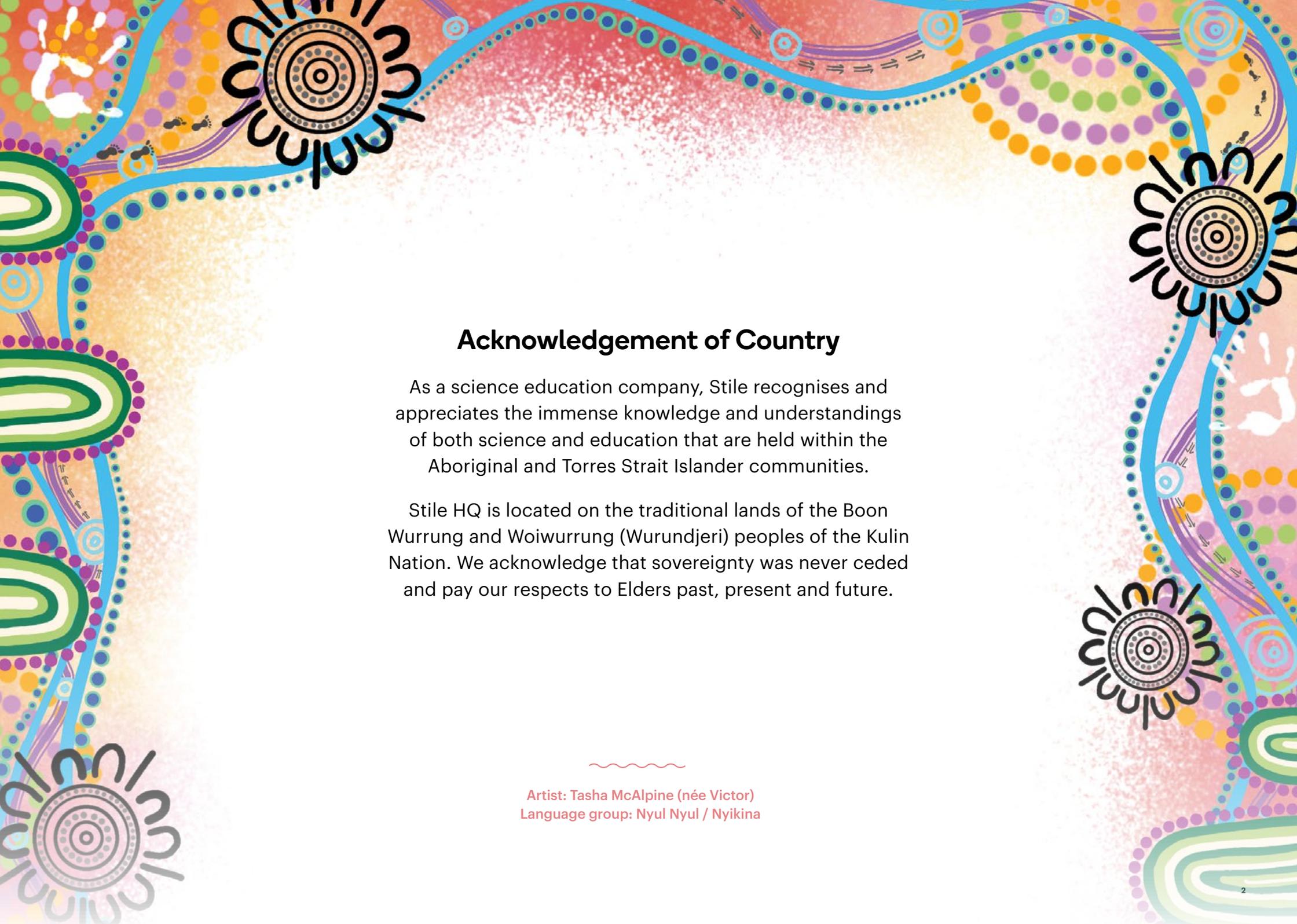


# Scope and Sequence

NSW Syllabus for the Australian Curriculum



## Acknowledgement of Country

As a science education company, Stile recognises and appreciates the immense knowledge and understandings of both science and education that are held within the Aboriginal and Torres Strait Islander communities.

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.

---

Artist: Tasha McAlpine (née Victor)  
Language group: Nyul Nyul / Nyikina

## A note from our Head of Education



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

**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.



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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

# Stage 4 – 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?**



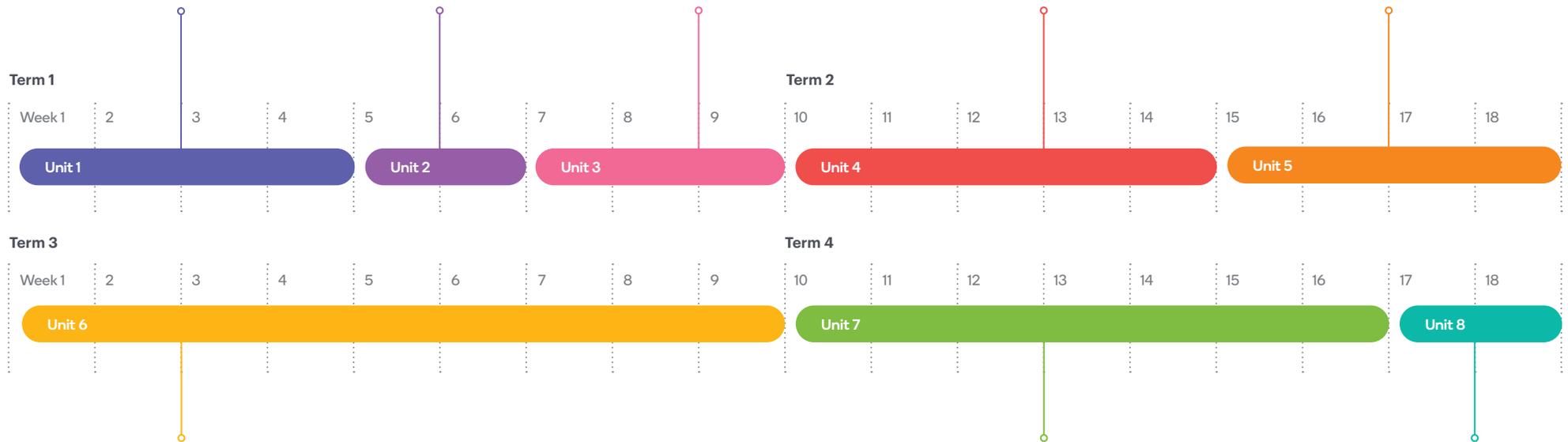
Resources  
**How has our use of resources changed over time?**



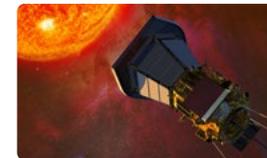
Classification and Biodiversity  
**Do we need to save the bees?**



Food Chains and Food Webs  
**Why do cats have slit-shaped pupils?**



Forces  
**How can you scale a wall like a gecko?**



Our Place in Space  
**Can we travel to the Sun?**



The Water Cycle  
**Would you ever drink your own urine?**

# Stage 4 – Year 7 Curriculum alignment

	Unit 1 Introduction to Science	Unit 2 Mixtures	Unit 3 Resources	Unit 4 Classification and Biodiversity
<b>Knowledge and Understanding</b>	<p>This unit focuses on Science as a human endeavour and Science inquiry strands.</p>	<p><b>SC4-17CW</b></p> <p>explains how scientific understanding of, and discoveries about, the properties of elements, compounds and mixtures relate to their uses in everyday life</p>	<p><b>SC4-13ES</b></p> <p>explains how advances in scientific understanding of processes that occur within and on the Earth, influence the choices people make about resource use and management</p>	<p><b>SC4-14LW</b></p> <p>relates the structure and function of living things to their classification, survival and reproduction</p>
<b>Skills</b>	<p><b>SC4-4WS</b></p> <p>identifies questions and problems that can be tested or researched and makes predictions based on scientific knowledge</p> <p><b>SC4-5WS</b>      </p> <p>collaboratively and individually produces a plan to investigate questions and problems</p> <p><b>SC4-6WS</b>    </p> <p>follows a sequence of instructions to safely undertake a range of investigation types, collaboratively and individually</p> <p><b>SC4-7WS</b>    </p> <p>processes and analyses data from a first-hand investigation and secondary sources to identify trends, patterns and relationships, and draw conclusions</p> <p><b>SC4-8WS</b>  </p> <p>selects and uses appropriate strategies, understanding and skills to produce creative and plausible solutions to identified problems</p> <p><b>SC4-9WS</b>   </p> <p>presents science ideas, findings and information to a given audience using appropriate scientific language, text types and representations</p>	<p><b>SC4-5WS</b>      </p> <p>collaboratively and individually produces a plan to investigate questions and problems</p> <p><b>SC4-6WS</b>    </p> <p>follows a sequence of instructions to safely undertake a range of investigation types, collaboratively and individually</p> <p><b>SC4-7WS</b>    </p> <p>processes and analyses data from a first-hand investigation and secondary sources to identify trends, patterns and relationships, and draw conclusions</p> <p><b>SC4-9WS</b>   </p> <p>presents science ideas, findings and information to a given audience using appropriate scientific language, text types and representations</p>	<p><b>SC4-4WS</b></p> <p>identifies questions and problems that can be tested or researched and makes predictions based on scientific knowledge</p> <p><b>SC4-5WS</b>      </p> <p>collaboratively and individually produces a plan to investigate questions and problems</p> <p><b>SC4-9WS</b>   </p> <p>presents science ideas, findings and information to a given audience using appropriate scientific language, text types and representations</p>	<p><b>SC4-4WS</b></p> <p>identifies questions and problems that can be tested or researched and makes predictions based on scientific knowledge</p> <p><b>SC4-5WS</b>      </p> <p>collaboratively and individually produces a plan to investigate questions and problems</p> <p><b>SC4-7WS</b>    </p> <p>processes and analyses data from a first-hand investigation and secondary sources to identify trends, patterns and relationships, and draw conclusions</p> <p><b>SC4-8WS</b>  </p> <p>selects and uses appropriate strategies, understanding and skills to produce creative and plausible solutions to identified problems</p> <p><b>SC4-9WS</b>   </p> <p>presents science ideas, findings and information to a given audience using appropriate scientific language, text types and representations</p>

# Stage 4 – Year 7 Curriculum alignment

	Unit 5 Food Chains and Food Webs	Unit 6 Forces	Unit 7 Our Place in Space	Unit 8 The Water Cycle
Knowledge and Understanding	<p><b>SC4-15LW</b> explains how new biological evidence changes people's understanding of the world</p>	<p><b>SC4-10PW</b> describes the action of unbalanced forces in everyday situations</p>	<p><b>SC4-12ES</b> describes the dynamic nature of models, theories and laws in developing scientific understanding of the Earth and solar system</p>	<p><b>SC4-13ES</b> explains how advances in scientific understanding of processes that occur within and on the Earth, influence the choices people make about resource use and management</p>
Skills	<p><b>SC4-4WS</b> identifies questions and problems that can be tested or researched and makes predictions based on scientific knowledge</p> <p><b>SC4-5WS</b>       collaboratively and individually produces a plan to investigate questions and problems</p> <p><b>SC4-7WS</b>     processes and analyses data from a first-hand investigation and secondary sources to identify trends, patterns and relationships, and draw conclusions</p> <p><b>SC4-6WS</b>     follows a sequence of instructions to safely undertake a range of investigation types, collaboratively and individually</p> <p><b>SC4-9WS</b>    presents science ideas, findings and information to a given audience using appropriate scientific language, text types and representations</p>	<p><b>SC4-4WS</b> identifies questions and problems that can be tested or researched and makes predictions based on scientific knowledge</p> <p><b>SC4-5WS</b>       collaboratively and individually produces a plan to investigate questions and problems</p> <p><b>SC4-6WS</b>     follows a sequence of instructions to safely undertake a range of investigation types, collaboratively and individually</p> <p><b>SC4-7WS</b>     processes and analyses data from a first-hand investigation and secondary sources to identify trends, patterns and relationships, and draw conclusions</p> <p><b>SC4-8WS</b>   selects and uses appropriate strategies, understanding and skills to produce creative and plausible solutions to identified problems</p> <p><b>SC4-9WS</b>    presents science ideas, findings and information to a given audience using appropriate scientific language, text types and representations</p>	<p><b>SC4-4WS</b> identifies questions and problems that can be tested or researched and makes predictions based on scientific knowledge</p> <p><b>SC4-5WS</b>       collaboratively and individually produces a plan to investigate questions and problems</p> <p><b>SC4-6WS</b>     follows a sequence of instructions to safely undertake a range of investigation types, collaboratively and individually</p> <p><b>SC4-7WS</b>     processes and analyses data from a first-hand investigation and secondary sources to identify trends, patterns and relationships, and draw conclusions</p> <p><b>SC4-9WS</b>    presents science ideas, findings and information to a given audience using appropriate scientific language, text types and representations</p>	<p><b>SC4-4WS</b> identifies questions and problems that can be tested or researched and makes predictions based on scientific knowledge</p> <p><b>SC4-6WS</b>     follows a sequence of instructions to safely undertake a range of investigation types, collaboratively and individually</p> <p><b>SC4-7WS</b>     processes and analyses data from a first-hand investigation and secondary sources to identify trends, patterns and relationships, and draw conclusions</p>

**Smog-free skies in Los Angeles**

*In March 2020, when 40 million residents were ordered to stay home due to the COVID-19 pandemic, the city experienced the longest stretch of good air quality since 1995!*



# Stage 4 – 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.



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?**



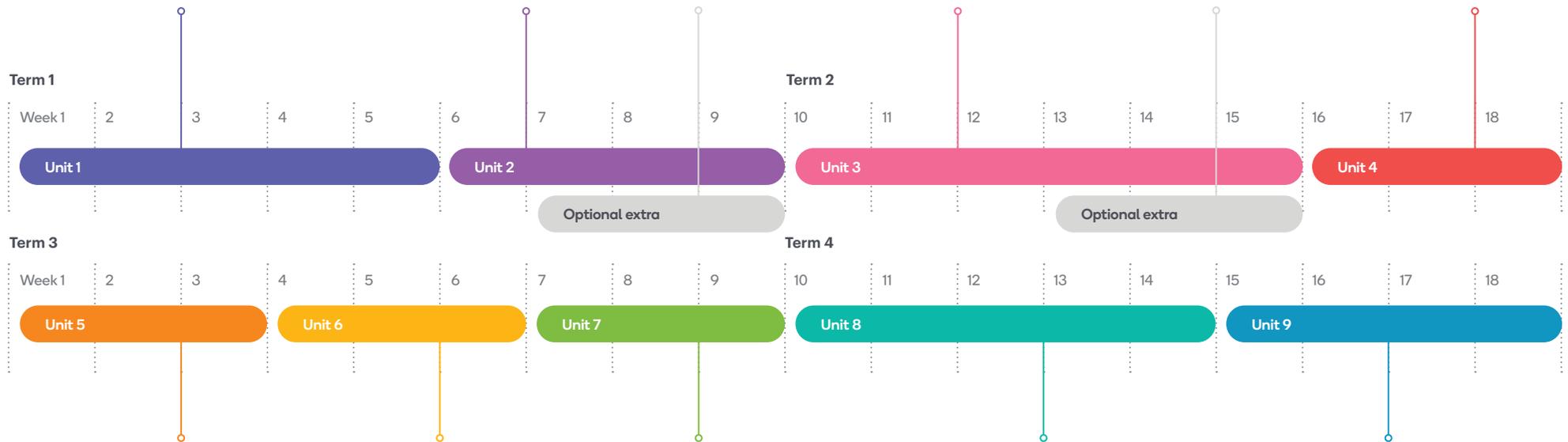
Energy  
**What can we learn from nature's energy engineers?**



Optional extra:  
**Student Research Project**



Heat  
**How can I cook the perfect pizza?**



Magnetism  
**What is wireless electricity?**



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



Elements and Compounds  
**Why is helium so rare?**



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



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

# Stage 4 – Year 8 Curriculum alignment

	Unit 1 Cells	Unit 2 Body Systems	Optional Plants	Unit 3 Energy
Knowledge and Understanding	<p><b>SC4-14LW</b></p> <p>relates the structure and function of living things to their classification, survival and reproduction</p>	<p><b>SC4-14LW</b></p> <p>relates the structure and function of living things to their classification, survival and reproduction</p>	<p><b>SC4-14LW</b></p> <p>relates the structure and function of living things to their classification, survival and reproduction</p> <p><i>This outcome is addressed in the Cells and Body Systems units, however Plants has been included as an optional extra if you wish to examine the structure and function of plants in relation to their classification, survival and reproduction.</i></p>	<p><b>SC4-11PW</b></p> <p>discusses how scientific understanding and technological developments have contributed to finding solutions to problems involving energy transfers and transformations</p>
Skills	<p><b>SC4-4WS</b></p> <p>identifies questions and problems that can be tested or researched and makes predictions based on scientific knowledge</p> <p><b>SC4-5WS</b> </p> <p>collaboratively and individually produces a plan to investigate questions and problems</p> <p><b>SC4-7WS</b> </p> <p>processes and analyses data from a first-hand investigation and secondary sources to identify trends, patterns and relationships, and draw conclusions</p> <p><b>SC4-8WS</b> </p> <p>selects and uses appropriate strategies, understanding and skills to produce creative and plausible solutions to identified problems</p> <p><b>SC4-9WS</b> </p> <p>presents science ideas, findings and information to a given audience using appropriate scientific language, text types and representations</p>	<p><b>SC4-5WS</b> </p> <p>collaboratively and individually produces a plan to investigate questions and problems</p> <p><b>SC4-7WS</b> </p> <p>processes and analyses data from a first-hand investigation and secondary sources to identify trends, patterns and relationships, and draw conclusions</p> <p><b>SC4-8WS</b> </p> <p>selects and uses appropriate strategies, understanding and skills to produce creative and plausible solutions to identified problems</p> <p><b>SC4-9WS</b> </p> <p>presents science ideas, findings and information to a given audience using appropriate scientific language, text types and representations</p>	<p><b>SC4-4WS</b></p> <p>identifies questions and problems that can be tested or researched and makes predictions based on scientific knowledge</p> <p><b>SC4-5WS</b> </p> <p>collaboratively and individually produces a plan to investigate questions and problems</p> <p><b>SC4-6WS</b> </p> <p>follows a sequence of instructions to safely undertake a range of investigation types, collaboratively and individually</p> <p><b>SC4-7WS</b> </p> <p>processes and analyses data from a first-hand investigation and secondary sources to identify trends, patterns and relationships, and draw conclusions</p>	

# Stage 4 – Year 8 Curriculum alignment

	Unit 4 Heat	Unit 5 Magnetism	Unit 6 Physical and Chemical Change	Unit 7 Elements and Compounds
Knowledge and Understanding	<p><b>SC4-11PW</b></p> <p>discusses how scientific understanding and technological developments have contributed to finding solutions to problems involving energy transfers and transformations</p>	<p><b>SC4-11PW</b></p> <p>discusses how scientific understanding and technological developments have contributed to finding solutions to problems involving energy transfers and transformations</p>	<p><b>SC4-17CW</b></p> <p>explains how scientific understanding of, and discoveries about the properties of elements, compounds and mixtures relate to their uses in everyday life</p>	<p><b>SC4-16CW</b></p> <p>describes the observed properties and behaviour of matter, using scientific models and theories about the motion and arrangement of particles</p>
Skills	<p><b>SC4-4WS</b></p> <p>identifies questions and problems that can be tested or researched and makes predictions based on scientific knowledge</p> <p><b>SC4-5WS</b>      </p> <p>collaboratively and individually produces a plan to investigate questions and problems</p> <p><b>SC4-6WS</b>    </p> <p>follows a sequence of instructions to safely undertake a range of investigation types, collaboratively and individually</p> <p><b>SC4-7WS</b>    </p> <p>processes and analyses data from a first-hand investigation and secondary sources to identify trends, patterns and relationships, and draw conclusions</p> <p><b>SC4-8WS</b>  </p> <p>selects and uses appropriate strategies, understanding and skills to produce creative and plausible solutions to identified problems</p>	<p><b>SC4-5WS</b>      </p> <p>collaboratively and individually produces a plan to investigate questions and problems</p> <p><b>SC4-7WS</b>    </p> <p>processes and analyses data from a first-hand investigation and secondary sources to identify trends, patterns and relationships, and draw conclusions</p>	<p><b>SC4-4WS</b></p> <p>identifies questions and problems that can be tested or researched and makes predictions based on scientific knowledge</p> <p><b>SC4-5WS</b>      </p> <p>collaboratively and individually produces a plan to investigate questions and problems</p> <p><b>SC4-6WS</b>    </p> <p>follows a sequence of instructions to safely undertake a range of investigation types, collaboratively and individually</p> <p><b>SC4-7WS</b>    </p> <p>processes and analyses data from a first-hand investigation and secondary sources to identify trends, patterns and relationships, and draw conclusions</p> <p><b>SC4-8WS</b>  </p> <p>selects and uses appropriate strategies, understanding and skills to produce creative and plausible solutions to identified problems</p> <p><b>SC4-9WS</b>    </p> <p>presents science ideas, findings and information to a given audience using appropriate scientific language, text types and representations</p>	<p><b>SC4-4WS</b></p> <p>identifies questions and problems that can be tested or researched and makes predictions based on scientific knowledge</p> <p><b>SC4-5WS</b>      </p> <p>collaboratively and individually produces a plan to investigate questions and problems</p> <p><b>SC4-6WS</b>    </p> <p>follows a sequence of instructions to safely undertake a range of investigation types, collaboratively and individually</p> <p><b>SC4-7WS</b>    </p> <p>processes and analyses data from a first-hand investigation and secondary sources to identify trends, patterns and relationships, and draw conclusions</p> <p><b>SC4-8WS</b>  </p> <p>selects and uses appropriate strategies, understanding and skills to produce creative and plausible solutions to identified problems</p> <p><b>SC4-9WS</b>    </p> <p>presents science ideas, findings and information to a given audience using appropriate scientific language, text types and representations</p>

# Stage 4 – Year 8 Curriculum alignment

## Unit 8

## States of Matter

## Unit 9

## Active Earth (Part 1): Rocks

### Knowledge and Understanding

#### SC4-16CW

describes the observed properties and behaviour of matter, using scientific models and theories about the motion and arrangement of particles

#### SC4-12ES

describes the dynamic nature of models, theories and laws in developing scientific understanding of the Earth and solar system

### Skills

#### SC4-4WS

identifies questions and problems that can be tested or researched and makes predictions based on scientific knowledge

#### SC4-4WS

identifies questions and problems that can be tested or researched and makes predictions based on scientific knowledge

#### SC4-5WS



collaboratively and individually produces a plan to investigate questions and problems

#### SC4-5WS



collaboratively and individually produces a plan to investigate questions and problems

#### SC4-7WS



processes and analyses data from a first-hand investigation and secondary sources to identify trends, patterns and relationships, and draw conclusions

#### SC4-6WS



follows a sequence of instructions to safely undertake a range of investigation types, collaboratively and individually

#### SC4-8WS



selects and uses appropriate strategies, understanding and skills to produce creative and plausible solutions to identified problems

#### SC4-7WS



processes and analyses data from a first-hand investigation and secondary sources to identify trends, patterns and relationships, and draw conclusions

#### SC4-9WS



presents science ideas, findings and information to a given audience using appropriate scientific language, text types and representations

#### SC4-8WS



selects and uses appropriate strategies, understanding and skills to produce creative and plausible solutions to identified problems

#### SC4-9WS

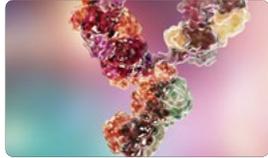


presents science ideas, findings and information to a given audience using appropriate scientific language, text types and representations

# Stage 5 – Year 9 Scope & Sequence



Stile X booklets are available for all units shown except Student Research Project. With Stile X, you can offer support and extension for students in class or give them the tools to review and master knowledge independently.



The Immune System  
**How can we protect communities from diseases?**



Optional extra:  
The Endocrine System  
**Will staring at your phone screen before bed affect your sleep?**



Ecosystems  
**How can we prevent plastic from harming marine life?**



Optional extra:  
The Nervous System  
**Could machines sniff out cancers better than dogs?**



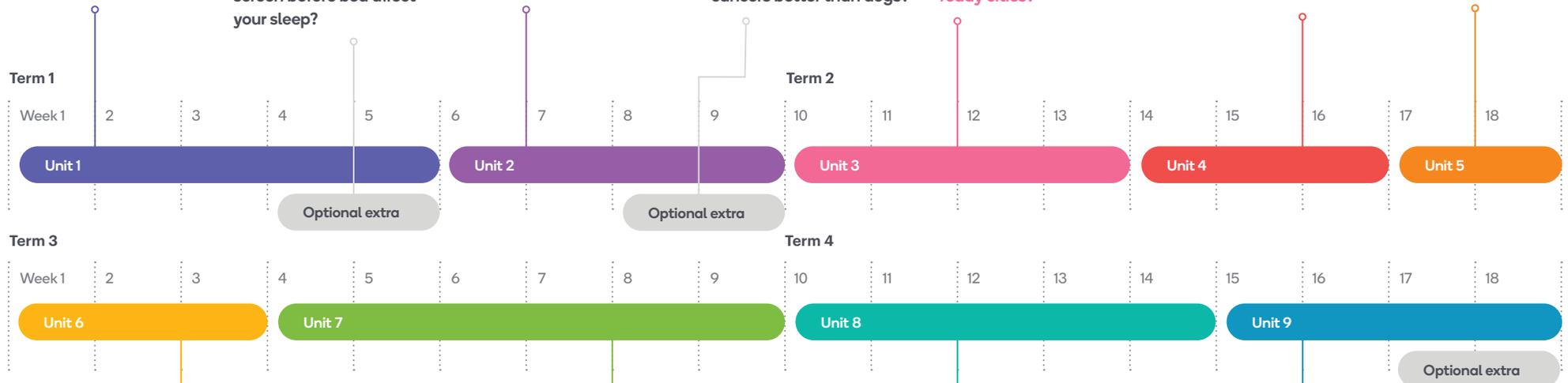
Active Earth (Part 2):  
Plate Tectonics  
**How do we build future-ready cities?**



Reactions and Energy  
**Are bionic leaves better than the real thing?**



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



Light  
**How can my smartphone be used as a microscope?**



Non-contact Forces and Electricity  
**Are we on track for sustainable transport?**



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



Chemical Reactions  
**What happens when sodium explodes in water?**



Optional extra: Acids and Bases  
**Why are our oceans becoming more acidic?**

# Stage 5 – Year 9 Curriculum alignment

	Unit 1 The Immune system	Optional The Endocrine System	Optional The Nervous System	Unit 2 Ecosystems
Knowledge and Understanding	<p><b>SC5-14LW</b></p> <p>analyses interactions between components and processes within biological systems</p>	<p><b>SC5-14LW</b></p> <p>analyses interactions between components and processes within biological systems</p> <p><i>This outcome is addressed in The Immune System, however The Endocrine System has been included as an optional extra if you wish to examine another example of coordinated and interdependent internal systems.</i></p>	<p><b>SC5-14LW</b></p> <p>analyses interactions between components and processes within biological systems</p> <p><i>This outcome is addressed in The Immune System, however The Nervous System has been included as an optional extra if you wish to examine another example of coordinated and interdependent internal systems.</i></p>	<p><b>SC5-14LW</b></p> <p>analyses interactions between components and processes within biological systems</p>
Skills	<p><b>SC5-4WS</b></p> <p>develops questions or hypotheses to be investigated scientifically</p> <p><b>SC5-5WS</b> </p> <p>produces a plan to investigate identified questions, hypotheses or problems, individually and collaboratively</p> <p><b>SC5-6WS</b> </p> <p>undertakes first-hand investigations to collect valid and reliable data and information, individually and collaboratively</p> <p><b>SC5-7WS</b> </p> <p>processes, analyses and evaluates data from first-hand investigations and secondary sources to develop evidence-based arguments and conclusions</p> <p><b>SC5-8WS</b> </p> <p>A student applies scientific understanding and critical thinking to suggest possible solutions to identified problems</p> <p><b>SC5-9WS</b> </p> <p>presents science ideas and evidence for a particular purpose and to a specific audience, using appropriate scientific language, conventions and representations</p>	<p><b>SC5-7WS</b> </p> <p>processes, analyses and evaluates data from first-hand investigations and secondary sources to develop evidence-based arguments and conclusions</p> <p><b>SC5-9WS</b> </p> <p>presents science ideas and evidence for a particular purpose and to a specific audience, using appropriate scientific language, conventions and representations</p>	<p><b>SC5-6WS</b> </p> <p>undertakes first-hand investigations to collect valid and reliable data and information, individually and collaboratively</p> <p><b>SC5-7WS</b> </p> <p>processes, analyses and evaluates data from first-hand investigations and secondary sources to develop evidence-based arguments and conclusions</p> <p><b>SC5-7WS</b> </p> <p>processes, analyses and evaluates data from first-hand investigations and secondary sources to develop evidence-based arguments and conclusions</p> <p><b>SC5-8WS</b> </p> <p>A student applies scientific understanding and critical thinking to suggest possible solutions to identified problems</p> <p><b>SC5-9WS</b> </p> <p>presents science ideas and evidence for a particular purpose and to a specific audience, using appropriate scientific language, conventions and representations</p>	<p><b>SC5-4WS</b></p> <p>develops questions or hypotheses to be investigated scientifically</p> <p><b>SC5-5WS</b> </p> <p>produces a plan to investigate identified questions, hypotheses or problems, individually and collaboratively</p> <p><b>SC5-6WS</b> </p> <p>undertakes first-hand investigations to collect valid and reliable data and information, individually and collaboratively</p> <p><b>SC5-7WS</b> </p> <p>processes, analyses and evaluates data from first-hand investigations and secondary sources to develop evidence-based arguments and conclusions</p> <p><b>SC5-8WS</b> </p> <p>A student applies scientific understanding and critical thinking to suggest possible solutions to identified problems</p> <p><b>SC5-9WS</b> </p> <p>presents science ideas and evidence for a particular purpose and to a specific audience, using appropriate scientific language, conventions and representations</p>

# Stage 5 – Year 9 Curriculum alignment

	Unit 3 Active Earth (Part 2): Plate Tectonics	Unit 4 Reactions and Energy	Unit 5 Sound	Unit 6 Light
Knowledge and Understanding	<p><b>SC5-12ES</b></p> <p>describes changing ideas about the structure of the Earth and the universe to illustrate how models, theories and laws are refined over time by the scientific community</p>	<p><b>SC5-17CW</b></p> <p>discusses the importance of chemical reactions in the production of a range of substances, and the influence of society on the development of new materials</p>	<p><b>SC5-10PW</b></p> <p>applies models, theories and laws to explain situations involving energy, force and motion</p>	<p><b>SC5-10PW</b></p> <p>applies models, theories and laws to explain situations involving energy, force and motion</p>
Skills	<p><b>SC5-4WS</b></p> <p>develops questions or hypotheses to be investigated scientifically</p> <p><b>SC5-5WS</b> </p> <p>produces a plan to investigate identified questions, hypotheses or problems, individually and collaboratively</p> <p><b>SC5-7WS</b> </p> <p>processes, analyses and evaluates data from first-hand investigations and secondary sources to develop evidence-based arguments and conclusions</p> <p><b>SC5-9WS</b> </p> <p>presents science ideas and evidence for a particular purpose and to a specific audience, using appropriate scientific language, conventions and representations</p>	<p><b>SC5-4WS</b></p> <p>develops questions or hypotheses to be investigated scientifically</p> <p><b>SC5-5WS</b> </p> <p>produces a plan to investigate identified questions, hypotheses or problems, individually and collaboratively</p> <p><b>SC5-6WS</b> </p> <p>follows a sequence of instructions to safely undertake a range of investigation types, collaboratively and individually</p> <p><b>SC5-7WS</b> </p> <p>processes, analyses and evaluates data from first-hand investigations and secondary sources to develop evidence-based arguments and conclusions</p> <p><b>SC5-9WS</b> </p> <p>presents science ideas and evidence for a particular purpose and to a specific audience, using appropriate scientific language, conventions and representations</p>	<p><b>SC5-5WS</b> </p> <p>produces a plan to investigate identified questions, hypotheses or problems, individually and collaboratively</p> <p><b>SC5-7WS</b> </p> <p>processes, analyses and evaluates data from first-hand investigations and secondary sources to develop evidence-based arguments and conclusions</p>	<p><b>SC5-6WS</b> </p> <p>follows a sequence of instructions to safely undertake a range of investigation types, collaboratively and individually</p> <p><b>SC5-7WS</b> </p> <p>processes, analyses and evaluates data from first-hand investigations and secondary sources to develop evidence-based arguments and conclusions</p>

	Unit 7 Non-contact Forces and Electricity	Unit 8 Atoms	Unit 9 Chemical Reactions	Optional Acids and Bases
Knowledge and Understanding	<p><b>SC5-11PW</b> explains how scientific understanding about energy conservation, transfers and transformations is applied in systems</p>	<p><b>SC5-16CW</b> explains how models, theories and laws about matter have been refined as new scientific evidence becomes available</p>	<p><b>SC5-17CW</b> discusses the importance of chemical reactions in the production of a range of substances, and the influence of society on the development of new materials</p>	<p><b>SC5-17CW</b> discusses the importance of chemical reactions in the production of a range of substances, and the influence of society on the development of new materials</p> <p><i>This outcome is addressed in the Chemical Reactions and Reaction Types units, however Acids and Bases has been included as an optional extra if you wish to examine acid-base reactions in the context of ocean acidification.</i></p>
Skills	<p><b>SC5-4WS</b> develops questions or hypotheses to be investigated scientifically</p> <p><b>SC5-5WS</b>   <p>produces a plan to investigate identified questions, hypotheses or problems, individually and collaboratively</p> <p><b>SC5-7WS</b>   <p>processes, analyses and evaluates data from first-hand investigations and secondary sources to develop evidence-based arguments and conclusions</p> <p><b>SC5-8WS</b> </p></p></p>			

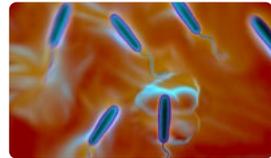
# Stage 5 – Year 10 Scope & Sequence



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?**



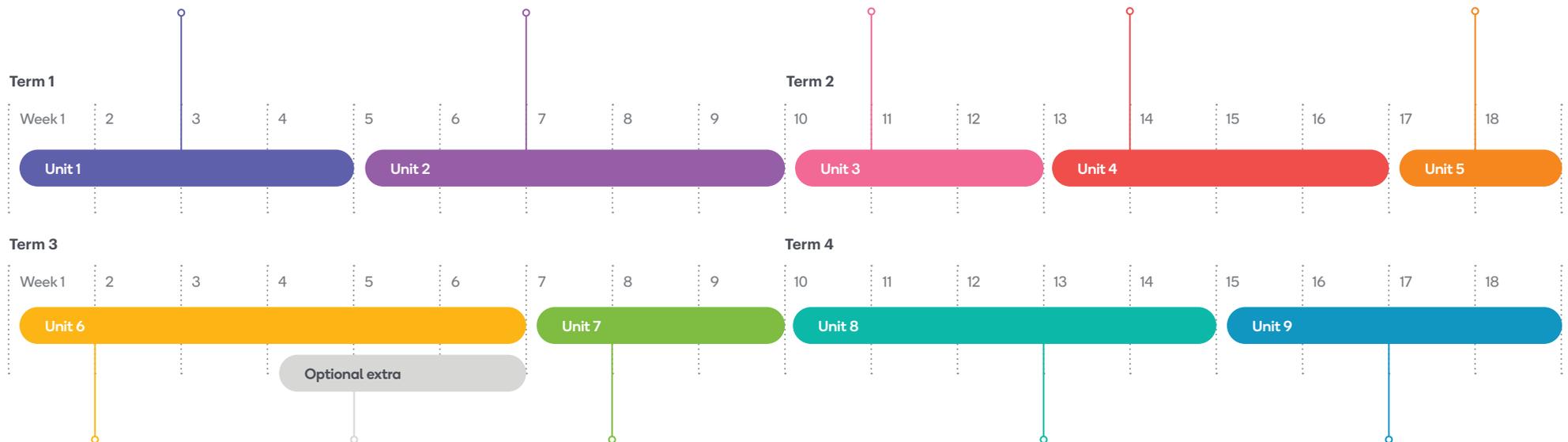
Kinematics  
**Are self-driving cars the way of the future?**



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?**



The Periodic Table  
**How do exploding stars create heavy metals?**



Optional extra:  
**Student Research Project**



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



Earth Systems  
**Climate change... is there even a debate?**



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

# Stage 5 – Year 10 Curriculum alignment

	Unit 1 Genetics	Unit 2 Evolution	Unit 3 Kinematics	Unit 4 Newton's Laws of Motion
Knowledge and Understanding	<p><b>SC5-15LW</b></p> <p>explains how biological understanding has advanced through scientific discoveries, technological developments and the needs of society</p>	<p><b>SC5-15LW</b></p> <p>explains how biological understanding has advanced through scientific discoveries, technological developments and the needs of society</p>	<p><b>SC5-10PW</b></p> <p>applies models, theories and laws to explain situations involving energy, force and motion</p>	<p><b>SC5-10PW</b></p> <p>applies models, theories and laws to explain situations involving energy, force and motion</p>
Skills	<p><b>SC5-5WS</b> </p> <p>produces a plan to investigate identified questions, hypotheses or problems, individually and collaboratively</p> <p><b>SC5-6WS</b> </p> <p>undertakes first-hand investigations to collect valid and reliable data and information, individually and collaboratively</p> <p><b>SC5-7WS</b> </p> <p>processes, analyses and evaluates data from first-hand investigations and secondary sources to develop evidence-based arguments and conclusions</p> <p><b>SC5-9WS</b> </p> <p>presents science ideas and evidence for a particular purpose and to a specific audience, using appropriate scientific language, conventions and representations</p>	<p><b>SC5-4WS</b></p> <p>develops questions or hypotheses to be investigated scientifically</p> <p><b>SC5-5WS</b> </p> <p>produces a plan to investigate identified questions, hypotheses or problems, individually and collaboratively</p> <p><b>SC5-6WS</b> </p> <p>undertakes first-hand investigations to collect valid and reliable data and information, individually and collaboratively</p> <p><b>SC5-7WS</b> </p> <p>processes, analyses and evaluates data from first-hand investigations and secondary sources to develop evidence-based arguments and conclusions</p> <p><b>SC5-9WS</b> </p> <p>presents science ideas and evidence for a particular purpose and to a specific audience, using appropriate scientific language, conventions and representations</p>	<p><b>SC5-5WS</b> </p> <p>produces a plan to investigate identified questions, hypotheses or problems, individually and collaboratively</p> <p><b>SC5-6WS</b> </p> <p>undertakes first-hand investigations to collect valid and reliable data and information, individually and collaboratively</p> <p><b>SC5-7WS</b> </p> <p>processes, analyses and evaluates data from first-hand investigations and secondary sources to develop evidence-based arguments and conclusions</p> <p><b>SC5-9WS</b> </p> <p>presents science ideas and evidence for a particular purpose and to a specific audience, using appropriate scientific language, conventions and representations</p>	<p><b>SC5-4WS</b></p> <p>develops questions or hypotheses to be investigated scientifically</p> <p><b>SC5-5WS</b> </p> <p>produces a plan to investigate identified questions, hypotheses or problems, individually and collaboratively</p> <p><b>SC5-6WS</b> </p> <p>undertakes first-hand investigations to collect valid and reliable data and information, individually and collaboratively</p> <p><b>SC5-7WS</b> </p> <p>processes, analyses and evaluates data from first-hand investigations and secondary sources to develop evidence-based arguments and conclusions</p> <p><b>SC5-9WS</b> </p> <p>presents science ideas and evidence for a particular purpose and to a specific audience, using appropriate scientific language, conventions and representations</p>

# Stage 5 – Year 10 Curriculum alignment

	Unit 5 Energy Conservation	Unit 6 The Periodic Table	Unit 7 Reaction Types	Unit 8 Earth Systems	Unit 9 The Universe
Knowledge and Understanding	<p><b>SC5-11PW</b></p> <p>explains how scientific understanding about energy conservation, transfers and transformations is applied in systems</p>	<p><b>SC5-16CW</b></p> <p>explains how models, theories and laws about matter have been refined as new scientific evidence becomes available</p>	<p><b>SC5-17CW</b></p> <p>discusses the importance of chemical reactions in the production of a range of substances, and the influence of society on the development of new materials</p>	<p><b>SC5-13ES</b></p> <p>explains how scientific knowledge about global patterns of geological activity and interactions involving global systems can be used to inform decisions related to contemporary issues</p>	<p><b>SC5-12ES</b></p> <p>describes changing ideas about the structure of the Earth and the universe to illustrate how models, theories and laws are refined over time by the scientific community</p>
Skills	<p><b>SC5-7WS</b> </p> <p>processes, analyses and evaluates data from first-hand investigations and secondary sources to develop evidence-based arguments and conclusions</p> <p><b>SC5-9WS</b> </p> <p>presents science ideas and evidence for a particular purpose and to a specific audience, using appropriate scientific language, conventions and representations</p>	<p><b>SC5-5WS</b> </p> <p>produces a plan to investigate identified questions, hypotheses or problems, individually and collaboratively</p> <p><b>SC5-6WS</b> </p> <p>undertakes first-hand investigations to collect valid and reliable data and information, individually and collaboratively</p> <p><b>SC5-7WS</b> </p> <p>processes, analyses and evaluates data from first-hand investigations and secondary sources to develop evidence-based arguments and conclusions</p>	<p><b>SC5-5WS</b> </p> <p>produces a plan to investigate identified questions, hypotheses or problems, individually and collaboratively</p> <p><b>SC5-7WS</b> </p> <p>processes, analyses and evaluates data from first-hand investigations and secondary sources to develop evidence-based arguments and conclusions</p> <p><b>SC5-9WS</b> </p> <p>presents science ideas and evidence for a particular purpose and to a specific audience, using appropriate scientific language, conventions and representations</p>	<p><b>SC5-4WS</b></p> <p>develops questions or hypotheses to be investigated scientifically</p> <p><b>SC5-5WS</b> </p> <p>produces a plan to investigate identified questions, hypotheses or problems, individually and collaboratively</p> <p><b>SC5-6WS</b> </p> <p>undertakes first-hand investigations to collect valid and reliable data and information, individually and collaboratively</p> <p><b>SC5-7WS</b> </p> <p>processes, analyses and evaluates data from first-hand investigations and secondary sources to develop evidence-based arguments and conclusions</p> <p><b>SC5-9WS</b> </p> <p>presents science ideas and evidence for a particular purpose and to a specific audience, using appropriate scientific language, conventions and representations</p>	<p><b>SC5-5WS</b> </p> <p>produces a plan to investigate identified questions, hypotheses or problems, individually and collaboratively</p> <p><b>SC5-7WS</b> </p> <p>processes, analyses and evaluates data from first-hand investigations and secondary sources to develop evidence-based arguments and conclusions</p> <p><b>SC5-9WS</b> </p> <p>presents science ideas and evidence for a particular purpose and to a specific audience, using appropriate scientific language, conventions and representations</p>

**A hawksbill turtle**

Hawksbill turtles play an important role in coral reef ecosystems. By feeding on sponges, they provide corals with more space to grow.





Acids and bases  
**How can metals help us fight cancer?**

SC5-17CW

discusses the importance of chemical reactions in the production of a range of substances, and the influence of society on the development of new materials



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

SC5-14LW

analyses interactions between components and processes within biological systems



Optional extra: Plants  
**How do predatory plants survive?**

SC5-14LW

analyses interactions between components and processes within biological systems



The Endocrine System  
**Will staring at your phone screen before bed affect your sleep?**

SC5-14LW

analyses interactions between components and processes within biological systems



Simple Machines  
**How do machines make life easier?**

SC4-10PW

describes the action of unbalanced forces in everyday situations



Metals  
**How do machines make life easier?**

SC4-17CW

explains how scientific understanding of, and discoveries about the properties of elements, compounds and mixtures relate to their uses in everyday life



Radiation  
**Why is cosmic radiation so dangerous?**

SC5-10PW

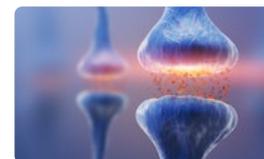
applies models, theories and laws to explain situations involving energy, force and motion



Optional extra: The Nervous System  
**Could machines sniff out cancers better than dogs?**

SC5-14LW

analyses interactions between components and processes within biological systems



Optional extra: The Nervous System  
**How can your gut influence your mood?**



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**

*A mountain river in Switzerland  
This landscape captures the interaction  
of some of Earth's systems.*





 Call us on 1300 918 292

 Email us at [community@stileeducation.com](mailto: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.