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| Year 8 Science Curriculum 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 8 students are introduced to cells as microscopic structures that explain macroscopic features of living systems. They connect form and function at an organ level and explore the organisation of a body system in terms of flows of matter between interdependent organs. They continue to develop a view of Earth as a dynamic system, in which change occurs across a range of timescales. They classify different types of energy and describe the role of energy in causing change in systems, including the role of energy and forces in the geosphere.  They learn to classify matter at the atomic level and distinguish between chemical and physical change. They understand that chemical reactions also involve energy. Students use experimentation to isolate relationships between components in systems and explain these relationships through increasingly complex representations. They consider the magnitude of properties and events and use appropriate units to describe proportional relationships.  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:   * Can we predict changes to the shape and position of continents? * Are facts enough? How much does science communication matter? * How can we tell if a substance has changed? * How can we best measure what we cannot directly see? * How is a leaf like a lung? | 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 8 students explain the role of specialised cell structures and organelles in cellular function and analyse the relationship between structure and function at organ and body system levels. They apply an understanding of the theory of plate tectonics to explain patterns of change in the geosphere. They explain how the properties of rocks relate to their formation and influence their use. They compare different forms of energy and represent transfer and transformation of energy in simple systems. They classify and represent different types of matter and distinguish between physical and chemical change. Students analyse how different factors influence development of and lead to changes in scientific knowledge. They analyse the key considerations that inform scientific responses and how these responses impact society. They analyse the importance of science communication in shaping viewpoints, policies and regulations.  Students plan and conduct safe, reproducible investigations to test relationships and explore models. They describe potential ethical issues and intercultural considerations needed for specific field locations or use of secondary data. They select and use equipment to generate and record data with precision. They select and construct appropriate representations to organise and process data and information. They analyse data and information to describe patterns, trends and relationships and identify anomalies. They identify assumptions and sources of error in methods and analyse conclusions and claims with reference to conflicting evidence and unanswered questions. They construct evidence-based arguments to support conclusions and evaluate claims. They select and use language and text features appropriately for their purpose when communicating their ideas, findings and arguments to specific audiences. | | By the end of Year 8 students explain the role of specialised cell structures and organelles in cellular function and analyse the relationship between structure and function at organ and body system levels. They apply an understanding of the theory of plate tectonics to explain patterns of change in the geosphere. They explain how the properties of rocks relate to their formation and influence their use. They compare different forms of energy and represent transfer and transformation of energy in simple systems. They classify and represent different types of matter and distinguish between physical and chemical change. Students analyse how different factors influence development of and lead to changes in scientific knowledge. 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| 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**  recognise cells as the basic units of living things, compare plant and animal cells, and describe the functions of specialised cell structures and organelles AC9S8U01 |  |  |  |  | **Nature and development of science**  explain how new evidence or different perspectives can lead to changes in scientific knowledge AC9S8H01 |  |  |  |  | **Questioning and predicting**  develop investigable questions, reasoned predictions and hypotheses to explore scientific models, identify patterns and test relationships AC9S8I01 |  |  |  |  | |
| analyse the relationship between structure and function of cells, tissues and organs in a plant and an animal organ system and explain how these systems enable survival of the individual AC9S8U02 |  |  |  |  | **investigate how cultural perspectives and world views influence the development of scientific knowledge AC9S8H02** |  |  |  |  | **Planning and conducting**  **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 AC9S8I02** |  |  |  |  | |
| **Earth and space sciences**  investigate tectonic activity including the formation of geological features at divergent, convergent and transform plate boundaries and describe the scientific evidence for the theory of plate tectonics AC9S8U03 |  |  |  |  | **Use and influence of science**  **examine how proposed scientific responses to contemporary issues may impact on society and explore ethical, environmental, social and economic considerations AC9S8H03** |  |  |  |  | select and use equipment to generate and record data with precision, using digital tools as appropriate AC9S8I03 |  |  |  |  | |
| describe the key processes of the rock cycle, including the timescales over which they occur, and examine how the properties of sedimentary, igneous and metamorphic rocks reflect their formation and influence their use AC9S8U04 |  |  |  |  | **explore the role of science communication in informing individual viewpoints and community policies and regulations AC9S8H04** |  |  |  |  | **Processing, modelling and analysing**  **select and construct appropriate representations, including tables, graphs, models and mathematical relationships, to organise and process data and information AC9S8I04** |  |  |  |  | |
| **Physical sciences**  classify different types of energy as kinetic or potential and investigate energy transfer and transformations in simple systems AC9S8U05 |  |  |  |  |  |  |  |  |  | analyse data and information to describe patterns, trends and relationships and identify anomalies AC9S8I05 |  |  |  |  | |
| **Chemical sciences**  classify matter as elements, compounds or mixtures and compare different representations of these, including 2-dimensional and 3-dimensional models, symbols for elements and formulas for molecules and compounds AC9S8U06 |  |  |  |  |  |  |  |  |  | **Evaluating**  analyse methods, conclusions and claims for assumptions, possible sources of error, conflicting evidence and unanswered questions AC9S8I06 |  |  |  |  | |
| compare physical and chemical changes and identify indicators of energy change in chemical reactions AC9S8U07 |  |  |  |  |  |  |  |  |  | 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 AC9S8I07 |  |  |  |  | |
|  |  |  |  |  |  |  |  |  |  | **Communicating**  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 AC9S8I08 |  |  |  |  | |

**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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