**Instruction:** List the title of the unit of work in the first column and then tick the check box of the content description/s addressed by it, which can be done electronically. Once completed, fill out the ‘Assessments’ table. If you need help completing the template view the curriculum mapping instructions document.

|  |  |
| --- | --- |
|  | **Science Understanding Strand** |
|  | **Sub-strand** | **Science as a human endeavour** | **Biological sciences** | **Chemical sciences** | **Earth and space sciences** | **Physical sciences** |
|  | **Content Descriptions** | Scientific understandings, discoveries and inventions are used to inform personal and community decisions and to solve problems that directly affect people’s lives[(VCSSU073)](http://victoriancurriculum.vcaa.vic.edu.au/Curriculum/ContentDescription/VCSSU073) | Living things have structural features and adaptations that help them to survive in their environment[(VCSSU074)](http://victoriancurriculum.vcaa.vic.edu.au/Curriculum/ContentDescription/VCSSU074) | The growth and survival of living things are affected by the physical conditions of their environment[(VCSSU075)](http://victoriancurriculum.vcaa.vic.edu.au/Curriculum/ContentDescription/VCSSU075) | Solids, liquids and gases behave in different ways and have observable properties that help to classify them [(VCSSU076)](http://victoriancurriculum.vcaa.vic.edu.au/Curriculum/ContentDescription/VCSSU076) | Changes to materials can be reversible, including melting, freezing, evaporating, or irreversible, including burning and rusting [(VCSSU077)](http://victoriancurriculum.vcaa.vic.edu.au/Curriculum/ContentDescription/VCSSU077) | Earth is part of a system of planets orbiting around a star (the Sun) [(VCSSU078)](http://victoriancurriculum.vcaa.vic.edu.au/Curriculum/ContentDescription/VCSSU078) | Sudden geological changes or extreme weather conditions can affect Earth’s surface [(VCSSU079)](http://victoriancurriculum.vcaa.vic.edu.au/Curriculum/ContentDescription/VCSSU079) | Light from a source forms shadows and can be absorbed, reflected and refracted [(VCSSU080)](http://victoriancurriculum.vcaa.vic.edu.au/Curriculum/ContentDescription/VCSSU080) | Energy from a variety of sources can be used to generate electricity; electric circuits enable this energy to be transferred to another place and then to be transformed into another form of energy[(VCSSU081)](http://victoriancurriculum.vcaa.vic.edu.au/Curriculum/ContentDescription/VCSSU081) |
| **Unit** | **Semester/Year** | CD  | Achievement standard # | CD  | Achievement standard # | CD  | Achievement standard # | CD  | Achievement standard # | CD  | Achievementstandard # | CD  | Achievement standard # | CD  | Achievement standard # | CD  | Achievement standard # | CD  | Achievement standard # |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |

|  |  |
| --- | --- |
|  | **Science Inquiry Skills Strand** |
|  | **Sub-strand** | **Questioning and predicting** | **Planning and conducting** | **Recording and processing** | **Analysing and evaluating** | **Communicating** |
|  | **Content Descriptions** | With guidance, pose questions to clarify practical problems or inform a scientific investigation, and predict what the findings of an investigation might be based on previous experiences or general rules[(VCSIS082)](http://victoriancurriculum.vcaa.vic.edu.au/Curriculum/ContentDescription/VCSIS082) | With guidance, plan appropriate investigation types to answer questions or solve problems and use equipment, technologies and materials safely, identifying potential risks [(VCSIS083)](http://victoriancurriculum.vcaa.vic.edu.au/Curriculum/ContentDescription/VCSIS083) | Decide which variables should be changed, measured and controlled in fair tests and accurately observe, measure and record data [(VCSIS084)](http://victoriancurriculum.vcaa.vic.edu.au/Curriculum/ContentDescription/VCSIS084) | Construct and use a range of representations, including tables and graphs, to record, represent and describe observations, patterns or relationships in data[(VCSIS085)](http://victoriancurriculum.vcaa.vic.edu.au/Curriculum/ContentDescription/VCSIS085) | Compare data with predictions and use as evidence in developing explanations [(VCSIS086)](http://victoriancurriculum.vcaa.vic.edu.au/Curriculum/ContentDescription/VCSIS086) | Suggest improvements to the methods used to investigate a question or solve a problem[(VCSIS087)](http://victoriancurriculum.vcaa.vic.edu.au/Curriculum/ContentDescription/VCSIS087) | Communicate ideas and processes using evidence to develop explanations of events and phenomena and to identify simple cause-and-effect relationships[(VCSIS088)](http://victoriancurriculum.vcaa.vic.edu.au/Curriculum/ContentDescription/VCSIS088) |
| **Unit** | **Semester/Year** | CD  | Achievement standard # | CD  | Achievement standard # | CD  | Achievement standard # | CD  | Achievement standard # | CD  | Achievementstandard # | CD  | Achievement standard # | CD  | Achievement standard # |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |

*See following page for Achievement Standards and Assessments Section*

|  |  |  |
| --- | --- | --- |
| **Level 3 and 4 Achievement Standard** | **Levels 5 and 6 Achievement Standard** - Separated by line. Number in brackets, E.g. (3), is used as an identifier in various parts of the template. | **Level 7 and 8 Achievement Standard**  |
| By the end of Level 4* Students describe situations where science understanding can influence their own and others’ actions.
* They explain the effects of Earth’s rotation on its axis.
* They distinguish between temperature and heat and use examples to illustrate how heat is produced and transferred.
* They explain how heat is involved in changes of state between solid and liquid.
* They link the physical properties of materials to their use.
* They discuss how natural and human processes cause changes to Earth’s surface.
* They use contact and non-contact forces to describe interactions between objects.
* They group living things based on observable features and distinguish them from non-living things.
* They describe relationships that assist the survival of living things.
* They compare the key stages in the life cycle of a plant and an animal and relate life cycles to growth and survival.
* Students describe how they use science investigations to identify patterns and relationships and to respond to questions.
* They follow instructions to identify questions that they can investigate about familiar contexts and make predictions based on prior knowledge.
* They discuss ways to conduct investigations and suggest why a test was fair or not.
* They safely use equipment to make and record formal measurements and observations.
* They use provided tables and column graphs to organise and identify patterns and trends in data.
* Students suggest explanations for observations and compare their findings with their predictions.
* They use formal and informal scientific language to communicate their observations, methods and findings.
 | By the end of Level 6* Students explain how scientific knowledge is used in decision making and develops from many people’s contributions. (1)
* They discuss how scientific understandings, discoveries and inventions affect peoples’ lives. (2)
* They compare the properties and behaviours of solids, liquids and gases. (3)
* They compare observable changes to materials and classify these changes as reversible or irreversible. (4)
* They explain everyday phenomena associated with the absorption, reflection and refraction of light. (5)
* They compare different ways in which energy can be transformed from one form to another to generate electricity and evaluate their suitability for particular purposes. (6)
* They construct electric circuits and distinguish between open and closed circuits. (7)
* They explain how natural events cause rapid change to Earth’s surface and use models to describe the key features of our Solar System. (8)
* They analyse how structural and behavioural adaptations of living things enhance their survival, and predict and describe the effect of environmental changes on individual living things. (9)
* Students follow procedures to develop questions that they can investigate and design investigations into simple cause-and-effect relationships. (10)
* When planning experimental methods, they identify and justify the variables they choose to change and measure in fair tests. (11)
* They make predictions based on previous experiences or general rules. (12)
* They identify and manage potential safety risks. (13)
* They make and record accurate observations as tables, diagrams or descriptions. (14)
* They organise data into tables and graphs to identify and analyse patterns and relationships. (15)
* They compare patterns in data with their predictions when explaining their findings. (16)
* They suggest where improvements to their experimental methods or research could improve the quality of their data. (17)
* They refer to data when they report findings and use appropriate representations and simple reports to communicate their ideas, methods, findings and explanations. (18)
 | By the end of Level 8* Students explain how evidence has led to an improved understanding of a scientific idea.
* They discuss how science knowledge can be applied to generate solutions to contemporary problems and explain how these solutions may impact on society.
* They investigate different forms of energy and explain how energy transfers and transformations cause change in simple systems.
* They use examples to illustrate how light forms images. They use a wave model to explain the properties of sound.
* They use the particle model to predict, compare and explain the physical and chemical properties and behaviours of substances.
* They describe and apply techniques to separate pure substances from mixtures.
* They provide evidence for observed chemical changes in terms of colour change, heat change, gas production and precipitate formation.
* They analyse the relationship between structure and function at cell, organ and body system levels. They identify and classify living things.
* They explain how living organisms can be classified into major taxonomic groups based on observable similarities and differences.
* They predict the effect of environmental changes on feeding relationships between organisms in a food web.
* They distinguish between different types of simple machines and predict, represent and analyse the effects of unbalanced forces, including Earth’s gravity, on motion.
* They compare processes of rock formation, including the time scales involved, and analyse how the sustainable use of resources depends on the way they are formed and cycle through Earth systems.
* They model how the relative positions of Earth, the Sun and the Moon affect phenomena on Earth.
* Students identify and construct questions and problems that they can investigate scientifically and make predictions based on scientific knowledge.
* They plan experiments, identifying variables to be changed, measured and controlled.
* They consider accuracy and ethics when planning investigations, including designing field or experimental methods.
* Students summarise data from different sources and construct representations of their data to reveal and analyse patterns and relationships, and use these when justifying their conclusions.
* They explain how modifications to methods could improve the quality of their data and apply their scientific knowledge and investigation findings to evaluate claims made by others.
* They use appropriate scientific language, representations and simple word equations to communicate science ideas, methods and findings.
 |

|  |  |  |
| --- | --- | --- |
| **Assessments** |  |  |
| **Unit (Title)** | **Assessment** | **Achievement Standard/s** |  | **Unit (Title)** | **Assessment** | **Achievement Standard/s** |
|  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |