SPARKLAB AT QUEENSLAND MUSEUM

Australian Curriculum Links for Years 3-4

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	**Critical and Creative Thinking**
Comprehending texts through listening, reading and viewing.	Inquiring – identifying, exploring and organising information and ideas.
Text, Word and Visual knowledge.	Generating ideas, possibilities and actions.
Numeracy	Reflecting on thinking and processes.
Recognise and using patterns and relationships.	Analysing, synthesising and evaluating reasoning and procedures.
Using spatial reasoning.	
Using measurement.	

Science

	Knowledge and Understanding	Science as a Human Endeavour and Science Inquiry Skills
Year 3	Chemical sciences (ACSSU046) A change of state between solid and liquid can be caused by adding or removing heat. Earth and space sciences (ACSSU048) Earth's rotation on its axis causes regular changes, including night and day. Physical sciences (ACSSU049) Heat can be produced in many ways and can move from one object to another.	Nature and development of science (ACSHE050) Science involves making predictions and describing patterns and relationships. Questioning and predicting (ACSIS053) Identify questions that can be investigated scientifically and predict what might happen based on prior knowledge. Planning and conducting (ACSIS054) Suggest ways to plan and conduct investigations to find answers to questions. Processing and analysing information (ACSIS215) Compare results with predictions, suggesting possible reasons for findings. Evaluating (ACSIS058) Reflect on the investigation, including whether a test was fair or not.
Year 4	Chemical sciences (ACSSU074) Natural and processed materials have a range of physical properties that can influence their use. Earth and space sciences (ACSSU075) Earth's surface changes over time as a result of natural processes and human activity.* Physical sciences (ACSSU076) Forces can be exerted by one object on another through direct contact or from a distance.	Nature and development of science (ACSHE061) Science involves making predictions and describing patterns and relationships. Questioning and predicting (ACSIS064) Identify questions that can be investigated scientifically and predict what might happen based on prior knowledge. Planning and conducting (ACSIS065) Suggest ways to plan and conduct investigations to find answers to questions. Processing and analysing information (ACSIS216) Compare results with predictions, suggesting possible reasons for findings. Evaluating (ACSIS069) Reflect on the investigation, including whether a test was fair or not.

Technologies – Design and Technologies

	Knowledge and Understanding	Design and Technologies Processes and Production Skills
Year 3 - 4	Investigate how forces and the properties of materials affect the behaviour of a product or system (ACTDEK011) Investigate the suitability of materials, systems, components, tools and equipment for a range of purposes (ACTDEK013)	Critique needs or opportunities for designing and explore and test a variety of materials, components, tools and equipment and the techniques needed to produce designed solutions (ACTDEP014)* Select and use materials, components and equipment and use safe work practices to make designed solutions (ACTDEP016) Evaluate design ideas, processes and solutions (ACTDEP017)

Mathematics

	Number and Algebra	Measurement and Geometry
Year 3	Fractions and decimals Model and represent unit fractions including 1/2, 1/4, 1/3, 1/5 and their multiples to a complete whole. (ACMNA058)*	Using units of measurement Measure, order and compare objects using familiar metric units of length, mass and capacity (ACMMG061)* Shape Make models of 3D objects and describe key features (ACMMG063) Geometric reasoning Identify angles as measures of turn and compare angle sizes in everyday situations (ACMMG064)*
Year 4	Fractions and decimals Investigate equivalent fractions used in contexts (ACMNA077)*	Using units of measurement Compare objects using familiar metric units of area and volume (ACMMG290)* Shape Compare and describe 2D shapes that result from combining and splitting common shapes (ACMMG088)*

* Indirect link