Year 7 Science

ACiQ v9.0

Australian Curriculum Version 9.0: Achievement standard aligned to content descriptions

This resource shows alignment between aspects of the achievement standard and relevant content descriptions for Year 7. A similar resource is available for other year levels.

The Australian Curriculum (AC) v9.0 code for each content description includes an element indicating the strand it is organised by, e.g. AC9S7U01 indicates Science understanding strand.

Key to content description codes: Science	
e.g. **AC9SFU01** Australian Curriculum (**AC**) Version 9 (**9**) Science (**S**) Year (**7**) Strand (**U**, **H**, **I**) Content description number (**##**)	Strands: • SU — Science understanding • SHE — Science as a human endeavour • SI — Science inquiry

Year 7 Australian Curriculum: Science achievement standard

By the end of Year 7 students explain how biological diversity is ordered and organised. They represent flows of matter and energy in ecosystems and predict the effects of environmental changes. They model cycles in the Earth-sun-moon system and explain the effects of these cycles on Earth phenomena. They represent and explain the effects of forces acting on objects. They use particle theory to explain the physical properties of substances and develop processes that separate mixtures. Students identify the factors that can influence development of and lead to changes in scientific knowledge. They explain how scientific responses are developed and can impact society. They explain the role of science communication in shaping viewpoints, policies and regulations.

Students plan and conduct safe, reproducible investigations to test relationships and aspects of scientific models. They identify potential ethical issues and intercultural considerations required for field locations or use of secondary data. They use equipment to generate and record data with precision. They select and construct appropriate representations to organise data and information. They process data and information and analyse it to describe patterns, trends and relationships. They identify possible sources of error in methods and identify unanswered questions in conclusions and claims. They identify evidence to support their conclusions and construct arguments to support or dispute claims. They select and use language and text features appropriately for their purpose and audience when communicating their ideas and findings.

Achievement standard aspect	Relevant content description/s	AC v9.0 code
By the end of Year 7	**Students learn to:**	
Students explain how biological diversity is ordered and organised.	• investigate the role of classification in ordering and organising the diversity of life on Earth and use and develop classification tools including dichotomous keys	AC9S7U01
They represent flows of matter and energy in ecosystems and predict the effects of environmental changes.	• use models, including food webs, to represent matter and energy flow in ecosystems and predict the impact of changing abiotic and biotic factors on populations	AC9S7U02
They model cycles in the Earth-sun-moon system and explain the effects of these cycles on Earth phenomena.	• model cyclic changes in the relative positions of the Earth, sun and moon and explain how these cycles cause eclipses and influence predictable phenomena on Earth, including seasons and tides	AC9S7U03
They represent and explain the effects of forces acting on objects.	• investigate and represent balanced and unbalanced forces, including gravitational force, acting on objects, and relate changes in an object's motion to its mass and the magnitude and direction of forces acting on it	AC9S7U04
They use particle theory to explain the physical properties of substances and develop processes that separate mixtures.	• use particle theory to describe the arrangement of particles in a substance, including the motion of and attraction between particles, and relate this to the properties of the substance	AC9S7U05
	• use a particle model to describe differences between pure substances and mixtures and apply understanding of properties of substances to separate mixtures	AC9S7U06
Students identify the factors that can influence development of and lead to changes in scientific knowledge.	• explain how new evidence or different perspectives can lead to changes in scientific knowledge	AC9S7H01
	• investigate how cultural perspectives and world views influence the development of scientific knowledge	AC9S7H02
They explain how scientific responses are developed and can impact society.	• examine how proposed scientific responses to contemporary issues may impact on society and explore ethical, environmental, social and economic considerations	AC9S7H03
They explain the role of science communication in shaping viewpoints, policies and regulations.	• explore the role of science communication in informing individual viewpoints and community policies and regulations	AC9S7H04
Students plan and conduct safe, reproducible investigations to test relationships and aspects of scientific models.	• develop investigable questions, reasoned predictions and hypotheses to explore scientific models, identify patterns and test relationships	AC9S7I01
	• plan and conduct reproducible investigations to answer questions and test hypotheses, including identifying variables and assumptions and, as appropriate, recognising and managing risks, considering ethical issues and recognising key considerations regarding heritage sites and artefacts on Country/Place	AC9S7I02
They identify potential ethical issues and intercultural considerations required for field locations or use of secondary data.	• plan and conduct reproducible investigations to answer questions and test hypotheses, including identifying variables and assumptions and, as appropriate, recognising and managing risks, considering ethical issues and recognising key considerations regarding heritage sites and artefacts on Country/Place	AC9S7I02
They use equipment to generate and record data with precision.	• select and use equipment to generate and record data with precision, using digital tools as appropriate	AC9S7I03
They select and construct appropriate representations to organise data and information.	• select and construct appropriate representations, including tables, graphs, models and mathematical relationships, to organise and process data and information	AC9S7I04

Achievement standard aspect	Relevant content description/s	AC v9.0 code
They process data and information and analyse it to describe patterns, trends and relationships.	• analyse data and information to describe patterns, trends and relationships and identify anomalies	AC9S7I05
They identify possible sources of error in methods and identify unanswered questions in conclusions and claims.	• analyse methods, conclusions and claims for assumptions, possible sources of error, conflicting evidence and unanswered questions	AC9S7I06
They identify evidence to support their conclusions and construct arguments to support or dispute claims.	• construct evidence-based arguments to support conclusions or evaluate claims and consider any ethical issues and cultural protocols associated with using or citing secondary data or information	AC9S7I07
They select and use language and text features appropriately for their purpose and audience when communicating their ideas and findings.	• write and create texts to communicate ideas, findings and arguments for specific purposes and audiences, including selection of appropriate language and text features, using digital tools as appropriate.	AC9S7I08

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.