

## Victorian Curriculum Links Years 7-8

<p><b>Scientific knowledge and understanding of the world changes as new evidence becomes available; science knowledge can develop through collaboration and connecting ideas across the disciplines and practice of science</b></p>	
<p><b>Science and technology contribute to finding solutions to a range of contemporary issues; these solutions may impact on other areas of society and involve ethical considerations</b></p>	<ul style="list-style-type: none"> <li>Investigating the development of vehicles over time, including the application of science and technology to the designs of solar-powered or electric vehicles</li> </ul>
<p><b>Energy appears in different forms including movement (kinetic energy), heat, light, chemical energy and potential energy; devices can change energy from one form to another</b></p>	<ul style="list-style-type: none"> <li>Using flow diagrams to illustrate changes between different forms of energy</li> </ul>
<p><b>Identify questions, problems and claims that can be investigated scientifically and make predictions based on scientific knowledge</b></p>	<ul style="list-style-type: none"> <li>Considering whether an investigation using available resources is possible when identifying questions or problems to investigate</li> <li>Using information and knowledge from their own investigations and secondary sources to predict the expected results from an investigation</li> <li>Recognising that the solution of some questions and problems may require consideration of social, cultural, economic or moral factors in addition to results from scientific investigation</li> </ul>
<p><b>Collaboratively and individually plan and conduct a range of investigation types, including fieldwork and experiments, ensuring safety and ethical guidelines are followed</b></p>	<ul style="list-style-type: none"> <li>Identifying whether the use of their own observations and experiments or the use of other research materials is appropriate for their investigation</li> <li>Using simulations and identifying their strengths and limitations</li> <li>Developing strategies and techniques for effective research using secondary sources, including use of the internet</li> </ul>
<p><b>In fair tests, measure and control variables, and select equipment to collect data with accuracy appropriate to the task</b></p>	<ul style="list-style-type: none"> <li>Taking into consideration all aspects of fair testing, available equipment, safe investigation and ethical considerations identifying and explaining the differences between controlled, dependent and independent variables when planning investigations</li> <li>Using specialised equipment to increase the accuracy of measurement within an investigation</li> </ul>
<p><b>Construct and use a range of representations including graphs, keys and models to record and summarise data from students' own investigations and secondary sources, and to represent and analyse patterns and relationships</b></p>	<ul style="list-style-type: none"> <li>Understanding different types of diagrammatic, graphical and physical representations and considering their strengths and limitations</li> <li>Comparing and contrasting data from a number of sources in order to create a summary of collected data</li> <li>Using diagrammatic representations to convey abstract ideas and to simplify complex situations</li> </ul>
<p><b>Use scientific knowledge and findings from investigations to identify relationships, evaluate claims and draw conclusions</b></p>	<ul style="list-style-type: none"> <li>Identifying data that provides evidence to support or refute the hypothesis being tested</li> <li>Drawing conclusions based on a range of evidence including from primary and secondary sources</li> </ul>
<p><b>Reflect on the method used to investigate a question or solve a problem, including evaluating the quality of the data collected, and identify improvements to the method</b></p>	<ul style="list-style-type: none"> <li>Identifying and considering indicators of the quality of the data when analysing results</li> <li>Discussing investigation methods with others to share ideas about the quality of the inquiry processes used</li> <li>Suggesting improvements to investigation methods that would improve the accuracy of the data recorded</li> </ul>
<p><b>Communicate ideas, findings and solutions to problems including identifying impacts and</b></p>	<ul style="list-style-type: none"> <li>Using digital technologies to access information, to communicate and collaborate with others on and off site and to present science ideas</li> </ul>

<p><b>limitations of conclusions and using appropriate scientific language and representations</b></p>	<ul style="list-style-type: none"><li>• Selecting and using appropriate language and representations to communicate science ideas within a specified text type and for a specified audience</li></ul>
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