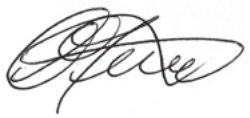
Stile

Scope and Sequence

Version 8.4 of the Australian Curriculum


Stile

A note from our Head of Education



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 curriculum-aligned 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.

Spectacular sunset
At sunrise and sunset, the Sun's light has to travel a greater distance through the atmosphere. Due to its short wavelength, the blue light is scattered while the red light remains visible and causes the sky to turn beautiful colors.

Contents

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
- 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.

Introduction to Science

What is science and how can it help us solve global problems?

Mixtures

Can we 3D-print new bones to replace broken ones?

Resources

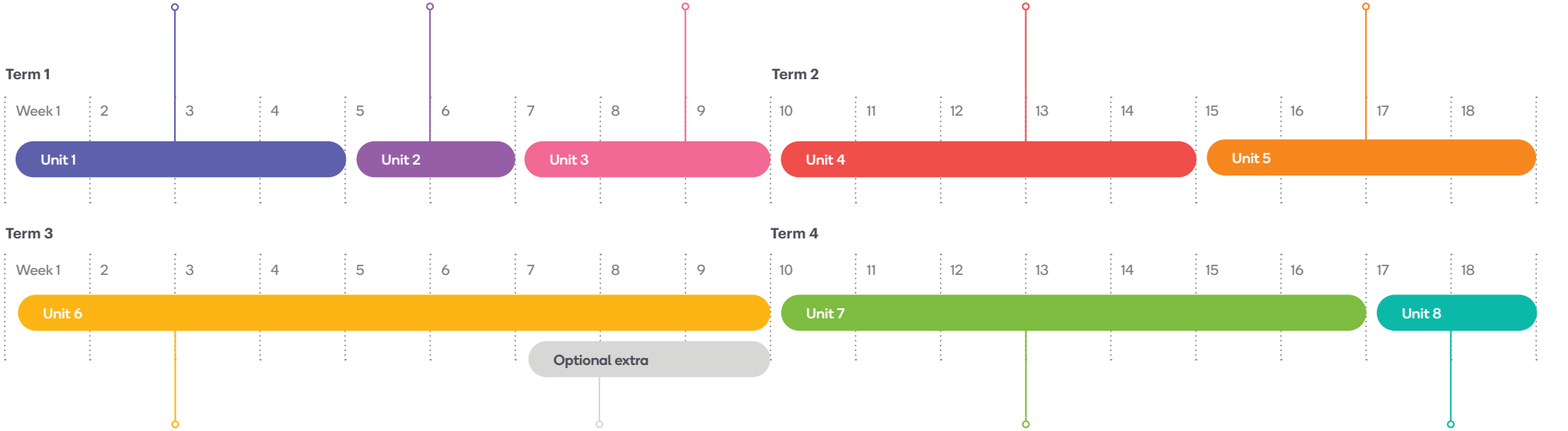
How has our use of resources changed over time?

Classification and Biodiversity

Do we need to save the bees?

Food Chains and Food Webs

Why do cats have slit-shaped pupils?

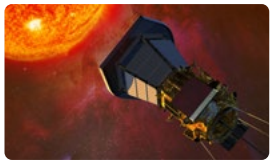


Forces

How can you scale a wall like a gecko?

Optional extra: Magnetism

What is wireless electricity?



Our Place in Space

Can we travel to the Sun?

The Water Cycle

Would you ever drink your own urine?

Year 7 – Curriculum alignment

Unit 1 Introduction to Science

Science understanding

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

Science as a human endeavour

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

Science inquiry

ACSIS124

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 guidelines are followed

ACSIS126

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

ACSIS129

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

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

ACSIS131

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

Unit 2 Mixtures

Science understanding

ACSSU113

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

Science as a human endeavour

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

Science inquiry

ACSIS125

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Unit 3 Resources

Science understanding

ACSSU116

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

Science as a human endeavour

ACSHE120

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Year 7 – Curriculum alignment

Unit 4 Classification and Biodiversity

Science understanding

ACSSU111

Classification helps organise the diverse group of organisms

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Unit 5 Food Chains and Food Webs

Science understanding

ACSSU112

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

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Unit 6 Forces

Science understanding

ACSSU117

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

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Year 7 – Curriculum alignment

	Optional Magnetism	Unit 7 Our Place in Space	Unit 8 The Water Cycle
Science understanding	**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
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Year 8 – Scope & Sequence

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Cells
Are you ready to meet lab-grown meat?

Body Systems
What does it take to be a cold-blooded killer?

Optional extra: Plants
How do predatory plants survive?

Energy
What can we learn from nature's energy engineers?

Optional extra: Heat
How can I cook the perfect pizza?

Physical and Chemical Change
What does chemistry have to do with chocolate making?

Term 1

Week 1 2 3 4 5 6 7 8 9

Unit 1

Unit 2

Optional extra

Term 2

10 11 12 13 14 15 16 17 18

Unit 3

Optional extra

Unit 4

Term 3

Week 1 2 3 4 5 6 7 8 9

Unit 5

Unit 6

Term 4

10 11 12 13 14 15 16 17 18

Unit 7

States of Matter
Why is liquid water so important for humans to live on Mars?

Elements and Compounds
Why is helium so rare?

Active Earth (Part 1): Rocks
How do we build future-ready cities?

Year 8 – Curriculum alignment

	Unit 1 Cells	Unit 2 Body Systems	Optional Plants
Science understanding	**ACSSU149** Cells are the basic units of living things; they have specialised structures and functions	**ACSSU150** Multi-cellular organisms contain systems of organs carrying out specialised functions that enable them to survive and reproduce	**ACSSU150** Multi-cellular organisms contain systems of organs carrying out 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** 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 **ACSHE226** Science knowledge can develop through collaboration across the disciplines of science and the contributions of people from a range of cultures	**ACSHE136** People use science understanding and skills in their occupations and these have influenced the development of practices in areas of human activity	**ACSHE136** People use science understanding and skills in their occupations and these have influenced the development of practices in areas of human activity
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Year 8 – Curriculum alignment

Unit 3 Energy

Science understanding

ACSSU155

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

Science as a human endeavour

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

Science inquiry

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 guidelines are followed

ACSIS141

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ACSIS144

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

ACSIS146

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

Optional Heat

Science understanding

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.

Science as a human endeavour

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ACSIS234

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Unit 4 Physical and Chemical Change

Science understanding

ACSSU225

Chemical change involves substances reacting to form new substances

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ACSHE136

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ACSIS234

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Year 8 – Curriculum alignment

Unit 5 States of Matter

Science understanding

ACSSU151

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

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Unit 6 Elements and Compounds

Science understanding

ACSSU152

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

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Unit 7 Active Earth (Rocks)

Science understanding

ACSSU153

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

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Year 9 – Scope & Sequence

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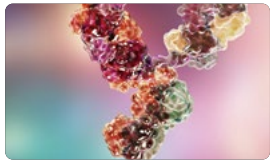

The Immune System

How can we protect communities from diseases?

Ecosystems

How can we prevent plastic from harming marine life?

Light

How can my smartphone be used as a microscope?

Optional extra: Sound

In space no one can hear you scream – or can they?

Non-contact Forces and Electricity

Are we on track for sustainable transport?

Term 1

Week 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9

Unit 1 | Unit 2

Term 2

10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18

Unit 3 | Unit 4

Optional extra

Term 3

Week 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9

Unit 5 | Unit 6

Term 4

10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18

Unit 7 | Unit 8 | Unit 9

Atoms

How can the building blocks of atoms help us see further?

Chemical Reactions

What happens when sodium explodes in water?

Reactions and Energy

Are bionic leaves better than the real thing?

Acids and Bases

Why are our oceans becoming more acidic?

Active Earth (Part 2): Plate Tectonics

How do we build future-ready cities?

Year 9 – Curriculum alignment

	Unit 1 The Immune system	Unit 2 Ecosystems	Unit 3 Light
Science understanding	**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
Science as a human endeavour	**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	**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	**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
Science inquiry	**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 **ACSIS169** 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 **ACSIS171** 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** 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** 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** Use knowledge of scientific concepts to draw conclusions that are consistent with evidence **ACSIS171** 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** 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 **ACSIS166** 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** Use knowledge of scientific concepts to draw conclusions that are consistent with evidence

Year 9 – Curriculum alignment

Optional — Sound

Science understanding

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.

Science as a human endeavour

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

Science inquiry

ACSIS166

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

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

Unit 4 — Non-contact Forces and Electricity

Science understanding

ACSSU182

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

Science as a human endeavour

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

Science inquiry

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

ACSIS169

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

ACSIS171

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

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

Unit 5 — Atoms

Science understanding

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

Science as a human endeavour

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Science inquiry

ACSIS169

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

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

Unit 6 Chemical Reactions

Science understanding

ACSSU178

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

Science as a human endeavour

ACSHE160

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ACSHE228

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Science inquiry

ACSIS164

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ACSIS165

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ACSIS166

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

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

ACSIS171

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

Unit 7 Reactions and Energy

Science understanding

ACSSU179

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

Science as a human endeavour

ACSHE160

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ACSHE228

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ACSIS174

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

Unit 8 Acids and Bases

Science understanding

ACSSU179

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

Science as a human endeavour

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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

Unit 9 Active Earth (Part 2): Plate Tectonics

Science understanding

ACSSU180

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

Science as a human endeavour

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ACSIS170

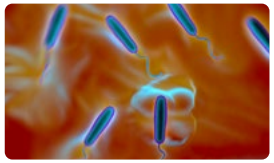
Use knowledge of scientific concepts to draw conclusions that are consistent with evidence

The Milky Way galaxy
The Solar System we call home is part of the Milky Way galaxy which contains over 100 billion stars.

Year 10 – Scope & Sequence

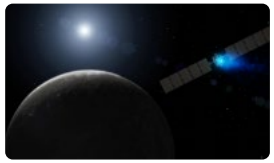
Stile X booklets are available for all units in this scope and sequence. With Stile X, you can offer support and extension for students in class or give them the tools to review and master knowledge independently.

Genetics
Can genes increase the risk of cancer?



Evolution
Are we responsible for the rise of antibiotic-resistant superbugs?

Kinematics
Are self-driving cars the way of the future?



Newton's Laws of Motion
How can we apply Newton's Laws to car crash investigations?

Energy Conservation
Can we use ocean waves to produce electricity?

Term 1

Week 1 2 3 4 5 6 7 8 9

Unit 1 | Unit 2

Term 2

10 11 12 13 14 15 16 17 18

Unit 3 | Unit 4 | Unit 5

Term 3

Week 1 2 3 4 5 6 7 8 9

Unit 6 | Unit 7

Term 4

10 11 12 13 14 15 16 17 18

Unit 8 | Unit 9

The Periodic Table
How do exploding stars create heavy metals?

Reaction Types
Are self-healing space suits science fiction or just science?

Earth Systems (Part 2) Climate Change
Climate change... Is there even a debate?

The Universe
How do gravitational waves give us a new way of understanding the universe?

Year 10 – Curriculum alignment

	Unit 1 Genetics	Unit 2 Evolution	Unit 3 Kinematics
Science understanding	**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
Science as a human endeavour	**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	**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
Science inquiry	**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** Select and use appropriate equipment, including digital technologies, to collect and record data systematically and accurately **ACSIS204** Use knowledge of scientific concepts to draw conclusions that are consistent with evidence **ACSIS208** Communicate scientific ideas and information for a particular purpose, including constructing evidence-based arguments and using appropriate scientific language, conventions and representations	**ACSIS203** 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** 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** Select and use appropriate equipment, including digital technologies, to collect and record data systematically and accurately **ACSIS203** 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** 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

Year 10 – Curriculum alignment

Unit 4 Newton's Laws of Motion

Science understanding

ACSSU229

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

Science as a human endeavour

ACSHE192

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

ACSHE194

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Science inquiry

ACSIS198

Formulate questions or hypotheses that can be investigated scientifically

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

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

ACSIS203

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

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

Unit 5 Energy Conservation

Science understanding

ACSSU190

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

Science as a human 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

Science inquiry

ACSIS204

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

ACSIS208

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

Unit 6 The Periodic Table

Science understanding

ACSSU186

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

Science as a human endeavour

ACSHE191

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

Science inquiry

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

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

ACSIS204

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

Year 10 – Curriculum alignment

Unit 7 Reaction Types

Science understanding

ACSSU187

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

Science as a human 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

Science inquiry

ACSIS200

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

ACSIS203

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

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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

Unit 8 Climate Change

Science understanding

ACSSU189

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

Science as a human endeavour

ACSHE191

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ACSHE192

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

ACSHE194

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ACSHE230

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Science inquiry

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ACSIS208

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

Unit 9 The Universe

Science understanding

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

Science as a human endeavour

ACSHE191

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ACSHE192

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Science inquiry

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ACSIS203

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

An albino baby fur seal
Natural selection depends on variation in genetic traits, such as fur colour.

Supplementary resources

Optional extra: Metals

How can metals help us fight cancer?

ACSSU187

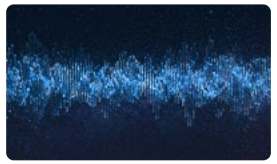
Different types of chemical reactions are used to produce a range of products and can occur at different rates

Optional extra: Radiation

Why is cosmic radiation so dangerous?

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



Optional extra: Sound

In space no one can hear you scream – or can they?

ACSSU182

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

Optional extra: Heat

How do you make the best pizza?

ACSSU155

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

Optional extra: Plants

How do predatory plants survive?

ACSSU150

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

Optional extra: Magnetism

What is wireless electricity?

ACSSU117

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

The Nervous System

Could machines sniff out cancers better than dogs?

ACSSU175

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

Simple Machines

How do machines make life easier?

ACSSU117

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

The Endocrine System

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

ACSSU175

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

Supplementary resources

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

ACSSU112

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

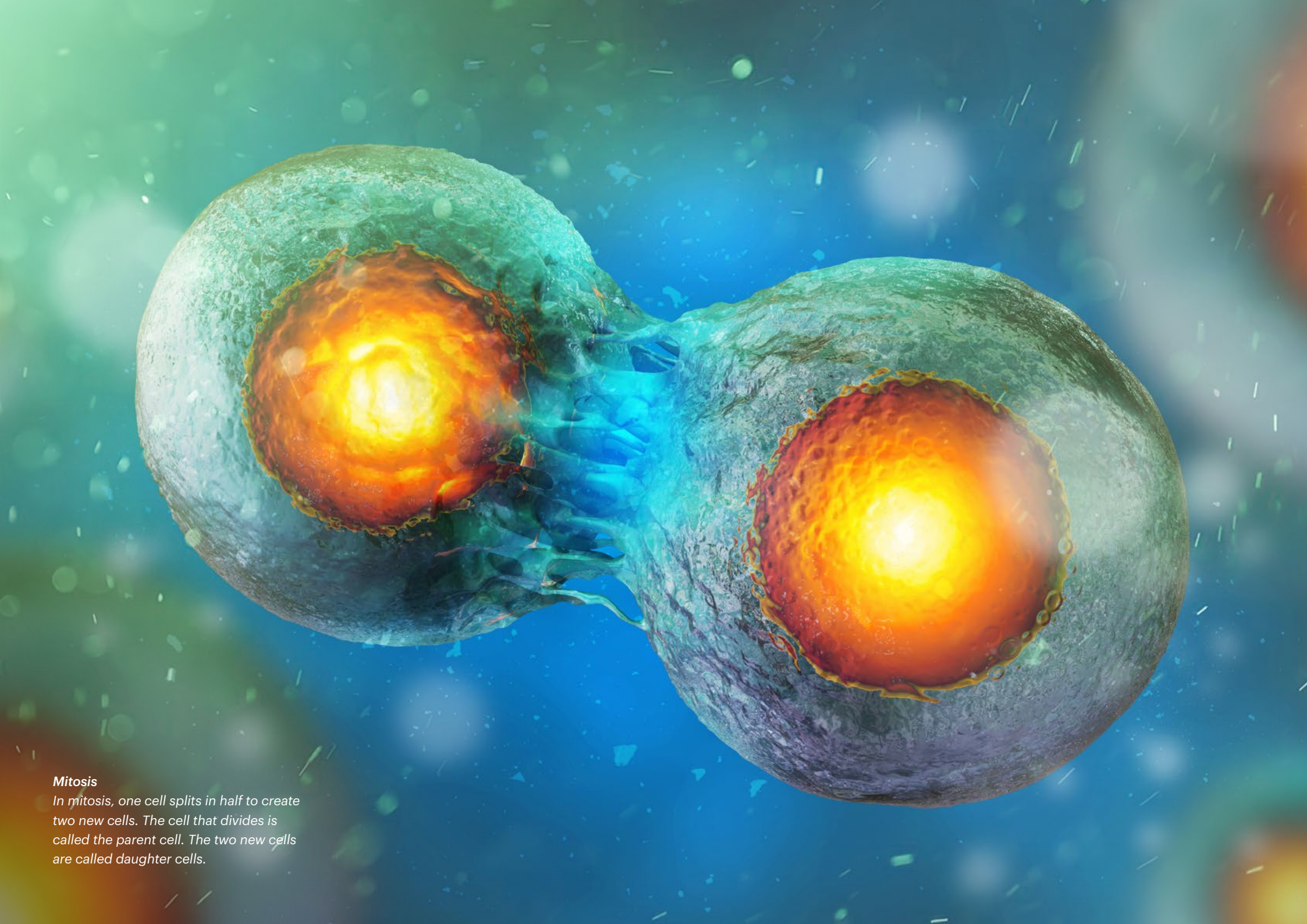
Escape rooms
Engage your students in fun scientific puzzles

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



Mitosis
In mitosis, one cell splits in half to create two new cells. The cell that divides is called the parent cell. The two new cells are called daughter cells.

Call us on 1300 918 292

Email us at community@stileeducation.com

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.