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| --- |
| Year 4 ScienceCurriculum and assessment plan[Insert school name, implementation year] |

Use this template to plan an overview or summary of the teaching, learning and assessment for a year level in the Australian Curriculum: Science. For planning advice, refer to the *Planning for teaching, learning and assessment* document available on the Planning tab for each learning area at [www.qcaa.qld.edu.au/p-10/aciq/version-9/learning-areas](http://www.qcaa.qld.edu.au/p-10/aciq/version-9/learning-areas).

**How to use this template:** Type information into the fields (yellow shading). When the plan is complete, delete the highlighted instructions (blue shading). To do so, select the instruction text, click the **Home tab > Styles dropdown > Clear All/Clear Formatting >** text will revert to Normal style and you can delete the text.

| Level description | Context and cohort considerations (if applicable)  |
| --- | --- |
| In Year 4 students extend their understanding of systems as interactions between related components and analyse patterns to identify that these interactions can occur in predictable ways. They classify system components and create simple models of system interactions, such as food chains and representations of the water cycle. They learn that these models can be used to predict the effect of missing or malfunctioning components. They explore the relationship between form and function by investigating different materials and their properties and learn that classification can enable prediction. They investigate forces that operate from a distance and learn that some interactions result from phenomena that cannot be seen with the naked eye. Students use fair testing to explore relationships between system components. They appreciate the value of using standard units of measurement to measure and compare attributes of systems and the importance of fair methods for drawing conclusions.Inquiry questions can help excite students’ curiosity and challenge their thinking. Following are examples of inquiry questions that could be used to prompt discussion and exploration:* How can we keep food fresh and safe to eat without using plastic?
* Why do we measure things?
* What would happen if there were no ants in a local habitat?
* How does friction help or hinder motion?
* What’s the big deal about the water cycle?
 | Describe the context and cohort. Consider the following to make informed professional decisions during the planning process:* + relevant student data and information, e.g. achievement data
	+ available resources, e.g. timetabling
	+ school and sector priorities.

[Insert context and cohort considerations] |

**Note:** Insert/delete rows/columns, as required, to provide an overview of the teaching, learning and assessment sequence across the year level.

| Unit 1 — [Insert unit title] | Unit 2 — [Insert unit title] | Unit 3 — [Insert unit title] | Unit 4 — [Insert unit title] |
| --- | --- | --- | --- |
| Duration: [Insert semester, term and/or weeks] | Duration: [Insert semester, term and/or weeks] | Duration: [Insert semester, term and/or weeks] | Duration: [Insert semester, term and/or weeks] |
| [Insert unit description and learning focus] | [Insert unit description and learning focus] | [Insert unit description and learning focus] | [Insert unit description and learning focus] |

**Note:**

Adjust the table to reflect the number of units you will offer.

Highlight the aspects of the achievement standard that will be assessed within each unit.

|  | Unit 1 | Unit 2  | Unit 3 | Unit 4 |
| --- | --- | --- | --- | --- |
|  | Assessment — [Insert assessment title] | Timing | Assessment — [Insert assessment title] | Timing | Assessment — [Insert assessment title] | Timing | Assessment — [Insert assessment title] | Timing  |
| Assessment | [Insert concise description of assessment][Insert technique][Insert mode, if applicable][Insert conditions]  | [Insert week/s or date/s] | [Insert concise description of assessment][Insert technique][Insert mode, if applicable][Insert conditions]  | [Insert week/s or date/s] | [Insert concise description of assessment][Insert technique][Insert mode, if applicable][Insert conditions]  | [Insert week/s or date/s] | [Insert concise description of assessment][Insert technique][Insert mode, if applicable][Insert conditions]  | [Insert week/s or date/s] |
| Achievement standard | By the end of Year 4 students identify the roles of organisms in a habitat and construct food chains. They identify key processes in the water cycle and describe how water cycles through the environment. They identify forces acting on objects and describe their effect. They relate the uses of materials to their properties. They explain the role of data in science inquiry. They identify solutions based on scientific explanations and describe the needs these meet.Students pose questions to identify patterns and relationships and make predictions based on observations. They plan investigations using planning scaffolds, identify key elements of fair tests and describe how they conduct investigations safely. They use simple procedures to make accurate formal measurements. They construct representations to organise data and information and identify patterns and relationships. They compare their findings with those of others, assess the fairness of their investigation, identify further questions for investigation and draw conclusions. They communicate ideas and findings for an identified audience and purpose, including using scientific vocabulary when appropriate. | By the end of Year 4 students identify the roles of organisms in a habitat and construct food chains. They identify key processes in the water cycle and describe how water cycles through the environment. They identify forces acting on objects and describe their effect. They relate the uses of materials to their properties. They explain the role of data in science inquiry. They identify solutions based on scientific explanations and describe the needs these meet.Students pose questions to identify patterns and relationships and make predictions based on observations. They plan investigations using planning scaffolds, identify key elements of fair tests and describe how they conduct investigations safely. They use simple procedures to make accurate formal measurements. They construct representations to organise data and information and identify patterns and relationships. They compare their findings with those of others, assess the fairness of their investigation, identify further questions for investigation and draw conclusions. They communicate ideas and findings for an identified audience and purpose, including using scientific vocabulary when appropriate. | By the end of Year 4 students identify the roles of organisms in a habitat and construct food chains. They identify key processes in the water cycle and describe how water cycles through the environment. They identify forces acting on objects and describe their effect. They relate the uses of materials to their properties. They explain the role of data in science inquiry. They identify solutions based on scientific explanations and describe the needs these meet.Students pose questions to identify patterns and relationships and make predictions based on observations. They plan investigations using planning scaffolds, identify key elements of fair tests and describe how they conduct investigations safely. They use simple procedures to make accurate formal measurements. They construct representations to organise data and information and identify patterns and relationships. They compare their findings with those of others, assess the fairness of their investigation, identify further questions for investigation and draw conclusions. They communicate ideas and findings for an identified audience and purpose, including using scientific vocabulary when appropriate. | By the end of Year 4 students identify the roles of organisms in a habitat and construct food chains. They identify key processes in the water cycle and describe how water cycles through the environment. They identify forces acting on objects and describe their effect. They relate the uses of materials to their properties. They explain the role of data in science inquiry. They identify solutions based on scientific explanations and describe the needs these meet.Students pose questions to identify patterns and relationships and make predictions based on observations. They plan investigations using planning scaffolds, identify key elements of fair tests and describe how they conduct investigations safely. They use simple procedures to make accurate formal measurements. They construct representations to organise data and information and identify patterns and relationships. They compare their findings with those of others, assess the fairness of their investigation, identify further questions for investigation and draw conclusions. They communicate ideas and findings for an identified audience and purpose, including using scientific vocabulary when appropriate. |
| Moderation | [Insert moderation details, including when moderation will occur and how it will be conducted] | [Insert moderation details, including when moderation will occur and how it will be conducted] | [Insert moderation details, including when moderation will occur and how it will be conducted] | [Insert moderation details, including when moderation will occur and how it will be conducted] |

**Note:** Adjust the table to reflect the number of units you will offer. Check or uncheck the columns as appropriate for each unit.

| Content descriptions | Units | Content descriptions | Units | Content descriptions | Units |
| --- | --- | --- | --- | --- | --- |
| Science understanding | 1 | 2 | 3 | 4 | Science as a human endeavour | 1 | 2 | 3 | 4 | Science inquiry | 1 | 2 | 3 | 4 |
| **Biological sciences**explain the roles and interactions of consumers, producers and decomposers within a habitat and how food chains represent feeding relationships AC9S4U01 | [ ]  | [ ]  | [ ]  | [ ]  | **Nature and development of science**examine how people use data to develop scientific explanations AC9S4H01 | [ ]  | [ ]  | [ ]  | [ ]  | **Questioning and predicting**pose questions to explore observed patterns and relationships and make predictions based on observations AC9S4I01 | [ ]  | [ ]  | [ ]  | [ ]  |
| **Earth and space sciences**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 | [ ]  | [ ]  | [ ]  | [ ]  | **Use and influence of science**consider how people use scientific explanations to meet a need or solve a problem AC9S4H02 | [ ]  | [ ]  | [ ]  | [ ]  | **Planning and conducting**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 AC9S4I02 | [ ]  | [ ]  | [ ]  | [ ]  |
| **Physical sciences**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 | [ ]  | [ ]  | [ ]  | [ ]  |  |  |  |  |  | follow procedures to make and record observations, including making formal measurements using familiar scaled instruments and using digital tools as appropriate AC9S4I03 | [ ]  | [ ]  | [ ]  | [ ]  |
| **Chemical sciences**examine the properties of natural and made materials including fibres, metals, glass and plastics and consider how these properties influence their use AC9S4U04 | [ ]  | [ ]  | [ ]  | [ ]  |  |  |  |  |  | **Processing, modelling and analysing**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 AC9S4I04 | [ ]  | [ ]  | [ ]  | [ ]  |
|  |  |  |  |  |  |  |  |  |  | **Evaluating**compare findings with those of others, consider if investigations were fair, identify questions for further investigation and draw conclusions AC9S4I05 | [ ]  | [ ]  | [ ]  | [ ]  |
|  |  |  |  |  |  |  |  |  |  | **Communicating**write and create texts to communicate findings and ideas for identified purposes and audiences, using scientific vocabulary and digital tools as appropriate AC9S4I06 | [ ]  | [ ]  | [ ]  | [ ]  |

**Note:** Adjust the table to reflect the number of units you will offer. Check or uncheck the columns as appropriate for each unit.

| General capabilities | Units |  | Cross-curriculum priorities | Units |
| --- | --- | --- | --- | --- |
|  | 1 | 2 | 3 | 4 |  |  | 1 | 2 | 3 | 4 |
| Critical and creative thinking  | [ ]  | [ ]  | [ ]  | [ ]  |  | Aboriginal and Torres Strait Islander histories and cultures | [ ]  | [ ]  | [ ]  | [ ]  |
| Digital literacy  | [ ]  | [ ]  | [ ]  | [ ]  |  | Asia and Australia’s engagement with Asia | [ ]  | [ ]  | [ ]  | [ ]  |
| Ethical understanding | [ ]  | [ ]  | [ ]  | [ ]  |  | Sustainability | [ ]  | [ ]  | [ ]  | [ ]  |
| Intercultural understanding | [ ]  | [ ]  | [ ]  | [ ]  |
| Literacy  | [ ]  | [ ]  | [ ]  | [ ]  |
| Numeracy | [ ]  | [ ]  | [ ]  | [ ]  |
| Personal and social capability | [ ]  | [ ]  | [ ]  | [ ]  |

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