Year 1 plan — Australian Curriculum: Science

Implementation year: School name:

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| Identify curriculum | Year level description  (highlighted aspects indicate differences from the previous year level) | The *Science Inquiry Skills* and *Science as a Human Endeavour* strands are described across a two-year band. In their planning, schools and teachers refer to the expectations outlined in the Achievement Standard and also to the content of the *Science Understanding* strand for the relevant year level to ensure that these two strands are addressed over the two-year period. The three strands of the curriculum are interrelated and their content is taught in an integrated way. The order and detail in which the content descriptions are organised into teaching/learning programs are decisions to be made by the teacher.  From Foundation to Year 2, students learn that observations can be organised to reveal patterns, and that these patterns can be used to make predictions about phenomena. In Year 1, students infer simple cause-and-effect relationships from their observations and experiences, and begin to link events and phenomena with observable effects. They observe changes that can be large or small and happen quickly or slowly. They explore the properties of familiar objects and phenomena, identifying similarities and differences. Students begin to value counting as a means of comparing observations, and are introduced to ways of organising their observations. | | | |
| Achievement standard | By the end of Year 1, students describe objects and events that they encounter in their everyday lives, and the effects of interacting with [materials](http://www.australiancurriculum.edu.au/Glossary?a=S&t=materials) and objects. They identify a range of habitats. They describe changes to things in their [local environment](http://www.australiancurriculum.edu.au/Glossary?a=S&t=local+environment) and suggest how science helps people care for environments.  Students make predictions, and investigate everyday phenomena. They follow instructions to record and sort their observations and share their observations with others. | | | |
| Source: Australian Curriculum, Assessment and Reporting Authority (ACARA), *Australian Curriculum v3.0: Science for Foundation–10* <www.australiancurriculum.edu.au/Science/Curriculum/F-10>. | | | |
| Teaching and learning | Term overview | Term 1 | Term 2 | Term 3 | Term 4 |
| Why do I live here?  During this term children examine a range of living things to explore the links between the external features of living things and the environments they live in.  Children will:   * explore the local environment, ask questions and make predictions * recognise common features of animals such as head, legs and wings and common features of plants such as leaves and roots * describe the use of animal body parts for particular purposes such as moving and feeding * describe the use of plant parts for particular purposes such as making food and obtaining water * recognise that different living things live in different places such as land and water * collect, record in tables and compare observations with predictions * compare observations with others * represent and communicate observations and ideas using oral and written language and drawing. | Science everyday  During this term children undertake investigations to explore and answer questions about physical change that occurs in objects they use every day.  Children will:   * ask questions and make predictions about how materials change when they are heated or cooled, bent, stretched or twisted * participate in guided investigations to test their predictions * collect, record in tables and compare observations * describe the physical change in materials using their knowledge of science and observations made during the unit * represent and communicate observations and ideas using oral and written language and drawing * appreciate that the physical changes that occur to everyday objects informs the type of material used to make them. | Exemplar unit: Changes around me  During this term children observe day and night and investigate observable changes that occur in the sky and landscape. They will ask questions and describe changes in objects and events related to the sky and landscape.  Children will:   * predict the changes they would observe in the sky and on the landscape during day and night * observe the sky and landscape during the day and night * compare their predictions and observations made of the sky and landscape during the day and night * monitor observations throughout the term * record observations in tables * represent and communicate observations and ideas using oral and written language and drawing * describe the changes in the sky and landscape they observe over the course of the term. | Light and sound  During this term children investigate the sources of light and sound. They apply what they have learnt by creating a short literary or non-literary text to elaborate for others how light and sound are produced and sensed.  Children will:   * respond to and pose questions about familiar objects * recognise that the senses of sight, touch and hearing are used to learn about sound and light in the world around them * recognise that objects can be seen when light from sources is available to illuminate them * participate in guided investigations to explore different ways to produce sound using familiar objects and actions * participate in guided investigations to compare sounds made by musical instruments using characteristics such as loudness, pitch and actions used to make the sound * appreciate how the characteristics of sound are used in everyday things * record observations in tables and compare observations with others * represent and communicate observations and ideas using oral and written language and drawing. |

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|  | Aboriginal and Torres Strait Islander perspectives | Science provides opportunities for children to strengthen their appreciation and understanding of Aboriginal peoples and Torres Strait Islander peoples and their living cultures. Specific content and skills within relevant sections of the curriculum can be drawn upon to encourage engagement with:   * Aboriginal and Torres Strait Islander frameworks of knowing and ways of learning * Indigenous contexts in which Aboriginal and Torres Strait Islander peoples live * Aboriginal peoples’ and Torres Strait Islander peoples’ contributions to Australian society and cultures.   Science provides opportunities to explore aspects of Australian Indigenous knowing with connection to, and guidance from, the communities who own them. Using a respectful inquiry approach, children have the opportunity to explore non-Indigenous science interpretations of Aboriginal and Torres Strait Islander lifestyles including knowledge of natural phenomena; native flora and fauna; and land, water and waste management. Using an inquiry approach enables children to learn science in contexts that are valued by Aboriginal and Torres Strait Islander children, their peers and communities, acknowledging their values and approaches to learning. | | | | | | | | |
| General capabilities and cross‑curriculum priorities | Opportunities to engage with:  gc_literacy gc_numeracy gc_critical gc_ict gc_personal_social  cc_sust | | Opportunities to engage with:  gc_literacy gc_numeracy gc_critical gc_ict gc_ethical gc_personal_social  cc_sust | | Opportunities to engage with:  gc_literacy gc_numeracygc_critical gc_ethical gc_personal_social  cc_sust | | Opportunities to engage with:  gc_literacy gc_numeracy gc_critical gc_ict gc_ethical gc_personal_social  cc_sust | | |
| Key to general capabilities and cross-curriculum priorities | Description: Description: gc_literacy Literacy  Description: Description: gc_numeracy Numeracy  Description: Description: gc_ict ICT capability  Description: Description: gc_critical Critical and creative thinking  Description: Description: gc_ethical Ethical behaviour  Description: Description: gc_personal_social Personal and social capability  Description: Description: gc_intercultural Intercultural understanding   Aboriginal and Torres Strait Islander histories and cultures  Description: cc_asia Asia and Australia’s engagement with Asia  Description: cc_sust Sustainability | | | | | | | | |
| Develop assessment | Assessment  For advice and guidelines on assessment, see: [www.qsa.qld.edu.au](http://www.qsa.qld.edu.au) | An assessment folio is a targeted collection of a child’s work for ongoing review and analysis, and for reporting a child’s achievement and progress at a point in time. Administrators and teachers determine the evidence that will be collected to demonstrate a pattern of achievement within the child’s learning across the Australian Curriculum and the remaining Queensland learning areas, where applicable. | | | | | | | | |
| Term 1 | | Term 2 | | Term 3 | | Term 4 | | |
| Week | Assessment instrument | Week | Assessment instrument | Week | Assessment instrument | Week | Assessment instrument | |
| 1 | Supervised assessment: Short response (Written)  Identify current knowledge with a diagnostic tool at the beginning of the unit and use formatively when building upon prior knowledge. | 2–10 | Collection of work (Written)  Communicate observations and ideas in a science journal, during or following each lesson, with ongoing feedback provided by the teacher. | 2–10 | Collection of work (Written)  Communicate observations and ideas in a science journal, during or following each lesson, with ongoing feedback provided by the teacher. | 2–10 | | Collection of work (Written)  Communicate observations and ideas in a science journal, during or following each lesson, with ongoing feedback provided by the teacher. |
| 2–10 | Collection of work (Written)  Communicate observations and ideas in a science journal, during or following each lesson, with ongoing feedback provided by the teacher.  The assessment package *Birdwatchers* in the QSA Assessment Bank could be used as assessment in this unit. | 8 | Supervised assessment: Short responses (Written/oral)  Explain why a type of material was chosen to make an object, using annotations on a drawing of the object.  Respond to teacher’s prompts for further elaborations during an individual conference.  The assessment package *What if and how come* in the QSA Assessment Bank could be used as assessment in this unit. | 8 | Experimental investigation: Recorded observations (Multimodal)  Record observations made during the day and night using diagrams with annotations, captions and labels.  Respond to teacher’s prompts for further elaborations during an individual conference. | 8 | | Supervised assessment: Literary or non-literary text (Written)  Conduct investigations to gather observations about light and sound. Use these observations to create a text for other readers, explaining how light and sound are produced and sensed.  The assessment package *What makes sound* in the QSA Assessment Bank could be used as assessment in this unit. |
| Make judgments and use feedback | Moderation | Teachers review school profiles from the previous year.  Teachers take opportunities to informally discuss children’s development of skills and knowledge as the term progresses. | | Teachers and children develop tasks.  Teachers select representative annotated drawings and records of individual conferences and meet to ensure consistency of judgments. | | Teachers take opportunities to informally discuss children’s development of skills and knowledge as the term progresses.  Teachers select representative annotated diagrams and records of individual conferences and meet to ensure consistency of judgments. | | Teachers take opportunities to informally discuss children’s development of skills and knowledge as the term progresses.  Teachers moderate randomly sampled folios to ensure consistency of judgments. | | |

Year 1 Science: review for balance and coverage of content descriptions

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| Science Understanding | 1 | 2 | 3 | 4 |
| Biological sciences | | | | |
| Living things have a variety of external features [(ACSSU017)](http://www.australiancurriculum.edu.au/Curriculum/ContentDescription/ACSSU017) | ✓ |  |  |  |
| Living things live in different places where their needs are met [(ACSSU211)](http://www.australiancurriculum.edu.au/Curriculum/ContentDescription/ACSSU211) | ✓ |  |  |  |
| Chemical sciences | | | | |
| Everyday materials can be physically changed in a variety of ways [(ACSSU018)](http://www.australiancurriculum.edu.au/Curriculum/ContentDescription/ACSSU018) |  | ✓ |  |  |
| Earth and space sciences | | | | |
| Observable changes occur in the sky and landscape [(ACSSU019)](http://www.australiancurriculum.edu.au/Curriculum/ContentDescription/ACSSU019) |  |  | ✓ |  |
| Physical sciences | | | | |
| Light and sound are produced by a range of sources and can be sensed [(ACSSU020)](http://www.australiancurriculum.edu.au/Curriculum/ContentDescription/ACSSU020) |  |  |  | ✓ |

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| Science as a Human Endeavour | 1 | 2 | 3 | 4 |
| Nature and development of science | | | | |
| Science involves asking questions about, and describing changes in, objects and events [(ACSHE021)](http://www.australiancurriculum.edu.au/Curriculum/ContentDescription/ACSHE021) | ✓ |  | ✓ |  |
| Use and influence of science | | | | |
| People use science in their daily lives, including when caring for their environment and living things [(ACSHE022)](http://www.australiancurriculum.edu.au/Curriculum/ContentDescription/ACSHE022) |  | ✓ | ✓ | ✓ |

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| Science Inquiry Skills | 1 | 2 | 3 | 4 |
| Questioning and predicting | | | | |
| Respond to and pose questions, and make predictions about familiar objects and events [(ACSIS024)](http://www.australiancurriculum.edu.au/Curriculum/ContentDescription/ACSIS024) | ✓ | ✓ | ✓ | ✓ |
| Planning and conducting | | | | |
| Participate in different types of guided investigations to explore and answer questions, such as manipulating materials, testing ideas, and accessing information sources [(ACSIS025)](http://www.australiancurriculum.edu.au/Curriculum/ContentDescription/ACSIS025) |  | ✓ |  | ✓ |
| Use informal measurements in the collection and recording of observations, with the assistance of digital technologies as appropriate [(ACSIS026)](http://www.australiancurriculum.edu.au/Curriculum/ContentDescription/ACSIS026) | ✓ | ✓ |  | ✓ |
| Processing and analysing data and information | | | | |
| Use a range of methods to sort information, including drawings and provided tables [(ACSIS027)](http://www.australiancurriculum.edu.au/Curriculum/ContentDescription/ACSIS027) | ✓ | ✓ | ✓ | ✓ |
| Through discussion, compare observations with predictions [(ACSIS212)](http://www.australiancurriculum.edu.au/Curriculum/ContentDescription/ACSIS212) | ✓ | ✓ | ✓ | ✓ |
| Evaluating | | | | |
| Compare observations with those of others [(ACSIS213)](http://www.australiancurriculum.edu.au/Curriculum/ContentDescription/ACSIS213) | ✓ | ✓ |  | ✓ |
| Communicating | | | | |
| Represent and communicate observations and ideas in a variety of ways such as oral and written language, drawing and role play [(ACSIS029)](http://www.australiancurriculum.edu.au/Curriculum/ContentDescription/ACSIS029) | ✓ | ✓ | ✓ | ✓ |

Source: Australian Curriculum, Assessment and Reporting Authority (ACARA), *Australian Curriculum v3.0: Science for Foundation–10* <www.australiancurriculum.edu.au/Science/Curriculum/F-10>.