

STEM Years 1- 10

Course Overview Year 3

Physical Sciences, Science Inquiry Skills, Science as a Human endeavour

Outcome	Concept	Activity	Worksheets	Resources Required
<p>SU Year 3 Heat can be produced in many ways and can move from one object to another</p> <p>SHE: Science involves making predictions and describing patterns and relationships</p> <p>SIS 1. With guidance, identify questions in familiar contexts that can be investigated scientifically and predict what might happen based on prior knowledge</p> <p>SIS 2. Suggest ways to plan and conduct investigations to find answers to questions</p> <p>SIS 3. Safely use appropriate materials, tools or equipment to make and record observations, using formal measurements and digital technologies as appropriate</p> <p>SIS 4. Use a range of methods including tables and simple column graphs to represent data and to identify patterns and trends</p> <p>SIS 5. Compare results with predictions, suggesting possible reasons for findings</p> <p>SIS 6. Reflect on the investigation; including whether a test was fair or not</p> <p>Technology: Designs are influenced by purpose</p>	<p>Year 3 Heat can be produced naturally (fires, sun) and artificially (heaters, microwave ovens)</p> <p>Temperature measures how hot a body is compared to others. Our bodies measure heat through the skin, which can be deceptive compared to the actual temperature.</p> <p>Different Materials for drinks, ice blocks and houses can be good conductors or poor conductors (insulators) of heat depending on type, colour, thickness, amount of surface or amount of liquid.</p> <p>Heat flows from hot to cold so keeping something cold means keeping the heat out.</p>	<ul style="list-style-type: none"> Lesson Hot and Cold Investigate temperature Investigate heat sources - Sun Investigate materials for heat conductivity <p>Projects</p> <ul style="list-style-type: none"> Design a house that stays cool inside. 	<p><i>3.1 Lesson 1 Hot and Cold.</i></p> <p><i>3.2 Investigating heat of the sun</i></p> <p><i>3.3 Investigating materials for cups.</i></p> <p><i>3.4 Investigation Keeping it Cold</i></p> <p><i>3.5P Project Design a “cool house”</i></p>	<p>Thermometer or Digital temperature probe</p> <p>Various cups and containers of different sizes and materials.</p> <p>Ice Various fabrics and colours</p> <p>Card board box and building materials. Various materials for covering, water based paints</p>

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<p>Technology Outcomes AC Syllabus Design</p> <p>4.2 Investigate how forces and the properties of materials affect the behaviour of a product or system</p> <p>4.4 Investigate the suitability of materials, components, systems, tools and equipment for a range of purposes</p> <p>4.7 Select and use materials, components, tools and equipment using safe work practices to make designed solutions</p> <p>4.8 Evaluate design ideas, processes and solutions based on criteria for success developed with guidance and including care for the environment</p> <p>4.9 Plan a sequence of production steps when making designed solutions individually and collaboratively</p>	<p>Year 3</p> <p>Different Materials for drinks, ice blocks and houses can be good conductors or poor conductors (insulators) of heat depending on type, colour, thickness, amount of surface or amount of liquid.</p>	<p>Projects</p> <ul style="list-style-type: none"> • Design a house that stays cool inside. • Lesson Hot and Cold • Investigate temperature • Investigate materials for heat conductivity 	<p>3.3 <i>Investigating materials for cups.</i></p> <p>3.4 <i>Investigation Keeping it Cold</i></p>	<p>Thermometer or Digital temperature probe</p> <p>Various cups and containers of different sizes and materials.</p> <p>Ice Various fabrics and colours</p> <p>Card board box and building materials. Various materials for covering, water based paints</p>
<p>Maths Outcomes AC Syllabus</p> <p>Make models of three-dimensional objects and describe key features (ACMMG063)</p> <p>Collect data, organise into categories and create displays using lists, tables, picture graphs and simple column graphs, with and without the use of digital technologies (ACMSP069)</p>	<p>Maths Features of a cool house include 3 dimensional shape and large area</p> <p>Complete table and examine trends and patterns. Draw a column graph showing temperature</p>	<p>Projects</p> <ul style="list-style-type: none"> • Design a house that stays cool inside. • Investigate heat sources - Sun 	<p>3.5P Project <i>Design a "cool house"</i></p> <p>3.2 <i>Investigating heat of the sun</i></p>	