

The Australian Curriculum

Subjects	Science
Year levels	Year 6

Year 6 Content Descriptions

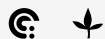
Science Understanding

Biological sciences

The growth and survival of living things are affected by physical conditions of their environment (ACSSU094 - Scootle [↗](#))

Elaborations

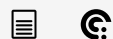
investigating how changing the physical conditions for plants impacts on their growth and survival such as salt water, use of fertilizers and soil types



observing the growth of fungi such as yeast and bread mould in different conditions



researching organisms that live in extreme environments such as Antarctica or a desert



considering the effects of physical conditions causing migration and hibernation

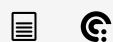


Chemical sciences

Changes to materials can be reversible or irreversible (ACSSU095 - Scootle [↗](#))

Elaborations

describing what happens when materials are mixed



investigating the solubility of common materials in water



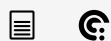
investigating the change in state caused by heating and cooling of a familiar substance



investigating irreversible changes such as rusting, burning and cooking



exploring how reversible changes can be used to recycle materials



investigate reversible reactions such as melting, freezing and evaporating



Earth and space sciences

Sudden geological changes and extreme weather events can affect Earth's surface

(ACSSU096 - Scootle [↗](#))

Elaborations

investigating major geological events such as earthquakes, volcanic eruptions and tsunamis in Australia, the Asia region and throughout the world

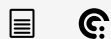


recognising that earthquakes can cause tsunamis

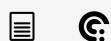
describing how people measure significant geological events



exploring ways that scientific understanding can assist in natural disaster management to minimise both long- and short-term effects



considering the effect of drought on living and non-living aspects of the environment



Physical sciences

Electrical energy can be transferred and transformed in electrical circuits and can be generated from a range of sources (ACSSU097 - Scootle [↗](#))

Elaborations

recognising the need for a complete circuit to allow the flow of electricity



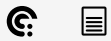
investigating different electrical conductors and insulators



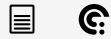
exploring the features of electrical devices such as switches and light globes



investigating how moving air and water can turn turbines to generate electricity



investigating the use of solar panels




considering whether an energy source is sustainable



Science as a Human Endeavour

Nature and development of science

Science involves testing predictions by gathering data and using evidence to develop explanations of events and phenomena and reflects historical and cultural contributions ([ACSHE098 - Scootle](#) )

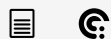


Elaborations

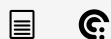
investigating how knowledge about the effects of using the Earth's resources has changed over time



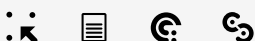
describing how understanding of the causes and effects of major natural events has changed as new evidence has become available



investigating the use of electricity, including predicting the effects of changes to electric circuits



considering how gathering evidence helps scientists to predict the effect of major geological or climatic events



investigating how people from different cultures have used sustainable sources of energy, for example water and solar power



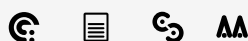
exploring institutions and locations where contemporary Australian scientists conduct research on catastrophic natural events



learning how Aboriginal and Torres Strait Islander knowledge, such as the medicinal and nutritional properties of Australian plants, is being used as part of the evidence base for scientific advances



investigating the development of earthquake measurements from the Chinese invention of the seismograph in the second century



Use and influence of science

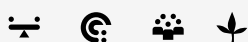
Scientific knowledge is used to solve problems and inform personal and community decisions

([ACSHE100 - Scootle](#))



Elaborations

considering how personal and community choices influence our use of sustainable sources of energy



investigating how understanding of catastrophic natural events helps in planning for their early detection and minimising their impact



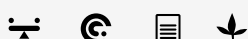
recognising that science can inform choices about where people live and how they manage natural disasters



considering how guidelines help to ensure the safe use of electrical devices



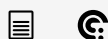
discussing the use of electricity and the conservation of sources of energy



researching the scientific work involved in global disaster alerts and communication, such as cyclone, earthquake and tsunami alerts



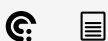
investigating how electrical energy is generated in Australia and around the world



researching the use of methane generators in Indonesia



considering how electricity and electrical appliances have changed the way some people live



Science Inquiry Skills

Questioning and predicting

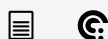
With guidance, pose clarifying questions and make predictions about scientific investigations

([AC SIS232 - Scootle](#) )

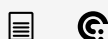


Elaborations

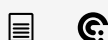
refining questions to enable scientific investigation




asking questions to understand the scope or nature of a problem



applying experience from previous investigations to predict the outcomes of investigations in new contexts



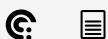
Planning and conducting

Identify, plan and apply the elements of scientific investigations to answer questions and solve problems using equipment and materials safely and identifying potential risks ([AC SIS103 - Scootle](#) )



Elaborations

following a procedure to design an experimental or field investigation




discussing methods chosen with other students, and refining methods accordingly



considering which investigation methods are most suited to answer a particular question or solve a problem



Decide variables to be changed and measured in fair tests, and observe measure and record **data** with accuracy using **digital technologies** as appropriate ([AC SIS104 - Scootle](#) )

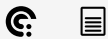


Elaborations

using familiar units such as grams, seconds and metres and developing the use of standard multipliers such as kilometres and millimetres




using the idea of an independent variable (note: this terminology does not need to be used at this stage) as something that is being investigated by changing it and measuring the effect of this change



using digital technologies to make accurate measurements and to record data



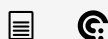
Processing and analysing data and information

Construct and use a range of representations, including tables and graphs, to represent and describe observations, patterns or relationships in **data** using **digital technologies** as appropriate ([AC SIS107 - Scootle](#) )



Elaborations

exploring how different representations can be used to show different aspects of relationships, processes or trends



using digital technologies to construct representations, including dynamic representations



Compare **data** with predictions and use as **evidence** in developing explanations ([AC SIS221 - Scootle](#) )

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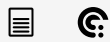


Elaborations

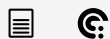
sharing ideas as to whether observations match predictions, and discussing possible reasons for predictions being incorrect



discussing the difference between data and evidence



referring to evidence when explaining the outcomes of an investigation



Evaluating

Reflect on and suggest improvements to scientific investigations ([AC SIS108 - Scootle](#) )




Elaborations

discussing improvements to the methods used, and how these methods would improve the quality of the data obtained



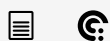
Communicating

Communicate ideas, explanations and processes using scientific representations in a variety of ways, including multi-modal texts ([AC SIS110 - Scootle](#) )

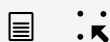


Elaborations

discussing the best way to communicate science ideas and what should be considered when planning a text



using a variety of communication modes, such as reports, explanations, arguments, debates and procedural accounts, to communicate science ideas



using labelled diagrams, including cross-sectional representations, to communicate ideas and processes within multi-modal texts

