learning processes</p>	
<p>Investigating <i>INV ES1.7</i> Investigates their surroundings by observing, questioning, exploring and reporting.</p>	<p>1.1, 1.2, 1.3, 1.4, 1.5, 1.6, 1.7, 1.8, 1.9, 1.10, 1.11, 1.13, 1.14, 1.16, 1.17, 1.18, 1.19, 1.21, 1.22, 1.23, 1.24</p>
<p>Designing and making <i>DM ES1.8</i> Generates own ideas and designs through trial and error, play, modelling and making.</p>	<p>1.5, 1.13, 1.14, 1.21</p>
<p>Using technology <i>UT ES1.9</i> Identifies and uses a limited range of equipment, computer-based technology, materials, and other resources when undertaking exploration and production.</p>	<p>1.7, 1.8, 1.9, 1.10, 1.11</p>

Stage 1 Outcomes	Book . Lesson
Content strands	
<p>Built environments <i>BE S1.1</i> Creates, modifies or models built environments to suit the needs of users.</p>	<p>1.9 2.2, 2.3, 2.4, 2.6, 2.8, 2.9, 2.11, 2.12, 2.13, 2.14, 2.15, 2.16</p>
<p>Information and communication <i>IC S1.2</i> Creates a range of information products and communicates using a variety of media.</p>	<p>1.7, 1.8, 1.10 2.18, 2.20 3.7, 3.8, 3.10, 3.13, 3.21</p>
<p>Living things <i>LT S1.3</i> Identifies and describes ways living things grow and change.</p>	<p>1.5, 1.14 2.6, 2.8, 2.9, 3.2, 3.3, 3.4, 3.5, 3.12, 3.18a, 3.18b, 3.19, 3.20, 3.21</p>
<p>Physical phenomena <i>PP S1.4</i> Identifies and describes different ways some forms of energy are used in the community.</p>	<p>1.15, 1.16, 1.17 3.6, 3.16, 3.20</p>
<p>Products and services <i>PS S1.5</i> Grows, makes or processes some products using a range of techniques and materials.</p>	<p>2.15, 2.16 3.9, 3.13, 3.14, 3.15, 3.16</p>

Stage 1 Outcomes	Book . Lesson
<p>Earth and its surroundings</p> <p><i>ES S1.6</i></p> <p>Identifies and describes ways people and other living things depend upon the Earth and its environments.</p>	<p>2.5, 2.10, 2.16</p> <p>3.1, 3.2, 3.6, 3.20</p>
<p>Learning processes</p>	
<p>Investigating</p> <p><i>INV S1.7</i></p> <p>Conducts guided investigations by observing, questioning, predicting, collecting and recording data and suggesting possible explanations.</p>	<p>1.5, 1.7, 1.10, 1.15, 1.16</p> <p>2.1, 2.2, 2.3, 2.4, 2.5, 2.6, 2.7, 2.8, 2.9, 2.10, 2.11, 2.12, 2.13, 2.14, 2.15, 2.16, 2.18, 2.20</p> <p>3.1, 3.2, 3.3, 3.4, 3.5, 3.6, 3.7, 3.8, 3.9, 3.10</p> <p>3.12, 3.13, 3.14, 3.15, 3.16, 3.17, 3.18a, 3.18b, 3.19, 3.20, 3.21</p>
<p>Designing and making</p> <p><i>DM S1.8</i></p> <p>Develops and implements their own design ideas in response to an investigation of needs and wants.</p>	<p>1.5</p> <p>2.11, 2.12, 2.13, 2.14, 2.15, 2.16</p> <p>3.1, 3.2, 3.16, 3.20, 3.21</p>
<p>Using technology</p> <p><i>UT S1.9</i></p> <p>Selects and uses a range of equipment, computer-based technology, materials and other resources to undertake an investigation or design task.</p>	<p>1.7, 1.10</p> <p>2.14, 2.15, 2.16</p> <p>3.6, 3.13, 3.14, 3.15, 3.16, 3.18a, 3.18b</p>

Stage 2 Outcomes	Book . Lesson
Content strands	
<p>Built environments <i>BE S2.1</i> Creates, models and evaluates built environments reflecting consideration of functional and aesthetic factors.</p>	<p>4.12, 4.13, 4.14, 4.15 5.7</p>
<p>Information and communication <i>IC S2.2</i> Creates and evaluates information products, demonstrating an understanding of the needs of particular audiences.</p>	<p>3.2 4.7, 4.9, 4.10, 4.11 5.12</p>
<p>Living things <i>LT S2.3</i> Identifies and describes the structure and function of living things and ways in which living things interact with other living things and their environment.</p>	<p>3.18a, 3.18b, 3.19 4.8, 4.9 5.2, 5.3, 5.4, 5.5, 5.6, 5.7, 5.10, 5.11, 5.17, 5.20</p>
<p>Physical phenomena <i>PP S2.4</i> Identifies various types and sources of energy and devises systems that use energy.</p>	<p>3.14, 3.15, 3.16, 3.17 4.1, 4.2, 4.3, 4.16, 4.17, 4.18, 4.19 5.6, 5.13</p>
<p>Products and services <i>PS S2.5</i> Creates and evaluates products and services considering aesthetic and functional factors.</p>	<p>3.16, 3.17 4.12, 4.13, 4.14, 4.15 5.14, 5.15, 5.16, 5.17</p>

Stage 2 Outcomes	Book . Lesson
<p>Earth and its surroundings <i>ES S2.6</i> Identifies some of the features of the solar system and describes interactions that affect conditions on Earth.</p>	<p>4.16, 4.17, 4.18, 4.19, 4.20 5.17</p>
<p>Learning processes</p>	
<p>Investigating <i>INV S2.7</i> Conducts investigations by observing, questioning, predicting, testing, collecting, recording and analysing data, and drawing conclusions.</p>	<p>3.2, 3.14, 3.15, 3.16, 3.17, 3.18a, 3.18b, 3.19, 3.21 4.1, 4.2, 4.3, 4.4, 4.5, 4.6, 4.7, 4.8, 4.9, 4.10, 4.11, 4.12, 4.13, 4.14, 4.15, 4.16, 4.17, 4.18, 4.19, 4.20 5.1, 5.2, 5.3, 5.4, 5.5, 5.6, 5.7, 5.9, 5.10, 5.11, 5.12, 5.13, 5.14, 5.15, 5.16, 5.17 5.20</p>
<p>Designing and making <i>DM S2.8</i> Develops, implements and evaluates ideas using drawings, models and prototypes at appropriate stages of the design process.</p>	<p>3.2, 3.16, 3.21 4.10, 4.11, 4.12, 4.13, 4.15, 4.19 5.1, 5.3, 5.4, 5.5, 5.6, 5.7, 5.11, 5.13, 5.16</p>
<p>Using technology <i>UT S2.9</i> Selects and uses a range of equipment, computer-based technology, materials and other resources with developing skill to enhance investigation and design tasks.</p>	<p>3.15, 3.16, 3.17, 3.18a, 3.18b 4.3, 4.14, 4.15, 4.18 5.11, 5.12</p>

Stage 3 Outcomes	Book . Lesson
Content strands	
<p>Built environments <i>BE S3.1</i> Creates and evaluates built environments demonstrating consideration of sustainability and aesthetic, cultural, safety and functional issues.</p>	<p>5.7, 5.8, 5.12 6.15 7.5, 7.15</p>
<p>Information and communication <i>IC S3.2</i> Creates and evaluates information products and processes, demonstrating consideration of type of media, form, audience and ethical issues.</p>	<p>5.6, 5.12 7.20</p>
<p>Living things <i>LT S3.3</i> Identifies, describes and evaluates the interactions between living things and their effects on the environment.</p>	<p>6.7, 6.8 7.7, 7.8, 7.9, 7.10, 7.11, 7.14, 7.15, 7.16, 7.18, 7.19, 7.20</p>
<p>Physical phenomena <i>PP S3.4</i> Identifies and applies processes involved in manipulating, using and changing the form of energy.</p>	<p>5.13 6.2, 6.3, 6.4, 6.5, 6.6, 6.7, 6.8, 6.9, 6.10, 6.11, 6.12, 6.13, 6.14, 6.15, 6.16 7.3, 7.4, 7.6</p>
<p>Products and service <i>PS S3.5</i> Creates and evaluates products and services, demonstrating consideration of sustainability, aesthetic, cultural, safety and functional issues.</p>	<p>5.4, 5.6, 5.8, 5.12, 5.21 6.12, 6.13, 6.14, 6.15</p>

Stage 3 Outcomes	Book . Lesson
<p>Earth and its surroundings <i>ES S3.6</i> Recognises that the Earth is the source of most materials and resources, and describes phenomena and processes, both natural and human, that form and change the Earth over time.</p>	<p>5.17, 5.18, 5.19, 5.21 6.17, 6.18, 6.19, 6.20 7.3, 7.4, 7.7, 7.8, 7.9, 7.10, 7.18, 7.19</p>
<p>Learning processes</p>	
<p>Investigating <i>INV S3.7</i> Conducts their own investigations and makes judgements based on the results of observing, questioning, planning, predicting, testing, collecting, recording and analysing data, and drawing conclusions.</p>	<p>5.1, 5.4, 5.6, 5.7, 5.8, 5.12, 5.13, 5.17, 5.18, 5.19, 5.21 6.1, 6.2, 6.3, 6.4, 6.5, 6.6, 6.7, 6.8, 6.9, 6.10, 6.11, 6.12, 6.13, 6.14, 6.15, 6.16, 6.17, 6.18, 6.19, 6.20, 6.21 7.1, 7.3, 7.4, 7.5, 7.6, 7.7, 7.8, 7.9, 7.10, 7.11, 7.12, 7.13, 7.14, 7.15, 7.16, 7.18, 7.19, 7.20</p>
<p>Designing and making <i>DM S3.8</i> Develops and resolves a design task by planning, implementing, managing and evaluating design processes.</p>	<p>5.1, 5.3, 5.4, 5.6, 5.7 6.2, 6.6, 6.11, 6.12, 6.13, 6.14, 6.15, 6.16, 6.19, 6.20, 6.21 7.1, 7.5, 7.9, 7.10, 7.11, 7.13, 7.14</p>
<p>Using technology <i>UT S3.9</i> Evaluates, selects and uses a range of equipment, computer-based technology, materials and other resources to meet the requirements and constraints of investigation and design tasks.</p>	<p>6.13, 6.14 7.1, 7.6, 7.15</p>