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Year 5 curriculum connections

The Energy Savers Program addresses Essential Learnings from the following key learning areas by the end of year 5.

Key Learning Area	Essential Learnings	Section
Science (www.qsa.qld.edu.au/downloads/p-9/qcar_el_science_yr5.pdf)		
Ways of working		Calculate Communicate
	Students are able to: <ul style="list-style-type: none"> • plan activities and investigations, identifying and using elements of a fair test • collect and organise data, information and evidence • evaluate information and evidence to support data gathered from activities and investigations • draw conclusions that are supported by evidence, reproducible data and established scientific concepts • communicate scientific ideas, data and findings, using scientific terminology and formats appropriate to context and purpose • identify and apply safe practices • reflect on and identify different points of view and consider other people's values relating to science • reflect on learning to identify new understandings and future application. 	
Knowledge and understanding		
<i>Science as a human endeavour</i>	<ul style="list-style-type: none"> • Scientific ideas can be used to explain the development and workings of everyday items. • Science can help to make natural, social and built environments sustainable and may influence personal human activities. • Science can contribute to people's work and leisure. 	
<i>Earth and beyond</i>	<ul style="list-style-type: none"> • Changes to the surface of the earth or the atmosphere have identifiable causes, including human and natural activity. 	
<i>Earth and change</i>	<ul style="list-style-type: none"> • Different forms of energy used within a community have different sources. 	

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Key Learning Area	Essential Learnings	Section
Studies of society and environment (SOSE) (www.qsa.qld.edu.au/downloads/learning/qcar_el_sose_yr5.pdf)		
Ways of working		
	Students are able to: <ul style="list-style-type: none"> • collect and organise information and evidence. • evaluate sources of information and evidence to determine different perspectives, and distinguish facts from opinions. • draw and justify conclusions based on information and evidence 	Calculate
	<ul style="list-style-type: none"> • communicate descriptions, decisions and conclusions, using text types selected to match audience and purpose • share opinions, identify possibilities and propose actions to respond to findings • apply strategies to influence decisions or behaviours and to contribute to groups • reflect on and identify personal actions and those of others to clarify values associated with social justice, the democratic process, sustainability and peace. 	Communicate
Knowledge and understanding		
<i>Place and space</i>	<ul style="list-style-type: none"> • Interactions between people and places affect the physical features of the land, biodiversity, water and atmosphere. • Physical features of environments influence the ways in which people live and work in communities. • Sustainability of local natural, social and built environments can be influenced by positive and negative attitudes and behaviours. 	Calculate Communicate
Technology (www.qsa.qld.edu.au/downloads/learning/qcar_el_technology_yr5.pdf)		
Ways of working		
	Students are able to: <ul style="list-style-type: none"> • reflect on and analyse the impacts of products and processes on people, their communities and environments • evaluate the suitability of products and processes against criteria and recommend improvements • identify, apply and justify workplace health and safety practices • reflect on and analyse the impacts of products and processes on people, their communities and environments. 	Calculate Communicate
Knowledge and understanding		
<i>Technology as a human endeavour</i>	<ul style="list-style-type: none"> • People can influence decisions made about the design, development and use of technology to change the impact on people, their communities and environments at local and global levels. 	Calculate Communicate

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Key Learning Area	Essential Learnings	Section
Mathematics (www.qsa.qld.edu.au/downloads/learning/qcar_el_mathematics_yr5.pdf)		
Ways of working		
	<p>Students are able to:</p> <ul style="list-style-type: none"> analyse situations to identify the key mathematical features and conditions, strategies and procedures that may be relevant in the generation of a solution pose and refine questions to confirm or alter thinking and develop hypotheses and predictions select and use mental and written computations, estimations, representations and technologies to generate solutions and to check for reasonableness of the solution use mathematical interpretations and conclusions to generalise reasoning and make inferences evaluate their own thinking and reasoning, considering their application of mathematical ideas, the efficiency of their procedures and opportunities to transfer results into new learning communicate thinking, and justify and evaluate reasoning and generalisations, using mathematical language, representations and technologies reflect and identify the contribution of mathematics to their own and other people's lives 	Calculate Communicate
	<ul style="list-style-type: none"> plan and conduct activities and investigations, using valid strategies and procedures to solve problems. 	Calculate
Knowledge and understanding		
<i>Number</i>	<ul style="list-style-type: none"> Rational numbers (integers, fractions and decimals) can be used to describe and solve problems involving rate, ratio, proportion and percentage. Whole numbers can be multiplied and divided by whole numbers to 10. Problems can be interpreted and solved using rational and irrational numbers, including integers, simple powers and square roots, and conventions of the four operations to generate solutions using mental, written and technology-assisted strategies. Estimates with upper and lower boundaries can be formed. 	Calculate
<i>Measurement</i>	<ul style="list-style-type: none"> Instruments, technologies, strategies and formulas are used to estimate, compare calculate measures and derived measures, including rate, area, duration and Australian time zone differences. Standard units, including centimetre, metre, square centimetre, square metre, gram, kilogram, minute, degree, millilitre and litre, and a range of instruments are used to measure and order attributes of objects, including length, area, volume, mass, time, and angles. Relationships exist between units of equivalent measure and are used to make conversions of units. 	Calculate

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Key Learning Area	Essential Learnings	Section
<i>Chance and data</i>	<ul style="list-style-type: none"> Data can be gathered from samples and surveys, experiments and simulations, published data and databases, and used to estimate probabilities of events and to respond to claims and questions. Data interpretation is simplified through the use of suitable representations and descriptive statistics. Simple ensure of spread and centre distribution of responses, and the effect of bias and outliers on the measures of location are used to make inferences. 	Calculate Communicate
English (www.qsa.qld.edu.au/downloads/learning/qcar_el_english_yr5.pdf)		
Ways of working		
	<p>Students are able to:</p> <ul style="list-style-type: none"> identify main ideas and the sequence of events, make inferences and draw conclusions based on their understanding of the reliability of ideas and information across texts construct non-literary texts by planning and organising subject matter according to specific text structure and referring to other texts. 	Calculate Communicate
	<ul style="list-style-type: none"> recognise and select vocabulary and interpret and apply literal and figurative language. Interpret and analyse how language elements and other aspects of texts position readers/viewers/ listeners reflect on learning, apply new understandings and justify future applications demonstrate and analyse the relationship between audience, subject matter, purpose and text type construct literary texts by planning and developing subject matter, and manipulating language elements to present particular point of view reflect on and analyse how language choices position readers/viewers/listeners in particular ways for different purposes and can exclude information. 	Communicate
Knowledge and understanding		
<i>Reading and viewing</i>	<ul style="list-style-type: none"> Readers and viewers use a number of active comprehension strategies to interpret texts, including activating prior knowledge, predicting, questioning, identifying main ideas, inferring, monitoring, summarising and reflecting. Comprehension involves drawing on knowledge of the subject matter and contextual cues to interpret, infer from and evaluate texts in community contexts. Words, groups of words, visual resources and images can persuade an audience to agree with a point of view by portraying people, characters, places, events and things in different ways. Purposes for reading and viewing are identified and are supported by an evaluation of texts based on an overview that includes skimming and scanning titles, visuals, headings and subheadings, font size, tables of contents, indexes and glossaries. 	Calculate Communicate

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Queensland curriculum connections *continued...*

Key Learning Area	Essential Learnings	Section
<i>Literary and non-literary texts</i>	<ul style="list-style-type: none"> Non-literary texts analyse, inform, argue and persuade. Non-literary texts can conclude with recommendations, restating the main arguments or summarising a position. Reasoning, points of view and judgments are supported by evidence that can refer to authority sources. Audience can be positioned to view characters and ideas in particular ways and these views can be questioned. Feature articles, current affairs and news reports, formal letters, editorials, radio programs, film documentaries, reviews, biographies, advertisements, letters to the editor, expositions, formal meetings and debates, and extended presentations are types of non-literary texts 	Calculate Communicate
<i>Speaking and listening</i>	<ul style="list-style-type: none"> The purpose of speaking and listening includes examining issues, evaluating opinions, convincing others, and managing relationships and transactions, and seeking opinions of others. Speakers can adopt different roles, and make language choices appropriate to the level of formality. Speakers and listeners use a number of strategies to make meaning, including identifying purpose, activating prior knowledge, responding, questioning, identifying main ideas, monitoring, summarising and reflecting. In presentations, speakers make meaning clear through the selection and sequencing of ideas and information and the use of visual aids as support 	Calculate Communicate
<i>Writing and designing</i>	<ul style="list-style-type: none"> The purpose of writing and designing includes parodying, analysing and arguing. Words and phrases, symbols, images and audio affect meaning and interpretation. Writers and designers can adopt different roles, and make language choices appropriate to the audience. Writers and designers refer to authoritative sources and use a number of active writing strategies, including planning, drafting, revising, editing, proofreading, publishing and reflecting. Text users make choices about grammar and punctuation, to make meaning. 	Calculate Communicate
<i>Language elements</i>	<ul style="list-style-type: none"> Vocabulary is chosen to express ideas and information in a commonsense or technical way. Auditory, spoken, visual and nonverbal elements add meaning to the subject matter and focus the audience's attention. 	Calculate Communicate
The Arts (www.qsa.qld.edu.au/downloads/learning/qcar_el_arts_yr5.pdf)		
<i>Ways of working</i>	<ul style="list-style-type: none"> Select and develop ideas for arts works, considering different audiences and different purposes, using arts elements and languages. Rehearse and rework arts works, using interpretive and technical skills. Present arts works to informal and formal audiences, using arts techniques, skills and processes. 	Communicate
<i>Drama</i>	<ul style="list-style-type: none"> Role and status of relationships can be maintained using movement, including posture, gesture and body position, and expression of voice. 	Communicate

Queensland curriculum connections *continued...*

Year 6 curriculum connections

The Energy Savers Program addresses Essential Learnings from the following key learning areas by the end of year 7.

Key Learning Area	Essential Learnings	Section
Science (www.qsa.qld.edu.au/downloads/p-9/qcar_el_science_yr7.pdf)		
Ways of working		
	Students are able to: <ul style="list-style-type: none"> draw conclusions that summarise and explain patterns in data and are supported by evidence and scientific concepts reflect on different points of view and recognise and clarify people's values relating to the applications and impacts of science collect and analyse first- and second-hand data, information and evidence communicate scientific ideas, data and evidence, using scientific terminology suited to the context and purpose reflect on learning, apply new understandings and identify future applications identify problems and issues, and formulate testable scientific questions plan investigations, including identifying conditions for a fair comparison, variables to be changed and variables to be measured. 	Calculate Communicate
Knowledge and understanding		
<i>Science as a human endeavour</i>	<ul style="list-style-type: none"> Scientific knowledge can help to make natural, social and built environments sustainable, at a scale ranging from local to global Scientific knowledge has been accumulated and refined over time, and can be used to change the way people live. 	Calculate Communicate
<i>Energy and change</i>	<ul style="list-style-type: none"> Renewable and non-renewable energy sources can be identified and used for different purposes. Energy can be transferred and transformed. 	Calculate Communicate

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Key Learning Area	Essential Learnings	Section
Studies of society and environment (SOSE) (www.qsa.qld.edu.au/downloads/learning/qcar_el_sose_yr7.pdf)		
Ways of working		
	Students are able to: <ul style="list-style-type: none"> • evaluate sources of information and evidence for relevance, reliability, origins and perspective • identify issues and use common and own focus questions • draw conclusions and make decisions based on information and evidence by identifying patterns and connections • communicate descriptions, decisions and conclusions, using different text types for specific purposes and the conventions of research-based texts • respond to investigation findings and conclusions by planning and implementing actions • identify issues and use common and own focus questions. 	Calculate Communicate
	<ul style="list-style-type: none"> • plan investigations and use inquiry models • collect and analyse information and evidence from primary and secondary sources. 	Calculate
Knowledge and understanding		
<i>Place and space</i>	<ul style="list-style-type: none"> • Sustainability requires a balance between using, conserving and protecting environments, and involves decisions about how resources are used and managed. • Australian environments are defined by patterns of natural processes, by human activities and by the relationships between them, including climate and natural resource distribution, resource use, and settlement patterns. 	Calculate Communicate
Technology (www.qsa.qld.edu.au/downloads/learning/qcar_el_technology_yr7.pdf)		
Ways of working		
	Students are able to: <ul style="list-style-type: none"> • investigate and analyse the purpose, context, specifications and constraints for design ideas • reflect on and identify the impacts of products and processes on people, their communities and environments • select resources, techniques and tools to make products that meet specifications • generate and evaluate design ideas and determine suitability based on purpose, specifications and constraints • evaluate the suitability of products and processes for the purpose and context, and recommend improvements. 	Calculate Communicate

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Key Learning Area	Essential Learnings	Section
Knowledge and understanding		
<i>Technology as a human endeavour</i>	<ul style="list-style-type: none"> Design and development of products are influenced by societies' changing needs and wants, and include artefacts, systems, environments and services. Decisions made about the design, development and use of products can impact positively or negatively on people, their communities and environments. 	Calculate Communicate
Mathematics (www.qsa.qld.edu.au/downloads/learning/qcar_el_mathematics_yr7.pdf)		
Ways of working	<p>Students are able to:</p> <ul style="list-style-type: none"> analyse situations to identify mathematical concepts and the relationships between key features and conditions necessary to generate solutions select and use suitable mental and written computations, estimations, representations and technologies to generate solutions and to check for reasonableness communicate thinking and justify reasoning and generalisations, using mathematical language, representations and technologies develop arguments to justify predictions, inferences, decisions and generalisations from solutions reflect on and identify the contribution of mathematics to their life reflect on learning, apply new understanding and identify future applications pose questions that draw on familiar examples to clarify thinking and support predictions plan activities and investigations to explore concepts through selected pathways, and plan strategies to solve mathematical questions, problems and issues. 	Calculate Communicate
Knowledge and understanding		
<i>Number</i>	<ul style="list-style-type: none"> Percentages, rate, ratio and proportion can be used to describe relationships between quantities and to solve problems in practical situations involving money, time and other measures. Estimation strategies including rounding, and estimates based on powers of 10, assist in checking for reasonableness of calculations involving whole numbers and common and decimal fractions. Problems can be interpreted and solved by selecting from the four operations and mental, written and technology-assisted strategies. 	Calculate

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Key Learning Area	Essential Learnings	Section
<i>Chance and data</i>	<ul style="list-style-type: none"> • Sample data drawn from a given population can be summarised, compared and represented in a variety of ways. • Data can be discrete and can be allocated to categories or numbered. • Data may be continuous and described as distributions of quantities. • Variation and possible causes of bias can be identified in data collections. 	Calculate Communicate
<i>Measurement</i>	<ul style="list-style-type: none"> • Appropriate instruments, technologies and scale are used when exploring measurement of length, area, volume, mass, time and angles where not all of the graduations are numbered. • Relationship between the international system of measures, including between mm, cm, m and km; kg and t; cm² and m²; cm³ and m³. 	Calculate
English (www.qsa.qld.edu.au/downloads/learning/qcar_el_english_yr7.pdf)		
Ways of working		
	<p>Students are able to:</p> <ul style="list-style-type: none"> • construct non-literary texts to express meanings and messages, to identify causes and effects, and to state positions supported by evidence • construct literary texts by planning and developing subject matter, using dialogue, description and evaluative language • identify main ideas and the sequence of events, make inferences and draw conclusions based on ideas and information within and across texts 	Calculate Communicate
	<ul style="list-style-type: none"> • identify and demonstrate the relationship between audience, subject matter, purpose and text type • interpret and identify that readers/viewers/listeners are positioned by aspects of texts • recognise and select vocabulary and interpret the effect of literal and figurative language. 	Communicate
Knowledge and understanding		
<i>Reading and viewing</i>	<ul style="list-style-type: none"> • Readers and viewers use a number of active comprehension strategies to interpret texts, including activating prior knowledge, predicting, questioning, identifying main ideas, inferring, monitoring, summarising and reflecting. • Comprehension involves drawing on knowledge of the subject matter and contextual cues to interpret, infer from and evaluate texts in community contexts. • Words, groups of words, visual resources and images can persuade an audience to agree with a point of view by portraying people, characters, places, events and things in different ways. • Purposes for reading and viewing are identified and are supported by an evaluation of texts based on an overview that includes skimming and scanning titles, visuals, headings and subheadings, font size, tables of contents, indexes and glossaries. 	Calculate Communicate

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Queensland curriculum connections *continued...*

<i>Writing and design</i>	<ul style="list-style-type: none"> The purpose of writing and designing includes evoking emotion, persuading and informing. Writers and designers establish roles, make assumptions about their audience and position them through language choices. Words and phrases, symbols, images and audio affect meaning position and audience. Text users make choices about grammar and punctuation, to establish meaning. Writers and designers refer to authoritative sources and use a number of active writing strategies, including planning, drafting, revising, editing, proofreading, publishing and reflecting. 	Calculate Communicate
<i>Language elements</i>	<ul style="list-style-type: none"> Evaluative language, including adjectives, can appeal to certain groups, express opinions, and represent people, characters, places, events and things in different ways. Vocabulary is chosen to establish relationships, persuade others, describe ideas and demonstrate knowledge. 	Calculate Communicate
<i>Literary and non-literary texts</i>	<ul style="list-style-type: none"> Non-literary texts evaluate, inform, present arguments and persuade. Articles, features, letters to the editor, documentaries, interviews, advertisements, film reviews, information and news reports, autobiographies, arguments, groups discussions, meetings and debates are types of non-literary texts. Main ideas, issues and events are selected and organised to sustain a point of view and to project a level of authority that matches a purpose and an intended audience. A text can be constructed for more than one purpose. Literary texts entertain, evoke emotion, create suspense and convey messages and information. Poetic forms and poetic devices express thoughts and ideas in a variety of ways. 	Calculate Communicate
<i>Speaking and listening</i>	<ul style="list-style-type: none"> Active listeners identify ideas and issues from others' viewpoints and clarify meanings to justify opinions and reasoning. Speakers use their assumptions about the characteristics of listeners to engage their interest and attention. In presentations, speakers make meaning clear by organising subject matter, identifying their role and selecting relevant resources. Statements, questions and commands can use language that positions and represents ideas and information. The purpose of speaking and listening includes advancing opinions, discussing, persuading others to a point of view, influencing transactions, and establishing and maintaining relationships. Speakers and listeners use a number of strategies to make meaning, including identifying purpose, activating prior knowledge, responding, questioning, identifying main ideas, monitoring, summarising and reflecting. 	Communicate
The Arts (http://www.qsa.qld.edu.au/downloads/learning/qcar_el_arts_yr7.pdf)		
<i>Ways of working</i>	<p>Students are able to:</p> <ul style="list-style-type: none"> select and develop ideas for art works, considering intended audiences and intended purposes, and make decisions about arts elements and languages. 	Calculate Communicate
<i>Drama</i>	<ul style="list-style-type: none"> Roles and characters can be presented from different perspectives and in different situations, using variations in voice, movement and focus. Dramatic action is interpreted, prepared and shaped through scenarios and scripts. 	