

Prep–Year 6 Science

Australian Curriculum Version 9.0: Sequence of content descriptions

The following table provides a sequence of content descriptions aligned to the strands and sub-strands for Prep–Year 6 Science. Content descriptions identify the learning area’s essential knowledge, understanding and skills. This resource can be used to support curriculum planning. A similar resource is available for Years 7–10 Science.


Strand: Science understanding							
Sub-strands	Prep	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Biological sciences	observe external features of plants and animals and describe ways they can be grouped based on these features AC9SFU01	identify the basic needs of plants and animals, including air, water, food or shelter, and describe how the places they live meet those needs AC9S1U01		compare characteristics of living and non-living things and examine the differences between the life cycles of plants and animals AC9S3U01	explain the roles and interactions of consumers, producers and decomposers within a habitat and how food chains represent feeding relationships AC9S4U01	examine how particular structural features and behaviours of living things enable their survival in specific habitats AC9S5U01	investigate the physical conditions of a habitat and analyse how the growth and survival of living things is affected by changing physical conditions AC9S6U01
Earth and space sciences		describe daily and seasonal changes in the environment and explore how these changes affect everyday life AC9S1U02	recognise Earth is a planet in the solar system and identify patterns in the changing position of the sun, moon, planets and stars in the sky AC9S2U01	compare the observable properties of soils, rocks and minerals and investigate why they are important Earth resources AC9S3U02	identify sources of water and describe key processes in the water cycle, including movement of water through the sky, landscape and ocean; precipitation; evaporation; and condensation AC9S4U02	describe how weathering, erosion, transportation and deposition cause slow or rapid change to Earth’s surface AC9S5U02	describe the movement of Earth and other planets relative to the sun and model how Earth’s tilt, rotation on its axis and revolution around the sun relate to cyclic observable phenomena, including variable day and night length AC9S6U02
Physical sciences	describe how objects move and how factors including their size, shape or material influence their movement AC9SFU02	describe pushes and pulls in terms of strength and direction and predict the effect of these forces on objects’ motion and shape AC9S1U03	explore different actions to make sounds and how to make a variety of sounds, and recognise that sound energy causes objects to vibrate AC9S2U02	identify sources of heat energy and examine how temperature changes when heat energy is transferred from one object to another AC9S3U03	identify how forces can be exerted by one object on another and investigate the effect of frictional, gravitational and magnetic forces on the motion of objects AC9S4U03	identify sources of light, recognise that light travels in a straight path and describe how shadows are formed and light can be reflected and refracted AC9S5U03	investigate the transfer and transformation of energy in electrical circuits, including the role of circuit components, insulators and conductors AC9S6U03
Chemical sciences	recognise that objects can be composed of different materials and describe the observable properties of those materials AC9SFU03		recognise that materials can be changed physically without changing their material composition and explore the effect of different actions on materials including bending, twisting, stretching and breaking into smaller pieces AC9S2U03	investigate the observable properties of solids and liquids and how adding or removing heat energy leads to a change of state AC9S3U04	examine the properties of natural and made materials including fibres, metals, glass and plastics and consider how these properties influence their use AC9S4U04	explain observable properties of solids, liquids and gases by modelling the motion and arrangement of particles AC9S5U04	compare reversible changes, including dissolving and changes of state, and irreversible changes, including cooking and rusting that produce new substances AC9S6U04

Strand: Science as a human endeavour				
Sub-strands	Prep	Years 1–2	Years 3–4	Years 5–6
Nature and development of science			examine how people use data to develop scientific explanations AC9S3H01 AC9S4H01	examine why advances in science are often the result of collaboration or build on the work of others AC9S5H01 AC9S6H01
Use and influence of science	explore the ways people make and use observations and questions to learn about the natural world AC9SFH01	describe how people use science in their daily lives, including using patterns to make scientific predictions AC9S1H01 AC9S2H01	consider how people use scientific explanations to meet a need or solve a problem AC9S3H02 AC9S4H02	investigate how scientific knowledge is used by individuals and communities to identify problems, consider responses and make decisions AC9S5H02 AC9S6H02

Strand: Science inquiry				
Sub-strands	Prep	Years 1–2	Years 3–4	Years 5–6
Questioning and predicting	pose questions and make predictions based on experiences AC9SFI01	pose questions to explore observed simple patterns and relationships and make predictions based on experiences AC9S1I01 AC9S2I01	pose questions to explore observed patterns and relationships and make predictions based on observations AC9S3I01 AC9S4I01	pose investigable questions to identify patterns and test relationships and make reasoned predictions AC9S5I01 AC9S6I01
Planning and conducting	engage in investigations safely and make observations using their senses AC9SFI02	suggest and follow safe procedures to investigate questions and test predictions AC9S1I02 AC9S2I02	use provided scaffolds to plan and conduct investigations to answer questions or test predictions, including identifying the elements of fair tests, and considering the safe use of materials and equipment AC9S3I02 AC9S4I02	plan and conduct repeatable investigations to answer questions, including, as appropriate, deciding the variables to be changed, measured and controlled in fair tests; describing potential risks; planning for the safe use of equipment and materials; and identifying required permissions to conduct investigations on Country/Place AC9S5I02 AC9S6I02
		make and record observations, including informal measurements, using digital tools as appropriate AC9S1I03 AC9S2I03	follow procedures to make and record observations, including making formal measurements using familiar scaled instruments and using digital tools as appropriate AC9S3I03 AC9S4I03	use equipment to observe, measure and record data with reasonable precision, using digital tools as appropriate AC9S5I03 AC9S6I03
Processing, modelling and analysing	represent observations in provided templates and identify patterns with guidance AC9SFI03	sort and order data and information and represent patterns, including with provided tables and visual or physical models AC9S1I04 AC9S2I04	construct and use representations, including tables, simple column graphs and visual or physical models, to organise data and information, show simple relationships and identify patterns AC9S3I04 AC9S4I04	construct and use appropriate representations, including tables, graphs and visual or physical models, to organise and process data and information and describe patterns, trends and relationships AC9S5I04 AC9S6I04
Evaluating	compare observations with predictions with guidance AC9SFI04	compare observations with predictions and others' observations, consider if investigations are fair and identify further questions with guidance AC9S1I05 AC9S2I05	compare findings with those of others, consider if investigations were fair, identify questions for further investigation and draw conclusions AC9S3I05 AC9S4I05	compare methods and findings with those of others, recognise possible sources of error, pose questions for further investigation and select evidence to draw reasoned conclusions AC9S5I05 AC9S6I05
Communicating	share questions, predictions, observations and ideas with others AC9SFI05	write and create texts to communicate observations, findings and ideas, using everyday and scientific vocabulary AC9S1I06 AC9S2I06	write and create texts to communicate findings and ideas for identified purposes and audiences, using scientific vocabulary and digital tools as appropriate AC9S3I06 AC9S4I06	write and create texts to communicate ideas and findings for specific purposes and audiences, including selection of language features, using digital tools as appropriate AC9S5I06 AC9S6I06

More information

If you would like more information, please visit the QCAA website www.qcaa.qld.edu.au. Alternatively, email the K–10 Curriculum and Assessment branch at australiancurriculum@qcaa.qld.edu.au.

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