Prep Year 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 content includes the three strands of *Science Understanding*, *Science Inquiry Skills* and *Science as a Human Endeavour*. 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 Foundation, students observe and describe the behaviours and properties of everyday objects, materials and living things. They explore change in the world around them, including changes that impact on them, such as the weather, and changes they can effect, such as making things move or change shape. They learn that seeking answers to questions and making observations is a core part of science and use their senses to gather different types of information. |
| Achievement standard | By the end of the Foundation year, students describe the [properties](http://www.australiancurriculum.edu.au/Glossary?a=S&t=properties) and behaviour of familiar objects. They suggest how the [environment](http://www.australiancurriculum.edu.au/Glossary?a=S&t=environment) affects them and other living things. Students share observations of familiar objects and events. |
| 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 |
| Weather watchDuring this term children explore daily and seasonal changes in the weather through class routines and transitions. They make links to how the immediate environment affects them. They discuss and explore these changes through their senses and begin to create charts and drawings to represent them.Children will:* respond to questions about the weather using their senses to make observations and to explore how changes in the weather affect them
* link the changes in the daily weather to the way they modify their behaviour and dress for different conditions
* represent their ideas and share their observations and ideas about the weather through discussions and drawings
* learn how Aboriginal and Torres Strait Islander concepts of time and weather patterns explain how things happen in the world around them.
 | I’m a scientistDuring this term children adopt the role of a scientist as they make observations and explore observable properties of materials and the everyday objects they are used in. The class investigates how to “observe” using all of their senses and record their observations in a variety of ways.Children will:* respond to questions about everyday objects, using their senses to explore the properties of materials
* use their senses to make observations to sort and group materials on the basis of observable properties
* think about how the materials used in everyday objects are suited to their use
* represent their ideas and share their observations and ideas about materials through discussions and drawings.
 | Exemplar unit: Our living worldDuring this term children generate and investigate ideas about living things. They use their senses to investigate and gather information in order to explore and develop understandings about the basic needs of all living things.Children will:* use their own experiences to identify the needs of living things
* investigate the needs of living things in a range of situations
* respond to questions about living things, using their senses to make observations and to explore the needs of living things
* represent their ideas and share their observations and ideas about living things through discussions and drawings.
 | I like to move it, move itDuring this term children examine a range of objects and experiment to determine how they move. They draw conclusions about the factors influencing that movement. They apply and communicate their understandings by predicting, testing and confirming how other objects might move.Children will:* respond to questions about moving objects, using their senses to make observations and to explore how the objects move
* observe the way different objects move
* compare the way different-sized, but similar-shaped, objects move
* explore how the movement of different living things depends on their size and shape
* represent their ideas and share their observations and ideas about movement through discussions and drawings.
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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_critical gc_personal_social gc_interculturalcc_sust | Opportunities to engage with:gc_literacy gc_critical gc_personal_socialcc_sust | Opportunities to engage with:gc_literacy gc_critical gc_personal_social cc_sust | Opportunities to engage with:gc_literacy gc_critical gc_personal_social |
| 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 | AssessmentFor 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. |
| The assessment folio is a representative selection of evidence of the child’s learning in relation to the achievement standard for each learning area and it: * ensures there are multiple opportunities to demonstrate the elements of the achievement standard and to demonstrate patterns within the evidence
* includes evidence compiled over time from a variety of quality early years assessment techniques and across a range of teaching and learning contexts
* considers the Year-level requirements and the school’s context
* ensures evidence of children’s learning is collected over a timespan that suits reporting and moderation processes for the purpose of twice-yearly reporting.

The assessment folio may include:* notes of conversations with children
* anecdotal records, e.g. spoken/signed: class discussions
* personalised checklists with comments
* images or recordings — photographs, video or audio recordings,
* objects or artefacts that children develop or make, e.g. drawings and labels
* notes of discussions with other partners
* oral questioning.

Other assessment techniques: * science journal
* interview.
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| Term 1 | Term 2 | Term 3 | Term 4 |
| Assessment instrument | Assessment instrument | Week | Assessment instrument | Assessment instrument |
| The Term 1 unit overview provides further examples of unit-specific focused assessment. | The Term 2 unit overview provides further examples of unit-specific focused assessment. | 2–8 | Collection of work (Written) Science journal: communicate observations and ideasduring/following each lesson with ongoing feedback provided by the teacher.  | The Term 4 unit overview provides further examples of unit-specific focused assessment. |
| Ongoing throughout the term | Experimental investigation: Recorded observations (Multimodal) Children communicate their observations and ideas during or following each lesson as they answer the question: What are the needs of living things?The assessment package *Germinate* in the QSA Assessment Bank could be used as assessment in this unit. |
| Make judgments and use feedback | Moderation | Teachers moderate and validate judgments about children’s learning progress to ensure consistency of judgment when matching evidence in an assessment folio to a standard or a phase descriptor. A moderation process may involve teachers sharing a sample range of assessment folios representing each level of the P–2 reporting framework in each of the learning areas. Teachers then discuss and match the samples to a level of achievement and apply an on-balance judgment to the remaining assessment folios for the class. School-based moderation processes can be applied to Australian Curriculum learning areas and remaining Queensland learning areas where the Australian Curriculum is not yet available. |

Prep Science: review for balance and coverage of content descriptions

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| Science Understanding | 1 | 2 | 3 | 4 |
| Biological sciences |
| Living things have basic needs, including food and water [(ACSSU002)](http://www.australiancurriculum.edu.au/Curriculum/ContentDescription/ACSSU002) |  |  | ✓ |  |
| Chemical sciences |
| Objects are made of materials that have observable properties [(ACSSU003)](http://www.australiancurriculum.edu.au/Curriculum/ContentDescription/ACSSU003) |  | ✓ |  |  |
| Earth and space sciences |
| Daily and seasonal changes in our environment, including the weather, affect everyday life [(ACSSU004)](http://www.australiancurriculum.edu.au/Curriculum/ContentDescription/ACSSU004) | ✓ |  |  |  |
| Physical sciences |
| The way objects move depends on a variety of factors, including their size and shape [(ACSSU005)](http://www.australiancurriculum.edu.au/Curriculum/ContentDescription/ACSSU005) |  |  |  | ✓ |

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| Science as a Human Endeavour | 1 | 2 | 3 | 4 |
| Nature and development of science |
| Science involves exploring and observing the world using the senses [(ACSHE013)](http://www.australiancurriculum.edu.au/Curriculum/ContentDescription/ACSHE013) | ✓ | ✓ | ✓ | ✓ |

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| Science Inquiry Skills | 1 | 2 | 3 | 4 |
| Questioning and predicting |
| Respond to questions about familiar objects and events [(ACSIS014)](http://www.australiancurriculum.edu.au/Curriculum/ContentDescription/ACSIS014) | ✓ | ✓ | ✓ | ✓ |
| Planning and conducting |
| Explore and make observations by using the senses [(ACSIS011)](http://www.australiancurriculum.edu.au/Curriculum/ContentDescription/ACSIS011) | ✓ | ✓ | ✓ | ✓ |
| Processing and analysing data and information |
| Engage in discussions about observations and use methods such as drawing to represent ideas [(ACSIS233)](http://www.australiancurriculum.edu.au/Curriculum/ContentDescription/ACSIS233) | ✓ | ✓ | ✓ | ✓ |
| Communicating |
| Share observations and ideas [(ACSIS012)](http://www.australiancurriculum.edu.au/Curriculum/ContentDescription/ACSIS012) | ✓ | ✓ | ✓ | ✓ |

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