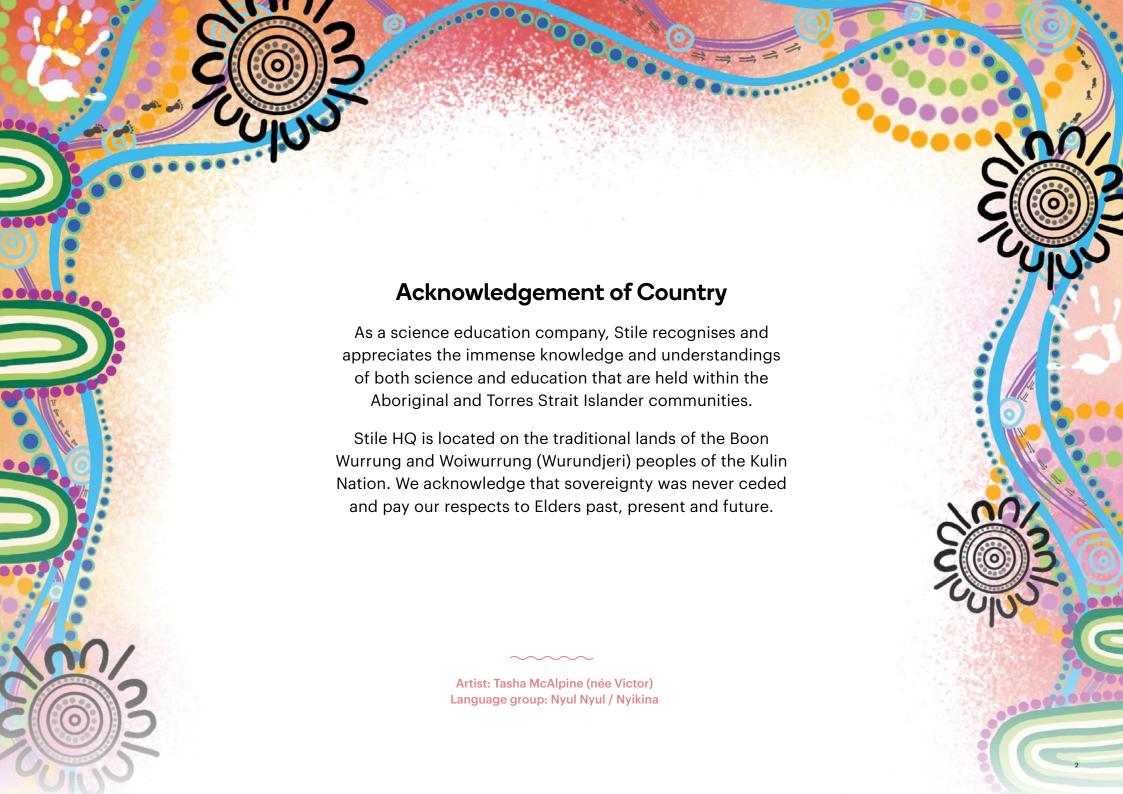
Stile

Scope and Sequence

Version 8.4 of the Australian Curriculum



A note from our Head of Education



Here

Clare Feeney | Head of Education and the whole Stile team

Stile is for everyday use in your classroom. It facilitates vibrant, collaborative learning with a mixture of rich, interactive activities that collectively cover every outcome of the Years 7–10 Science curriculum.

To support you, we've created this scope and sequence document to give you guidance on how you can use Stile as a program of learning across Years 7–10. This sequence is designed to be used as a guide – a way to ensure you are covering the curriculum with our resources – but as with everything at Stile you can customise it to best suit your classes. Make as few or as many changes as you like; it's all about teaching in your style and doing what works for your students. Our curriculumaligned lessons are ready to teach straight out of the box and have built-in customisation and editing tools that let you tailor them to your classroom. We have created these resources to do some of the work for you so you can do what you do best: teach.

If you have any questions or would like to chat more about our science program please reach out. We're a bunch of teachers and science nerds based in Melbourne, with team members across the country, and we love chatting with fellow educators about awesome science education.



Contents Year 7 Scope & Sequence 6 Curriculum alignment 7 Year 8 Scope & Sequence 10 Curriculum alignment 11 Year 9 Scope & Sequence 14 Curriculum alignment 15 Year 10 Scope & Sequence 20 Curriculum alignment 21 **Supplementary resources** 25

All units in Stile address the general capabilities of the Australian Curriculum. We have used the following symbols to indicate this:

Ethical understanding

Literacy

© Critical and creative thinking

Numeracy

Personal and social capability

Digital literacy

(5) Intercultural understanding

Year 7 – Scope & Sequence

Stile X booklets are available for all units in this scope and sequence. With Stile X, you can offer support and extension for students in class or give them the tools to review and master knowledge independently.



Year 7 – Curriculum alignment

Unit 1

Introduction to Science

Mixtures

Unit 3

Resources

endeavour

Science as a

Science inquiry

This unit focuses on Science as a human endeavour and Science inquiry strands. ACSSU113

Mixtures, including solutions, contain a combination of pure substances that can be separated using a range of techniques ACSSU116

Some of Earth's resources are renewable, including water that cycles through the environment, but others are non-renewable

ACSHE119

Scientific knowledge has changed peoples' understanding of the world and is refined as new evidence becomes available

ACSHE120

Solutions to contemporary issues that are found using science and technology, may impact on other areas of society and may involve ethical considACSHE121

People use science understanding and skills in their occupations and these have influenced the development of practices in areas of human activity

ACSHE223



Science knowledge can develop through collaboration across the disciplines of science and the contributions of people from a range of cultures

ACSHE120 (=



Solutions to contemporary issues that are found using science and technology, may impact on other areas of society and may involve ethical considerations

ACSHE121

People use science understanding and skills in their occupations and these have influenced the development of

practices in areas of human activity

ACSHE223

Science knowledge can develop through collaboration across the disciplines of science and the contributions of people from a range of cultures

ACSHE120 (=)

Solutions to contemporary issues that are found using science and technology, may impact on other areas of society and may involve ethical considerations

ACSHE121

People use science understanding and skills in their occupations and these have influenced the development of practices in areas of human activity

ACSHE223

Science knowledge can develop through collaboration across the disciplines of science and the contributions of people from a range of cultures

ACSIS124 (E) (®)



Identify questions and problems that can be investigated scientifically and make predictions based on scientific knowledge

ACSIS125 (⊋) (⊕) (⊕)







Collaboratively and individually plan and conduct a range of investigation types, including fieldwork and experiments, ensuring safety and ethical quidelines are followed

ACSIS126 (%)



Measure and control variables, select equipment appropriate to the task and collect data with accuracy

ACSIS129 (a) (c) (%)







Construct and use a range of representations, including graphs, keys and models to represent and analyse patterns or relationships in data using digital technologies as appropriate







Summarise data, from students' own investigations and secondary sources, and use scientific understanding to identify relationships and draw conclusions based on evidence





Reflect on scientific investigations including evaluating the quality of the data collected, and identifying improve-

ACSIS132



Use scientific knowledge and findings from investigations to evaluate claims based on evidence



Communicate ideas, findings and evidence based solutions to problems using scientific language, and representations, using digital technologies as

ACSIS125 (☐) (⑥) (④)







Collaboratively and individually plan and conduct a range of investigation types, including fieldwork and experiments, ensuring safety and ethical guidelines are followed

ACSIS126 (%)



Measure and control variables, select equipment appropriate to the task and collect data with accuracy





Construct and use a range of repre sentations, including graphs, keys and models to represent and analyse patterns or relationships in data using digital technologies as appropriate

ACSIS130 (a) (c) (a)





Summarise data, from students' own investigations and secondary sources, and use scientific understanding to identify relationships and draw conclusions based on evidence

ACSIS131 (E) (C) (%)



Reflect on scientific investigations including evaluating the quality of the data collected, and identifying improve-

ACSIS133



Communicate ideas, findings and evidence based solutions to problems using scientific language, and representations, using digital technologies as appropriate



Identify questions and problems that can be investigated scientifically and make predictions based on scientific knowledge

ACSIS125 (⇌) (⊜) (♀)





Collaboratively and individually plan and conduct a range of investigation types, including fieldwork and experiments, ensuring safety and ethical quidelines are followed



Communicate ideas, findings and evidence based solutions to problems using scientific language, and representations, using digital technologies as appropriate

Year 7 – Curriculum alignment

Unit 4

Classification and Biodiversity

Food Chains and Food Webs

Forces

endeavour

human e

Science as a

Science inquiry

ACSSU111

Classification helps organise the diverse group of organisms

ACSSU112

Interactions between organisms, including the effects of human activities can be represented by food chains and food webs

ACSSU117

Change to an object's motion is caused by unbalanced forces. including Earth's gravitational attraction, acting on the object

ACSHE119

Scientific knowledge has changed peoples' understanding of the world and is refined as new evidence becomes available

ACSHE120 (→



Solutions to contemporary issues that are found using science and technology, may impact on other areas of society and may involve ethical considerations

ACSHE121 (=



People use science understanding and skills in their occupations and these have influenced the development of practices in areas of human activity

ACSHE119

Scientific knowledge has changed peoples' understanding of the world and is refined as new evidence becomes available

ACSHE120 (=



Solutions to contemporary issues that are found using science and technology, may impact on other areas of society and may involve ethical considerations

ACSHE119

Scientific knowledge has changed peoples' understanding of the world and is refined as new evidence becomes available

ACSHE120 (=)



Solutions to contemporary issues that are found using science and technology, may impact on other areas of society and may involve ethical considerations

ACSHE121



People use science understanding and skills in their occupations and these have influenced the development of practices in areas of human activity

ACSHE223



Science knowledge can develop through collaboration across the disciplines of science and the contributions of people from a range of cultures





Identify questions and problems that can be investigated scientifically and make predictions based on scientific knowledge

ACSIS125



and conduct a range of investigation

types, including fieldwork and exper-

iments, ensuring safety and ethical



Use scientific knowledge and findings from investigations to evaluate claims

ACSIS129



quidelines are followed





Construct and use a range of representations, including graphs, keys and models to represent and analyse patterns or relationships in data using digital technologies as appropriate





Summarise data, from students' own

investigations and secondary sources, and use scientific understanding to identify relationships and draw conclusions based on evidence

ACSIS132



based on evidence

ACSIS133



Communicate ideas, findings and evidence based solutions to problems using scientific language, and representations, using digital technologies as appropriate

ACSIS124 (E) (C)



Identify questions and problems that can be investigated scientifically and make predictions based on scientific knowledge







Collaboratively and individually plan and conduct a range of investigation types, including fieldwork and experiments, ensuring safety and ethical quidelines are followed

ACSIS126 (%)



Measure and control variables, select equipment appropriate to the task and collect data with accuracy







Construct and use a range of representations, including graphs, keys and models to represent and analyse patterns or relationships in data using digital technologies as appropriate

ACSIS130 (E) (C) (UE)



Summarise data, from students' own investigations and secondary sources, and use scientific understanding to identify relationships and draw conclusions based on evidence

ACSIS131 (a) (c) (b)





Reflect on scientific investigations including evaluating the quality of the data collected, and identifying improvements

ACSIS132



Use scientific knowledge and findings from investigations to evaluate claims based on evidence

ACSIS133



Communicate ideas, findings and evidence based solutions to problems using scientific language, and representations, using digital technologies as appropriate



Identify questions and problems that can be investigated scientifically and make predictions based on scientific knowledge

ACSIS125







Collaboratively and individually plan and conduct a range of investigation types, including fieldwork and experiments, ensuring safety and ethical quidelines are followed

ACSIS126 (%)



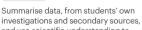
Measure and control variables, select equipment appropriate to the task and collect data with accuracy





Construct and use a range of representations, including graphs, keys and models to represent and analyse patterns or relationships in data using digital technologies as appropriate





and use scientific understanding to identify relationships and draw conclusions based on evidence

ACSIS131 (a) (c) (b)



Reflect on scientific investigations including evaluating the quality of the data collected, and identifying improvements



Use scientific knowledge and findings from investigations to evaluate claims based on evidence



Communicate ideas, findings and evidence based solutions to problems using scientific language, and representations, using digital technologies as appropriate

Year 7 – Curriculum alignment

Optional

Magnetism

Unit 7

Our Place in Space

Unit 8

The Water Cycle

endeavour

ACSSU117

Change to an object's motion is caused by unbalanced forces. including Earth's gravitational attraction, acting on the object

This content description is addressed in the Forces unit, however Magnetism has been included as an optional extra if you wish to examine another example of an object's motion caused by unbalanced forces. ACSSU115

Predictable phenomena on Earth, including seasons and eclipses. are caused by the relative positions of the sun. Earth and the moon ACSSU116

Some of Earth's resources are renewable, including water that cycles through the environment, but others are non-renewable

ACSHE119

Scientific knowledge has changed peoples' understanding of the world and is refined as new evidence becomes available

ACSHE223

Science knowledge can develop through collaboration across the disciplines of science and the contributions of people from a range of cultures

ACSHE119

Scientific knowledge has changed peoples' understanding of the world and is refined as new evidence becomes available

ACSHE223

Science knowledge can develop through collaboration across the disciplines of science and the contributions of people from a range of cultures

ACSHE120 (=

Solutions to contemporary issues that are found using science and technology, may impact on other areas of society and may involve ethical considACSHE223

Science knowledge can develop through collaboration across the disciplines of science and the contributions of people from a range of cultures

ACSIS125 (■) (©) (-</u>



guidelines are followed

ACSIS129 (E) (C) (Ta)



and conduct a range of investigation

types, including fieldwork and exper-

iments, ensuring safety and ethical

Construct and use a range of repre-



Summarise data, from students' own investigations and secondary sources, and use scientific understanding to sions based on evidence

ACSIS130 (E) (C)



identify relationships and draw conclu-

ACSIS124 (E) (C)









Collaboratively and individually plan and conduct a range of investigation types, including fieldwork and experiments, ensuring safety and ethical quidelines are followed

ACSIS126 🖫 💢



Measure and control variables, select equipment appropriate to the task and collect data with accuracy





Construct and use a range of representations, including graphs, keys and models to represent and analyse patterns or relationships in data using digital technologies as appropriate

ACSIS130 (E) (C) (UE)





ACSIS131 (a) (c) (a)



Reflect on scientific investigations including evaluating the quality of the data collected, and identifying improvements

ACSIS133



Communicate ideas, findings and evidence based solutions to problems using scientific language, and representations, using digital technologies as appropriate

ACSIS124 (E) (C)



Identify questions and problems that can be investigated scientifically and make predictions based on scientific knowledge

ACSIS126



Measure and control variables, select equipment appropriate to the task and collect data with accuracy

ACSIS131 (a) (c) (u)

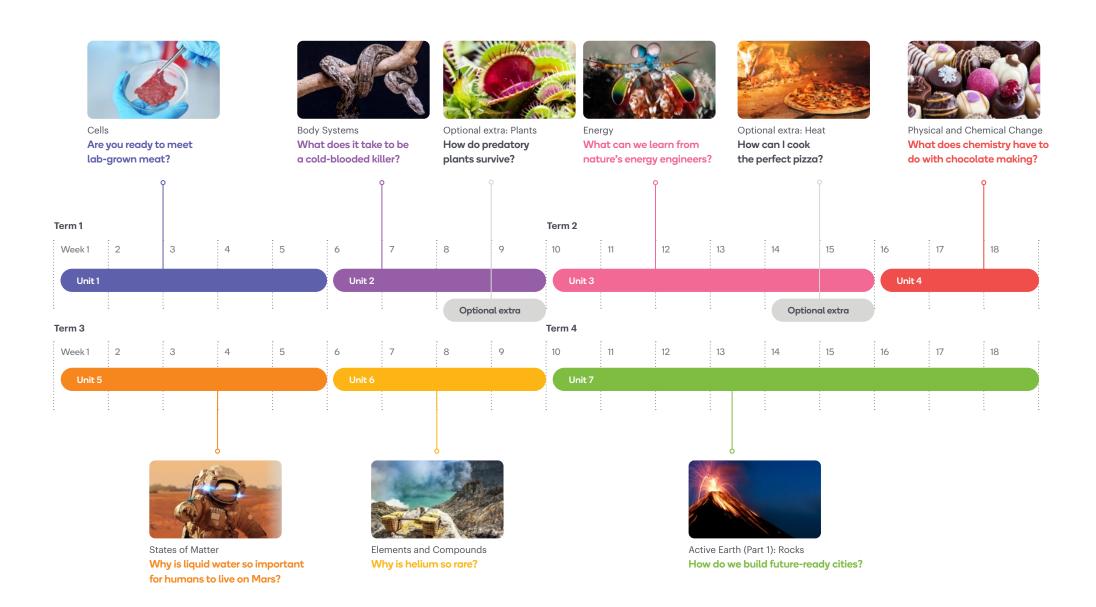


Reflect on scientific investigations including evaluating the quality of the data collected, and identifying improve-

sentations, including graphs, keys and models to represent and analyse patterns or relationships in data using digital technologies as appropriate

Year 8 - Scope & Sequence

Stile X booklets are available for all units in this scope and sequence. With Stile X, you can offer support and extension for students in class or give them the tools to review and master knowledge independently.



Year 8 – Curriculum alignment

Body Systems Plants Unit 1 Cells Unit 2 Optional ACSSU149 ACSSU150 ACSSU150 Cells are the basic units of living things: they Multi-cellular organisms contain systems of organs carrying out Multi-cellular organisms contain systems of organs carrying out have specialised structures and functions specialised functions that enable them to survive and reproduce specialised functions that enable them to survive and reproduce This content description is addressed in the Body Systems unit, however Plants has been included as an optional extra if you wish to examine another example of a multicellular organism. Science as a human endeavour ACSHE134 ACSHE136 (=) ACSHE136 ACSHE136 (=) Scientific knowledge has changed People use science understanding and People use science understanding and People use science understanding and peoples' understanding of the world skills in their occupations and these skills in their occupations and these skills in their occupations and these and is refined as new evidence have influenced the development of have influenced the development of have influenced the development of becomes available practices in areas of human activity practices in areas of human activity practices in areas of human activity ACSHE135 ACSHE226 Solutions to contemporary issues that Science knowledge can develop are found using science and techthrough collaboration across the disciplines of science and the contributions nology, may impact on other areas of society and may involve ethical considof people from a range of cultures erations Science inquiry ACSIS140 (⊋) (⊕) (⊕) ACSIS148 (E) (:k) ACSIS140 (⇌) (⊕) (⊕) ACSIS139 (E) (C) ACSIS145 (a) (c) (a) ACSIS139 (E) Identify questions and problems that Summarise data, from students' own Collaboratively and individually plan Communicate ideas, findings and Identify questions and problems that Collaboratively and individually plan and can be investigated scientifically and and conduct a range of investigation conduct a range of investigation types, investigations and secondary sources, evidence based solutions to problems can be investigated scientifically and make predictions based on scientific and use scientific understanding to types, including fieldwork and experusing scientific language, and represenmake predictions based on scientific including fieldwork and experiments, knowledge identify relationships and draw concluiments, ensuring safety and ethical tations, using digital technologies as knowledge ensuring safety and ethical guidelines sions based on evidence guidelines are followed appropriate are followed ACSIS140 (⊋) (⊕) (⊕) (⊕)











Construct and use a range of representations, including graphs, keys and models to represent and analyse patterns or relationships in data using digital technologies as appropriate



Communicate ideas, findings and evidence based solutions to problems using scientific language, and representations, using digital technologies as appropriate

ACSIS234 (E) (C)



Use scientific knowledge and findings from investigations to evaluate claims based on evidence

ACSIS144 (a) (b) (c) (a)





Construct and use a range of representations, including graphs, keys and models to represent and analyse patterns or relationships in data using digital technologies as appropriate

ACSIS145 (a) (c) (a)



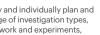


Summarise data, from students' own investigations and secondary sources. and use scientific understanding to identify relationships and draw conclusions based on evidence

ACSIS234 (E) (C)



Use scientific knowledge and findings from investigations to evaluate claims based on evidence



Year 8 – Curriculum alignment

Unit 3

Energy

Optional

Heat

Physical and Chemical Change

as a human endeavour

ACSSU155

Energy appears in different forms, including movement (kinetic energy), heat and potential energy, and energy transformations and transfers cause change within systems

ACSSU155

Energy appears in different forms, including movement (kinetic energy). heat and potential energy, and energy transformations and transfers cause change within systems

This content description is addressed in the Energy unit, however Heat has been included as an optional extra if you wish to examine heat specifically as a form of energy.

ACSSU225

Chemical change involves substances reacting to form new substances

ACSHE135 (=

Solutions to contemporary issues that are found using science and technology, may impact on other areas of society and may involve ethical considerations

ACSHE136 (=



People use science understanding and skills in their occupations and these have influenced the development of practices in areas of human activity

ACSHE134

Scientific knowledge has changed peoples' understanding of the world and is refined as new evidence becomes available

ACSHE226

Science knowledge can develop through collaboration across the disciplines of science and the contributions of people from a range of cultures

ACSHE135

Solutions to contemporary issues that are found using science and technology, may impact on other areas of society and may involve ethical considerations

ACSHE136 😑



People use science understanding and skills in their occupations and these have influenced the development of practices in areas of human activity

ACSIS139 (E) (C)



Identify questions and problems that can be investigated scientifically and make predictions based on scientific knowledge



and conduct a range of investigation





ACSIS145 (E) (C) (P)

types, including fieldwork and experiments, ensuring safety and ethical guidelines are followed



Measure and control variables, select equipment appropriate to the task and collect data with accuracy







Construct and use a range of representations, including graphs, keys and models to represent and analyse patterns or relationships in data using digital technologies as appropriate

Summarise data, from students' own investigations and secondary sources, and use scientific understanding to identify relationships and draw conclusions based on evidence

ACSIS146 (a) (c) (b)





Reflect on scientific investigations including evaluating the quality of the data collected, and identifying improveACSIS139 (E) (C)





Identify questions and problems that can be investigated scientifically and make predictions based on scientific knowledge

ACSIS140 (☐) (ⓒ) (辛)





Collaboratively and individually plan and conduct a range of investigation types, including fieldwork and experiments, ensuring safety and ethical guidelines are followed

ACSIS141 () () ()





Measure and control variables, select equipment appropriate to the task and collect data with accuracy

ACSIS144 (a) (c) (%)





Construct and use a range of representations, including graphs, keys and models to represent and analyse patterns or relationships in data using digital technologies as appropriate



Summarise data, from students' own investigations and secondary sources, and use scientific understanding to identify relationships and draw conclusions based on evidence

ACSIS146 (a) (c) (b)





Reflect on scientific investigations including evaluating the quality of the data collected, and identifying improvements

ACSIS234



Use scientific knowledge and findings from investigations to evaluate claims based on evidence



Identify questions and problems that can be investigated scientifically and make predictions based on scientific knowledge



Collaboratively and individually plan and conduct a range of investigation types, including fieldwork and experiments, ensuring safety and ethical guidelines are followed

ACSIS141



Measure and control variables, select equipment appropriate to the task and collect data with accuracy



Summarise data, from students' own investigations and secondary sources, and use scientific understanding to identify relationships and draw conclusions based on evidence



Communicate ideas, findings and evidence based solutions to problems using scientific language, and representations, using digital technologies as appropriate



Use scientific knowledge and findings from investigations to evaluate claims based on evidence

Year 8 – Curriculum alignment

Unit 5

States of Matter

Elements and Compounds

Unit 7

Active Earth (Rocks)

Science as a human endeavour

ACSSU151

Properties of the different states of matter can be explained in terms of the motion and arrangement of particles

ACSSU152

Differences between elements, compounds and mixtures can be described at a particle level

ACSSU153

Sedimentary, igneous and metamorphic rocks contain minerals and are formed by processes that occur within Earth over a variety of timescales

ACSHE134

Scientific knowledge has changed peoples' understanding of the world and is refined as new evidence becomes available

ACSHE135 (=

Solutions to contemporary issues that are found using science and technology, may impact on other areas of society and may involve ethical considACSHE136 (=)



People use science understanding and skills in their occupations and these have influenced the development of practices in areas of human activity

ACSHE134

Scientific knowledge has changed peoples' understanding of the world and is refined as new evidence becomes available

ACSHE135 (=



Solutions to contemporary issues that are found using science and technology, may impact on other areas of society and may involve ethical considerations

ACSHE136 (=



People use science understanding and skills in their occupations and these have influenced the development of practices in areas of human activity

ACSHE134

Scientific knowledge has changed peoples' understanding of the world and is refined as new evidence becomes available

ACSHE135 (=



Solutions to contemporary issues that are found using science and technology, may impact on other areas of society and may involve ethical considACSHE136 (=)



People use science understanding and skills in their occupations and these have influenced the development of practices in areas of human activity

ACSHE226

Science knowledge can develop through collaboration across the disciplines of science and the contributions of people from a range of cultures

Science inquiry



Identify questions and problems that can be investigated scientifically and make predictions based on scientific knowledge







Collaboratively and individually plan and conduct a range of investigation types, including fieldwork and experiments, ensuring safety and ethical quidelines are followed

ACSIS145 (a) (c) (c)





Summarise data, from students' own investigations and secondary sources. and use scientific understanding to identify relationships and draw conclusions based on evidence

ACSIS148





Communicate ideas, findings and evidence based solutions to problems using scientific language, and representations, using digital technologies as appropriate



Use scientific knowledge and findings from investigations to evaluate claims based on evidence

ACSIS139 (E) (C)







Identify questions and problems that can be investigated scientifically and make predictions based on scientific knowledge

ACSIS140 (⇌) (்ଛ)







Collaboratively and individually plan and conduct a range of investigation types, including fieldwork and experiments, ensuring safety and ethical quidelines are followed

ACSIS141



Measure and control variables, select equipment appropriate to the task and collect data with accuracy

ACSIS144 (a) (c) (b) (c)







Construct and use a range of representations, including graphs, keys and models to represent and analyse patterns or relationships in data using digital technologies as appropriate

ACSIS145 (%) (@) (@)





Summarise data, from students' own investigations and secondary sources, and use scientific understanding to identify relationships and draw conclusions based on evidence





Reflect on scientific investigations including evaluating the quality of the data collected, and identifying improve-

ACSIS148 ()



Communicate ideas, findings and evidence based solutions to problems using scientific language, and representations, using digital technologies as appropriate

ACSIS234 (E) (C)



Use scientific knowledge and findings from investigations to evaluate claims based on evidence

ACSIS139



Identify questions and problems that can be investigated scientifically and make predictions based on scientific knowledge

ACSIS140 (⇌) (⊜) (⋮≼)





Collaboratively and individually plan and conduct a range of investigation types, including fieldwork and experiments, ensuring safety and ethical quidelines are followed

ACSIS141



Measure and control variables, select equipment appropriate to the task and collect data with accuracy

ACSIS144 (a) (c) (b) (c)



Construct and use a range of representations, including graphs, keys and models to represent and analyse patterns or relationships in data using digital technologies as appropriate



Summarise data, from students' own investigations and secondary sources, and use scientific understanding to identify relationships and draw conclusions based on evidence



Reflect on scientific investigations including evaluating the quality of the data collected, and identifying improve-

ACSIS148 (k) (E)



Communicate ideas, findings and evidence based solutions to problems using scientific language, and representations, using digital technologies as appropriate

ACSIS234 (E) (E)

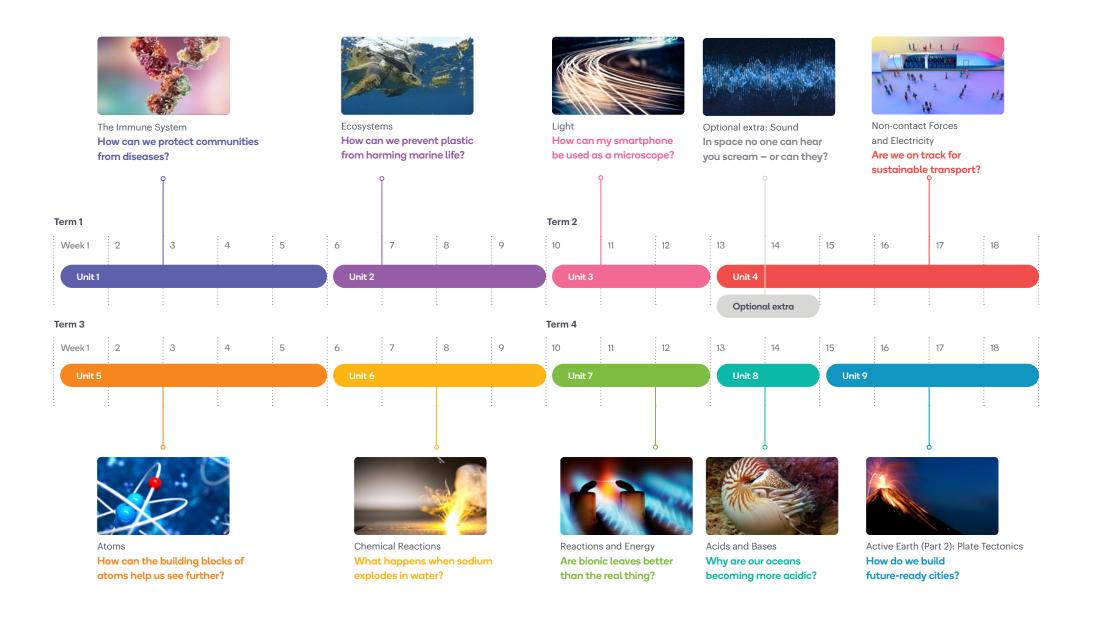


Use scientific knowledge and findings from investigations to evaluate claims based on evidence

Year 9 – Scope & Sequence



Stile X booklets are available for all units in this scope and sequence. With Stile X, you can offer support and extension for students in class or give them the tools to review and master knowledge independently.



Year 9 – Curriculum alignment

The Immune system

Ecosystems

Unit 3

Liaht

endeavour

Science as a human

Science inquiry

ACSSU175

Multi-cellular organisms rely on coordinated and interdependent internal systems to respond to changes to their environment

ACSSU176

Ecosystems consist of communities of interdependent organisms and abiotic components of the environment: matter and energy flow through these systems

ACSSU182

Energy transfer through different mediums can be explained using wave and particle models

ACSHE157 (=

Scientific understanding, including models and theories, is contestable and is refined over time through a process of review by the scientific community

ACSHE158

Advances in scientific understanding often rely on developments in technology and technological advances are often linked to scientific discoveries

ACSHE160

People use scientific knowledge to evaluate whether they accept claims, explanations or predictions, and advances in science can affect people's lives, including generating new career opportunities





Values and needs of contemporary society can influence the focus of scientific research

ACSHE158

Advances in scientific understanding often rely on developments in technol ogy and technological advances are often linked to scientific discoveries

ACSHE160

People use scientific knowledge to evaluate whether they accept claims, explanations or predictions, and advances in science can affect people's lives, including generating new career opportunities

ACSHE228



Values and needs of contemporary society can influence the focus of scientific research

ACSHE157 🚖



Scientific understanding, including models and theories, is contestable and is refined over time through a process of review by the scientific community

ACSHE158

Advances in scientific understanding often rely on developments in technology and technological advances are often linked to scientific discoveries

ACSIS164

Formulate questions or hypotheses that can be investigated scientifically

ACSIS165 (⇌) (⊜)





Plan, select and use appropriate investigation types, including field work and laboratory experimentation, to collect reliable data: assess risk and address ethical issues associated with these methods

ACSIS166



Select and use appropriate equipment, including digital technologies, to collect and record data systematically and accurately



Analyse patterns and trends in data, including describing relationships between variables and identifying inconsistencies



Use knowledge of scientific concepts to draw conclusions that are consistent

ACSIS171

with evidence





Evaluate conclusions, including identifying sources of uncertainty and possible alternative explanations, and describe specific ways to improve the quality of the data

ACSIS172



Critically analyse the validity of information in primary and secondary sources and evaluate the approaches used to solve problems

ACSIS174 (a) (c)



Communicate scientific ideas and information for a particular purpose. including constructing evidence-based arguments and using appropriate scientific language, conventions and representations

ACSIS164

Formulate questions or hypotheses that can be investigated scientifically

ACSIS165 (⇌) (⊜)





Plan, select and use appropriate investigation types, including field work and laboratory experimentation, to collect reliable data: assess risk and address ethical issues associated with these methods

ACSIS166 (E) (%)



Select and use appropriate equipment, including digital technologies, to collect and record data systematically and accurately

ACSIS169 (E) (E)





Analyse patterns and trends in data, including describing relationships between variables and identifying inconsistencies

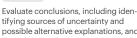
ACSIS170 (E) (C)



Use knowledge of scientific concepts to draw conclusions that are consistent with evidence

ACSIS171





tifying sources of uncertainty and possible alternative explanations, and describe specific ways to improve the quality of the data

ACSIS172



Critically analyse the validity of information in primary and secondary sources and evaluate the approaches used to solve problems

ACSIS174 (E) (C)



Communicate scientific ideas and information for a particular purpose. including constructing evidence-based arguments and using appropriate scientific language, conventions and representations





Plan, select and use appropriate investigation types, including field work and laboratory experimentation, to collect reliable data; assess risk and address ethical issues associated with these methods

ACSIS166



Select and use appropriate equipment, including digital technologies, to collect and record data systematically and accurately



Analyse patterns and trends in data, including describing relationships between variables and identifying inconsistencies

ACSIS170 (E) (C)



Use knowledge of scientific concepts to draw conclusions that are consistent with evidence

Year 9 – Curriculum alignment

Optional

Sound

Non-contact Forces and Electricity

Unit 5

Atoms

ACSSU182

Energy transfer through different mediums can be explained using wave and particle models

This content description is addressed in the Light and Non-contact Forces units, however Sound has been included as an optional extra if you wish to examine another example of energy transfer.

ACSSU182

Energy transfer through different mediums can be explained using wave and particle models

ACSSU177

All matter is made of atoms that are composed of protons, neutrons and electrons: natural radioactivity arises from the decay of nuclei in atoms

ACSHE160

People use scientific knowledge to evaluate whether they accept claims, explanations or predictions, and advances in science can affect people's lives, including generating new career opportunities

ACSHE157 (=)



Scientific understanding, including models and theories, is contestable and is refined over time through a process of review by the scientific community

ACSHE158

Advances in scientific understanding often rely on developments in technol ogy and technological advances are often linked to scientific discoveries

ACSHE160

People use scientific knowledge to evaluate whether they accept claims. explanations or predictions, and advances in science can affect people's lives, including generating new career opportunities





Values and needs of contemporary society can influence the focus of scientific research

ACSHE157 (=)



Scientific understanding, including models and theories, is contestable and is refined over time through a process of review by the scientific community

ACSHE158

Advances in scientific understanding often rely on developments in technology and technological advances are often linked to scientific discoveries

ACSHE160

People use scientific knowledge to evaluate whether they accept claims, explanations or predictions, and advances in science can affect people's lives, including generating new career opportunities

human





Select and use appropriate equipment, including digital technologies, to collect and record data systematically and accurately

ACSIS169





Analyse patterns and trends in data. including describing relationships between variables and identifying inconsistencies

ACSIS170 (E) (E) (UE)





Use knowledge of scientific concepts to draw conclusions that are consistent with evidence

ACSIS172 (E) (C)



Critically analyse the validity of information in primary and secondary sources and evaluate the approaches used to solve problems

ACSIS164 (E) (C)





Formulate questions or hypotheses that can be investigated scientifically





Plan, select and use appropriate investigation types, including field work and laboratory experimentation, to collect reliable data; assess risk and address ethical issues associated with these methods

ACSIS169 (a) (c) (u)





Analyse patterns and trends in data, including describing relationships between variables and identifying inconsistencies

ACSIS170 (E) (C)



Use knowledge of scientific concepts to draw conclusions that are consistent with evidence





Evaluate conclusions, including identifving sources of uncertainty and possible alternative explanations, and describe specific ways to improve the quality of the data

ACSIS172 (E) (E)



Critically analyse the validity of information in primary and secondary sources and evaluate the approaches used to solve problems



Communicate scientific ideas and information for a particular purpose, including constructing evidence-based arguments and using appropriate scientific language, conventions and representations



Analyse patterns and trends in data, including describing relationships between variables and identifying inconsistencies

ACSIS170



Use knowledge of scientific concepts to draw conclusions that are consistent with evidence



Communicate scientific ideas and information for a particular purpose. including constructing evidence-based arguments and using appropriate scientific language, conventions and representations

Year 9 – Curriculum alignment

Chemical Reactions

Unit 7

Reactions and Energy

Unit 8

Acids and Bases

ACSSU178

Chemical reactions involve rearranging atoms to form new substances: during a chemical reaction mass is not created or destroyed

ACSSU179

Chemical reactions, including combustion and the reactions of acids, are important in both non-living and living systems and involve energy transfer ACSSU179

Chemical reactions, including combustion and the reactions of acids, are important in both non-living and living systems and involve energy transfer

ACSHE160

People use scientific knowledge to evaluate whether they accept claims, explanations or predictions, and advances in science can affect people's lives, including generating new career opportunities

ACSHE228



Values and needs of contemporary society can influence the focus of scientific research

ACSHE160

People use scientific knowledge to evaluate whether they accept claims, explanations or predictions, and advances in science can affect people's lives, including generating new career opportunities

ACSHE228



Values and needs of contemporary society can influence the focus of scientific research

ACSHE157

Scientific understanding, including models and theories, is contestable and is refined over time through a process of review by the scientific community

ACSHE160

People use scientific knowledge to evaluate whether they accept claims, explanations or predictions, and advances in science can affect people's lives, including generating new career opportunities

ACSHE228

Values and needs of contemporary society can influence the focus of scientific research

ACSIS164

Science inquiry

Formulate questions or hypotheses that can be investigated scientifically

ACSIS165 (⇌) (ඬ)



laboratory experimentation, to collect

reliable data: assess risk and address

ethical issues associated with these

with evidence





Evaluate conclusions, including identifving sources of uncertainty and possible alternative explanations, and describe specific ways to improve the

ACSIS166

methods



Select and use appropriate equipment. including digital technologies, to collect and record data systematically and accurately



Analyse patterns and trends in data, including describing relationships between variables and identifying inconsistencies

ACSIS170 (E) (C)



Use knowledge of scientific concepts to draw conclusions that are consistent

ACSIS171





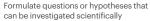
quality of the data

ACSIS174



Communicate scientific ideas and information for a particular purpose. including constructing evidence-based arguments and using appropriate scientific language, conventions and representations

ACSIS164



ACSIS165 (⊋) (€)





Plan, select and use appropriate investigation types, including field work and laboratory experimentation, to collect reliable data: assess risk and address ethical issues associated with these methods

ACSIS169





Analyse patterns and trends in data. including describing relationships between variables and identifying inconsistencies

ACSIS170 (E) (C)



Use knowledge of scientific concepts to draw conclusions that are consistent with evidence

ACSIS172



Critically analyse the validity of information in primary and secondary sources and evaluate the approaches used to solve problems

ACSIS174 (E) (C)



Communicate scientific ideas and information for a particular purpose. including constructing evidence-based arguments and using appropriate scientific language, conventions and representations

ACSIS165 (→ (□) (ⓒ)





Plan, select and use appropriate investigation types, including field work and laboratory experimentation, to collect reliable data; assess risk and address ethical issues associated with these methods



Select and use appropriate equipment, including digital technologies, to collect and record data systematically and accurately



Analyse patterns and trends in data, including describing relationships between variables and identifying inconsistencies

ACSIS170 (E) (C)



Use knowledge of scientific concepts to draw conclusions that are consistent with evidence

ACSIS174



Communicate scientific ideas and information for a particular purpose, including constructing evidence-based arguments and using appropriate scientific language, conventions and representations

Year 9 - Curriculum alignment



Active Earth (Part 2): Plate Tectonics

endeavour

ACSSU180

The theory of plate tectonics explains global patterns of geological activity and continental movement

ACSHE157

Scientific understanding, including models and theories, is contestable and is refined over time through a process of review by the scientific community

ACSHE158 (=

Advances in scientific understanding often rely on developments in technology and technological advances are often linked to scientific discoveries

ACSHE160 (=

People use scientific knowledge to evaluate whether they accept claims, explanations or predictions, and advances in science can affect people's lives, including generating new career opportunities

ACSHE228

Values and needs of contemporary society can influence the focus of scientific research



Formulate questions or hypotheses that can be investigated scientifically







Evaluate conclusions, including identifying sources of uncertainty and possible alternative explanations, and describe specific ways to improve the quality of the data





Select and use appropriate equipment, including digital technologies, to collect and record data systematically and accurately



Critically analyse the validity of information in primary and secondary sources and evaluate the approaches used to solve problems

ACSIS169 (E) (E)





Analyse patterns and trends in data. including describing relationships between variables and identifying inconsistencie



Communicate scientific ideas and information for a particular purpose, including constructing evidence-based arguments and using appropriate scientific language, conventions and representations

ACSIS170 🗐 🍥



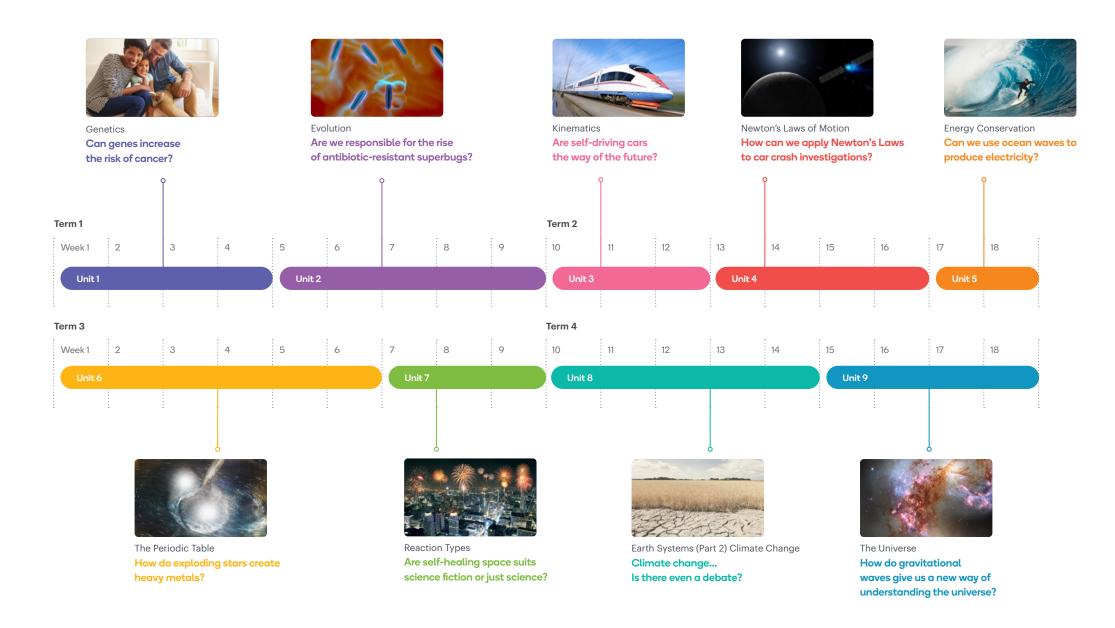
Use knowledge of scientific concepts to draw conclusions that are consistent with evidence



Year 10 - Scope & Sequence



Stile X booklets are available for all units in this scope and sequence. With Stile X, you can offer support and extension for students in class or give them the tools to review and master knowledge independently.



Year 10 – Curriculum alignment

Unit 1

Genetics

Evolution

Unit 3

Kinematics

endeavour

Science as a human

ACSSU184

Transmission of heritable characteristics from one generation to the next involves DNA and genes

ACSSU185

The theory of evolution by natural selection explains the diversity of living things and is supported by a range of scientific evidence

ACSSU229

The motion of objects can be described and predicted using the laws of physics

ACSHE192

Advances in scientific understanding often rely on technological advances and are often linked to scientific discov-

ACSHE194

People use scientific knowledge to evaluate whether they accept claims, explanations or predictions, and advances in science can affect people's lives, including generating new career opportunities

ACSHE191

Scientific understanding, including models and theories, is contestable and is refined over time through a process of review by the scientific community

ACSHE230

Values and needs of contemporary society can influence the focus of scientific research

ACSHE192

Advances in scientific understanding often rely on technological advances and are often linked to scientific discoveries

ACSHE194

People use scientific knowledge to evaluate whether they accept claims, explanations or predictions, and advances in science can affect people's lives, including generating new career opportunities

ACSIS199 (☐) (ⓒ) (긎)

methods

and accurately





tigation types, including field work and

laboratory experimentation, to collect

Select and use appropriate equipment.

collect and record data systematically

including digital technologies, to

reliable data: assess risk and address

ethical issues associated with these

ACSIS200 (B) (B) (C)



Use knowledge of scientific concepts to draw conclusions that are consistent with evidence



ACSIS204



scientific language, conventions and





representations





Communicate scientific ideas and information for a particular purpose, including constructing evidence-based arguments and using appropriate

ACSIS203 (a) (c) (c)







Analyse patterns and trends in data, including describing relationships between variables and identifying inconsistencies

ACSIS204



Use knowledge of scientific concepts to draw conclusions that are consistent with evidence

ACSIS198



Formulate questions or hypotheses that can be investigated scientifically

ACSIS199 (■) (€) (-)







ACSIS200 (a) (%) (%)

methods



Select and use appropriate equipment, including digital technologies, to collect and record data systematically and accurately

ACSIS203 (a) (c) (h)



Analyse patterns and trends in data, including describing relationships between variables and identifying inconsistencies



Use knowledge of scientific concepts to draw conclusions that are consistent with evidence





Evaluate conclusions, including identifying sources of uncertainty and possible alternative explanations, and describe specific ways to improve the quality of the data



Critically analyse the validity of information in primary and secondary sources. and evaluate the approaches used to solve problems

ACSIS208 (E) (E)



Communicate scientific ideas and information for a particular purpose, including constructing evidence-based arguments and using appropriate scientific language, conventions and representations

Year 10 – Curriculum alignment

Unit 4

Newton's Laws of Motion

Unit 5

Energy Conservation

The Periodic Table

endeavour

Science inquiry

ACSSU229

The motion of objects can be described and predicted using the laws of physics

ACSSU190

Energy conservation in a system can be explained by describing energy transfers and transformations

ACSSU186

The atomic structure and properties of elements are used to organise them in the Periodic Table

ACSHE192

Advances in scientific understanding often rely on technological advances and are often linked to scientific discov-

ACSHE194

People use scientific knowledge to evaluate whether they accept claims, explanations or predictions, and advances in science can affect people's lives, including generating new career opportunities

ACSHE194

People use scientific knowledge to evaluate whether they accept claims, explanations or predictions, and advances in science can affect people's lives, including generating new career opportunities

ACSHE191 🚖



Scientific understanding, including models and theories, is contestable and is refined over time through a process of review by the scientific community





Formulate questions or hypotheses that can be investigated scientifically

ACSIS199 (☐) (ⓒ) (긎)





Plan, select and use appropriate investigation types, including field work and laboratory experimentation, to collect reliable data: assess risk and address ethical issues associated with these methods







Select and use appropriate equipment, including digital technologies, to collect and record data systematically and accurately





Analyse patterns and trends in data, including describing relationships between variables and identifying inconsistencies

ACSIS204





Use knowledge of scientific concepts to draw conclusions that are consistent with evidence

ACSIS205 (a) (c) (%)





Evaluate conclusions, including identifying sources of uncertainty and possible alternative explanations, and describe specific ways to improve the quality of the data

ACSIS206



Critically analyse the validity of information in primary and secondary sources, and evaluate the approaches used to solve problems

ACSIS208



Communicate scientific ideas and information for a particular purpose, including constructing evidence-based arguments and using appropriate scientific language, conventions and



Use knowledge of scientific concepts to draw conclusions that are consistent with evidence

ACSIS208 (E) (C)



Communicate scientific ideas and information for a particular purpose. including constructing evidence-based arguments and using appropriate scientific language, conventions and representations

ACSIS199 (■) (©) (=)





Plan, select and use appropriate investigation types, including field work and laboratory experimentation, to collect reliable data: assess risk and address ethical issues associated with these

methods





ACSIS204 (E) (C)



Use knowledge of scientific concepts to draw conclusions that are consistent with evidence

ACSIS203 (a) (c) (a)

representations

ACSIS200 (E) (%) (%)

Year 10 – Curriculum alignment

Unit 7

Reaction Types

Unit 8

Climate Change

Unit 9

The Universe

ACSSU187

Different types of chemical reactions are used to produce a range of products and can occur at different rates

ACSSU189

Global systems, including the carbon cycle, rely on interactions involving the biosphere, lithosphere, hydrosphere and atmosphere ACSSU188

The universe contains features including galaxies, stars and solar systems, and the Big Bang theory can be used to explain the origin of the universe

endeavour

ACSHE194

People use scientific knowledge to evaluate whether they accept claims, explanations or predictions, and advances in science can affect people's lives, including generating new career opportunities

ACSHE230 (=



Values and needs of contemporary society can influence the focus of scientific research

ACSHE191 (=)



Scientific understanding, including models and theories, is contestable and is refined over time through a process of review by the scientific community

ACSHE192

Advances in scientific understanding often rely on technological advances and are often linked to scientific discovACSHE194

People use scientific knowledge to evaluate whether they accept claims, explanations or predictions, and advances in science can affect people's lives, including generating new career opportunitie

ACSHE230 (→

Values and needs of contemporary society can influence the focus of scientific research

ACSHE191



Scientific understanding, including models and theories, is contestable and is refined over time through a process of review by the scientific community

ACSHE192

Advances in scientific understanding often rely on technological advances and are often linked to scientific discoveries

ACSHE194

People use scientific knowledge to evaluate whether they accept claims, explanations or predictions, and advances in science can affect people's lives, including generating new career opportunities

ACSHE230



Values and needs of contemporary society can influence the focus of scientific research

ACSIS200 (E) (%)







Select and use appropriate equipment, including digital technologies, to collect and record data systematically and accurately

ACSIS203 (E) (C)





Analyse patterns and trends in data, including describing relationships between variables and identifying

inconsistencies ACSIS204



Use knowledge of scientific concepts to draw conclusions that are consistent with evidence



Evaluate conclusions, including identifying sources of uncertainty and possible alternative explanations, and describe specific ways to improve the quality of the data

ACSIS206



Critically analyse the validity of information in primary and secondary sources. and evaluate the approaches used to solve problems

ACSIS208



Communicate scientific ideas and information for a particular purpose, including constructing evidence-based arguments and using appropriate scientific language, conventions and representations

ACSIS199 () ()







Plan, select and use appropriate investigation types, including field work and laboratory experimentation, to collect reliable data: assess risk and address ethical issues associated with these methods

ACSIS200 (E) (%)







Select and use appropriate equipment, including digital technologies, to collect and record data systematically and accurately

ACSIS203 (a) (c) (s)





Analyse patterns and trends in data, including describing relationships between variables and identifying

ACSIS205





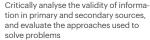


Evaluate conclusions, including identifving sources of uncertainty and possible alternative explanations, and describe specific ways to improve the quality of the data

ACSIS206







ACSIS208



Communicate scientific ideas and information for a particular purpose, including constructing evidence-based arguments and using appropriate scientific language, conventions and representations



Plan, select and use appropriate investigation types, including field work and laboratory experimentation, to collect reliable data: assess risk and address ethical issues associated with these methods

ACSIS203 (E) (%) (C)



Analyse patterns and trends in data. including describing relationships between variables and identifying inconsistencies

ACSIS208



Communicate scientific ideas and information for a particular purpose, including constructing evidence-based arguments and using appropriate scientific language, conventions and representations



inconsistencies





Supplementary resources



Optional extra: Metals

How can metals help us fight cancer?



Optional extra: Radiation Why is cosmic radiation so dangerous?



Optional extra: Sound
In space no one can hear you scream – or can they?

ACSSU187

Different types of chemical reactions are used to produce a range of products and can occur at different rates



All matter is made of atoms that are composed of protons, neutrons and electrons; natural radioactivity arises from the decay of nuclei in atoms

ACSSU182

Energy transfer through different mediums can be explained using wave and particle models



Optional extra: Heat **How do you make the best pizza?**



Optional extra: Plants

How do predatory plants survive?



Optional extra: Magnetism
What is wireless electricity?

ACSSU155

Energy appears in different forms, including movement (kinetic energy), heat and potential energy, and energy transformations and transfers cause change within evertone:



Multi-cellular organisms contain systems of organs carrying out specialised functions that enable them to survive and reproduce



Change to an object's motion is caused by unbalanced forces, including Earth's gravitational attraction, acting on the object



Human Impacts on Ecosystems **Are corals going extinct...again?**



Simple Machines

How do machines make
life easier?



The Endocrine System

Will staring at your phone screen
before bed affect your sleep?

ACSSU112

Interactions between organisms, including the effects of human activities can be represented by food chains and food webs

ACSSU117

Change to an object's motion is caused by unbalanced forces, including Earth's gravitational attraction, acting on the object

ACSSU175

Multi-cellular organisms rely on coordinated and interdependent internal systems to respond to changes to their environment

Supplementary resources



The Nervous System

Could machines sniff out
cancers better than dogs?



The Nervous System

How can your gut

influence your mood?

ACSSU175

Multi-cellular organisms rely on coordinated and interdependent internal systems to respond to changes to their environment



Escape rooms

Engage your students
in fun scientific puzzles



Women in STEM career profiles

Explore a range of

careers in STEM



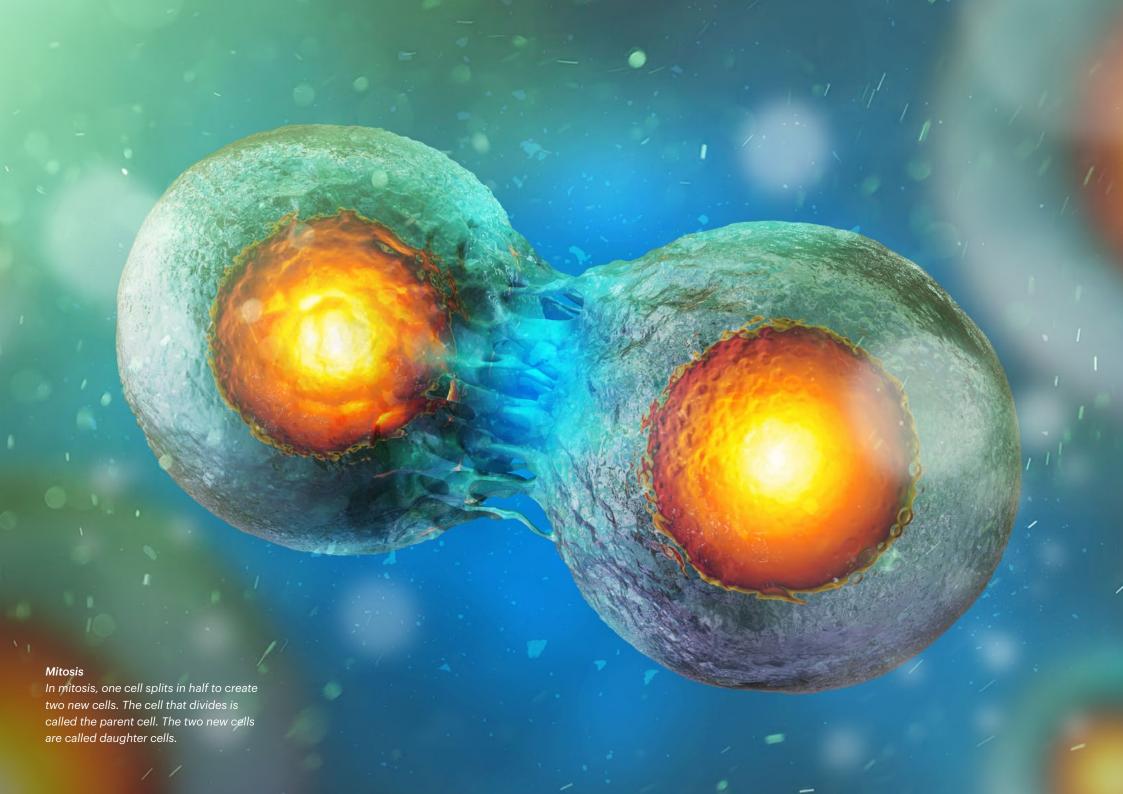
Science news lessons
Real-world science
based on the news



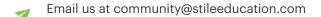
Skill builders Lessons to boost your students' science inquiry skills



Student research project
Lessons designed to teach students
how to complete scientific research



Call us on 1300 918 292



Swing by the office to say hi!
Level 5, 128 Exhibition Street, Melbourne, Victoria

Stile HQ is located on the traditional lands of the Boon Wurrung and Woiwurrung (Wurundjeri) peoples of the Kulin Nation. We acknowledge that sovereignty was never ceded and pay our respects to Elders past, present and future.