

The Australian Curriculum

Subjects	Science
Year levels	Year 5

Year 5 Content Descriptions

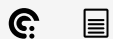
Science Understanding

Biological sciences

Living things have structural features and adaptations that help them to survive in their environment (ACSSU043 - [Scootle](#))

Elaborations

explaining how particular adaptations help survival such as nocturnal behaviour, silvery coloured leaves of dune plants



describing and listing adaptations of living things suited for particular Australian environments



exploring general adaptations for particular environments such as adaptations that aid water conservation in deserts



Chemical sciences

Solids, liquids and gases have different observable properties and behave in different ways (ACSSU077 - [Scootle](#))

Elaborations

recognising that substances exist in different states depending on the temperature



observing that gases have mass and take up space, demonstrated by using balloons or bubbles




exploring the way solids, liquids and gases change under different situations such as heating and cooling



recognising that not all substances can be easily classified on the basis of their observable properties

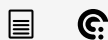


Earth and space sciences

The Earth is part of a system of planets orbiting around a star (the sun) ([ACSSU078 - Scootle](#) )

Elaborations

identifying the planets of the solar system and comparing how long they take to orbit the sun




modelling the relative size of and distance between Earth, other planets in the solar system and the sun



recognising the role of the sun as a provider of energy for the Earth



Physical sciences

Light from a source forms shadows and can be absorbed, reflected and refracted ([ACSSU080 - Scootle](#) )

Elaborations

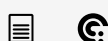
drawing simple labelled ray diagrams to show the paths of light from a source to our eyes



comparing shadows from point and extended light sources such as torches and fluorescent tubes



classifying materials as transparent, opaque or translucent based on whether light passes through them or is absorbed



recognising that the colour of an object depends on the properties of the object and the colour of the light source




exploring the use of mirrors to demonstrate the reflection of light

recognising the refraction of light at the surfaces of different transparent materials, such as when light travels from air to water or air to glass



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 ([ACSH081 - Scootle](#) )



Elaborations

developing an understanding of the behaviour of light by making observations of its effects



testing predictions relating to the behaviour of solids, liquids and gases by conducting observational experiments



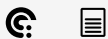
researching how scientists were able to develop ideas about the solar system through the gathering of evidence through space exploration



describing how scientists from a range of cultures have improved our understanding of the solar system, such as Copernicus, Khayyāṣim and Galileo




researching the different types of scientists who work in teams in space exploration, and Australia's involvement in space exploration



learning how Aboriginal and Torres Strait Islander Peoples used observation of the night sky to assist with navigation



Use and influence of science

Scientific knowledge is used to solve problems and inform personal and community decisions ([ACSH083 - Scootle](#) )



Elaborations

considering how best to ensure growth of plants



considering how decisions are made to grow particular plants and crops depending on environmental conditions



comparing the benefits of using solid, liquid or gaseous fuels to heat a home



describing the safety aspects of using gases



investigating how the development of materials such as plastics and synthetic fabrics have led to the production of useful products



describing how technologies developed to aid space exploration have changed the way people live, work and communicate



exploring objects and devices that include parts that involve the reflection, absorption or refraction of light such as mirrors, sunglasses and prisms



Science Inquiry Skills

Questioning and predicting

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

(ACIS231 - Scootle [↗](#))

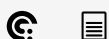


Elaborations


exploring the range of questions that can be asked about a problem or phenomena and with guidance, identifying those questions that could be investigated



applying experience from similar situations in the past to predict what might happen in a new situation



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 SIS086 - Scootle](#) )



Elaborations

experiencing a range of ways of investigating questions, including experimental testing, internet research, field observations and exploring simulations



explaining rules for safe processes and use of equipment




discussing the advantages of certain types of investigation for answering certain types of questions



considering different ways to approach problem solving, including researching, using trial and error, experimental testing and creating models



Decide variables to be changed and measured in fair tests, and observe measure and record data with accuracy using digital technologies as appropriate ([AC SIS087 - Scootle](#) )



Elaborations

discussing in groups how investigations can be made as fair as possible



using tools to accurately measure objects and events in investigation and exploring which tools provide the most accurate measurements




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



recording data in tables and diagrams or electronically as digital images and spreadsheets



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 SIS090 - [Scootle](#) )



Elaborations

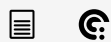
constructing tables, graphs and other graphic organisers to show trends in data




identifying patterns in data and developing explanations that fit these patterns



identifying similarities and differences in qualitative data in order to group items or materials



Compare data with predictions and use as evidence in developing explanations (AC SIS218 - [Scootle](#) )



Elaborations

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



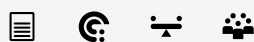
Evaluating

Reflect on and suggest improvements to scientific investigations (AC SIS091 - [Scootle](#) )




Elaborations

working collaboratively to identify where methods could be improved, including where testing was not fair and practices could be improved



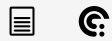
Communicating

Communicate ideas, explanations and processes using scientific representations in a variety of ways, including multi-modal texts ([AC SIS093 - Scootle](#) )

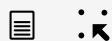


Elaborations

discussing how models represent scientific ideas and constructing physical models to demonstrate an aspect of scientific understanding



constructing multi-modal texts to communicate science ideas



using labelled diagrams, including cross-sectional representations, to communicate ideas

