

Curriculum connections

Victoria

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The Home Energy Project (HEP) activities address Victorian Essential Learning Standards (VELS) Levels 5 to 6.

Level 5

Strand	Domain	Dimension	Key elements of standards	Section
Physical, personal and social learning	Personal learning	Managing personal learning	<ul style="list-style-type: none"> Set realistic short and long-term goals and describe their progress towards achieving these. 	Conserve Communicate
	Civics and citizenship	Community engagement	<ul style="list-style-type: none"> Present points of view on contemporary issues and events using appropriate supporting evidence. Explain the different perspectives on some contemporary issues and propose possible solutions to problems. Use democratic processes when working in groups on class and community projects. Participate in school and community events and participate in activities to contribute to environmental sustainability or action on other community issues. 	Communicate
Discipline-based learning	The arts	Creating and making	<ul style="list-style-type: none"> Independently and collaboratively, plan, design, improvise, interpret, evaluate, refine, make and present arts works that represent and communicate ideas and purposes. Experiment with, select and use appropriate skills, techniques, processes, media, materials, equipment and technologies across a range of arts forms and styles. Generate and develop ideas that explore particular concepts, techniques and issues when making arts works. Combine and manipulate arts elements, principals and/or conventions to represent and communicate ideas and develop imaginative solutions to set tasks. 	Communicate

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Strand	Domain	Dimension	Key elements of standards	Section
	Science	Science knowledge and understanding	<ul style="list-style-type: none"> Use everyday examples of machines, tools and appliances to show how the thermodynamic model describes energy and change. 	Calculate
		Science at work	<ul style="list-style-type: none"> Design investigations that include measurement, using standard laboratory instruments and equipment and methods to improve accuracy in measurement. Make systematic observations and interpret recorded data appropriately. 	Conserve
	Mathematics	Working mathematically	<ul style="list-style-type: none"> Use technology such as graphic calculators, spreadsheets, dynamic geometry software and computer algebra systems for a range of mathematical purposes including numerical computation, graphing and investigation of patterns. 	Calculate Conserve
	Humanities (Geography)	Geographic knowledge and understanding	<ul style="list-style-type: none"> Describe the characteristics of the Asia-Pacific region and explain, with examples, how the interaction of physical processes and human activities create variations within the region. 	Calculate
	Humanities (Economics)	Economic knowledge and understanding	<ul style="list-style-type: none"> Make informed economic and consumer decisions, demonstrating the development of personal financial literacy. 	Calculate Conserve
Inter-disciplinary learning	Communication	Presenting	<ul style="list-style-type: none"> Use the communication conventions, forms and language appropriate to the subject to convey a clear message across a range of presentation forms to meet the needs of the context, purpose and audience. Provide and use constructive feedback and reflection to develop effective communication skills. 	Communicate
	Thinking	Reasoning, processing and inquiry	<ul style="list-style-type: none"> Use a range of strategies of reasoning and analysis to evaluate evidence and consider their own and others' points of view. 	Conserve Communicate

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Level 6

Strand	Domain	Dimension	Key elements of standards	Section
Physical, personal and social learning	Personal learning	Working in teams	<ul style="list-style-type: none"> • Work collaboratively, negotiate roles and delegate tasks. 	Conserve Communicate
	Civics and citizenship	Community engagement	<ul style="list-style-type: none"> • Draw on a range of resources, including the mass media to articulate and defend their own opinions about political, social and environmental issues in national and global contexts. • Contest, where appropriate, the opinions of others. • Develop an action plan which demonstrates their knowledge of a social or environmental issue and suggest strategies to raise community awareness of it. • Participate in a range of citizenship activities including those with a national or global perspective, at school and in the local community. 	Communicate
Discipline-based learning	The arts	Creating and making	<ul style="list-style-type: none"> • Apply decision making skills to find the most effective way to implement ideas and designs. • Create and make arts works devised from a range of stimuli. • Use a range of traditional and contemporary media, materials, equipment and technologies. 	Communicate
		Science knowledge and understanding	<ul style="list-style-type: none"> • Describe change in terms of energy using a range of biological, chemical and physical contexts. 	Calculate
	Science at work	<ul style="list-style-type: none"> • Use the relevant science concepts and relationships as one dimension of debating contentious and/or ethically based science-related issues of broad community concern. • Formulate their own hypotheses and plan and conduct investigations in order to prove or disprove them. • Select appropriate equipment and measurement procedures that will ensure a high degree of reliability in data collected and enable valid conclusions to be drawn. 	Conserve Communicate	
		<ul style="list-style-type: none"> • Construct working models and visual aids that demonstrate scientific ideas. • Present experimental results using appropriate data presentation formats, and comment on the nature of experimental errors. 		

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	Mathematics	Working mathematically	<ul style="list-style-type: none"> Use technology such as graphic calculators, spreadsheets, dynamic geometry software and computer algebra systems for a range of mathematical purposes. 	Calculate Conserve
	Humanities (Geography)	Geographic knowledge and understanding	<ul style="list-style-type: none"> Explain the operation of a major natural system and its interaction with human activities. Describe global patterns of development from a range of perspectives and identify and describe the factors that determine these patterns. 	Calculate
	Humanities (Economics)	Economic knowledge and understanding	<ul style="list-style-type: none"> Describe how markets, government policies, enterprise and innovation affect the economy, society and environment in terms of employment, economic growth, the use and provision of resources, exports and imports and ecological sustainability. 	Calculate
	English	Speaking and listening	<ul style="list-style-type: none"> Compare ideas, build on others' ideas, provide and justify other points of view, and reach conclusions that take account of aspects of an issue. 	Conserve Communicate
Inter-disciplinary learning	Thinking	Reasoning, processing and inquiry	<ul style="list-style-type: none"> Discriminate in the way they use a variety of sources. Generate questions that explore perspectives. Process and synthesise complex information and complete activities focusing on problem solving and decision making which involve a wide range and complexity of variables and solutions. Employ appropriate methodologies for creating and verifying knowledge in different disciplines. Make informed decisions based on their analysis of various perspectives and sometimes contradictory information. 	Conserve Communicate

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