



**Britannica**  
Expedition: **LEARN!**

Teacher Guide

# ACARA SCIENCE

Your guide to how Expedition Learn fulfills your **curriculum's outcomes**.

IMAGEQUEST: Chemistry students performing a titration experiment. Science Photo Library..



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# Expedition: Learn! and the Australian Curriculum

The education team at Britannica is committed to providing digital resources that are rigorous, engaging, and deeply relevant to the Australian context.

This guide details how Expedition: Learn! aligns specifically with the **Australian Curriculum: Science (Version 9.0)**. To support seamless integration into your teaching programs, this document mirrors the structure of the curriculum itself.

## Curriculum Organisation

Reflecting the developmental stages of learning, our content is organised into Year Level Bands (**Years 3–5** and **Years 6–8**). Within these bands, lessons are categorised by the key sub-strands of Science:

- Physical and Chemical Sciences
- Biological Sciences
- Earth and Space Sciences

## Navigating this Guide

The tables in this document map the Australian Curriculum content descriptors directly to Expedition Learn lessons. By referencing the specific curriculum codes (e.g., AC9S3U01), teachers can easily identify the exact lessons, interactive activities, and assessments required to fulfill specific learning outcomes.

This document acts as a comprehensive planning tool, ensuring that when you use Expedition: Learn!, you are delivering targeted instruction that meets the rigorous standards of the Australian Curriculum.

# Science as a Human Endeavour

In the study of Science as a Human Endeavour, students learn that science is not just a body of knowledge – it is a uniquely human pursuit shaped by curiosity, creativity, ethics, culture, and collaboration. They discover that scientific understanding evolves as new evidence emerges, that breakthroughs arise when technology, engineering and societal need intersect, and that responsible decision-making requires balancing knowledge with environmental, social and ethical considerations.

These ideas matter because they teach students **how to think**, not what to think – how to question evidence, navigate complexity, and participate in solving the great challenges of their time. Britannica strengthens this journey by immersing students in **real-world inquiry**, connecting them with global perspectives, and scaffolding the investigative habits – skepticism, perseverance, accuracy, and imagination – that define **authentic scientific practice**. It equips every learner to see themselves not just as consumers of science, but as future contributors to a world shaped by evidence, empathy, and informed action.

This document acts as a comprehensive planning tool, ensuring that when you use Expedition Learn, you are delivering targeted instruction that meets the rigorous standards of the Australian Curriculum.

## PHYSICAL AND CHEMICAL SCIENCES

## Matter

[Go to Expedition Learn →](#)

Code/s	Code Description	Lesson
AC9S3U03	identify sources of heat energy and examine how temperature changes when heat energy is transferred from one object to another	<ul style="list-style-type: none"><li>• <a href="#">What is Matter?</a></li><li>• <a href="#">States of Matter</a></li><li>• <a href="#">Properties of Matter</a></li><li>• <a href="#">Conductors and Insulators</a></li><li>• <a href="#">What are Chemical Reactions?</a></li></ul>
AC9S4U03	identify how forces can be exerted by one object on another and investigate the effect of frictional, gravitational and magnetic forces on the motion of objects	<ul style="list-style-type: none"><li>• <a href="#">Measuring Mass and Volume</a></li><li>• <a href="#">Properties of Matter</a></li></ul>
AC9S5U03	identify sources of light, recognise that light travels in a straight path and describe how shadows are formed and light can be reflected and refracted	Coming Soon

## Forces and Motion

Code/s	Code Description	Lesson
AC9S4U03	identify sources of heat energy and examine how temperature changes when heat energy is transferred from one object to another	<ul style="list-style-type: none"><li>• <a href="#">What is Friction?</a></li></ul>

AC9S4U03	identify how forces can be exerted by one object on another and investigate the effect of frictional, gravitational and magnetic forces on the motion of objects	<ul style="list-style-type: none"> <li>• What are forces?</li> <li>• Balanced and Unbalanced Forces</li> <li>• What is Friction?</li> <li>• What are Electric and Magnetic Interactions</li> <li>• Gravitational Force</li> <li>• Patterns of Motion</li> <li>• Changes in Movement</li> <li>• Using Magnets to Solve Problems</li> <li>• Electromagnets</li> <li>• What are Simple Machines?</li> <li>• What are Compound Machines?</li> </ul>
AC9S5U03	identify sources of light, recognise that light travels in a straight path and describe how shadows are formed and light can be reflected and refracted	Coming Soon

## Energy

Code/s	Code Description	Lesson
AC9S3U03	identify sources of heat energy and examine how temperature changes when heat energy is transferred from one object to another	<ul style="list-style-type: none"> <li>• Identifying Forms of Energy</li> <li>• Heat</li> <li>• Energy Transfer</li> <li>• Energy Conversions</li> </ul>
AC9S4U03	identify how forces can be exerted by one object on another and investigate the effect of frictional, gravitational and magnetic forces on the motion of objects	<ul style="list-style-type: none"> <li>• Speed and Energy</li> <li>• Energy and Colliding Objects</li> <li>• Energy Transfer</li> <li>• Energy Conversions</li> </ul>

AC9S5U03	identify sources of light, recognise that light travels in a straight path and describe how shadows are formed and light can be reflected and refracted	<ul style="list-style-type: none"> <li>Identifying Forms of Energy</li> <li>Introduction to Light Energy</li> <li>Energy Transfer</li> <li>Energy Conversions</li> </ul>
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## Waves and Information Transfer

Code/s	Code Description	Lesson
AC9S3U03	identify sources of heat energy and examine how temperature changes when heat energy is transferred from one object to another	Coming Soon
AC9S4U03	identify how forces can be exerted by one object on another and investigate the effect of frictional, gravitational and magnetic forces on the motion of objects	Coming Soon
AC9S5U03	identify sources of light, recognise that light travels in a straight path and describe how shadows are formed and light can be reflected and refracted	<ul style="list-style-type: none"> <li>What are Waves?</li> <li>What is Light?</li> <li>Mirrors and Reflection of Light</li> <li>Patterns Transfer Information</li> </ul>

## BIOLOGICAL SCIENCE

### Structures and Processes of Living Things

Code/s	Code Description	Lesson
AC9S3U01	compare characteristics of living and non-living things and examine the differences between the life cycles of plants and animals	<ul style="list-style-type: none"> <li>Life Cycles of Flowering Plants</li> <li>Plant Structures</li> </ul>

		<ul style="list-style-type: none"> <li>• Flowers</li> <li>• How Do Flowering Plants Reproduce?</li> <li>• Materials for Plant Growth</li> <li>• Life Cycles of Animals</li> <li>• Animal Structures</li> <li>• What are Cells?</li> <li>• How is the Human Body Organised?</li> <li>• Human Body Systems</li> </ul>
AC9S4U01	explain the roles and interactions of consumers, producers and decomposers within a habitat and how food chains represent feeding relationships	Coming Soon
AC9S5U01	examine how particular structural features and behaviours of living things enable their survival in specific habitats	<ul style="list-style-type: none"> <li>• Plant Structures</li> <li>• Flowers</li> <li>• How Do Flowering Plants Reproduce?</li> <li>• Materials for Plant Growth</li> <li>• Plant Responses</li> <li>• Animal Structures</li> <li>• The Heart</li> <li>• The Brain</li> <li>• The Skin</li> <li>• The Lungs</li> <li>• The Stomach</li> <li>• What are Cells?</li> <li>• How Is the Human Body Organised?</li> </ul>



		<ul style="list-style-type: none"> <li>Human Body Systems</li> <li>Animal Senses</li> <li>Animal Responses</li> <li>Responding to Seasonal Changes</li> </ul>
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## Ecosystems

Code/s	Code Description	Lesson
AC9S3U01	compare characteristics of living and non-living things and examine the differences between the life cycles of plants and animals	<ul style="list-style-type: none"> <li>Ecosystems</li> <li>Ocean Ecosystems</li> <li>Producers, Consumers, and Decomposers</li> <li>Food Chains and Food Webs</li> <li>Plant Growth and the Environment</li> <li>Microorganisms</li> </ul>
AC9S4U01	explain the roles and interactions of consumers, producers and decomposers within a habitat and how food chains represent feeding relationships	<ul style="list-style-type: none"> <li>Ecosystems</li> <li>Ocean Ecosystems</li> <li>Changes in the Environment</li> <li>Group Behavior</li> <li>Producers, Consumers, and Decomposers</li> </ul>
AC9S5U01	examine how particular structural features and behaviours of living things enable their survival in specific habitats	<ul style="list-style-type: none"> <li>Ecosystems</li> <li>Ocean Ecosystems</li> <li>Changes in the Environment</li> <li>Group Behavior</li> <li>Producers, Consumers, and Decomposers</li> <li>Food Chains and Food Webs</li> </ul>

		<ul style="list-style-type: none"> <li>Plant Growth and the Environment</li> <li>Microorganisms</li> </ul>
AC9S5U02	describe how weathering, erosion, transportation and deposition cause slow or rapid change to Earth's surface	<ul style="list-style-type: none"> <li>Changes in the Environment</li> <li>Ocean Ecosystems</li> <li>Plant Growth and the Environment</li> </ul>

## Traits and Behaviors

Code/s	Code Description	Lesson
AC9S3U01	compare characteristics of living and non-living things and examine the differences between the life cycles of plants and animals	<ul style="list-style-type: none"> <li>What Is a Trait?</li> <li>Traits and the Environment</li> </ul>
AC9S4U01	explain the roles and interactions of consumers, producers and decomposers within a habitat and how food chains represent feeding relationships	Coming Soon
AC9S5U01	examine how particular structural features and behaviours of living things enable their survival in specific habitats	<ul style="list-style-type: none"> <li>What Is a Trait?</li> <li>Traits and the Environment</li> <li>Instincts and Learned Behaviors</li> </ul>

## Evolution and Classification

Code/s	Code Description	Lesson
AC9S3U01	compare characteristics of living and non-living things and examine the differences between the life cycles of plants and animals	<ul style="list-style-type: none"> <li>Types of Fossils and How They Form</li> <li>Fossils and Evidence of Life</li> </ul>

		<ul style="list-style-type: none"> <li>• Extinct Plants and Animals</li> <li>• Survival and Differences Among Organisms</li> <li>• Classification of Organisms</li> <li>• Classifying Plants</li> <li>• Comparing Animals</li> </ul>
AC9S4U02	investigate how natural processes and human activity cause slow and rapid changes to Earth's surface	<ul style="list-style-type: none"> <li>• Types of Fossils and How They Form</li> <li>• Fossils and Evidence of Life</li> <li>• Understanding Earth's Changes</li> <li>• Extinct Plants and Animals</li> </ul>
AC9S5U01	examine how particular structural features and behaviours of living things enable their survival in specific habitats	<ul style="list-style-type: none"> <li>• Extinct Plants and Animals</li> <li>• Survival and Differences Among Organisms</li> <li>• Animal Habitats</li> <li>• Classification of Organisms</li> <li>• Classifying Plants</li> <li>• Comparing Animals</li> </ul>
AC9S5U02	describe how weathering, erosion, transportation and deposition cause slow or rapid change to Earth's surface	<ul style="list-style-type: none"> <li>• Types of Fossils and How They Form</li> <li>• Fossils and Evidence of Life</li> <li>• Understanding Earth's Changes</li> <li>• Extinct Plants and Animals</li> <li>• Animal Habitats</li> </ul>

# EARTH AND SPACE SCIENCE

## Earth and Space

Code/s	Code Description	Lesson
AC9S3U02	compare the observable properties of soils, rocks and minerals and investigate why they are important Earth resources	<ul style="list-style-type: none"><li>• <a href="#">Comets, Asteroids, and Meteoroids</a></li></ul>
AC9S4U02	identify sources of water and describe key processes in the water cycle, including movement of water through the sky, landscape and ocean; precipitation; evaporation; and condensation	Coming Soon
AC9S5U02	describe how weathering, erosion, transportation and deposition cause slow or rapid change to Earth's surface	<ul style="list-style-type: none"><li>• <a href="#">Earth, the Sun, and the Moon</a></li><li>• <a href="#">How Earth Moves</a></li><li>• <a href="#">Patterns of Daily Change</a></li><li>• <a href="#">Comets, Asteroids, and Meteoroids</a></li><li>• <a href="#">The Planets</a></li><li>• <a href="#">What Are Moons?</a></li><li>• <a href="#">The Phases of the Moon</a></li><li>• <a href="#">Moon Phases and Tides</a></li><li>• <a href="#">Seasonal Changes in Stars</a></li></ul>

# Earth's Systems and Resources

Code/s	Code Description	Lesson
AC9S3U02	compare the observable properties of soils, rocks and minerals and investigate why they are important Earth resources	<ul style="list-style-type: none"> <li>• Soil, Rocks, Air, and Water</li> <li>• Soil and How It Is Formed</li> <li>• What Is the Rock Cycle?</li> <li>• What Are Minerals?</li> </ul>
AC9S4U02	identify sources of water and describe key processes in the water cycle, including movement of water through the sky, landscape and ocean; precipitation; evaporation; and condensation	<ul style="list-style-type: none"> <li>• What Is Weather</li> <li>• Weather Data</li> <li>• Seasons and Weather</li> <li>• Weather-Related Hazards</li> <li>• What Is Climate?</li> <li>• Earth's Spheres</li> <li>• Interactions of Earth's Spheres</li> <li>• Understanding the Water Cycle</li> <li>• Where Is Earth's Water Found?</li> <li>• Soil, Rocks, Air, and Water</li> </ul>
AC9S5U02	describe how weathering, erosion, transportation and deposition cause slow or rapid change to Earth's surface	<ul style="list-style-type: none"> <li>• Weather-Related Hazards</li> <li>• Weathering and Erosion</li> <li>• Patterns of Earth's Features</li> <li>• Earth's Land Features</li> <li>• Natural Hazards</li> <li>• Earth's Spheres</li> <li>• Interactions of Earth's Spheres</li> <li>• Soil and How It Is Formed</li> </ul>

# Earth and Human Activity

Code/s	Code Description	Lesson
AC9S3U02	compare the observable properties of soils, rocks and minerals and investigate why they are important Earth resources	<ul style="list-style-type: none"><li>• <a href="#">How Humans Change the Environment</a></li><li>• <a href="#">Nonrenewable Energy Resources</a></li><li>• <a href="#">How Do Fossil Fuels Form?</a></li><li>• <a href="#">Protecting Earth</a></li><li>• <a href="#">What Is Recycling?</a></li></ul>
AC9S4U02	identify sources of water and describe key processes in the water cycle, including movement of water through the sky, landscape and ocean; precipitation; evaporation; and condensation	<ul style="list-style-type: none"><li>• <a href="#">How Humans Change the Environment</a></li><li>• <a href="#">Renewable Energy Resources</a></li><li>• <a href="#">Protecting Earth</a></li></ul>
AC9S5U02	describe how weathering, erosion, transportation and deposition cause slow or rapid change to Earth's surface	<ul style="list-style-type: none"><li>• <a href="#">How Humans Change the Environment</a></li><li>• <a href="#">Nonrenewable Energy Resources</a></li><li>• <a href="#">How Do Fossil Fuels Form?</a></li><li>• <a href="#">Protecting Earth</a></li></ul>
AC9S3H02	consider how people use scientific explanations to meet a need or solve a problem	<ul style="list-style-type: none"><li>• <a href="#">Renewable Energy Resources</a></li><li>• <a href="#">Protecting Earth</a></li><li>• <a href="#">What Is Recycling?</a></li></ul>

AC9S4H02	consider how people use science knowledge and skills in occupations and discuss how a range of occupations provide evidence for growth in science knowledge and understanding	<ul style="list-style-type: none"> <li>• <a href="#">Renewable Energy Resources</a></li> <li>• <a href="#">Nonrenewable Energy Resources</a></li> <li>• <a href="#">Protecting Earth</a></li> </ul>
AC9S5H01	describe how people develop scientific explanations based on observations, evidence and data, and how these explanations can be refined over time	<ul style="list-style-type: none"> <li>• <a href="#">How Humans Change the Environment</a></li> <li>• <a href="#">How Do Fossil Fuels Form?</a></li> <li>• <a href="#">What Is Recycling?</a></li> </ul>
AC9S5H02	investigate how scientific knowledge is used by individuals and communities to identify problems, consider responses and make decisions	<ul style="list-style-type: none"> <li>• <a href="#">How Humans Change the Environment</a></li> <li>• <a href="#">Renewable Energy Resources</a></li> <li>• <a href="#">Nonrenewable Energy Resources</a></li> <li>• <a href="#">Protecting Earth</a></li> <li>• <a href="#">What Is Recycling?</a></li> </ul>

## PHYSICAL AND CHEMICAL SCIENCES

## Structure and Properties of Matter

[Go to Expedition Learn →](#)

Code/s	Code Description	Lesson
AC9S6U03	investigate the transfer and transformation of energy in electrical circuits, including the role of circuit components, insulators and conductors	<ul style="list-style-type: none"><li>Classifying Conductors and Insulators</li></ul>
AC9S6U04	compare reversible changes, including dissolving and changes of state, and irreversible changes, including cooking and rusting that produce new substances	<ul style="list-style-type: none"><li>Thermal Energy and States of Matter</li><li>Substances and Mixtures</li><li>Factors that Affect Dissolving</li></ul>
AC9S7U05	use particle theory to describe the arrangement of particles in a substance, including the motion of and attraction between particles, and relate this to the properties of the substance	<ul style="list-style-type: none"><li>The Structure of Matter</li><li>Thermal Energy and States of Matter</li><li>Comparing Properties of Matter</li><li>Density</li></ul>
AC9S7U06	use a particle model to describe differences between pure substances and mixtures and apply understanding of properties of substances to separate mixtures	<ul style="list-style-type: none"><li>Elements and Compounds</li><li>Substances and Mixtures</li><li>Comparing Properties of Matter</li></ul>



		<ul style="list-style-type: none"> <li>Factors that Affect Dissolving</li> </ul>
AC9S8U05	classify different types of energy as kinetic or potential and investigate energy transfer and transformations in simple systems	<ul style="list-style-type: none"> <li>Thermal Energy and States of Matter</li> </ul>
AC9S8U06	classify matter as elements, compounds or mixtures and compare different representations of these, including 2-dimensional and 3-dimensional models, symbols for elements and formulas for molecules and compounds	<ul style="list-style-type: none"> <li>The Structure of Matter</li> <li>Elements and Compounds</li> <li>Substances and Mixtures</li> <li>Chemical Symbols and Formulas</li> <li>Classifying Elements</li> </ul>
AC9S8U07	compare physical and chemical changes and identify indicators of energy change in chemical reactions	<ul style="list-style-type: none"> <li>Synthetic Materials</li> </ul>

## Chemical Reactions

Code/s	Code Description	Lesson
AC9S6U04	compare reversible changes, including dissolving and changes of state, and irreversible changes, including cooking and rusting that produce new substances	<ul style="list-style-type: none"> <li>Chemical Changes Affect Properties</li> <li>Chemical Reactions</li> <li>Conservation of Matter in Chemical Reactions</li> </ul>

AC9S7U05	use particle theory to describe the arrangement of particles in a substance, including the motion of and attraction between particles, and relate this to the properties of the substance	<ul style="list-style-type: none"> <li>• <a href="#">Chemical Changes Affect Properties</a></li> <li>• <a href="#">Chemical Reactions</a></li> </ul>
AC9S7U06	use a particle model to describe differences between pure substances and mixtures and apply understanding of properties of substances to separate mixtures	Coming Soon
AC9S8U05	classify different types of energy as kinetic or potential and investigate energy transfer and transformations in simple systems	<ul style="list-style-type: none"> <li>• <a href="#">Chemical Reactions and Energy</a></li> </ul>
AC9S8U06	classify matter as elements, compounds or mixtures and compare different representations of these, including 2-dimensional and 3-dimensional models, symbols for elements and formulas for molecules and compounds	<ul style="list-style-type: none"> <li>• <a href="#">Chemical Reactions</a></li> </ul>
AC9S8U07	compare physical and chemical changes and identify indicators of energy change in chemical reactions	<ul style="list-style-type: none"> <li>• <a href="#">Chemical Changes Affect Properties</a></li> <li>• <a href="#">Chemical Reactions</a></li> <li>• <a href="#">Conservation of Matter in Chemical Reactions</a></li> <li>• <a href="#">Chemical Reactions and Energy</a></li> </ul>

# Forces and Interactions

Code/s	Code Description	Lesson
AC9S6U03	investigate the transfer and transformation of energy in electrical circuits, including the role of circuit components, insulators and conductors	<ul style="list-style-type: none"><li>• <a href="#">Electric and Magnetic Forces</a></li></ul>
AC9S7U04	investigate the effects of applied forces and resulting friction, gravitational and electrostatic forces on the motion of objects	<ul style="list-style-type: none"><li>• <a href="#">Forces and Motion</a></li><li>• <a href="#">Newton's First Law</a></li><li>• <a href="#">Newton's Third Law</a></li><li>• <a href="#">Graphing and Describing Motion</a></li><li>• <a href="#">Electric and Magnetic Forces</a></li><li>• <a href="#">Gravitational Interactions</a></li><li>• <a href="#">Fields and Forces</a></li></ul>
AC9S8U05	classify different types of energy as kinetic or potential and investigate energy transfer and transformations in simple systems	<ul style="list-style-type: none"><li>• <a href="#">Forces and Motion</a></li><li>• <a href="#">Graphing and Describing Motion</a></li><li>• <a href="#">Gravitational Interactions</a></li></ul>

## Energy

Code/s	Code Description	Lesson
AC9S6U03	investigate the transfer and transformation of energy in electrical circuits, including the role of circuit components, insulators and conductors	<ul style="list-style-type: none"><li>• <a href="#">Electrical Circuits</a></li></ul>

AC9S7U04	investigate the effects of applied forces and resulting friction, gravitational and electrostatic forces on the motion of objects	<ul style="list-style-type: none"> <li>• Kinetic Energy</li> <li>• Potential Energy</li> <li>• Changes in Kinetic Energy</li> </ul>
AC9S7U05	use particle theory to describe the arrangement of particles in a substance, including the motion of and attraction between particles, and relate this to the properties of the substance	<ul style="list-style-type: none"> <li>• Thermal Energy Transfer</li> <li>• Energy and Temperature Change</li> </ul>
AC9S8U05	classify different types of energy as kinetic or potential and investigate energy transfer and transformations in simple systems	<ul style="list-style-type: none"> <li>• Kinetic Energy</li> <li>• Potential Energy</li> <li>• Changes in Kinetic Energy</li> <li>• Thermal Energy Transfer</li> <li>• Energy and Temperature Change</li> <li>• Electrical Circuits</li> <li>• Conservation of Energy</li> </ul>

## Waves and Electromagnetic Radiation

Code/s	Code Description	Lesson
AC9S6U03	investigate the transfer and transformation of energy in electrical circuits, including the role of circuit components, insulators and conductors	<ul style="list-style-type: none"> <li>• Digital and Analog Signals</li> </ul>

AC9S7U04	investigate and represent balanced and unbalanced forces, including gravitational force, acting on objects, and relate changes in an object's motion to its mass and the magnitude and direction of forces acting on it	Coming Soon
AC9S8U05	classify different types of energy as kinetic or potential and investigate energy transfer and transformations in simple systems	<ul style="list-style-type: none"> <li>• <a href="#">Introduction to Wave Properties</a></li> <li>• <a href="#">Light</a></li> <li>• <a href="#">The Electromagnetic Spectrum</a></li> <li>• <a href="#">Digital and Analog Signals</a></li> </ul>

## BIOLOGICAL SCIENCE

### Structure, Function, and Information Processing

Code/s	Code Description	Lesson
AC9S6U01	investigate the physical conditions of a habitat and analyse how the growth and survival of living things is affected by changing physical conditions	<ul style="list-style-type: none"> <li>• <a href="#">Plant Responses</a></li> <li>• <a href="#">Materials for Plant Growth</a></li> <li>• <a href="#">Animal Responses</a></li> <li>• <a href="#">Responding to Seasonal Changes</a></li> <li>• <a href="#">Homeostasis</a></li> </ul>
AC9S7U01	investigate the role of classification in ordering and organising the diversity of life on Earth and use and develop classification tools including dichotomous keys	<ul style="list-style-type: none"> <li>• <a href="#">Using Characteristics to Classify Organisms</a></li> <li>• <a href="#">Comparing Organisms</a></li> <li>• <a href="#">Comparing Animals</a></li> <li>• <a href="#">Body Structure and Symmetry</a></li> </ul>

AC9S7U02	use models, including food webs, to represent matter and energy flow in ecosystems and predict the impact of changing abiotic and biotic factors on populations	Coming Soon
AC9S8U01	recognise cells as the basic units of living things, compare plant and animal cells, and describe the functions of specialised cell structures and organelles	<ul style="list-style-type: none"> <li>• <a href="#">Cells</a></li> <li>• <a href="#">Parts of a Cell</a></li> <li>• <a href="#">What Are Cells?</a></li> <li>• <a href="#">Cell Division for Growth and Repair</a></li> </ul>
AC9S8U02	analyse the relationship between structure and function of cells, tissues and organs in a plant and an animal organ system and explain how these systems enable survival of the individual	<ul style="list-style-type: none"> <li>• <a href="#">Organisation of the Human Body</a></li> <li>• <a href="#">Sensing Information</a></li> <li>• <a href="#">The Human Muscular System</a></li> <li>• <a href="#">The Human Respiratory System</a></li> <li>• <a href="#">The Human Circulatory System</a></li> <li>• <a href="#">The Human Excretory System</a></li> <li>• <a href="#">The Human Nervous System</a></li> <li>• <a href="#">Body Structure and Symmetry</a></li> <li>• <a href="#">Homeostasis</a></li> <li>• <a href="#">Plant Structures</a></li> <li>• <a href="#">Animal Senses</a></li> <li>• <a href="#">The Brain</a></li> <li>• <a href="#">The Lungs</a></li> <li>• <a href="#">The Stomach</a></li> <li>• <a href="#">The Heart</a></li> <li>• <a href="#">The Skin</a></li> <li>• <a href="#">How Is the Human Body Organised?</a></li> </ul>

# Matter and Energy in Organisms and Ecosystems

Code/s	Code Description	Lesson
AC9S6U01	investigate the physical conditions of a habitat and analyse how the growth and survival of living things is affected by changing physical conditions	<ul style="list-style-type: none"> <li>Resources in Ecosystems</li> <li>Ecosystems: Impacts of Change</li> <li>Ecological Succession</li> </ul>
AC9S7U01	investigate the role of classification in ordering and organising the diversity of life on Earth and use and develop classification tools including dichotomous keys	Coming Soon
AC9S7U02	use models, including food webs, to represent matter and energy flow in ecosystems and predict the impact of changing abiotic and biotic factors on populations	<ul style="list-style-type: none"> <li>Photosynthesis</li> <li>Cellular Respiration</li> <li>Materials in Food Are Used for Growth</li> <li>Resources in Ecosystems</li> <li>Cycles of Matter: Carbon</li> <li>Matter and Energy in Food Webs</li> <li>Energy Pyramids</li> <li>Ecosystems: Impacts of Change</li> </ul>
AC9S8U01	recognise cells as the basic units of living things, compare plant and animal cells, and describe the functions of specialised cell structures and organelles	<ul style="list-style-type: none"> <li>Photosynthesis</li> <li>Cellular Respiration</li> </ul>

AC9S8U02	analyse the relationship between structure and function of cells, tissues and organs in a plant and an animal organ system and explain how these systems enable survival of the individual	<ul style="list-style-type: none"> <li>• Photosynthesis</li> <li>• Cellular Respiration</li> <li>• Materials in Food Are Used for Growth</li> </ul>
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## Interdependent Relationships in Ecosystems

Code/s	Code Description	Lesson
AC9S6U01	investigate the physical conditions of a habitat and analyse how the growth and survival of living things is affected by changing physical conditions	<ul style="list-style-type: none"> <li>• Interactions in Ecosystems</li> <li>• Predators and Prey</li> <li>• Epidemics and Pandemics</li> <li>• Biodiversity</li> <li>• Organisation of Ecosystems</li> <li>• Ecological Niches</li> </ul>
AC9S7U01	investigate the role of classification in ordering and organising the diversity of life on Earth and use and develop classification tools including dichotomous keys	<ul style="list-style-type: none"> <li>• Viruses, Bacteria, Fungi, and Parasites</li> <li>• Biodiversity</li> <li>• Organisation of Ecosystems</li> </ul>
AC9S7U02	use models, including food webs, to represent matter and energy flow in ecosystems and predict the impact of changing abiotic and biotic factors on populations	<ul style="list-style-type: none"> <li>• Interactions in Ecosystems</li> <li>• Predators and Prey</li> <li>• Viruses, Bacteria, Fungi, and Parasites</li> <li>• Epidemics and Pandemics</li> <li>• Biodiversity</li> <li>• Organisation of Ecosystems</li> </ul>



AC9S8U01	recognise cells as the basic units of living things, compare plant and animal cells, and describe the functions of specialised cell structures and organelles	<ul style="list-style-type: none"> <li>Viruses, Bacteria, Fungi, and Parasites</li> <li>Epidemics and Pandemics</li> </ul>
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## Growth, Development, & Reproduction of Organisms

Code/s	Code Description	Lesson
AC9S6U01	investigate the physical conditions of a habitat and analyse how the growth and survival of living things is affected by changing physical conditions	<ul style="list-style-type: none"> <li>Growth of Organisms</li> </ul>
AC9S7U01	investigate the role of classification in ordering and organising the diversity of life on Earth and use and develop classification tools including dichotomous keys	Coming Soon
AC9S7U02	use models, including food webs, to represent matter and energy flow in ecosystems and predict the impact of changing abiotic and biotic factors on populations	<ul style="list-style-type: none"> <li>Viruses, Bacteria, Fungi, and Parasites</li> <li>Biodiversity</li> <li>Organisation of Ecosystems</li> </ul>
AC9S8U01	recognise cells as the basic units of living things, compare plant and animal cells, and describe the functions of specialised cell structures and organelles	<ul style="list-style-type: none"> <li>Genes, Chromosomes, and Traits</li> <li>Mutations</li> <li>Reproduction</li> <li>Humans Influence the Inheritance of Traits</li> <li>Punnett Squares and Pedigrees</li> </ul>

AC9S8U02	describe the form and function of reproductive cells and organs in animals and plants, and analyse how the processes of sexual and asexual reproduction enable survival of the species	<ul style="list-style-type: none"> <li>• Plant Reproduction</li> <li>• Animal Behaviors Affect Reproduction</li> <li>• Growth of Organisms</li> <li>• Genes, Chromosomes, and Traits</li> <li>• Mutations</li> <li>• Reproduction</li> <li>• Humans Influence the Inheritance of Traits</li> <li>• Punnett Squares and Pedigrees</li> </ul>
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## Natural Selection and Adaptation

Code/s	Code Description	Lesson
AC9S6U01	investigate the physical conditions of a habitat and analyse how the growth and survival of living things is affected by changing physical conditions	<ul style="list-style-type: none"> <li>• Extinctions</li> <li>• Understanding Adaptation</li> <li>• Natural Selection</li> </ul>
AC9S7U01	investigate the role of classification in ordering and organising the diversity of life on Earth and use and develop classification tools including dichotomous keys	<ul style="list-style-type: none"> <li>• Inferring Evolutionary Relationships</li> </ul>
AC9S7U02	use models, including food webs, to represent matter and energy flow in ecosystems and predict the impact of changing abiotic and biotic factors on populations	<ul style="list-style-type: none"> <li>• Extinctions</li> <li>• Natural Selection</li> <li>• Understanding Adaptation</li> </ul>

AC9S8U01	recognise cells as the basic units of living things, compare plant and animal cells, and describe the functions of specialised cell structures and organelles	<ul style="list-style-type: none"> <li>• <a href="#">Patterns in Development</a></li> </ul>
AC9S8U02	recognise cells as the basic units of living things, compare plant and animal cells, and describe the functions of specialised cell structures and organelles	<ul style="list-style-type: none"> <li>• <a href="#">Patterns in Development</a></li> </ul>
AC9S8U02	analyse the relationship between structure and function of cells, tissues and organs in a plant and an animal organ system and explain how these systems enable survival of the individual	<ul style="list-style-type: none"> <li>• <a href="#">Understanding Adaptation</a></li> </ul>
AC9S8U03	investigate tectonic activity including the formation of geological features at divergent, convergent and transform plate boundaries and describe the rock cycle, the timescales over which rocks form and the ways they are used by people	<ul style="list-style-type: none"> <li>• <a href="#">Patterns in the Fossil Record</a></li> <li>• <a href="#">Extinctions</a></li> <li>• <a href="#">Inferring Evolutionary Relationships</a></li> </ul>

# EARTH SCIENCE

## Space Systems

Code/s	Code Description	Lesson
AC9S6U02	describe the movement of Earth and other planets relative to the sun and model how Earth's tilt, rotation on its axis and revolution around the sun relate to observable patterns, including variable lengths of day and night and the seasons	<ul style="list-style-type: none"><li>• <a href="#">Seasons</a></li><li>• <a href="#">Motion in Space</a></li><li>• <a href="#">The Solar System</a></li></ul>
AC9S7U03	model cyclic changes in the relative positions of the Earth, sun and moon and explain how these cycles cause eclipses and influence predictable phenomena on Earth, including seasons and tides	<ul style="list-style-type: none"><li>• <a href="#">Lunar Phases</a></li><li>• <a href="#">Seasons</a></li><li>• <a href="#">Eclipses</a></li><li>• <a href="#">What Causes Tides?</a></li><li>• <a href="#">The Phases of the Moon</a></li><li>• <a href="#">Moon Phases and Tides</a></li></ul>
AC9S8U04	describe the key processes of the rock cycle, including the timescales over which they occur	Coming Soon

## History of Earth

Code/s	Code Description	Lesson
AC9S8U03	investigate tectonic activity including the formation of geological features at divergent, convergent and transform plate boundaries and describe the scientific evidence for the theory of plate tectonics	<ul style="list-style-type: none"><li>• <a href="#">The Geologic Time Scale</a></li><li>• <a href="#">Volcanoes</a></li><li>• <a href="#">Plate Movements</a></li></ul>

		<ul style="list-style-type: none"> <li>• Plate Boundaries</li> <li>• Earth's Layers</li> </ul>
AC9S8U04	describe the key processes of the rock cycle, including the timescales over which they occur, and examine how the properties of sedimentary, igneous and metamorphic rocks reflect their formation and influence their use	<ul style="list-style-type: none"> <li>• The Geologic Time Scale</li> <li>• Weathering and Other Changes in Earth's Surface</li> <li>• Volcanoes</li> <li>• Plate Movements</li> <li>• Plate Boundaries</li> <li>• Earth's Layers</li> </ul>

## Earth's Systems

Code/s	Code Description	Lesson
AC9S6U04	compare reversible changes, including dissolving and changes of state, and irreversible changes, including cooking and rusting that produce new substances	<ul style="list-style-type: none"> <li>• The Water Cycle</li> </ul>
AC9S7U05	use particle theory to describe the arrangement of particles in a substance, including the motion of and attraction between particles, and relate this to the properties of the substance	<ul style="list-style-type: none"> <li>• Soil Formation and Its Properties</li> <li>• Minerals and Their Properties</li> </ul>
AC9S8U03	investigate tectonic activity including the formation of geological features at divergent, convergent and transform plate boundaries and describe the scientific evidence for the theory of plate tectonics	<ul style="list-style-type: none"> <li>• The Earth System and Subsystems</li> </ul>

AC9S8U04	describe the key processes of the rock cycle, including the timescales over which they occur, and examine how the properties of sedimentary, igneous and metamorphic rocks reflect their formation and influence their use	<ul style="list-style-type: none"> <li>• <a href="#">The Earth System and Subsystems</a></li> <li>• <a href="#">The Rock Cycle</a></li> <li>• <a href="#">Natural Resources</a></li> <li>• <a href="#">Soil Formation and Its Properties</a></li> <li>• <a href="#">Minerals and Their Properties</a></li> </ul>
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## Weather and Climate

Code/s	Code Description	Lesson
AC9S6U01	Investigate the physical conditions of a habitat and analyse how the growth and survival of living things is affected by changing physical conditions	<ul style="list-style-type: none"> <li>• <a href="#">Earth's Atmosphere</a></li> <li>• <a href="#">Introduction to Climate</a></li> <li>• <a href="#">Biomes</a></li> </ul>
AC9S6U02	describe the movement of Earth and other planets relative to the sun and model how Earth's tilt, rotation on its axis and revolution around the sun relate to cyclic observable phenomena, including variable day and night length	<ul style="list-style-type: none"> <li>• <a href="#">Introduction to Climate</a></li> <li>• <a href="#">Air Masses and Weather</a></li> </ul>
AC9S7U02	use models, including food webs, to represent matter and energy flow in ecosystems and predict the impact of changing abiotic and biotic factors on populations	<ul style="list-style-type: none"> <li>• <a href="#">Climate Change</a></li> <li>• <a href="#">What are Greenhouse Gases?</a></li> <li>• <a href="#">Air Masses and Weather</a></li> </ul>
AC9S7U06	use a particle model to describe differences between pure substances and mixtures and apply understanding of properties of substances to separate mixtures	<ul style="list-style-type: none"> <li>• <a href="#">Earth's Atmosphere</a></li> <li>• <a href="#">What are Greenhouse Gases?</a></li> </ul>

# Human Impacts and Natural Hazards

Code/s	Code Description	Lesson
AC9S7U02	use models, including food webs, to represent matter and energy flow in ecosystems and predict the impact of changing abiotic and biotic factors on populations	<ul style="list-style-type: none"><li>• <a href="#">Natural Disasters Affect Florida</a></li><li>• <a href="#">Watersheds</a></li><li>• <a href="#">Introduction to Natural Hazards</a></li></ul>
AC9S7U06	use a particle model to describe differences between pure substances and mixtures and apply understanding of properties of substances to separate mixtures	<ul style="list-style-type: none"><li>• <a href="#">How People Use Water</a></li><li>• <a href="#">Watersheds</a></li></ul>
AC9S8U03	investigate tectonic activity including the formation of geological features at divergent, convergent and transform plate boundaries and describe the scientific evidence for the theory of plate tectonics	<ul style="list-style-type: none"><li>• <a href="#">Introduction to Natural Hazards</a></li><li>• <a href="#">Human Impacts on Earth Systems</a></li></ul>
AC9S8H03	examine how proposed scientific responses to contemporary issues may impact on society and explore ethical, environmental, social and economic considerations	<ul style="list-style-type: none"><li>• <a href="#">Monitoring and Minimising Human Impact</a></li><li>• <a href="#">Human Impacts on Earth Systems</a></li></ul>

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