

SPARKLAB AT QUEENSLAND MUSEUM

Australian Curriculum Links for Years 5-6

Semester 2, 2018

SparkLab is a new Sciencentre experience at Queensland Museum. Refer to the [Exhibition Guide](#) for an overview of the interactive exhibits and programs.

SparkLab exhibits and programs link to the Australian National Curriculum specifically in the learning areas of Science, Technologies and Mathematics, and support students to develop their general capabilities in Literacy, Numeracy, and Critical and Creative Thinking.

General capabilities relevant to SparkLab

Direct links

Literacy

Comprehending texts through listening, reading and viewing.

Text, Word and Visual knowledge.

Numeracy

Recognise and using patterns and relationships.

Using spatial reasoning.

Using measurement.

Critical and Creative Thinking

Inquiring – identifying, exploring and organising information and ideas.

Generating ideas, possibilities and actions.

Reflecting on thinking and processes.

Analysing, synthesising and evaluating reasoning and procedures.

Science

	Knowledge and Understanding	Science as a Human Endeavour and Science Inquiry Skills
Year 5	<p>Chemical sciences (ACSSU077) Solids, liquids and gases have different observable properties and behave in different ways.</p> <p>Earth and space sciences (ACSSU078) The Earth is part of a system of planets orbiting around a star (the sun).*</p> <p>Physical science (ACSSU080) Light from a source forms shadows and can be absorbed, reflected and refracted.</p>	<p>Nature and development of science (ACSHE081) Science involves testing predictions by gathering data and using evidence to develop explanations of events and phenomena.</p> <p>Use and influence of science (ACSHE083) Scientific understandings, discoveries and inventions are used to solve problems that directly affect people's lives.</p> <p>Questioning and predicting (AC SIS231) Pose questions to clarify practical problems or inform a scientific investigation, and predict what the findings of an investigation might be.</p> <p>Planning and conducting (AC SIS086) Plan appropriate investigation methods to answer questions or solve problems. (AC SIS087) Decide which variable should be changed and measured in fair tests.</p> <p>Processing and analysing information (AC SIS218) Compare data with predictions and use as evidence in developing explanations.</p> <p>Evaluating (AC SIS091) Suggest improvements to the methods used to investigate a question or solve a problem.</p> <p>Communicating (AC SIS093) Communicate ideas, explanations and processes in a variety of ways.</p>
Year 6	<p>Chemical sciences (ACSSU095) Changes to materials can be reversible, such as melting, freezing, evaporating; or irreversible such as burning or rusting.</p> <p>Earth and space sciences (ACSSU096) Sudden geological changes or extreme weather conditions can affect Earth's surface. *</p> <p>Physical sciences (ACSSU097) Electrical circuits provide a means of transferring and transforming electricity.</p> <p>Physical sciences (ACSSU218) Energy from a variety of sources can be used to generate electricity.</p>	<p>Nature and development of science (ACSHE098) Science involves testing predictions by gathering data and using evidence to develop explanations of events and phenomena.</p> <p>Questioning and predicting (AC SIS232) Pose questions to clarify practical problems or inform scientific investigation, and predict what the findings of an investigation might be.</p> <p>Planning and conducting (AC SIS103) Plan investigation methods to answer questions or solve problems. (AC SIS104) Decide which variable should be changed and measured in fair tests.</p> <p>Processing and analysing information (AC SIS221) Compare data with predictions and use as evidence in developing explanations.</p>

	Evaluating (AC SIS108) Suggest improvements to the methods used to investigate a question or solve a problem.
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Technologies – Design and Technologies

	Knowledge and Understanding	Design and Technologies Processes and Production Skills
Year 5-6	<p>Examine how people in design and technologies occupations address competing considerations (ACTDEK019)</p> <p>Investigate how electrical energy can control movement, sound or light in a design (ACTDEK020)</p> <p>Investigate characteristics and properties of a range of materials, components and equipment and evaluate the impact of their use (ACTDEK023)</p>	<p>Select appropriate materials, components, equipment and techniques and apply safe procedures to make designed solutions (ACTDEP026)</p>

Mathematics

	Number and Algebra	Measurement and Geometry
Year 5	<p><u>Fractions and decimals</u></p> <p>Compare and order common unit fractions (ACMNA102)*</p> <p>Investigate strategies to solve problems involving addition and subtraction of fractions (ACMNA103)*</p>	<p><u>Shape</u></p> <p>Connect 3D objects with their nets and other 2D representations (ACMMG111)*</p> <p><u>Geometric reasoning</u></p> <p>Estimate, measure and compare angles using degrees. (ACMMG112)</p>
Year 6	<p><u>Fractions and decimals</u></p> <p>Solve problems involving addition and subtraction of fractions (ACMNA126)*</p>	<p><u>Shape</u></p> <p>Construct simple prisms and pyramids (ACMMG140)</p> <p><u>Geometric reasoning</u></p> <p>Investigate angles on a straight line, angles at a point and vertically opposite angles (ACMMG141)*</p>

* Indirect link