

Version 9.0 of the Australian Curriculum

The science curriculum is changing.
Stile has you covered.



Version 9.0 of the Australian Curriculum has been released. The how and when of implementing this curriculum will be determined by the State and territory curriculum, school education authorities, and non-government sectors and schools. Understandably, changes to the curriculum can cause a lot of uncertainty. Luckily the new science curriculum includes refinements rather than a wholesale rethink. And, if you're already using Stile's lesson resources, you're very well placed to accommodate these changes.

When we sat down to analyse the changes with a critical eye, we were delighted by just how much they validate and reinforce Stile's existing approach. The move to more inquiry-based learning and stronger ties between science and society align perfectly with Stile's long-standing emphasis on real-world contexts. The "clearer alignment to Mathematics and Technologies" moves closer to Stile's model of the natural integration of the STEM disciplines and is supportive of our approach to numeracy.

Together with those broader themes, the new science curriculum also includes some minor resequencing of content knowledge across the year levels. These changes make sense to us and will allow further reinforcement of these complex, important scientific ideas. If we have a nitpick, it's about the increased prescriptiveness of some "content descriptions". While this provides greater clarity on expectations, we worry this may limit the creative ways teachers might present these scientific concepts.

We also welcome the reinforcement of Indigenous perspectives. This is something we aim to get better at, and we're currently in a phase of listening and learning the most appropriate way to do so.

To support you and your students, we've already begun aligning to the changes in the sequencing in our Stile Classroom resources and in Stile X and will have updated units ready for implementation in 2023.



A stylized, handwritten signature in black ink, appearing to read 'Clare Feeney'.

Clare Feeney | Head of Education
and the whole Stile team

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What's been added?	<ul style="list-style-type: none"> States of matter (from Year 8) Mixtures now explicitly calls out the use of the particle model 	<ul style="list-style-type: none"> Plate tectonics has been added to the rocks unit 	<ul style="list-style-type: none"> There is a new description on sexual and asexual reproduction in the context of survival of species (that is, pre-evolution for year 10) Carbon cycle Energy conservation 	
What's been removed?	<ul style="list-style-type: none"> Renewable resources The water cycle 	<ul style="list-style-type: none"> States of matter (this has been added to Year 7) 	<ul style="list-style-type: none"> Ecosystems Plate tectonics (added to year 8) 	<ul style="list-style-type: none"> Acids and bases Energy conservation
What's been modified?	<ul style="list-style-type: none"> The classification content description now explicitly calls out the use of dichotomous keys The ecosystems content description has been altered to be much more similar to the (previously) year 9 outcome statement. The forces content description has been rephrased to be more prescriptive, alluding much more to the explicit teaching of Newton's Laws 	<ul style="list-style-type: none"> The cells content description is much more prescriptive calling out plant cells Body systems is more prescriptive calling out plant systems Elements and compounds has more of an emphasis on models 	<ul style="list-style-type: none"> Homeostasis has been changed to be much more focused on feedback mechanisms. We're covering this with the immune system 	<ul style="list-style-type: none"> Global systems now covers carbon cycle in year 9 Evolution now covers the beginning of natural selection in year 9 Genetics is much more prescriptive calling out meiosis, mitosis and Mendelian inheritance The universe now has more of a focus on evidence for the Big Bang theory Both chemical sciences statements are more prescriptive, calling out specific chemical reactions (synthesis, decomposition and displacement).

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Biological Sciences	<p>AC9S7U01 investigate the role of classification in ordering and organising the diversity of life on Earth and use and develop classification tools including dichotomous keys</p> <p>AC9S7U02 use models, including food webs, to represent matter and energy flow in ecosystems and predict the impact of changing abiotic and biotic factors on populations</p>	<p>AC9S8U01 recognise cells as the basic units of living things, compare plant and animal cells, and describe the functions of specialised cell structures and organelles</p> <p>AC9S8U02 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</p>	<p>AC9S9U01 compare the role of body systems in regulating and coordinating the body's response to a stimulus, and describe the operation of a negative feedback mechanism</p> <p>AC9S9U02 describe the form and function of reproductive cells and organs in animals and plants, and analyse how the processes of sexual and asexual reproduction enable survival of the species</p>	<p>AC9S10U01 explain the role of meiosis and mitosis and the function of chromosomes, DNA and genes in heredity and predict patterns of Mendelian inheritance</p> <p>AC9S10U02 use the theory of evolution by natural selection to explain past and present diversity and analyse the scientific evidence supporting the theory</p>
Earth & Space Science	<p>AC9S7U03 model cyclic changes in the relative positions of the Earth, sun and moon and explain how these cycles cause eclipses and influence predictable phenomena on Earth, including seasons and tides</p>	<p>AC9S8U03 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</p> <p>AC9S8U04 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</p>	<p>AC9S9U03 represent the carbon cycle and examine how key processes including combustion, photosynthesis and respiration rely on interactions between Earth's spheres (the geosphere, biosphere, hydrosphere and atmosphere)</p>	<p>AC9S10U03 describe how the big bang theory models the origin and evolution of the universe and analyse the supporting evidence for the theory</p> <p>AC9S10U04 use models of energy flow between the geosphere, biosphere, hydrosphere and atmosphere to explain patterns of global climate change</p>

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Physical Sciences	<p>AC9S7U04</p> <p>investigate and represent balanced and unbalanced forces, including gravitational force, acting on objects, and relate changes in an object's motion to its mass and the magnitude and direction of forces acting on it</p>	<p>AC9S8U05</p> <p>classify different types of energy as kinetic or potential and investigate energy transfer and transformations in simple systems</p>	<p>AC9S9U04</p> <p>use wave and particle models to describe energy transfer through different mediums and examine the usefulness of each model for explaining phenomena</p> <p>AC9S9U05</p> <p>apply the law of conservation of energy to analyse system efficiency in terms of energy inputs, outputs, transfers and transformations</p>	<p>AC9S10U05</p> <p>investigate Newton's laws of motion and quantitatively analyse the relationship between force, mass and acceleration of objects</p>
Chemical Sciences	<p>AC9S7U05</p> <p>use particle theory to describe the arrangement of particles in a substance, including the motion of and attraction between particles, and relate this to the properties of the substance</p> <p>AC9S7U06</p> <p>use a particle model to describe differences between pure substances and mixtures and apply understanding of properties of substances to separate mixtures</p>	<p>AC9S8U06</p> <p>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</p> <p>AC9S8U07</p> <p>compare physical and chemical changes and identify indicators of energy change in chemical reactions</p>	<p>AC9S9U06</p> <p>explain how the model of the atom changed following the discovery of electrons, protons and neutrons and describe how natural radioactive decay results in stable atoms</p> <p>AC9S9U07</p> <p>model the rearrangement of atoms in chemical reactions using a range of representations, including word and simple balanced chemical equations, and use these to demonstrate the law of conservation of mass</p>	<p>AC9S10U06</p> <p>explain how the structure and properties of atoms relate to the organisation of the elements in the periodic table</p> <p>AC9S10U07</p> <p>identify patterns in synthesis, decomposition and displacement reactions and investigate the factors that affect reaction rates</p>

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Nature and development of science	<p>AC9S7H01 explain how new evidence or different perspectives can lead to changes in scientific knowledge</p> <p>AC9S7H02 investigate how cultural perspectives and worldviews influence the development of scientific knowledge</p>	<p>AC9S8H01 explain how new evidence or different perspectives can lead to changes in scientific knowledge</p> <p>AC9S8H02 investigate how cultural perspectives and worldviews influence the development of scientific knowledge</p>	<p>AC9S9H01 explain how scientific knowledge is validated and refined, including the role of publication and peer review</p> <p>AC9S9H02 investigate how advances in technologies enable advances in science, and how science has contributed to developments in technologies and engineering</p>	<p>AC9S10H01 explain how scientific knowledge is validated and refined, including the role of publication and peer review</p> <p>AC9S10H02 investigate how advances in technologies enable advances in science, and how science has contributed to developments in technologies and engineering</p>
Use and influence of science	<p>AC9S7H03 examine how proposed scientific responses to contemporary issues may impact on society and explore ethical, environmental, social and economic considerations</p> <p>AC9S7H04 explore the role of science communication in informing individual viewpoints and community policies and regulations</p>	<p>AC9S8H03 examine how proposed scientific responses to contemporary issues may impact on society and explore ethical, environmental, social and economic considerations</p> <p>AC9S8H04 explore the role of science communication in informing individual viewpoints and community policies and regulations</p>	<p>AC9S9H03 analyse the key factors that contribute to science knowledge and practices being adopted more broadly by society</p> <p>AC9S9H04 examine how the values and needs of society influence the focus of scientific research</p>	<p>AC9S10H03 analyse the key factors that contribute to science knowledge and practices being adopted more broadly by society</p> <p>AC9S10H04 examine how the values and needs of society influence the focus of scientific research</p>

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Questioning and predicting	<p>AC9S7I01</p> <p>develop investigable questions, reasoned predictions and hypotheses to explore scientific models, identify patterns and test relationships</p>	<p>AC9S8I01</p> <p>develop investigable questions, reasoned predictions and hypotheses to explore scientific models, identify patterns and test relationships</p>	<p>AC9S9I01</p> <p>develop investigable questions, reasoned predictions and hypotheses to test relationships and develop explanatory models</p>	<p>AC9S10I01</p> <p>develop investigable questions, reasoned predictions and hypotheses to test relationships and develop explanatory models</p>
Planning and conducting	<p>AC9S7I02</p> <p>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</p> <p>AC9S7I03</p> <p>select and use equipment to generate and record data with precision, using digital tools as appropriate</p>	<p>AC9S8I02</p> <p>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</p> <p>AC9S8I03</p> <p>select and use equipment to generate and record data with precision, using digital tools as appropriate</p>	<p>AC9S9I02</p> <p>plan and conduct valid, reproducible investigations to answer questions and test hypotheses, including identifying and controlling for possible sources of error and, as appropriate, developing and following risk assessments, considering ethical issues, and addressing key considerations regarding heritage sites and artefacts on Country/Place</p> <p>AC9S9I03</p> <p>select and use equipment to generate and record data with precision to obtain useful sample sizes and replicable data, using digital tools as appropriate</p>	<p>AC9S10I02</p> <p>plan and conduct valid, reproducible investigations to answer questions and test hypotheses, including identifying and controlling for possible sources of error and, as appropriate, developing and following risk assessments, considering ethical issues, and addressing key considerations regarding heritage sites and artefacts on Country/Place</p> <p>AC9S10I03</p> <p>select and use equipment to generate and record data with precision to obtain useful sample sizes and replicable data, using digital tools as appropriate</p>

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Processing, modeling and analysing	<p>AC9S7I04</p> <p>select and construct appropriate representations, including tables, graphs, models and mathematical relationships, to organise and process data and information</p> <p>AC9S7I05</p> <p>analyse data and information to describe patterns, trends and relationships and identify anomalies</p>	<p>AC9S8I04</p> <p>select and construct appropriate representations, including tables, graphs, models and mathematical relationships, to organise and process data and information</p> <p>AC9S8I05</p> <p>analyse data and information to describe patterns, trends and relationships and identify anomalies</p>	<p>AC9S9I04</p> <p>select and construct appropriate representations, including tables, graphs, descriptive statistics, models and mathematical relationships, to organise and process data and information</p> <p>AC9S9I05</p> <p>analyse and connect a variety of data and information to identify and explain patterns, trends, relationships and anomalies</p>	<p>AC9S10I04</p> <p>select and construct appropriate representations, including tables, graphs, descriptive statistics, models and mathematical relationships, to organise and process data and information</p> <p>AC9S10I05</p> <p>analyse and connect a variety of data and information to identify and explain patterns, trends, relationships and anomalies</p>
Evaluating	<p>AC9S7I06</p> <p>analyse methods, conclusions and claims for assumptions, possible sources of error, conflicting evidence and unanswered questions</p> <p>AC9S7I07</p> <p>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</p>	<p>AC9S8I06</p> <p>analyse methods, conclusions and claims for assumptions, possible sources of error, conflicting evidence and unanswered questions</p> <p>AC9S8I07</p> <p>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</p>	<p>AC9S9I06</p> <p>assess the validity and reproducibility of methods and evaluate the validity of conclusions and claims, including by identifying assumptions, conflicting evidence and areas of uncertainty</p> <p>AC9S9I07</p> <p>construct arguments based on analysis of a variety of evidence to support conclusions or evaluate claims, and consider any ethical issues and cultural protocols associated with accessing, using or citing secondary data or information</p>	<p>AC9S10I06</p> <p>assess the validity and reproducibility of methods and evaluate the validity of conclusions and claims, including by identifying assumptions, conflicting evidence and areas of uncertainty</p> <p>AC9S10I07</p> <p>construct arguments based on analysis of a variety of evidence to support conclusions or evaluate claims, and consider any ethical issues and cultural protocols associated with accessing, using or citing secondary data or information</p>

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Communicating	<p>AC9S7I08</p> <p>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</p>	<p>AC9S8I08</p> <p>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</p>	<p>AC9S9I08</p> <p>write and create texts to communicate ideas, findings and arguments effectively for identified purposes and audiences, including selection of appropriate content, language and text features, using digital tools as appropriate</p>	<p>AC9S10I08</p> <p>write and create texts to communicate ideas, findings and arguments effectively for identified purposes and audiences, including selection of appropriate content, language and text features, using digital tools as appropriate</p>

	Term 1		Term 2		Term 3	Term 4	
Unit	Introduction to Science	Our Place in Space	States of Matter	Mixtures	Forces	Classification	Ecosystems
Essential question	What is science and how can it help us solve global problems?	How have observations shaped models over time?	Why is liquid water so important for humans to live on Mars?	Can we 3D print new bones to replace broken ones?	How can you scale a wall like a gecko?	Why do zebras have stripes?	Why do cats have slit-shaped eyes?
Weeks	2	6	6	2	8	2	6
Science understanding	<p>AC9S7U06</p> <p>investigate how particles in pure substances and mixtures can be modelled and how differences in the properties of substances can be used to separate mixtures</p>	<p>AC9S7U03</p> <p>model cyclic changes in the relative positions of the Earth, sun and moon and explain how these cycles cause eclipses and influence predictable phenomena on Earth, including seasons and tides</p>	<p>*AC9S7U05</p> <p>use particle theory to describe the arrangement of particles in a substance, including the motion of and attraction between particles, and relate this to the properties of the substance</p>	<p>*AC9S7U06</p> <p>use a particle model to describe differences between pure substances and mixtures and apply understanding of properties of substances to separate mixtures</p>	<p>AC9S7U04</p> <p>investigate and represent balanced and unbalanced forces, including gravitational force, acting on objects, and relate changes in an object's motion to its mass and the magnitude and direction of forces acting on it</p>	<p>AC9S7U01</p> <p>investigate the role of classification in ordering and organising the diversity of life on Earth and use and develop classification tools including dichotomous keys</p>	<p>AC9S7U02</p> <p>use models, including food webs, to represent matter and energy flow in ecosystems and predict the impact of changing abiotic and biotic factors on populations</p>

Term 1		Term 2		Term 3	Term 4		
Unit	Introduction to Science	Our Place in Space	States of Matter	Mixtures	Forces	Classification	Ecosystems
Science inquiry	<p>AC9S7I01</p> <p>develop investigable questions, reasoned predictions and hypotheses to explore scientific models, identify patterns and test relationships</p>	<p>*AC9S7I02</p> <p>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</p> <p>AC9S7I08</p> <p>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</p>	<p>AC9S7I06</p> <p>use particle theory to describe the arrangement of particles in a substance, including the motion of and attraction between particles, and relate this to the properties of the substance</p>		<p>AC9S7I04</p> <p>select and construct appropriate representations, including tables, graphs, models and mathematical relationships, to organise and process data and information</p>	<p>AC9S7I07</p> <p>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</p>	<p>AC9S7I05</p> <p>analyse data and information to describe patterns, trends and relationships and identify anomalies</p>

	Term 1		Term 2		Term 3	Term 4	
Unit	Introduction to Science	Our Place in Space	States of Matter	Mixtures	Forces	Classification	Ecosystems
Science inquiry		<p>AC9S7H01</p> <p>explain how new evidence or different perspectives can lead to changes in scientific knowledge</p>					
Science as a human endeavour		<p>AC9S7H02</p> <p>investigate how cultural perspectives and worldviews influence the development of scientific knowledge</p>	<p>AC9S7H04</p> <p>explore the role of science communication in informing individual viewpoints and community policies and regulations</p>				

	Term 1		Term 2		Term 3		Term 4
Unit	Physical and Chemical Change	Elements and Compounds	Cells	Plant Systems	Body Systems	Energy	Active Earth
Essential question	What does chemistry have to do with chocolate making?	Why is helium so rare?	Would you eat lab-grown meat?	Why do predatory plants exist?	What does it take to be a cold-blooded killer?	How can we learn from nature to improve energy technology?	How do we build future-ready cities?
Weeks	4	4	5	3	3	5	8
Science understanding	<p>AC9S8U07</p> <p>compare physical and chemical changes and identify indicators of energy change in chemical reactions</p>	<p>AC9S8U06</p> <p>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</p>	<p>AC9S8U01</p> <p>recognise cells as the basic units of living things, compare plant and animal cells, and describe the functions of specialised cell structures and organelles</p>	<p>* AC9S8U02</p> <p>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</p>	<p>* AC9S8U02</p> <p>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</p>	<p>AC9S8U05</p> <p>classify different types of energy as kinetic or potential and investigate energy transfer and transformations in simple systems</p>	<p>AC9S8U04</p> <p>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</p> <p>* AC9S8U03</p> <p>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</p>

Term 1		Term 2		Term 3		Term 4	
Unit	Physical and Chemical Change	Elements and Compounds	Cells	Plant Systems	Body Systems	Energy	Active Earth
Science inquiry	<p>AC9S8I03</p> <p>select and use equipment to generate and record data with precision, using digital tools as appropriate</p>	<p>AC9S8I02</p> <p>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</p>	<p>AC9S8I07</p> <p>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</p>		<p>AC9S8I06</p> <p>analyse methods, conclusions and claims for assumptions, possible sources of error, conflicting evidence and unanswered questions</p>	<p>AC9S8I01</p> <p>develop investigable questions, reasoned predictions and hypotheses to explore scientific models, identify patterns and test relationships</p>	<p>AC9S8I04</p> <p>select and construct appropriate representations, including tables, graphs, models and mathematical relationships, to organise and process data and information</p> <p>AC9S8I05</p> <p>analyse data and information to describe patterns, trends and relationships and identify anomalies</p>
Science as a human endeavour			<p>* AC9S8H02</p> <p>investigate how cultural perspectives and world-views influence the development of scientific knowledge</p>	<p>AC9S8H03</p> <p>examine how proposed scientific responses to contemporary issues may impact on society and explore ethical, environmental, social and economic considerations</p>		<p>* AC9S8H04</p> <p>explore the role of science communication in informing individual viewpoints and community policies and regulations</p>	<p>AC9S8I08</p> <p>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</p> <p>AC9S8H01</p> <p>explain how new evidence or different perspectives can lead to changes in scientific knowledge</p>

	Term 1		Term 2			Term 3				Term 4	
Unit	The immune system	Survival of Species	Earth Systems	Energy Transfers and Transformations	Student research project	Light, Sound, Electricity and Heat				Atoms	Chemical Reactions
Essential question	How can we protect communities from diseases?	How does sexual and asexual reproduction enable survival of the species?	How should we power Australia's future?	Can we use ocean waves to produce electricity?	What skills are required to implement the scientific method?	Can you turn your smartphone into a microscope?	In space no one can hear you scream – or can they?	Electrical circuits on the catwalk?	How can I cook the best pizza?	How can the building blocks of atoms help us see further?	What happens when sodium explodes in water?
Weeks	6	2	4	2	2	2	2	2	2	5	5
Science understanding	<p>AC9S9U01</p> <p>compare the role of body systems in regulating and coordinating the body's response to a stimulus, and describe the operation of a negative feedback mechanism</p>	<p>* AC9S9U02</p> <p>describe the form and function of reproductive cells and organs in animals and plants, and analyse how the processes of sexual and asexual reproduction enable survival of the species</p>	<p>* AC9S9U03</p> <p>represent the carbon cycle and examine how key processes including combustion, photosynthesis and respiration rely on interactions between Earth's spheres (the geosphere, biosphere, hydrosphere and atmosphere)</p>	<p>* AC9S9U05</p> <p>apply the law of conservation of energy to analyse system efficiency in terms of energy inputs, outputs, transfers and transformations</p>		<p>AC9S9U04</p> <p>use wave and particle models to describe energy transfer through different mediums and examine the usefulness of each model for explaining phenomena</p>				<p>AC9S9U06</p> <p>explain how the model of the atom changed following the discovery of electrons, protons and neutrons and describe how natural radioactive decay results in stable atoms</p>	<p>AC9S9U07</p> <p>model the rearrangement of atoms in chemical reactions using a range of representations, including word and simple balanced chemical equations, and use these to demonstrate the law of conservation of mass</p>

Term 1		Term 2			Term 3	Term 4		
Unit	The immune system	Survival of Species	Earth Systems	Energy Transfers and Transformations	Student research project	Light, Sound, Electricity and Heat	Atoms	Chemical Reactions
Science inquiry	<p>AC9S9I04</p> <p>select and construct appropriate representations, including tables, graphs, descriptive statistics, models and mathematical relationships, to organise and process data and information</p> <p>AC9S9I07</p> <p>construct arguments based on analysis of a variety of evidence to support conclusions or evaluate claims, and consider any ethical issues and cultural protocols associated with accessing, using or citing secondary data or information</p>		<p>AC9S9I05</p> <p>analyse and connect a variety of data and information to identify and explain patterns, trends, relationships and anomalies</p>	<p>AC9S9I01</p> <p>develop investigable questions, reasoned predictions and hypotheses to test relationships and develop explanatory models</p>	<p>* AC9S9I02</p> <p>plan and conduct valid, reproducible investigations to answer questions and test hypotheses, including identifying and controlling for possible sources of error and, as appropriate, developing and following risk assessments, considering ethical issues, and addressing key considerations regarding heritage sites and artefacts on Country/Place</p>		<p>AC9S9I08</p> <p>write and create texts to communicate ideas, findings and arguments effectively for identified purposes and audiences, including selection of appropriate content, language and text features, using digital tools as appropriate</p>	<p>AC9S9I03</p> <p>select and use equipment to generate and record data with precision to obtain useful sample sizes and replicable data, using digital tools as appropriate</p>

Term 1		Term 2			Term 3		Term 4	
Unit	The immune system	Survival of Species	Earth Systems	Energy Transfers and Transformations	Student research project	Light, Sound, Electricity and Heat	Atoms	Chemical Reactions
Science as a human endeavour	<p>AC9S9H04</p> <p>examine how the values and needs of society influence the focus of scientific research</p>		<p>* AC9S9H03</p> <p>analyse the key factors that contribute to science knowledge and practices being adopted more broadly by society</p> <p>* AC9S9H01</p> <p>explain how scientific knowledge is validated and refined, including the role of publication and peer review</p>			<p>AC9S9H02</p> <p>investigate how advances in technologies enable advances in science, and how science has contributed to developments in technologies and engineering</p>	<p>AC9S9I08</p> <p>write and create texts to communicate ideas, findings and arguments effectively for identified purposes and audiences, including selection of appropriate content, language and text features, using digital tools as appropriate</p>	<p>AC9S9I03</p> <p>select and use equipment to generate and record data with precision to obtain useful sample sizes and replicable data, using digital tools as appropriate</p>

	Term 1		Term 2		Term 3		Term 4	
Unit	Genetics	Evolution	Newton's Laws of Motion	Kinematics	The Periodic Table	Reaction Types	Climate Change	The Universe
Essential question	How can genes increase the risk of cancer?	Are we responsible for the rise of antibiotic resistance?	How can we apply Newton's Laws in car crash investigations?	Are self-driving cars the way of the future?	How do exploding stars create heavy metals?	Are self-healing space suits science fiction or just science?	Climate change... is there even a debate?	How do gravitational waves give us a new way of understanding the universe?
Weeks	4	4	4	4	4	4	4	4
Science understanding	<p>AC9S10U01</p> <p>explain the role of meiosis and mitosis and the function of chromosomes, DNA and genes in heredity and predict patterns of Mendelian inheritance</p>	<p>* AC9S10U02</p> <p>use the theory of evolution by natural selection to explain past and present diversity and analyse the scientific evidence supporting the theory</p>	<p>AC9S10U05</p> <p>investigate Newton's laws of motion and quantitatively analyse the relationship between force, mass and acceleration of objects</p>	<p>AC9S10U06</p> <p>explain how the structure and properties of atoms relate to the organisation of the elements in the periodic table</p>	<p>AC9S10U07</p> <p>identify patterns in synthesis, decomposition and displacement reactions and investigate the factors that affect reaction rates</p>	<p>* AC9S10U04</p> <p>use models of energy flow between the geosphere, biosphere, hydrosphere and atmosphere to explain patterns of global climate change</p>	<p>AC9S10U03</p> <p>describe how the big bang theory models the origin and evolution of the universe and analyse the supporting evidence for the theory</p>	

Term 1		Term 2		Term 3		Term 4		
Unit	Genetics	Evolution	Newton's Laws of Motion	Kinematics	The Periodic Table	Reaction Types	Climate Change	The Universe
Science inquiry	<p>* AC9S10I02</p> <p>plan and conduct valid, reproducible investigations to answer questions and test hypotheses, including identifying and controlling for possible sources of error and, as appropriate, developing and following risk assessments, considering ethical issues, and addressing key considerations regarding heritage sites and artefacts on Country/Place</p>	<p>AC9S10I08</p> <p>write and create texts to communicate ideas, findings and arguments effectively for identified purposes and audiences, including selection of appropriate content, language and text features, using digital tools as appropriate</p>	<p>AC9S10I04</p> <p>select and construct appropriate representations including tables, graphs, descriptive statistics, models and mathematical relationships to organise and process data and information</p>	<p>AC9S10I03</p> <p>select and use equipment to generate and record data with precision to obtain useful sample sizes and replicable data, using digital tools as appropriate</p>	<p>AC9S10I05</p> <p>analyse and connect a variety of data and information to identify and explain patterns, trends, relationships and anomalies</p>	<p>AC9S10I01</p> <p>develop investigable questions, reasoned predictions and hypotheses to test relationships and develop explanatory models</p>	<p>AC9S10I07</p> <p>construct arguments based on analysis of a variety of evidence to support conclusions or evaluate claims, and consider any ethical issues and cultural protocols associated with accessing, using or citing secondary data or information</p>	<p>AC9S10I06</p> <p>assess the validity and reproducibility of methods and evaluate the validity of conclusions and claims, including by identifying assumptions, conflicting evidence and areas of uncertainty</p>
Science as a human endeavour	<p>* AC9S10H04</p> <p>examine how the values and needs of society influence the focus of scientific research</p>	<p>* AC9S10H03</p> <p>analyse the key factors that contribute to science knowledge and practices being adopted more broadly by society</p>					<p>* AC9S10H01</p> <p>explain how scientific knowledge is validated and refined, including the role of publication and peer review</p>	<p>AC9S10H02</p> <p>investigate how advances in technologies enable advances in science, and how science has contributed to developments in technologies and engineering</p>

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(A real human actually answers this phone!)