

# AC v9.0 EP Curriculum Map

## Year 5 - 10 Science



### Year 5

### Biological Sciences

Content Descriptor	EP Lessons in <i>1. Survival of Living Things (AC9S5U01)</i>	
AC9S5U01 examine how particular structural features and behaviours of living things enable their survival in specific habitats	<p><b>1. Adaptations for Survival</b></p> <ul style="list-style-type: none"><li>• <a href="#">Introduction to Adaptations</a></li><li>• <a href="#">Adaptations in Shape or Form</a></li><li>• <a href="#">Adaptations Inside the Body</a></li><li>• <a href="#">Adaptations in Behaviour</a></li><li>• <a href="#">Nocturnal Activity</a></li><li>• <a href="#">Dune Plants</a></li><li>• <a href="#">Camouflage</a></li><li>• <a href="#">Characteristics and Adaptations of Living Things that Fly</a></li></ul> <p><b>2. Adaptations to Environments</b></p> <ul style="list-style-type: none"><li>• <a href="#">Environments</a></li><li>• <a href="#">Rock Pool Environments</a></li><li>• <a href="#">Life in a Rock Pool</a></li><li>• <a href="#">Desert Environments</a></li><li>• <a href="#">Life in the Desert</a></li><li>• <a href="#">Polar Environments</a></li><li>• <a href="#">Life at the Poles</a></li></ul> <p><i>Blubber Gloves</i></p> <ul style="list-style-type: none"><li>• <a href="#">Blubber Gloves!</a></li><li>• <a href="#">Student Worksheet</a></li><li>• <a href="#">Teacher Guide</a></li></ul>	<p><b>3. Glossary</b></p> <ul style="list-style-type: none"><li>• <a href="#">Definitions List: Survival of Living Things</a></li><li>• <a href="#">Definitions MCQ: Survival of Living Things</a></li><li>• <a href="#">Spelling List: Survival of Living Things</a></li></ul> <p><b>4. Topic Test</b></p> <ul style="list-style-type: none"><li>• <a href="#">Topic Test: Adaptations</a></li></ul>

# Earth and Space Sciences

Content Descriptor	EP Lessons in 2. <i>Earth's Changes</i> (AC9S5U02)	
AC9S5U02 describe how weathering, erosion, transportation and deposition cause slow or rapid change to Earth's surface	<p><b>1. Weathering and Erosion</b></p> <ul style="list-style-type: none"> <li>• <a href="#">Erosion and Sedimentation</a></li> <li>• <a href="#">Weathering</a></li> <li>• <a href="#">Erosion and Deposition in Rivers</a></li> </ul> <p><i>Simulating Erosion</i></p> <ul style="list-style-type: none"> <li>• <a href="#">Simulating Erosion</a></li> <li>• <a href="#">Risk Assessment (in RiskAssess)</a></li> <li>• <a href="#">Student Worksheet PDF</a></li> <li>• <a href="#">Lab Report Material PDF</a></li> <li>• <a href="#">Teacher Guide PDF</a></li> <li>• <a href="#">Laboratory Technician Guide PDF</a></li> <li>• <a href="#">Editable Documents - Word (.docx)</a></li> </ul>	<p><b>2. Landforms</b></p> <ul style="list-style-type: none"> <li>• <a href="#">Erosional Coastal Landforms</a></li> <li>• <a href="#">Depositional Coastal Landforms</a></li> <li>• <a href="#">Desert Landforms</a></li> <li>• <a href="#">Australian Landforms formed by Physical Weathering, Erosion and Sedimentation</a></li> <li>• <a href="#">Australian Landforms formed by Volcanism and Chemical Weathering</a></li> </ul> <p><b>3. Glossary</b></p> <ul style="list-style-type: none"> <li>• <a href="#">Spelling List: Earth's Changes</a></li> </ul>

# Physical Sciences

Content Descriptor	EP Lessons in 3. <i>Light</i> (AC9S5U03)	
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	<p><b>1. The Path of Light</b></p> <ul style="list-style-type: none"> <li>• <a href="#">Light</a></li> <li>• <a href="#">How Do We See?</a></li> <li>• <a href="#">The Movement of Light</a></li> <li>• <a href="#">The Speed of Light</a></li> <li>• <a href="#">Ray Diagrams</a></li> <li>• <a href="#">Shadows</a></li> <li>• <a href="#">Comparing Shadows</a></li> <li>• <a href="#">Did Someone Say Glow-in-the-dark Platypus?</a></li> </ul> <p><b>2. Interaction with Light</b></p> <ul style="list-style-type: none"> <li>• <a href="#">Types of Objects</a></li> <li>• <a href="#">The Colour of Light</a></li> <li>• <a href="#">Absorption</a></li> <li>• <a href="#">Mirrors</a></li> </ul>	<ul style="list-style-type: none"> <li>• <a href="#">Refraction</a></li> <li>• <a href="#">Extension: Refraction and Ray Diagrams</a></li> </ul> <p><i>Build a Periscope</i></p> <ul style="list-style-type: none"> <li>• <a href="#">Build a Periscope</a></li> <li>• <a href="#">Risk Assessment (in RiskAssess)</a></li> <li>• <a href="#">Student Worksheet PDF</a></li> <li>• <a href="#">Teacher Guide PDF</a></li> <li>• <a href="#">Laboratory Technician Guide PDF</a></li> <li>• <a href="#">Editable Documents - Word (.docx)</a></li> </ul> <p><b>4. Glossary</b></p> <ul style="list-style-type: none"> <li>• <a href="#">Definitions List: Light</a></li> <li>• <a href="#">Definitions MCQ: Light</a></li> <li>• <a href="#">Spelling List: Light</a></li> </ul> <p><b>5. Topic Test</b></p> <ul style="list-style-type: none"> <li>• <a href="#">Topic Test: Light</a></li> </ul>

## Chemical Sciences

Content Descriptor	EP Lessons in 4. States of Matter (AC9S5U04)	
AC9S5U04 explain observable properties of solids, liquids and gases by modelling the motion and arrangement of particles	<b>1. Solids, Liquids &amp; Gases</b> <ul style="list-style-type: none"><li>• <a href="#">Introduction to Matter</a></li><li>• <a href="#">Solids</a></li><li>• <a href="#">Liquids</a></li><li>• <a href="#">Gases</a></li></ul> <b>2. Exploring States of Matter</b> <ul style="list-style-type: none"><li>• <a href="#">Comparing States of Water</a></li><li>• <a href="#">Gases have Masses?</a></li><li>• <a href="#">Secretive Substances</a></li><li>• <a href="#">Extreme Conditions</a></li></ul>	<b>3. Glossary</b> <ul style="list-style-type: none"><li>• <a href="#">Spelling List: States of Matter</a></li></ul> <b>4. Topic Test</b> <ul style="list-style-type: none"><li>• <a href="#">Topic Test: States of Matter</a></li></ul>

# Year 6

## Biological Sciences

Content Descriptor	EP Lessons in <i>1. Living Things and Their Environment (AC9S6U01)</i>	
<p>AC9S6U01 investigate the physical conditions of a habitat and analyse how the growth and survival of living things is affected by changing physical conditions</p>	<p><b>1. The Environment</b></p> <ul style="list-style-type: none"><li>• <a href="#">Living and Non-Living Things</a></li><li>• <a href="#">MRS GREN</a></li><li>• <a href="#">Environments</a></li><li>• <a href="#">Extreme Environments</a></li></ul> <p><i>Growing Mould</i></p> <ul style="list-style-type: none"><li>• <a href="#">Growing Mould!</a></li><li>• <a href="#">Student Worksheet</a></li><li>• <a href="#">Teacher Guide</a></li></ul> <p><b>2. Living Things and their Environments</b></p> <ul style="list-style-type: none"><li>• <a href="#">Non-Living Factors Affecting Plants</a></li><li>• <a href="#">Living Factors Affecting Plants</a></li><li>• <a href="#">Non-living Factors Affecting Fungi</a></li><li>• <a href="#">Living Factors Affecting Fungi</a></li><li>• <a href="#">Non-Living Factors Affecting Animals</a></li><li>• <a href="#">Living Factors Affecting Animals</a></li><li>• <a href="#">Extreme Environments: The Scorching Deserts</a></li><li>• <a href="#">Extreme Environments: The Deep Dark Sea</a></li><li>• <a href="#">Extreme Environments: The Freezing Poles</a></li><li>• <a href="#">Migration</a></li><li>• <a href="#">Hibernation</a></li></ul> <p><i>Growing Plants under Different Conditions</i></p> <ul style="list-style-type: none"><li>• <a href="#">Growing Plants under Different Conditions</a></li><li>• <a href="#">Risk Assessment (in RiskAssess)</a></li><li>• <a href="#">Student Worksheet PDF</a></li><li>• <a href="#">Teacher Guide PDF</a></li><li>• <a href="#">Editable Documents - Word (.docx)</a></li></ul>	<p><b>3. Glossary</b></p> <ul style="list-style-type: none"><li>• <a href="#">Definitions List: Living Things and Their Environment</a></li><li>• <a href="#">Definitions MCQ: Living Things and Their Environment</a></li><li>• <a href="#">Spelling List: Living Things and their Environment</a></li></ul> <p><b>4. Topic Test</b></p> <ul style="list-style-type: none"><li>• <a href="#">Topic Test: Living Things and Their Environment</a></li></ul>

# Earth and Space Sciences

Content Descriptor	EP Lessons in 2. <i>The Solar System</i> (AC9S6U02)	
<p>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</p>	<p><b>1. The Solar System</b></p> <ul style="list-style-type: none"><li>• <a href="#">Introduction to the Solar System</a></li><li>• <a href="#">The Sun</a></li><li>• <a href="#">Planet Earth</a></li><li>• <a href="#">Distances in Space</a></li><li>• <a href="#">Days</a></li><li>• <a href="#">Day and Night</a></li><li>• <a href="#">Years</a></li><li>• <a href="#">Indigenous Constellations</a></li></ul> <p><i>A Fruity Solar System</i></p> <ul style="list-style-type: none"><li>• <a href="#">A Fruity Solar System</a></li><li>• <a href="#">Student Worksheet</a></li><li>• <a href="#">Teacher Guide</a></li></ul> <p><i>Modelling The Earth, Moon and Sun</i></p> <ul style="list-style-type: none"><li>• <a href="#">Modelling The Earth, Moon and Sun</a></li><li>• <a href="#">Risk Assessment (in RiskAssess)</a></li><li>• <a href="#">Student Worksheet PDF</a></li><li>• <a href="#">Teacher Guide PDF</a></li><li>• <a href="#">Laboratory Technician Guide PDF</a></li><li>• <a href="#">Editable Documents - Word (.docx)</a></li></ul> <p><b>2. Exploring the Planets</b></p> <ul style="list-style-type: none"><li>• <a href="#">The Inner Planets</a></li><li>• <a href="#">The Outer Planets</a></li><li>• <a href="#">Comprehension: Why Doesn't Earth Have Rings?</a></li></ul> <p><b>3. Extension</b></p> <ul style="list-style-type: none"><li>• <a href="#">Models of the Solar System</a></li><li>• <a href="#">Sizes in Space</a></li></ul>	<p><b>4. Glossary</b></p> <ul style="list-style-type: none"><li>• <a href="#">Definitions List: The Solar System</a></li><li>• <a href="#">Definitions MCQ: The Solar System</a></li><li>• <a href="#">Spelling List: The Solar System</a></li></ul> <p><b>5. Topic Test</b></p> <ul style="list-style-type: none"><li>• <a href="#">Topic Test: The Solar System</a></li></ul>

# Physical Sciences

Content Descriptor	EP Lessons in 3. Electricity (AC9S6U03)	
<p>AC9S6U03 investigate the transfer and transformation of energy in electrical circuits, including the role of circuit components, insulators and conductors</p>	<p><b>1. Introduction to Electricity</b></p> <ul style="list-style-type: none"><li>• <a href="#">What is Electricity?</a></li><li>• <a href="#">Where Electricity Comes From</a></li></ul> <p><b>2. Circuits</b></p> <ul style="list-style-type: none"><li>• <a href="#">Circuitry</a></li><li>• <a href="#">Open and Closed Circuits</a></li><li>• <a href="#">Circuit Diagrams</a></li><li>• <a href="#">Conductors</a></li><li>• <a href="#">Insulators</a></li></ul>	<p><b>3. Glossary</b></p> <ul style="list-style-type: none"><li>• <a href="#">Definitions List: The Solar System</a></li><li>• <a href="#">Definitions MCQ: The Solar System</a></li><li>• <a href="#">Spelling List: The Solar System</a></li></ul> <p><b>4. Topic Test</b></p> <ul style="list-style-type: none"><li>• <a href="#">Topic Test: Electricity</a></li></ul>

# Chemical Sciences

Content Descriptor	EP Lessons in 4. <i>Comparing Reversible and Irreversible Changes (AC9S6U04)</i>	
AC9S6U04 compare reversible changes, including dissolving and changes of state, and irreversible changes, including cooking and rusting that produce new substances	<p><b>1. Reversible Changes</b></p> <ul style="list-style-type: none"><li>• <a href="#">Physical Changes and Reversible Reactions</a></li><li>• <a href="#">Temperature and States of Matter</a></li><li>• <a href="#">Changing States Through Heating</a></li><li>• <a href="#">Changing States Through Cooling</a></li><li>• <a href="#">Melting</a></li><li>• <a href="#">Freezing</a></li><li>• <a href="#">Boiling and Evaporation</a></li><li>• <a href="#">Condensation</a></li><li>• <a href="#">Melting Polar Ice</a></li></ul> <p><i>Growing Sugar Crystals</i></p> <ul style="list-style-type: none"><li>• <a href="#">Growing Sugar Crystals</a></li><li>• <a href="#">Student Worksheet</a></li><li>• <a href="#">Teacher Guide</a></li></ul> <p><i>Making Ice Cream</i></p> <ul style="list-style-type: none"><li>• <a href="#">Making Ice Cream</a></li><li>• <a href="#">Risk Assessment (in RiskAssess)</a></li><li>• <a href="#">Student Worksheet PDF</a></li><li>• <a href="#">Teacher Guide PDF</a></li><li>• <a href="#">Laboratory Technician Guide PDF</a></li><li>• <a href="#">Editable Documents - Word (.docx)</a></li></ul> <p><i>Making Recycled Paper</i></p> <ul style="list-style-type: none"><li>• <a href="#">Making Recycled Paper</a></li><li>• <a href="#">Risk Assessment (in RiskAssess)</a></li><li>• <a href="#">Student Worksheet PDF</a></li><li>• <a href="#">Teacher Guide PDF</a></li><li>• <a href="#">Laboratory Technician Guide PDF</a></li><li>• <a href="#">Editable Documents - Word (.docx)</a></li></ul>	<p><b>2. Irreversible Changes</b></p> <ul style="list-style-type: none"><li>• <a href="#">Irreversible Reactions</a></li><li>• <a href="#">Cooking and Burning</a></li><li>• <a href="#">Rusting</a></li><li>• <a href="#">Recycling Plastic</a></li><li>• <a href="#">Recycling Glass</a></li><li>• <a href="#">Recycling Metal</a></li></ul> <p><b>3. Glossary</b></p> <ul style="list-style-type: none"><li>• <a href="#">Definitions List: Comparing Reversible and Irreversible Changes</a></li><li>• <a href="#">Definitions MCQ: Comparing Reversible and Irreversible Changes</a></li><li>• <a href="#">Spelling List: Comparing Reversible and Irreversible Changes</a></li></ul> <p><b>4. Topic Test</b></p> <ul style="list-style-type: none"><li>• <a href="#">Topic Test: Chemical Changes</a></li></ul>

# Year 7

## An Introduction to Science

Content Descriptor	EP Lessons in 1. <i>An Introduction to Science</i>	
	<ul style="list-style-type: none"><li>• <a href="#">What is Science?</a></li><li>• <a href="#">Careers In Science</a></li><li>• <a href="#">Safety Guidelines and Hazards</a></li><li>• <a href="#">Science Equipment</a></li><li>• <a href="#">The Bunsen Burner</a></li><li>• <a href="#">Measuring and Reading Scales</a></li><li>• <a href="#">Interpreting Diagrams</a></li><li>• <a href="#">Scientific Method</a></li><li>• <a href="#">Variables</a></li><li>• <a href="#">Fair Tests</a></li><li>• <a href="#">Repeatability, Reliability and Accuracy</a></li><li>• <a href="#">Making Results Tables</a></li><li>• <a href="#">Constructing Graphs</a></li><li>• <a href="#">Interpreting Graphs</a></li><li>• <a href="#">Evaluating in Science</a></li></ul>	<b>Practical Investigation: Heating Water</b> <ul style="list-style-type: none"><li>• <a href="#">Pre-Lab Heating Water</a></li><li>• <a href="#">Post-Lab Heating Water</a></li><li>• <a href="#">Risk Assessment (in RiskAssess)</a></li><li>• <a href="#">Student Worksheet PDF</a></li><li>• <a href="#">Teacher Guide PDF</a></li><li>• <a href="#">Laboratory Technician Guide PDF</a></li><li>• <a href="#">Editable Documents - Word (.docx)</a></li></ul>



# Biological Sciences

Content Descriptor	EP Lessons in 2. Classification (AC9S7U01)	
<p>AC9S7U01 investigate the role of classification in ordering and organising the diversity of life on Earth and use and develop classification tools including dichotomous keys</p>	<p><b>1. What is Classification?</b></p> <ul style="list-style-type: none"><li>• <a href="#">Introduction to Classification</a></li><li>• <a href="#">Classification of Life</a></li><li>• <a href="#">Introduction to Classification</a></li><li>• <a href="#">Data Interpretation: Guess Who: Animal Edition</a></li></ul> <p><i>Classifying Leaves</i></p> <ul style="list-style-type: none"><li>• <a href="#">Classifying Leaves</a></li><li>• <a href="#">Risk Assessment (in RiskAssess)</a></li><li>• <a href="#">Student Worksheet PDF</a></li><li>• <a href="#">Teacher Guide PDF</a></li><li>• <a href="#">Laboratory Technician Guide PDF</a></li><li>• <a href="#">Editable Documents - Word (.docx)</a></li></ul> <p><b>2. Dichotomous Keys</b></p> <ul style="list-style-type: none"><li>• <a href="#">Introduction to Dichotomous Keys</a></li><li>• <a href="#">Branching Keys</a></li><li>• <a href="#">Circular Keys</a></li><li>• <a href="#">Tabular Keys</a></li></ul> <p><i>Building Dichotomous Keys</i></p> <ul style="list-style-type: none"><li>• <a href="#">Building Dichotomous Keys</a></li><li>• <a href="#">Risk Assessment (in RiskAssess)</a></li><li>• <a href="#">Student Worksheet PDF</a></li><li>• <a href="#">Teacher Guide PDF</a></li><li>• <a href="#">Laboratory Technician Guide PDF</a></li><li>• <a href="#">Editable Documents - Word (.docx)</a></li></ul> <p><i>Using Dichotomous Keys</i></p> <ul style="list-style-type: none"><li>• <a href="#">Using Dichotomous Keys</a></li><li>• <a href="#">Student Worksheet PDF</a></li><li>• <a href="#">Teacher Guide PDF</a></li><li>• <a href="#">Editable Documents - Word (.docx)</a></li></ul> <p><b>3. Linnaean Classification</b></p> <ul style="list-style-type: none"><li>• <a href="#">Linnaean Classification</a></li><li>• <a href="#">Binomial Nomenclature</a></li><li>• <a href="#">Species and Hybrids</a></li></ul>	<p><b>4. Examples of Classification</b></p> <ul style="list-style-type: none"><li>• <a href="#">Introduction to Plant Classification</a></li><li>• <a href="#">Identifying Species</a></li><li>• <a href="#">Animal Phyla</a></li><li>• <a href="#">Vertebrates</a></li><li>• <a href="#">The Platypus</a></li></ul> <p><i>Researching Phyla</i></p> <ul style="list-style-type: none"><li>• <a href="#">Researching Phyla</a></li><li>• <a href="#">Risk Assessment (in RiskAssess)</a></li><li>• <a href="#">Student Worksheet PDF</a></li><li>• <a href="#">Teacher Guide PDF</a></li><li>• <a href="#">Editable Documents - Word (.docx)</a></li></ul> <p><b>5. Extension</b></p> <ul style="list-style-type: none"><li>• <a href="#">Carl Linnaeus</a></li><li>• <a href="#">Dragons in the Deep</a></li><li>• <a href="#">History of Microscopes</a></li><li>• <a href="#">Tardigrades in Parking Lots</a></li><li>• <a href="#">Comprehension: How Does a Jellyfish Sting?</a></li><li>• <a href="#">Comprehension: Tiny, Tubby, Tenacious Tardigrades</a></li><li>• <a href="#">STEM - Kangaroo Counter</a></li></ul> <p><b>6. Glossary</b></p> <ul style="list-style-type: none"><li>• <a href="#">Definitions List: Classification</a></li><li>• <a href="#">Definitions MCO: Classification</a></li><li>• <a href="#">Spelling List: Classification</a></li></ul> <p><b>7. Topic Tests</b></p> <ul style="list-style-type: none"><li>• <a href="#">Topic Test: Classification and Using Keys</a></li><li>• <a href="#">Topic Test: Linnaean Classification</a></li></ul>

Content Descriptor	EP Lessons in <b>3. Interactions in Ecosystems (AC9S7U02)</b>	
<p>AC9S7U02 use models, including food webs, to represent matter and energy flow in ecosystems and predict the impact of changing abiotic and biotic factors on populations</p>	<p><b>1. Ecosystems</b></p> <ul style="list-style-type: none"> <li>• <a href="#">Ecology</a></li> <li>• <a href="#">Ecosystems</a></li> <li>• <a href="#">Biotic and Abiotic Factors</a></li> <li>• <a href="#">Abiotic Factors</a></li> <li>• <a href="#">Biotic Factors and Competition</a></li> </ul> <p><i>Collecting Invertebrates in Quadrats</i></p> <ul style="list-style-type: none"> <li>• <a href="#">Collecting Invertebrates in Quadrats</a></li> <li>• <a href="#">Risk Assessment (in RiskAssess)</a></li> <li>• <a href="#">Student Worksheet PDF</a></li> <li>• <a href="#">Lab Report Material PDF</a></li> <li>• <a href="#">Teacher Guide PDF</a></li> <li>• <a href="#">Laboratory Technician Guide PDF</a></li> </ul> <p><i>Measuring Abiotic Factors in Water</i></p> <ul style="list-style-type: none"> <li>• <a href="#">Measuring Abiotic Factors in Water</a></li> <li>• <a href="#">Risk Assessment (in RiskAssess)</a></li> <li>• <a href="#">Student Worksheet PDF</a></li> <li>• <a href="#">Lab Report Material PDF</a></li> <li>• <a href="#">Teacher Guide PDF</a></li> <li>• <a href="#">Laboratory Technician Guide PDF</a></li> </ul> <p><b>2. Food Chains and Food Webs</b></p> <ul style="list-style-type: none"> <li>• <a href="#">Food Chains</a></li> <li>• <a href="#">Food Webs</a></li> <li>• <a href="#">Decomposers</a></li> <li>• <a href="#">Consumers</a></li> <li>• <a href="#">Predators, Prey and Competition</a></li> <li>• <a href="#">Predator-Prey Dynamics</a></li> </ul> <p><i>Build a Food Web</i></p> <ul style="list-style-type: none"> <li>• <a href="#">Build a Food Web</a></li> <li>• <a href="#">Student Worksheet PDF</a></li> <li>• <a href="#">Teacher Guide PDF</a></li> <li>• <a href="#">Laboratory Technician Guide PDF</a></li> </ul>	<p><i>Extracting Leaf Pigments</i></p> <ul style="list-style-type: none"> <li>• <a href="#">Extracting Leaf Pigments</a></li> <li>• <a href="#">Risk Assessment (in RiskAssess)</a></li> <li>• <a href="#">Student Worksheet PDF</a></li> <li>• <a href="#">Lab Report Material PDF</a></li> <li>• <a href="#">Teacher Guide PDF</a></li> <li>• <a href="#">Laboratory Technician Guide PDF</a></li> </ul> <p><b>3. Impacts on the Environment</b></p> <ul style="list-style-type: none"> <li>• <a href="#">What is Pollution?</a></li> <li>• <a href="#">Pollution and Ecosystems</a></li> <li>• <a href="#">Oil Pollution and Industrial Waste</a></li> <li>• <a href="#">Australian Bushfires</a></li> <li>• <a href="#">Climate Change</a></li> <li>• <a href="#">Deforestation</a></li> <li>• <a href="#">Introduced and Invasive Species</a></li> <li>• <a href="#">An Agricultural Affair</a></li> <li>• <a href="#">Pesticides</a></li> <li>• <a href="#">The Palm Oil Predicament</a></li> <li>• <a href="#">Data Interpretation: Marine Ecosystems and Overfishing</a></li> <li>• <a href="#">STEM: A Green Utopia</a></li> <li>• <a href="#">STEM: Alternate Fuels</a></li> <li>• <a href="#">STEM: Vertical Garden</a></li> </ul> <p><i>Growing Plants under Different Conditions</i></p> <ul style="list-style-type: none"> <li>• <a href="#">Growing Plants under Different Conditions</a></li> <li>• <a href="#">Risk Assessment (in RiskAssess)</a></li> <li>• <a href="#">Student Worksheet PDF</a></li> <li>• <a href="#">Teacher Guide PDF</a></li> <li>• <a href="#">Laboratory Technician Guide PDF</a></li> </ul> <p><b>4. First Nations Australians &amp; Ecosystems</b></p> <ul style="list-style-type: none"> <li>• <a href="#">Introduced Species</a></li> <li>• <a href="#">Invasive Species in Australia</a></li> <li>• <a href="#">Species Conservation in Australia</a></li> <li>• <a href="#">Comprehension: Sustainable Bush Tucker</a></li> </ul> <p><i>Resources continue on the next page</i></p>

	<p><b>5. Extension</b></p> <ul style="list-style-type: none"> <li>• <a href="#">Cane Toads as an Introduced Species</a></li> <li>• <a href="#">Diurnal vs Nocturnal</a></li> <li>• <a href="#">Ecosystem Conservation</a></li> <li>• <a href="#">Interdependent Relationships</a></li> <li>• <a href="#">Scientific Methods of Conservation</a></li> <li>• <a href="#">Water Pollution and Solutions</a></li> <li>• <a href="#">Adaptations</a></li> </ul>	<p><b>6. Glossary</b></p> <ul style="list-style-type: none"> <li>• <a href="#">Definitions List: Interactions in Ecosystems</a></li> <li>• <a href="#">Definitions MCQ: Interactions in Ecosystems</a></li> <li>• <a href="#">Spelling List: Interactions in Ecosystems</a></li> </ul> <p><b>7. Topic Test</b></p> <ul style="list-style-type: none"> <li>• <a href="#">Topic Test: Biotic and Abiotic Factors</a></li> </ul>
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## Earth and Space Sciences

Content Descriptor	EP Lessons in 4. Earth, Moon and Sun (AC9S7U03)	
<p>AC9S7U03 model cyclic changes in the relative positions of the Earth, sun and moon and explain how these cycles cause eclipses and influence predictable phenomena on Earth, including seasons and tides</p>	<p><b>1. Earth and the Sun</b></p> <ul style="list-style-type: none"> <li>• <a href="#">Planet Earth</a></li> <li>• <a href="#">Earth, Moon and Sun</a></li> <li>• <a href="#">Seasons</a></li> <li>• <a href="#">Changing Seasons</a></li> <li>• <a href="#">Effects of Seasonal Change</a></li> </ul> <p><i>Making a Sundial</i></p> <ul style="list-style-type: none"> <li>• <a href="#">Making a Sundial</a></li> <li>• <a href="#">Risk Assessment (in RiskAssess)</a></li> <li>• <a href="#">Student Worksheet PDF</a></li> <li>• <a href="#">Teacher Guide PDF</a></li> <li>• <a href="#">Laboratory Technician Guide PDF</a></li> </ul> <p><i>Seasons and the Angle of the Sun</i></p> <ul style="list-style-type: none"> <li>• <a href="#">Seasons and the Angle of the Sun</a></li> <li>• <a href="#">Risk Assessment (in RiskAssess)</a></li> <li>• <a href="#">Student Worksheet PDF</a></li> <li>• <a href="#">Teacher Guide PDF</a></li> <li>• <a href="#">Laboratory Technician Guide PDF</a></li> </ul> <p><b>3. Moon and Eclipses</b></p> <ul style="list-style-type: none"> <li>• <a href="#">Tides</a></li> <li>• <a href="#">Phases of the Moon</a></li> <li>• <a href="#">Lunar Eclipse</a></li> <li>• <a href="#">Solar Eclipse</a></li> </ul>	<ul style="list-style-type: none"> <li>• <a href="#">Gravity and Orbits</a></li> <li>• <a href="#">Data Interpretation: Space Travel: The Weight Loss Sensation!</a></li> <li>• <a href="#">Data Interpretation: Tides and the Moon</a></li> </ul> <p><i>Modelling Gravity</i></p> <ul style="list-style-type: none"> <li>• <a href="#">Modelling Gravity</a></li> <li>• <a href="#">Risk Assessment (in RiskAssess)</a></li> <li>• <a href="#">Student Worksheet PDF</a></li> <li>• <a href="#">Teacher Guide PDF</a></li> <li>• <a href="#">Laboratory Technician Guide PDF</a></li> </ul> <p><i>Modelling The Earth, Moon and Sun</i></p> <ul style="list-style-type: none"> <li>• <a href="#">Modelling The Earth, Moon and Sun</a></li> <li>• <a href="#">Risk Assessment (in RiskAssess)</a></li> <li>• <a href="#">Student Worksheet PDF</a></li> <li>• <a href="#">Teacher Guide PDF</a></li> <li>• <a href="#">Laboratory Technician Guide PDF</a></li> </ul> <p><b>3. First Nations Australian's Astronomy</b></p> <ul style="list-style-type: none"> <li>• <a href="#">Indigenous Australian Constellations</a></li> <li>• <a href="#">Calendars and the Solar Year</a></li> </ul> <p><i>Resources continue on the next page</i></p>

#### 4. Extension

- [Asteroids and Meteoroids](#)
- [Exploring Space](#)
- [Exploring the Moon, Mars and Beyond](#)
- [Extension: Planetary Motion](#)
- [Pluto - The Big Little Planet](#)
- [The Universe](#)
- [Time Zones](#)
- [Comets](#)
- [Satellites](#)
- [Telescopes](#)

#### *Pinhole Camera*

##### 1. Making a Pinhole Camera

- [Making a Pinhole Camera](#)
- [Risk Assessment \(in RiskAssess\)](#)
- [Student Worksheet PDF](#)
- [Teacher Guide PDF](#)
- [Laboratory Technician Guide PDF](#)

##### 2. Using a Pinhole Camera

- [Using a Pinhole Camera to Calculate Diameter of the Sun](#)
- [Risk Assessment \(in RiskAssess\)](#)
- [Student Worksheet PDF](#)
- [Teacher Guide PDF](#)
- [Laboratory Technician Guide PDF](#)

#### 5. Glossary

- [Definitions List: Earth, Moon and Sun](#)
- [Definitions MCQ: Earth, Moon and Sun](#)
- [Spelling List: Earth, Moon and Sun](#)

#### 6. Topic Test

- [Topic Test: Days, Seasons and Time](#)

# Physical Sciences

Content Descriptor	EP Lessons in 5. Forces (AC9S7U04)	
<p>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</p>	<p><b>1. Forces</b></p> <ul style="list-style-type: none"><li>• <a href="#">Introduction to Forces</a></li><li>• <a href="#">Balanced and Unbalanced Forces</a></li><li>• <a href="#">Contact and Non-Contact Forces</a></li><li>• <a href="#">Drawing Forces</a></li><li>• <a href="#">Gravity</a></li><li>• <a href="#">Weight and Mass</a></li><li>• <a href="#">Planetary Motion</a></li><li>• <a href="#">Friction</a></li><li>• <a href="#">Fact or Friction?</a></li><li>• <a href="#">Data Interpretation: Space Travel: The Weight Loss Sensation!</a></li></ul> <p><i>Friction and Mass</i></p> <ul style="list-style-type: none"><li>• <a href="#">Investigating Friction and Mass</a></li><li>• <a href="#">Risk Assessment (in RiskAssess)</a></li><li>• <a href="#">Student Worksheet PDF</a></li><li>• <a href="#">Lab Report Material PDF</a></li><li>• <a href="#">Teacher Guide PDF</a></li><li>• <a href="#">Laboratory Technician Guide PDF</a></li></ul> <p><i>Friction and Surfaces</i></p> <ul style="list-style-type: none"><li>• <a href="#">Investigating Friction and Surfaces</a></li><li>• <a href="#">Risk Assessment (in RiskAssess)</a></li><li>• <a href="#">Student Worksheet PDF</a></li><li>• <a href="#">Lab Report Material PDF</a></li><li>• <a href="#">Teacher Guide PDF</a></li><li>• <a href="#">Laboratory Technician Guide PDF</a></li></ul> <p><b>2. Simple Machines</b></p> <ul style="list-style-type: none"><li>• <a href="#">Levers</a></li><li>• <a href="#">Inclined Planes</a></li><li>• <a href="#">Wheels, Axles and Pulleys</a></li><li>• <a href="#">Gears</a></li><li>• <a href="#">How Simple Machines work Together: Bicycle Investigation</a></li></ul>	<p><i>A Ramp as a Simple Machine</i></p> <ul style="list-style-type: none"><li>• <a href="#">Pre Lab: A Ramp as a Simple Machine</a></li><li>• <a href="#">Post Lab: A Ramp as a Simple Machine</a></li><li>• <a href="#">Risk Assessment (in RiskAssess)</a></li><li>• <a href="#">Student Worksheet PDF</a></li><li>• <a href="#">Lab Report Material PDF</a></li><li>• <a href="#">Laboratory Technician Guide PDF</a></li></ul> <p><i>Levers</i></p> <ul style="list-style-type: none"><li>• <a href="#">Levers</a></li><li>• <a href="#">Risk Assessment (in RiskAssess)</a></li><li>• <a href="#">Student Worksheet PDF</a></li><li>• <a href="#">Teacher Guide PDF</a></li><li>• <a href="#">Laboratory Technician Guide PDF</a></li></ul> <p><b>3. Forces in Action</b></p> <ul style="list-style-type: none"><li>• <a href="#">The Development of Flight</a></li><li>• <a href="#">How Planes Stay Up</a></li></ul> <p><i>Build a Marshmallow Blaster</i></p> <ul style="list-style-type: none"><li>• <a href="#">Build a Marshmallow Blaster</a></li><li>• <a href="#">Risk Assessment (in RiskAssess)</a></li><li>• <a href="#">Student Worksheet PDF</a></li><li>• <a href="#">Lab Report Material PDF</a></li><li>• <a href="#">Teacher Guide PDF</a></li><li>• <a href="#">Laboratory Technician Guide PDF</a></li></ul> <p><i>Build an Electroscope</i></p> <ul style="list-style-type: none"><li>• <a href="#">Build an Electroscope</a></li><li>• <a href="#">Risk Assessment (in RiskAssess)</a></li><li>• <a href="#">Student Worksheet PDF</a></li><li>• <a href="#">Teacher Guide PDF</a></li><li>• <a href="#">Laboratory Technician Guide PDF</a></li></ul> <p><i>Resources continue on the next page</i></p>

	<p><b>4. Extension</b></p> <ul style="list-style-type: none"> <li>• <a href="#">Calculating Net Force</a></li> <li>• <a href="#">Earth's Magnetic Field</a></li> <li>• <a href="#">Electrostatic Force</a></li> <li>• <a href="#">Gear Ratio</a></li> <li>• <a href="#">Newton's Laws of Motion</a></li> </ul>	<p><b>5. Glossary</b></p> <ul style="list-style-type: none"> <li>• <a href="#">Definitions List: Forces</a></li> <li>• <a href="#">Definitions MCQ: Forces</a></li> <li>• <a href="#">Spelling List: Forces</a></li> </ul> <p><b>6. Topic Test</b></p> <ul style="list-style-type: none"> <li>• <a href="#">Topic Test: Forces</a></li> </ul>
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## Chemical Sciences

Content Descriptor	EP Lessons in <i>6. The Particle Theory (AC9S7U05)</i>	
<p>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</p>	<p><b>1. The Particle Model of Matter</b></p> <ul style="list-style-type: none"> <li>• <a href="#">Introduction to Particles</a></li> <li>• <a href="#">Particle Model of Matter</a></li> <li>• <a href="#">States of Matter</a></li> <li>• <a href="#">Solids</a></li> <li>• <a href="#">Liquids</a></li> <li>• <a href="#">Gases</a></li> <li>• <a href="#">Comprehension: What is the Matter?</a></li> </ul> <p><b>2. Changing States</b></p> <ul style="list-style-type: none"> <li>• <a href="#">Changing States</a></li> <li>• <a href="#">Temperature and States of Matter</a></li> <li>• <a href="#">Melting and Freezing</a></li> <li>• <a href="#">Boiling, Evaporation and Condensation</a></li> </ul> <p><i>Building a Steam Engine</i></p> <ul style="list-style-type: none"> <li>• <a href="#">Building a Steam Engine</a></li> <li>• <a href="#">Risk Assessment (in RiskAssess)</a></li> <li>• <a href="#">Student Worksheet PDF</a></li> <li>• <a href="#">Teacher Guide PDF</a></li> <li>• <a href="#">Laboratory Technician Guide PDF</a></li> </ul> <p><i>Making Ice Cream</i></p> <ul style="list-style-type: none"> <li>• <a href="#">Making Ice Cream</a></li> <li>• <a href="#">Risk Assessment (in RiskAssess)</a></li> <li>• <a href="#">Student Worksheet PDF</a></li> <li>• <a href="#">Teacher Guide PDF</a></li> <li>• <a href="#">Laboratory Technician Guide PDF</a></li> </ul>	<p><b>4. Properties of Matter</b></p> <ul style="list-style-type: none"> <li>• <a href="#">Mass and Volume</a></li> <li>• <a href="#">Density</a></li> <li>• <a href="#">Density and Buoyancy</a></li> <li>• <a href="#">Heating and Cooling Effects on Volume</a></li> <li>• <a href="#">Pressure, Compression and Temperature</a></li> <li>• <a href="#">Diffusion</a></li> <li>• <a href="#">Viscosity</a></li> <li>• <a href="#">Viscosity &amp; Newtonian &amp; Non-Newtonian Fluids</a></li> </ul> <p><i>Building a Density Tower</i></p> <ul style="list-style-type: none"> <li>• <a href="#">Building a Density Tower</a></li> <li>• <a href="#">Risk Assessment (in RiskAssess)</a></li> <li>• <a href="#">Student Worksheet PDF</a></li> <li>• <a href="#">Lab Report Material PDF</a></li> <li>• <a href="#">Teacher Guide PDF</a></li> <li>• <a href="#">Laboratory Technician Guide PDF</a></li> </ul> <p><i>Resources continue on the next page</i></p>

	<p><b>5. Extension</b></p> <ul style="list-style-type: none"> <li>• <a href="#">Air Conditioners</a></li> <li>• <a href="#">Energy In Matter</a></li> <li>• <a href="#">Extreme Conditions</a></li> <li>• <a href="#">Gases have Masses?</a></li> <li>• <a href="#">Heating and Cooling Curves</a></li> <li>• <a href="#">Melting Polar Ice</a></li> <li>• <a href="#">Refrigerators and Refrigerants</a></li> <li>• <a href="#">States of Matter in Space</a></li> <li>• <a href="#">Sublimation and Deposition</a></li> <li>• <a href="#">The Water Cycle and Weather</a></li> <li>• <a href="#">When Water Freezes</a></li> <li>• <a href="#">Sublimation</a></li> </ul>	<p><b>6. Glossary</b></p> <ul style="list-style-type: none"> <li>• <a href="#">Definitions List: The Particle Theory</a></li> <li>• <a href="#">Definitions MCQ: The Particle Theory</a></li> <li>• <a href="#">Spelling List: The Particle Theory</a></li> </ul> <p><b>7. Topic Test</b></p> <ul style="list-style-type: none"> <li>• <a href="#">Topic Test: Matter</a></li> </ul>
<p><b>Content Descriptor</b></p>	<p><b>EP Lessons in 7. Mixtures (AC9S7U06)</b></p>	
<p>AC9S7U06 use a particle model to describe differences between pure substances and mixtures and apply understanding of properties of substances to separate mixtures</p>	<p><b>1. Mixtures and Substances</b></p> <ul style="list-style-type: none"> <li>• <a href="#">Introduction to Mixtures</a></li> <li>• <a href="#">Pure Substances and Mixtures</a></li> <li>• <a href="#">Graphs and Tables of Mixtures</a></li> </ul> <p><b>2. Solutions</b></p> <ul style="list-style-type: none"> <li>• <a href="#">Solutions</a></li> <li>• <a href="#">Concentration</a></li> <li>• <a href="#">Saturation and Line Graphs</a></li> </ul> <p><i>Temperature and Dissolving</i></p> <ul style="list-style-type: none"> <li>• <a href="#">Temperature and Dissolving</a></li> <li>• <a href="#">Risk Assessment (in RiskAssess)</a></li> <li>• <a href="#">Student Worksheet PDF</a></li> <li>• <a href="#">Lab Report Material PDF</a></li> <li>• <a href="#">Teacher Guide PDF</a></li> <li>• <a href="#">Laboratory Technician Guide PDF</a></li> </ul> <p><b>3. Separation Techniques</b></p> <ul style="list-style-type: none"> <li>• <a href="#">Introduction to Separation</a></li> <li>• <a href="#">Separating Suspensions</a></li> <li>• <a href="#">Evaporation</a></li> <li>• <a href="#">Crystallisation</a></li> <li>• <a href="#">Chromatography</a></li> <li>• <a href="#">Distillation</a></li> <li>• <a href="#">Open-Ended Separation Investigation</a></li> </ul>	<p><i>Candy Crystals</i></p> <ul style="list-style-type: none"> <li>• <a href="#">Candy Crystals</a></li> <li>• <a href="#">Post Lab: Candy Crystals</a></li> <li>• <a href="#">Risk Assessment (in RiskAssess)</a></li> <li>• <a href="#">Student Worksheet PDF</a></li> <li>• <a href="#">Teacher Guide PDF</a></li> <li>• <a href="#">Laboratory Technician Guide PDF</a></li> </ul> <p><i>Chromatography: Separating Colours</i></p> <ul style="list-style-type: none"> <li>• <a href="#">Chromatography: Separating Colours</a></li> <li>• <a href="#">Post Lab: Chromatography: Separating Colours</a></li> <li>• <a href="#">Risk Assessment (in RiskAssess)</a></li> <li>• <a href="#">Student Worksheet PDF</a></li> <li>• <a href="#">Teacher Guide PDF</a></li> <li>• <a href="#">Laboratory Technician Guide PDF</a></li> </ul> <p><i>Filtration</i></p> <ul style="list-style-type: none"> <li>• <a href="#">1a. Pre Lab: Filtration</a></li> <li>• <a href="#">1b. Post Lab: Filtration</a></li> <li>• <a href="#">Risk Assessment (in RiskAssess)</a></li> <li>• <a href="#">Student Worksheet PDF</a></li> <li>• <a href="#">Lab Report Material PDF</a></li> <li>• <a href="#">Teacher Guide PDF</a></li> <li>• <a href="#">Laboratory Technician Guide PDF</a></li> </ul>

### *Separating a Basic Mixture*

- [Separating a Basic Mixture](#)
- [Risk Assessment \(in RiskAssess\)](#)
- [Student Worksheet PDF](#)
- [Lab Report Material PDF](#)
- [Teacher Guide PDF](#)
- [Laboratory Technician Guide PDF](#)

### **4. Separation Around Us**

- [Separation in Industries](#)
- [Separation in Food](#)
- [Water Treatment](#)
- [Recycling Sewage](#)
- [Recycling](#)

### *Making a Solar Still*

- [Making a Solar Still](#)
- [Risk Assessment \(in RiskAssess\)](#)
- [Student Worksheet PDF](#)
- [Teacher Guide PDF](#)
- [Laboratory Technician Guide PDF](#)

### **5. First Nations Australians and Mixtures**

- [Indigenous Art using Mixtures](#)

### **6. Extension**

- [Blood as a Mixture](#)
- [Magnetic and Electrostatic Separation](#)
- [Solute, Solvent and Solution](#)
- [The Zombie Apocalypse Water Shortage](#)
- [Adsorption](#)
- [Centrifuging](#)
- [Comprehension: The Cave of the Crystals](#)

### **7. Glossary**

- [Definitions List: Mixtures](#)
- [Definitions MCQ: Mixtures](#)
- [Spelling List: Mixtures](#)

### **8. Topic Tests**

- [Topic Test: Identifying Mixtures](#)
- [Topic Test: Separating Mixtures](#)



# Year 8

## Biological Sciences

Content Descriptor	EP Lessons in 1. Cells (AC9S8U01)	
<p>AC9S8U01 recognise cells as the basic units of living things, compare plant and animal cells, and describe the functions of specialised cell structures and organelles</p>	<p><b>1. Cells</b></p> <ul style="list-style-type: none"><li>• <a href="#">An Introduction to Cells</a></li><li>• <a href="#">Animal Cell Structure</a></li><li>• <a href="#">Plant Cell Structure</a></li><li>• <a href="#">Animal vs. Plant Cells</a></li><li>• <a href="#">Cell Theory</a></li><li>• <a href="#">Specialised Animal Cells: Muscle and Nerve Cells</a></li><li>• <a href="#">Specialised Animal Cells II</a></li><li>• <a href="#">Comprehension: The Origin of Mitochondria</a></li><li>• <a href="#">Scientific Writing: Comparing Plant &amp; Animal Cells</a></li></ul> <p><i>Jelly Cells</i></p> <ul style="list-style-type: none"><li>• <a href="#">Jelly Cells</a></li><li>• <a href="#">Risk Assessment (in RiskAssess)</a></li><li>• <a href="#">Student Worksheet PDF</a></li><li>• <a href="#">Teacher Guide PDF</a></li><li>• <a href="#">Laboratory Technician Guide PDF</a></li></ul> <p><b>2. Microscopes</b></p> <ul style="list-style-type: none"><li>• <a href="#">History of Microscopes</a></li><li>• <a href="#">Parts and Function of a Microscope</a></li><li>• <a href="#">Using a Microscope</a></li><li>• <a href="#">Magnification</a></li><li>• <a href="#">Size of Cells</a></li><li>• <a href="#">Calculating the Size of Cells</a></li></ul>	<p><i>Lab Activity: Pond Critters</i></p> <ul style="list-style-type: none"><li>• <a href="#">Pond Critters</a></li><li>• <a href="#">Risk Assessment (in RiskAssess)</a></li><li>• <a href="#">Species Identification Guide PDF</a></li><li>• <a href="#">Student Worksheet PDF</a></li><li>• <a href="#">Teacher Guide PDF</a></li><li>• <a href="#">Laboratory Technician Guide PDF</a></li></ul> <p><i>Lab Activity: Preparing and Observing Cells</i></p> <ul style="list-style-type: none"><li>• <a href="#">Preparing and Observing Cells</a></li><li>• <a href="#">Risk Assessment (in RiskAssess)</a></li><li>• <a href="#">Student Worksheet PDF</a></li><li>• <a href="#">Teacher Guide PDF</a></li><li>• <a href="#">Laboratory Technician Guide PDF</a></li></ul> <p><i>Using a Microscope</i></p> <p>1. Background Information</p> <ul style="list-style-type: none"><li>• <a href="#">Parts and Function of a Microscope</a></li><li>• <a href="#">Magnification and Resolution</a></li><li>• <a href="#">How to Use a Microscope</a></li></ul> <p>2. Investigation: Using a Microscope</p> <ul style="list-style-type: none"><li>• <a href="#">Using a Microscope</a></li><li>• <a href="#">Risk Assessment (in RiskAssess)</a></li><li>• <a href="#">Student Worksheet PDF</a></li><li>• <a href="#">Teacher Guide PDF</a></li><li>• <a href="#">Laboratory Technician Guide PDF</a></li></ul> <p><i>Resources continue on the next page</i></p>

	<p><b>4. Extension</b></p> <ul style="list-style-type: none"> <li>• <a href="#">Bacterial Cell Structure</a></li> <li>• <a href="#">Cell Division in Bacteria</a></li> <li>• <a href="#">Cell Division in Humans: Meiosis</a></li> <li>• <a href="#">Cell Division in Humans: Mitosis</a></li> <li>• <a href="#">Eukaryotic Cells</a></li> <li>• <a href="#">Fungal Cell Structure</a></li> <li>• <a href="#">Prokaryotic Cells</a></li> <li>• <a href="#">Prokaryotic vs. Eukaryotic</a></li> <li>• <a href="#">Stem Cell Therapy</a></li> <li>• <a href="#">Stem Cells</a></li> <li>• <a href="#">Focus on Data: Food Safety and Salmonella</a></li> </ul>	<p><b>7. Glossary</b></p> <ul style="list-style-type: none"> <li>• <a href="#">Definitions List: Cells</a></li> <li>• <a href="#">Definitions MCQ: Cells</a></li> <li>• <a href="#">Spelling List: Cell Organelles</a></li> <li>• <a href="#">Spelling List: Cells</a></li> </ul> <p><b>8. Topic Tests</b></p> <ul style="list-style-type: none"> <li>• <a href="#">Topic Test: Animal and Plant Cells</a></li> <li>• <a href="#">Topic Test: Plant and Animal Cells + Cells</a></li> <li>• <a href="#">Topic Test: Cells</a></li> </ul>
<p><b>Content Descriptor</b></p>	<p><b>EP Lessons in 2. Living Systems (AC9S8U02)</b></p>	
<p>AC9S8U02 analyse the relationship between structure and function of cells, tissues and organs in a plant and an animal organ system and explain how these systems enable survival of the individual</p>	<p><b>1. Introduction to Body Systems</b></p> <ul style="list-style-type: none"> <li>• <a href="#">Introduction to Body Systems</a></li> <li>• <a href="#">Organ Systems</a></li> </ul> <p><i>First Aid and Body Systems</i></p> <ul style="list-style-type: none"> <li>• <a href="#">First Aid and Body Systems</a></li> <li>• <a href="#">Risk Assessment (in RiskAssess)</a></li> <li>• <a href="#">Student Worksheet PDF</a></li> <li>• <a href="#">Teacher Guide PDF</a></li> </ul> <p><b>2. Digestive System</b></p> <ul style="list-style-type: none"> <li>• <a href="#">Digestive System As A Whole</a></li> <li>• <a href="#">Mouth and Oesophagus</a></li> <li>• <a href="#">Stomach and Small Intestine</a></li> <li>• <a href="#">Large Intestine and Rectum</a></li> <li>• <a href="#">Comparing Digestion in Other Animals</a></li> </ul> <p><b>3. Respiratory System</b></p> <ul style="list-style-type: none"> <li>• <a href="#">Introduction to the Respiratory System</a></li> <li>• <a href="#">Breathing</a></li> <li>• <a href="#">Gas Exchange</a></li> <li>• <a href="#">Comparing Respiration</a></li> </ul>	<p><b>4. Circulatory System</b></p> <ul style="list-style-type: none"> <li>• <a href="#">Introduction to the Circulatory System</a></li> <li>• <a href="#">The Heart</a></li> <li>• <a href="#">Blood Vessels</a></li> <li>• <a href="#">Blood</a></li> </ul> <p><i>Heart Dissection</i></p> <ul style="list-style-type: none"> <li>• <a href="#">Heart Dissection</a></li> <li>• <a href="#">Risk Assessment (in RiskAssess)</a></li> <li>• <a href="#">Student Worksheet PDF</a></li> <li>• <a href="#">Teacher Guide PDF</a></li> <li>• <a href="#">Laboratory Technician Guide PDF</a></li> </ul> <p><b>5. Excretory System</b></p> <ul style="list-style-type: none"> <li>• <a href="#">Introduction to Excretory System</a></li> <li>• <a href="#">Excretory Organs</a></li> <li>• <a href="#">The Kidneys &amp; Urine Production</a></li> <li>• <a href="#">Kidney Disease</a></li> </ul> <p><i>Kidney Dissection</i></p> <ul style="list-style-type: none"> <li>• <a href="#">Kidney Dissection</a></li> <li>• <a href="#">Risk Assessment (in RiskAssess)</a></li> <li>• <a href="#">Student Worksheet PDF</a></li> <li>• <a href="#">Teacher Guide PDF</a></li> <li>• <a href="#">Laboratory Technician Guide PDF</a></li> </ul> <p><i>Resources continue on the next page</i></p>

## 6. Musculoskeletal System

- [Introduction to the Musculoskeletal System](#)
- [Bones & Joints](#)
- [Muscles](#)

## 7. Plant Systems

- [Plant Systems](#)
- [Xylem and Phloem](#)

### *Cross Pollination*

- [Cross Pollination](#)
- [Risk Assessment \(in RiskAssess\)](#)
- [Student Worksheet PDF](#)
- [Teacher Guide PDF](#)

### *Flower Dissection*

- [Flower Dissection](#)
- [Risk Assessment \(in RiskAssess\)](#)
- [Student Worksheet PDF](#)
- [Teacher Guide PDF](#)
- [Revision: Using a Microscope](#)

## 8. Organ Transplants

- [Organ Transplants](#)
- [Ethical Issues of Organ Transplants](#)
- [Ctrl + X, Ctrl + V: Xenotransplants](#)

## 9. Extension

- [Asexual Reproduction in Plants](#)
- [Food Groups](#)
- [Plant Cloning](#)
- [Seed Dispersal & Germination](#)
- [Sexual Reproduction in Plants](#)
- [Stress Effects on the Body](#)
- [The Microbes That Control What We Do](#)
- [Trapped in a Cave](#)
- [Injuries](#)
- [Photosynthesis](#)
- [Pollination](#)

## 10. Glossary

- [Definitions List: Reproductive System](#)
- [Definitions List: Spelling - Body Systems](#)
- [Definitions MCQ: Body Systems](#)
- [Definitions MCQ: Reproductive System](#)
- [Spelling List: Animal Reproductive Systems](#)
- [Spelling List: Body Systems](#)

## 11. Topic Tests

- [Body Systems \(32 marks\)](#)
- [Digestive System](#)
- [Respiratory System](#)

# Earth and Space Sciences

Content Descriptor	EP Lessons in 3. <i>Earth's Tectonic Activity (AC9S8U03)</i>	
<p>AC9S8U03 investigate tectonic activity including the formation of geological features at divergent, convergent and transform plate boundaries and describe the scientific evidence for the theory of plate tectonics</p>	<p><b>1. Plate Tectonics</b></p> <ul style="list-style-type: none"><li>• <a href="#">Earth's Structure</a></li><li>• <a href="#">Plate Tectonics</a></li><li>• <a href="#">Plate Boundaries</a></li><li>• <a href="#">Faults</a></li><li>• <a href="#">Comprehension: Ice Tectonics on Europa</a></li><li>• <a href="#">Comprehension: Subduction Zones and Ophiolite Belts</a></li></ul> <p><i>Deep Time and Plate Tectonics</i></p> <ul style="list-style-type: none"><li>• <a href="#">Deep Time and Plate Tectonics</a></li><li>• <a href="#">Risk Assessment (in RiskAssess)</a></li><li>• <a href="#">Student Worksheet PDF</a></li><li>• <a href="#">Teacher Guide PDF</a></li><li>• <a href="#">Laboratory Technician Guide PDF</a></li></ul> <p><b>2. Earthquakes and Volcanoes</b></p> <ul style="list-style-type: none"><li>• <a href="#">Introduction to Earthquakes</a></li><li>• <a href="#">Earthquake Hazards</a></li><li>• <a href="#">Measuring Earthquakes</a></li><li>• <a href="#">Introduction to Volcanoes</a></li><li>• <a href="#">Volcanic Eruptions</a></li><li>• <a href="#">Living with Volcanoes</a></li><li>• <a href="#">Understanding Megaquakes</a></li><li>• <a href="#">Predicting Earthquakes and Tsunamis</a></li></ul> <p><i>Build a Seismometer</i></p> <ul style="list-style-type: none"><li>• <a href="#">Build a Seismometer</a></li><li>• <a href="#">Risk Assessment (in RiskAssess)</a></li><li>• <a href="#">Student Worksheet PDF</a></li><li>• <a href="#">Teacher Guide PDF</a></li><li>• <a href="#">Laboratory Technician Guide PDF</a></li></ul> <p><i>The Hotspot Debate</i></p> <ul style="list-style-type: none"><li>• <a href="#">The Hotspot Debate</a></li><li>• <a href="#">Student Worksheet PDF</a></li><li>• <a href="#">Teacher Guide PDF</a></li><li>• <a href="#">Laboratory Technician Guide PDF</a></li></ul>	<p><b>3. Development of the Theory of Plate Tectonics</b></p> <ul style="list-style-type: none"><li>• <a href="#">Wegener's Theory of Continental Drift</a></li><li>• <a href="#">Supercontinents</a></li><li>• <a href="#">Seafloor Spreading &amp; Magnetic Striping</a></li><li>• <a href="#">Scientific Writing: The Time Traveller's Holiday Guide!</a></li></ul> <p><b>4. Extension</b></p> <ul style="list-style-type: none"><li>• <a href="#">Causes of Tsunamis</a></li><li>• <a href="#">Developing the Geological Timescale</a></li><li>• <a href="#">Disaster Recovery Robots</a></li><li>• <a href="#">Dissecting the Earth</a></li><li>• <a href="#">Earth's Magnetic Field</a></li><li>• <a href="#">Relief Bots</a></li><li>• <a href="#">Tsunami Hazards</a></li><li>• <a href="#">Types of Lava</a></li><li>• <a href="#">Volcano Exploration Robots</a></li><li>• <a href="#">Volcanic Hazards</a></li><li>• <a href="#">Tsunamis</a></li></ul> <p><b>5. Glossary</b></p> <ul style="list-style-type: none"><li>• <a href="#">Definitions List: Earth's Tectonic Activity</a></li><li>• <a href="#">Definitions MCQ: Earth's Tectonic Activity</a></li><li>• <a href="#">Spelling List: Earth's Tectonic Activity</a></li></ul> <p><b>6. Topic Tests</b></p> <ul style="list-style-type: none"><li>• <a href="#">Topic Test - Extreme Natural Events</a></li><li>• <a href="#">Topic Test - Plate Tectonics</a></li><li>• <a href="#">Topic Test - Volcanoes and Earthquakes</a></li></ul>

Content Descriptor	EP Lessons in 4. Rocks & Fossils (AC9S8U04)	
<p>AC9S8U04 describe the key processes of the rock cycle, including the timescales over which they occur, and examine how the properties of sedimentary, igneous and metamorphic rocks reflect their formation and influence their use</p>	<p><b>1. Rocks</b></p> <ul style="list-style-type: none"> <li>• <a href="#">The Rock Cycle</a></li> <li>• <a href="#">Sedimentary Rocks</a></li> <li>• <a href="#">Igneous Rocks</a></li> <li>• <a href="#">Metamorphic Rocks</a></li> <li>• <a href="#">Rock Density</a></li> <li>• <a href="#">Comprehension: Baked Rocks in the Lachlan Fold Belt</a></li> <li>• <a href="#">Comprehension: Hot Rocks of the Cosgrove Hotspot Track</a></li> </ul> <p><i>Cooling Crystals</i></p> <ul style="list-style-type: none"> <li>• <a href="#">Cooling Crystals</a></li> <li>• <a href="#">Student Worksheet PDF</a></li> <li>• <a href="#">Lab Report Material PDF</a></li> <li>• <a href="#">Teacher Guide PDF</a></li> <li>• <a href="#">Laboratory Technician Guide PDF</a></li> </ul> <p><i>Simulating Erosion</i></p> <ul style="list-style-type: none"> <li>• <a href="#">Simulating Erosion</a></li> <li>• <a href="#">Student Worksheet PDF</a></li> <li>• <a href="#">Lab Report Material PDF</a></li> <li>• <a href="#">Teacher Guide PDF</a></li> <li>• <a href="#">Laboratory Technician Guide PDF</a></li> </ul> <p><b>3. Fossils</b></p> <ul style="list-style-type: none"> <li>• <a href="#">Fossils</a></li> <li>• <a href="#">Australian Fossils</a></li> <li>• <a href="#">The Geological Timescale</a></li> <li>• <a href="#">Correlating Rocks</a></li> </ul> <p><i>Build a Geological Timescale</i></p> <ul style="list-style-type: none"> <li>• <a href="#">Build a Geological Timescale</a></li> <li>• <a href="#">Student Worksheet PDF</a></li> <li>• <a href="#">Laboratory Technician Guide PDF</a></li> <li>• <a href="#">Teacher Guide PDF</a></li> </ul>	<p><i>Build a Stratigraphic Column</i></p> <ul style="list-style-type: none"> <li>• <a href="#">Build a Stratigraphic Column</a></li> <li>• <a href="#">Risk Assessment (in RiskAssess)</a></li> <li>• <a href="#">Student Worksheet PDF</a></li> <li>• <a href="#">Teacher Guide PDF</a></li> <li>• <a href="#">Laboratory Technician Guide PDF</a></li> </ul> <p><b>3. Minerals &amp; Mining</b></p> <ul style="list-style-type: none"> <li>• <a href="#">Introduction to Minerals</a></li> <li>• <a href="#">Identifying Minerals</a></li> <li>• <a href="#">Minerals and Rocks as Resources</a></li> <li>• <a href="#">Mining and Mineral Exploration</a></li> <li>• <a href="#">Comprehension: The Mystery of Opals</a></li> <li>• <a href="#">Comprehension: Zircons are Forever</a></li> </ul> <p><b>4. Extension</b></p> <ul style="list-style-type: none"> <li>• <a href="#">Feathery Dinosaurs</a></li> <li>• <a href="#">Martian Geology</a></li> <li>• <a href="#">Volcanology</a></li> </ul> <p><b>5. Glossary</b></p> <ul style="list-style-type: none"> <li>• <a href="#">Definitions MCQ: Introduction to Geology</a></li> <li>• <a href="#">Definitions MCQ: Rocks &amp; Fossils</a></li> <li>• <a href="#">Spelling List: Introduction to Geology</a></li> <li>• <a href="#">Spelling List: Rocks &amp; Fossils</a></li> </ul> <p><b>6. Topic Tests</b></p> <ul style="list-style-type: none"> <li>• <a href="#">Topic Test: Earth Processes</a></li> <li>• <a href="#">Topic Test: Minerals and Rocks</a></li> </ul>

# Physical Sciences

Content Descriptor	EP Lessons in 5. Energy & Energy Transfer (AC9S8U05)	
<p>AC9S8U05 classify different types of energy as kinetic or potential and investigate energy transfer and transformations in simple systems</p>	<p><b>1. Energy and Units of Energy</b></p> <ul style="list-style-type: none"> <li>• <a href="#">What is Energy?</a></li> <li>• <a href="#">Kinetic Energy</a></li> <li>• <a href="#">Potential Energy</a></li> <li>• <a href="#">Identifying Kinetic or Potential Energy</a></li> <li>• <a href="#">Converting between Joules (J) &amp; Kilojoules (kJ)</a></li> <li>• <a href="#">Converting between Kilojoules (kJ) &amp; Megajoules (MJ)</a></li> <li>• <a href="#">Data Interpretation: Energy Calculations</a></li> <li>• <a href="#">Qualitative and Quantitative Data</a></li> </ul> <p><i>Bouncy Balls and Energy Efficiency</i></p> <ul style="list-style-type: none"> <li>• <a href="#">Bouncy Balls and Energy Efficiency</a></li> <li>• <a href="#">Risk Assessment (in RiskAssess)</a></li> <li>• <a href="#">Student Worksheet PDF</a></li> <li>• <a href="#">Lab Report Material PDF</a></li> <li>• <a href="#">Teacher Guide PDF</a></li> <li>• <a href="#">Laboratory Technician Guide PDF</a></li> </ul> <p><b>2. Energy Transfer and Transformation</b></p> <ul style="list-style-type: none"> <li>• <a href="#">Law of Conservation of Energy</a></li> <li>• <a href="#">Energy Transformations</a></li> <li>• <a href="#">Displaying Energy Transformations</a></li> <li>• <a href="#">Energy Transformations and Efficiency</a></li> <li>• <a href="#">Energy Transformations in Power Plants</a></li> <li>• <a href="#">Energy Transformation in Cars</a></li> <li>• <a href="#">Energy Transformation and Food</a></li> </ul> <p><i>Energy in Skate Parks</i></p> <ul style="list-style-type: none"> <li>• <a href="#">Energy in Skate Parks</a></li> <li>• <a href="#">Student Worksheet PDF</a></li> <li>• <a href="#">Lab Report Material PDF</a></li> <li>• <a href="#">Teacher Guide PDF</a></li> </ul>	<p><i>Energy Transformations</i></p> <ul style="list-style-type: none"> <li>• <a href="#">Energy Transformations</a></li> <li>• <a href="#">Risk Assessment (in RiskAssess)</a></li> <li>• <a href="#">Student Worksheet PDF</a></li> <li>• <a href="#">Teacher Guide PDF</a></li> <li>• <a href="#">Laboratory Technician Guide PDF</a></li> </ul> <p><i>Rube Goldberg Machines</i></p> <ul style="list-style-type: none"> <li>• <a href="#">Rube Goldberg Machines</a></li> <li>• <a href="#">Risk Assessment (in RiskAssess)</a></li> <li>• <a href="#">Student Worksheet PDF</a></li> <li>• <a href="#">Teacher Guide PDF</a></li> <li>• <a href="#">Laboratory Technician Guide PDF</a></li> </ul> <p><b>4. Heat Energy</b></p> <ul style="list-style-type: none"> <li>• <a href="#">Introduction to Heat Transfer</a></li> <li>• <a href="#">Conductors and Insulators</a></li> <li>• <a href="#">Radiation Investigation</a></li> </ul> <p><i>Building a Solar Oven</i></p> <ul style="list-style-type: none"> <li>• <a href="#">Building a Solar Oven</a></li> <li>• <a href="#">Risk Assessment (in RiskAssess)</a></li> <li>• <a href="#">Student Worksheet PDF</a></li> <li>• <a href="#">Teacher Guide PDF</a></li> <li>• <a href="#">Laboratory Technician Guide PDF</a></li> </ul> <p><i>Investigating Heat Energy</i></p> <ul style="list-style-type: none"> <li>• <a href="#">Investigating Heat Energy</a></li> <li>• <a href="#">Risk Assessment (in RiskAssess)</a></li> <li>• <a href="#">Student Worksheet PDF</a></li> <li>• <a href="#">Lab Report Material PDF</a></li> <li>• <a href="#">Teacher Guide PDF</a></li> <li>• <a href="#">Laboratory Technician Guide PDF</a></li> </ul> <p><b>5. Electrical Energy</b></p> <ul style="list-style-type: none"> <li>• <a href="#">What is Electricity?</a></li> <li>• <a href="#">Electricity Generation &amp; Transformations</a></li> <li>• <a href="#">Circuits</a></li> </ul> <p><i>Resources continue on the next page</i></p>

	<p><b>5. Extension</b></p> <ul style="list-style-type: none"> <li>• <a href="#">Cogeneration and Engines</a></li> <li>• <a href="#">Energy Efficient Houses</a></li> <li>• <a href="#">Heat Production</a></li> <li>• <a href="#">Reducing Energy Consumption</a></li> <li>• <a href="#">The Development of Flight</a></li> <li>• <a href="#">Units of Energy</a></li> <li>• <a href="#">Batteries</a></li> </ul>	<p><b>6. Glossary</b></p> <ul style="list-style-type: none"> <li>• <a href="#">Definitions List: Energy &amp; Energy Transfer</a></li> <li>• <a href="#">Definitions MCQ: Energy &amp; Energy Transfer</a></li> <li>• <a href="#">Spelling List: Energy &amp; Energy Transfer</a></li> </ul> <p><b>7. Topic Test</b></p> <ul style="list-style-type: none"> <li>• <a href="#">Topic Test: Types of Energy</a></li> </ul>
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## Chemical Sciences

Content Descriptor	EP Lessons in <i>6. Classifying Matter (AC9S8U06)</i>	
<p>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</p>	<p><b>1. Elements, Compounds &amp; Molecules</b></p> <ul style="list-style-type: none"> <li>• <a href="#">Introduction to Elements, Compounds and Mixtures</a></li> <li>• <a href="#">Elements</a></li> <li>• <a href="#">Compounds</a></li> <li>• <a href="#">Molecules</a></li> <li>• <a href="#">Chemical Formulas</a></li> <li>• <a href="#">First 10 Elements</a></li> </ul> <p><i>Making Models</i></p> <ul style="list-style-type: none"> <li>• <a href="#">1a. Pre Lab: Making Models</a></li> <li>• <a href="#">1b. Post Lab: Making Models</a></li> <li>• <a href="#">Risk Assessment (in RiskAssess)</a></li> <li>• <a href="#">Student Worksheet PDF</a></li> <li>• <a href="#">Teacher Guide PDF</a></li> <li>• <a href="#">Laboratory Technician Guide PDF</a></li> </ul> <p><b>3. Classifying Mixtures</b></p> <ul style="list-style-type: none"> <li>• <a href="#">Suspensions</a></li> <li>• <a href="#">Colloids</a></li> <li>• <a href="#">Emulsions</a></li> </ul> <p><b>4. The History of the Periodic Table</b></p> <ul style="list-style-type: none"> <li>• <a href="#">Why did we need a Periodic Table in the first place?</a></li> <li>• <a href="#">Discovering Elements</a></li> </ul>	<p><b>4. Extension</b></p> <ul style="list-style-type: none"> <li>• <a href="#">Carbon Chemistry</a></li> <li>• <a href="#">Chemical Bonding</a></li> <li>• <a href="#">Constructing Molecular Models</a></li> <li>• <a href="#">Elements and Compounds in Household Products</a></li> <li>• <a href="#">Identifying Metals, Nonmetals and Metalloids</a></li> <li>• <a href="#">Marie Curie and Radioactivity</a></li> <li>• <a href="#">Materials Science</a></li> <li>• <a href="#">Metals, Non-Metals and Metalloids</a></li> <li>• <a href="#">Properties and Uses of Everyday Elements and Compounds</a></li> <li>• <a href="#">Comprehension: Cosmetics and Chemistry: A Historical Perspective</a></li> </ul> <p><b>5. Glossary</b></p> <ul style="list-style-type: none"> <li>• <a href="#">Definitions List: Classifying Matter</a></li> <li>• <a href="#">Definitions MCQ: Classifying Matter</a></li> <li>• <a href="#">Spelling List: Classifying Matter</a></li> </ul> <p><b>6. Topic Tests</b></p> <ul style="list-style-type: none"> <li>• <a href="#">Topic Test: Elements, Compounds and Molecules (40 marks)</a></li> </ul>

Content Descriptor	EP Lessons in 7. <i>Chemical Changes</i> (AC9S8U07)	
AC9S8U07 compare physical and chemical changes and identify indicators of energy change in chemical reactions	<p><b>1. Physical Properties &amp; Changes</b></p> <ul style="list-style-type: none"> <li>• <a href="#">Physical Change</a></li> <li>• <a href="#">Physical Properties</a></li> <li>• <a href="#">Physical Properties of Metals and Non-Metals</a></li> </ul> <p><b>2. Chemical Properties &amp; Changes</b></p> <ul style="list-style-type: none"> <li>• <a href="#">Chemical Properties</a></li> <li>• <a href="#">Chemical Changes</a></li> <li>• <a href="#">Chemical Reactions</a></li> <li>• <a href="#">Identifying Physical and Chemical Changes</a></li> <li>• <a href="#">Comprehension: Watching Paint Dry</a></li> </ul> <p><i>Fire and Reactions</i></p> <ul style="list-style-type: none"> <li>• <a href="#">Combustion Reactions</a></li> <li>• <a href="#">Risk Assessment (in RiskAssess)</a></li> <li>• <a href="#">Student Worksheet PDF</a></li> <li>• <a href="#">Teacher Guide PDF</a></li> <li>• <a href="#">Laboratory Technician Guide PDF</a></li> </ul> <p><i>Identifying Chemical Reactions</i></p> <ul style="list-style-type: none"> <li>• <a href="#">Identifying Chemical Reactions</a></li> <li>• <a href="#">Risk Assessment (in RiskAssess)</a></li> <li>• <a href="#">Student Worksheet PDF</a></li> <li>• <a href="#">Lab Report Material PDF</a></li> <li>• <a href="#">Teacher Guide PDF</a></li> <li>• <a href="#">Laboratory Technician Guide PDF</a></li> </ul> <p><i>Observing Chemical Reactions</i></p> <ul style="list-style-type: none"> <li>• <a href="#">Observing Chemical Reactions</a></li> <li>• <a href="#">Risk Assessment (in RiskAssess)</a></li> <li>• <a href="#">Student Worksheet PDF</a></li> <li>• <a href="#">Teacher Guide PDF</a></li> <li>• <a href="#">Laboratory Technician Guide PDF</a></li> </ul>	<p><i>Rusting In Different Environments</i></p> <ul style="list-style-type: none"> <li>• <a href="#">Rusting in Different Environments</a></li> <li>• <a href="#">Risk Assessment (in RiskAssess)</a></li> <li>• <a href="#">Student Worksheet PDF</a></li> <li>• <a href="#">Lab Report Material PDF</a></li> <li>• <a href="#">Teacher Guide PDF</a></li> <li>• <a href="#">Laboratory Technician Guide PDF</a></li> </ul> <p><b>3. Chemical Compounds, Properties and Transformations</b></p> <ul style="list-style-type: none"> <li>• <a href="#">Using Substances Based on their Properties</a></li> <li>• <a href="#">Properties and Uses of Metals</a></li> <li>• <a href="#">Synthetic Materials and Their Uses</a></li> <li>• <a href="#">Chemicals: Friend or Foe?</a></li> <li>• <a href="#">Helium: More Than a Bit of Squeaky Fun</a></li> </ul> <p><b>4. Extension</b></p> <ul style="list-style-type: none"> <li>• <a href="#">A Day in the Life of an Industrial Chemist</a></li> <li>• <a href="#">Radioactivity in Industry</a></li> <li>• <a href="#">Radioactivity in Medicine</a></li> <li>• <a href="#">Working In Chemistry</a></li> <li>• <a href="#">Writing Symbol Equations</a></li> <li>• <a href="#">Writing Word Reactions</a></li> <li>• <a href="#">Alchemy</a></li> <li>• <a href="#">Recycling</a></li> <li>• <a href="#">Comprehension: By Our Powers Combined</a></li> </ul> <p><b>5. Glossary</b></p> <ul style="list-style-type: none"> <li>• <a href="#">Definitions List: Chemical Changes</a></li> <li>• <a href="#">Definitions MCQ: Chemical Changes</a></li> <li>• <a href="#">Spelling List: Chemical Changes</a></li> </ul> <p><b>6. Topic Test</b></p> <ul style="list-style-type: none"> <li>• <a href="#">Topic Test: Physical and Chemical Changes</a></li> </ul>



# Year 9

## Biological Sciences

Content Descriptor	EP Lessons in <i>1. Responding to Stimuli (AC9S9U01)</i>	
AC9S9U01 compare the role of body systems in regulating and coordinating the body's response to a stimulus, and describe the operation of a negative feedback mechanism	<p><b>1. Homeostasis</b></p> <ul style="list-style-type: none"><li>• <a href="#">Basics of Homeostasis</a></li><li>• <a href="#">Homeostatic Terms</a></li><li>• <a href="#">Data Interpretation: Body Temperature</a></li><li>• <a href="#">Data Interpretation: Regulating Blood Glucose Levels</a></li></ul> <p><b>2. The Nervous System</b></p> <ul style="list-style-type: none"><li>• <a href="#">Introduction To The Nervous System</a></li><li>• <a href="#">Nerves and Neurons</a></li><li>• <a href="#">Central and Peripheral Nervous System</a></li><li>• <a href="#">Sympathetic and Parasympathetic Nervous System</a></li><li>• <a href="#">Nerve Pathways</a></li></ul> <p><i>Reaction Times</i></p> <ul style="list-style-type: none"><li>• <a href="#">Reaction Times</a></li><li>• <a href="#">Risk Assessment (in RiskAssess)</a></li><li>• <a href="#">Student Worksheet PDF</a></li><li>• <a href="#">Teacher Guide PDF</a></li><li>• <a href="#">Laboratory Technician Guide PDF</a></li></ul> <p><i>Testing Reflexes</i></p> <ul style="list-style-type: none"><li>• <a href="#">Testing Reflexes</a></li><li>• <a href="#">Student Worksheet PDF</a></li><li>• <a href="#">Teacher Guide PDF</a></li><li>• <a href="#">Laboratory Technician Guide PDF</a></li></ul> <p><b>3. The Endocrine System</b></p> <ul style="list-style-type: none"><li>• <a href="#">Introduction to the Endocrine System</a></li><li>• <a href="#">Glands of the Endocrine System</a></li><li>• <a href="#">Hormones of the Endocrine System</a></li></ul>	<p><b>4. Responding to Stimuli</b></p> <ul style="list-style-type: none"><li>• <a href="#">Control Systems - Nervous vs Endocrine</a></li><li>• <a href="#">Sensory Organs</a></li><li>• <a href="#">The Eye</a></li></ul> <p><b>5. Feedback Mechanisms</b></p> <ul style="list-style-type: none"><li>• <a href="#">Stimulus-Response Model</a></li><li>• <a href="#">Negative and Positive Feedback</a></li><li>• <a href="#">Regulating Blood Sugar</a></li><li>• <a href="#">Modelling Human Thermoregulation</a></li><li>• <a href="#">Endocrine Diseases</a></li></ul> <p><b>6. Extension</b></p> <ul style="list-style-type: none"><li>• <a href="#">From Zero to Hero! Honey Bee Mathematicians</a></li><li>• <a href="#">Starfish Nervous System</a></li><li>• <a href="#">Use of Hormones in the Dairy Industry</a></li></ul> <p><b>7. Glossary</b></p> <ul style="list-style-type: none"><li>• <a href="#">Definitions List: Responding to Stimuli</a></li><li>• <a href="#">Definitions MCQ: Responding to Stimuli</a></li><li>• <a href="#">Spelling List: Responding to Stimuli</a></li></ul> <p><b>8. Topic Tests</b></p> <ul style="list-style-type: none"><li>• <a href="#">Topic Test: Homeostatic Concepts</a></li><li>• <a href="#">Topic Test: The Nervous System</a></li></ul>

Content Descriptor	EP Lessons in 2. <i>Reproduction (AC9S9U02) (AC9S8U02)</i>	
<p>AC9S9U02 describe the form and function of reproductive cells and organs in animals and plants, and analyse how the processes of sexual and asexual reproduction enable survival of the species</p>	<p><b>1. Sexual Reproduction</b></p> <ul style="list-style-type: none"> <li>• <a href="#">Sexual Reproduction</a></li> <li>• <a href="#">Female Reproduction</a></li> <li>• <a href="#">Male Reproduction</a></li> </ul> <p><b>2. Asexual Reproduction</b></p> <ul style="list-style-type: none"> <li>• <a href="#">Asexual Reproduction</a></li> <li>• <a href="#">Asexual Reproduction in Plants</a></li> <li>• <a href="#">Seed Dispersal &amp; Germination</a></li> </ul> <p><i>Cross Pollination</i></p> <ul style="list-style-type: none"> <li>• <a href="#">Cross Pollination</a></li> <li>• <a href="#">Risk Assessment (in RiskAssess)</a></li> <li>• <a href="#">Student Worksheet PDF</a></li> <li>• <a href="#">Teacher Guide PDF</a></li> </ul> <p><i>Flower Dissection</i></p> <ul style="list-style-type: none"> <li>• <a href="#">Flower Dissection</a></li> <li>• <a href="#">Risk Assessment (in RiskAssess)</a></li> <li>• <a href="#">Student Worksheet PDF</a></li> <li>• <a href="#">Teacher Guide PDF</a></li> <li>• <a href="#">Laboratory Technician Guide PDF</a></li> <li>• <a href="#">Revision: Using a Microscope</a></li> </ul>	<p><b>3. Extension</b></p> <ul style="list-style-type: none"> <li>• <a href="#">Labour &amp; Birth</a></li> <li>• <a href="#">Lamb in a Bag</a></li> <li>• <a href="#">Plant Cloning</a></li> <li>• <a href="#">Contraception</a></li> <li>• <a href="#">Pregnancy</a></li> <li>• <a href="#">Puberty</a></li> </ul> <p><b>4. Glossary</b></p> <ul style="list-style-type: none"> <li>• <a href="#">Definitions List: Reproduction</a></li> <li>• <a href="#">Definitions MCQ: Reproduction</a></li> <li>• <a href="#">Spelling List: Reproduction</a></li> </ul>

# Earth and Space Sciences

Content Descriptor	EP Lessons in 3. <i>The Carbon Cycle &amp; Earth's Spheres (AC9S9U03)</i>	
<p>AC9S9U03 represent the carbon cycle and examine how key processes including combustion, photosynthesis and respiration rely on interactions between Earth's spheres (the geosphere, biosphere, hydrosphere and atmosphere)</p>	<p><b>1. The Earth as a System</b></p> <ul style="list-style-type: none"><li>• <a href="#">The Lithosphere, Asthenosphere and Mesosphere</a></li><li>• <a href="#">The Biosphere and Biomes</a></li><li>• <a href="#">The Geosphere</a></li><li>• <a href="#">Water Cycle</a></li><li>• <a href="#">Water on Earth</a></li><li>• <a href="#">Comprehension: Cloudy with a Chance of Hamburgers</a></li></ul> <p><b>2. The Carbon Cycle</b></p> <ul style="list-style-type: none"><li>• <a href="#">The Carbon Cycle</a></li><li>• <a href="#">Photosynthesis</a></li><li>• <a href="#">Respiration</a></li><li>• <a href="#">Combustion Reactions</a></li><li>• <a href="#">Carbon Capture</a></li><li>• <a href="#">Carbon Footprints</a></li></ul> <p><b>3. The Greenhouse Effect</b></p> <ul style="list-style-type: none"><li>• <a href="#">The Greenhouse Effect</a></li><li>• <a href="#">The Enhanced Greenhouse Effect</a></li><li>• <a href="#">Human Influences on Climate</a></li><li>• <a href="#">CFCs and the Ozone Layer</a></li><li>• <a href="#">Effects: Temperature</a></li><li>• <a href="#">Computer Modelling and the Environment</a></li><li>• <a href="#">Research Activity - Climate Change</a></li></ul> <p><i>The Greenhouse Effect</i></p> <ul style="list-style-type: none"><li>• <a href="#">The Greenhouse Effect</a></li><li>• <a href="#">Risk Assessment (in RiskAssess)</a></li><li>• <a href="#">Student Worksheet PDF</a></li><li>• <a href="#">Lab Report Material PDF</a></li><li>• <a href="#">Teacher Guide PDF</a></li><li>• <a href="#">Laboratory Technician Guide PDF</a></li></ul>	<p><b>4. Extension</b></p> <ul style="list-style-type: none"><li>• <a href="#">Climate and Weather</a></li><li>• <a href="#">El Niño and La Niña</a></li><li>• <a href="#">Effects of Climate Change on Biodiversity</a></li><li>• <a href="#">Ocean Currents</a></li><li>• <a href="#">Reclaiming our Climate</a></li></ul> <p><b>5. Glossary</b></p> <ul style="list-style-type: none"><li>• <a href="#">Definitions List: The Carbon Cycle &amp; Earth's Spheres</a></li><li>• <a href="#">Definitions MCQ: The Carbon Cycle &amp; Earth's Spheres</a></li><li>• <a href="#">Spelling List: The Carbon Cycle &amp; Earth's Spheres</a></li></ul> <p><b>6. Topic Tests</b></p> <ul style="list-style-type: none"><li>• <a href="#">Climate Change</a></li><li>• <a href="#">Global Cycles</a></li></ul>

# Physical Sciences

Content Descriptor	EP Lessons in 4. Waves and Energy Transfer (AC9S9U04)	
<p>AC9S9U04 use wave and particle models to describe energy transfer through different mediums and examine the usefulness of each model for explaining phenomena</p>	<p><b>1. Heat Transfer</b></p> <ul style="list-style-type: none"><li>• <a href="#">Heat Transfer</a></li><li>• <a href="#">Conductors and Insulators</a></li><li>• <a href="#">Convection</a></li><li>• <a href="#">Radiation</a></li><li>• <a href="#">Conduction</a></li><li>• <a href="#">Harnessing Fire in Australia</a></li><li>• <a href="#">Comprehension: Heat Transfer in the Atmosphere and the Oceans</a></li><li>• <a href="#">Data Interpretation: The Speed of Heat Transfer</a></li></ul> <p><i>Convection in Liquids</i></p> <ul style="list-style-type: none"><li>• <a href="#">Convection in Liquids</a></li><li>• <a href="#">Risk Assessment (in RiskAssess)</a></li><li>• <a href="#">Student Worksheet PDF</a></li><li>• <a href="#">Lab Report Material PDF</a></li><li>• <a href="#">Teacher Guide PDF</a></li><li>• <a href="#">Laboratory Technician Guide PDF</a></li></ul> <p><i>Heat Conduction</i></p> <ul style="list-style-type: none"><li>• <a href="#">Heat Conduction</a></li><li>• <a href="#">Risk Assessment (in RiskAssess)</a></li><li>• <a href="#">Student Worksheet PDF</a></li><li>• <a href="#">Lab Report Material PDF</a></li><li>• <a href="#">Teacher Guide PDF</a></li><li>• <a href="#">Laboratory Technician Guide PDF</a></li></ul> <p><i>Insulators</i></p> <ul style="list-style-type: none"><li>• <a href="#">Insulators</a></li><li>• <a href="#">Risk Assessment (in RiskAssess)</a></li><li>• <a href="#">Student Worksheet PDF</a></li><li>• <a href="#">Lab Report Material PDF</a></li><li>• <a href="#">Teacher Guide PDF</a></li><li>• <a href="#">Laboratory Technician Guide PDF</a></li></ul>	<p><i>Radiation</i></p> <ul style="list-style-type: none"><li>• <a href="#">Radiation</a></li><li>• <a href="#">Risk Assessment (in RiskAssess)</a></li><li>• <a href="#">Student Worksheet PDF</a></li><li>• <a href="#">Lab Report Material PDF</a></li><li>• <a href="#">Teacher Guide PDF</a></li><li>• <a href="#">Laboratory Technician Guide PDF</a></li></ul> <p><b>2. Sound Energy</b></p> <ul style="list-style-type: none"><li>• <a href="#">Sound Waves</a></li><li>• <a href="#">Sound Formation</a></li><li>• <a href="#">Pitch and Loudness</a></li><li>• <a href="#">Australian Aboriginal Music</a></li></ul> <p><i>Slinky Waves</i></p> <ul style="list-style-type: none"><li>• <a href="#">Slinky Waves</a></li><li>• <a href="#">Risk Assessment (in RiskAssess)</a></li><li>• <a href="#">Student Worksheet PDF</a></li><li>• <a href="#">Teacher Guide PDF</a></li><li>• <a href="#">Laboratory Technician Guide PDF</a></li></ul> <p><i>Speed of Sound</i></p> <ul style="list-style-type: none"><li>• <a href="#">Speed of Sound</a></li><li>• <a href="#">Risk Assessment (in RiskAssess)</a></li><li>• <a href="#">Student Worksheet PDF</a></li><li>• <a href="#">Lab Report Material PDF</a></li><li>• <a href="#">Teacher Guide PDF</a></li><li>• <a href="#">Laboratory Technician Guide PDF</a></li></ul> <p><i>Resources continue on the next page</i></p>

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- [Circuits](#)
- [Circuits in Parallel](#)
- [Circuits in Series](#)
- [Comparing Circuits](#)
- [Conductors and Insulators](#)
- [Current](#)
- [Voltage](#)
- [Resistance](#)
- [Introduction to Ohm's Law](#)
- [Calculating Using Ohm's Law](#)
- [Batteries](#)

#### *Building Circuits*

- [Building Circuits](#)
- [Risk Assessment \(in RiskAssess\)](#)
- [Student Worksheet PDF](#)
- [Teacher Guide PDF](#)
- [Laboratory Technician Guide PDF](#)

#### *Ohm's Law*

- [Ohm's Law](#)
- [Risk Assessment \(in RiskAssess\)](#)
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#### *Resistance*

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### *Static Electricity*

- [Static Electricity](#)
- [Risk Assessment \(in RiskAssess\)](#)
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### 4. Light

- [Light as a Wave](#)
- [Plane Mirrors and Reflection](#)
- [Curved Mirrors](#)
- [Refraction](#)
- [Lenses](#)
- [Drawing Ray Diagrams](#)
- [Refractive Index](#)
- [Total Internal Reflection](#)
- [Light: Summary](#)
- [Comprehension: Development of Light Bulbs](#)

#### *Law of Reflection*

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#### *Lenses*

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#### *Refraction*

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## 5. Other forms of Electromagnetic Radiation

- [The Electromagnetic Spectrum](#)
- [Radio Waves](#)
- [You, Me and UV](#)
- [X-rays](#)
- [Radar](#)
- [Mobile Phones - Radio Waves and Microwaves](#)
- [Electromagnetic Radiation and Medicine](#)
- [Internet](#)
- [Comprehension: History of Radio Communication](#)
- [Comprehension: Ultrasound](#)

## 6. Extension

- [Bionic Ears](#)
- [Household Circuits and Electrical Safety](#)
- [Housing Insulation](#)
- [Snell's Law](#)
- [The Cosmic Microwave Background](#)
- [The Sixth Sense: Electroreception](#)
- [Turned Down for What: Workplace Noise](#)
- [War of the Currents](#)
- [Ways in which the Use of Electricity by Society has Changed Over Time](#)

## 7. Glossary

- [Definitions List: Communication with Waves](#)
- [Definitions List: Electricity](#)
- [Definitions List: Heat](#)
- [Definitions List: Light](#)
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- [Definitions MCQ: Communication with Waves](#)
- [Definitions MCQ: Electricity](#)
- [Definitions MCQ: Heat](#)
- [Definitions MCQ: Light](#)
- [Definitions MCQ: Sound](#)
- [Spelling List: Communication With Waves](#)
- [Spelling List: Electricity](#)
- [Spelling List: Heat](#)
- [Spelling List: Light](#)
- [Spelling List: Sound](#)

## 8. Topic Tests

- [Topic Test: Light](#)

Content Descriptor	EP Lessons in 5. Conservation of Energy (AC9S9U05)	
<p>AC9S9U05 apply the law of conservation of energy to analyse system efficiency in terms of energy inputs, outputs, transfers and transformations</p>	<p><b>1. Conservation of Energy</b></p> <ul style="list-style-type: none"> <li>• <a href="#">Conservation of Energy</a></li> <li>• <a href="#">Energy Transfer</a></li> <li>• <a href="#">Energy Transformations</a></li> <li>• <a href="#">Energy, Work, and Power</a></li> </ul> <p><i>Energy in Skate Parks</i></p> <ul style="list-style-type: none"> <li>• <a href="#">Energy in Skate Parks</a></li> <li>• <a href="#">Student Worksheet PDF</a></li> <li>• <a href="#">Lab Report Material PDF</a></li> <li>• <a href="#">Teacher Guide PDF</a></li> </ul> <p><i>Roller Coasters</i></p> <ul style="list-style-type: none"> <li>• <a href="#">Roller Coasters</a></li> <li>• <a href="#">Risk Assessment (in RiskAssess)</a></li> <li>• <a href="#">Student Worksheet PDF</a></li> <li>• <a href="#">Lab Report Material PDF</a></li> <li>• <a href="#">Teacher Guide PDF</a></li> <li>• <a href="#">Laboratory Technician Guide PDF</a></li> </ul> <p><b>2. Energy Efficiency</b></p> <ul style="list-style-type: none"> <li>• <a href="#">Useful and Wasted Energy</a></li> <li>• <a href="#">Energy Calculations</a></li> <li>• <a href="#">Energy Efficiency</a></li> <li>• <a href="#">Calculating Energy Efficiency</a></li> <li>• <a href="#">Sports Science</a></li> <li>• <a href="#">Energy Efficiency and Public Transport</a></li> <li>• <a href="#">Activity: Investigating Work in Everyday Activities</a></li> <li>• <a href="#">Comprehension: Energy in Rockets</a></li> </ul> <p><i>Energy Efficiency of Bouncy Balls</i></p> <ul style="list-style-type: none"> <li>• <a href="#">Energy Efficiency of Bouncy Balls</a></li> <li>• <a href="#">Risk Assessment (in RiskAssess)</a></li> <li>• <a href="#">Student Worksheet PDF</a></li> <li>• <a href="#">Lab Report Material PDF</a></li> <li>• <a href="#">Teacher Guide PDF</a></li> <li>• <a href="#">Laboratory Technician Guide PDF</a></li> </ul>	<p><b>3. Electricity Generation</b></p> <ul style="list-style-type: none"> <li>• <a href="#">Introduction to Electricity Generation</a></li> <li>• <a href="#">Electricity Generation In Australia</a></li> <li>• <a href="#">Wind Turbines</a></li> <li>• <a href="#">Hydroelectricity and the Balkan Dam Controversy</a></li> <li>• <a href="#">Geothermal Energy</a></li> </ul> <p><b>4. Extension</b></p> <ul style="list-style-type: none"> <li>• <a href="#">Cars of the Future</a></li> <li>• <a href="#">Cogeneration and Engines</a></li> <li>• <a href="#">Energy in Food</a></li> <li>• <a href="#">Energy Transformation and Food</a></li> <li>• <a href="#">Levitation at UChicago!</a></li> <li>• <a href="#">Steam Engines</a></li> </ul> <p><b>5. Glossary</b></p> <ul style="list-style-type: none"> <li>• <a href="#">Definitions List: Conservation of Energy</a></li> <li>• <a href="#">Definitions MCQ: Conservation of Energy</a></li> <li>• <a href="#">Spelling List: Conservation of Energy</a></li> </ul>

# Chemical Sciences

Content Descriptor	EP Lessons in <i>6. Atoms and Radioactivity (AC9S9U06)</i>	
AC9S9U06 explain how the model of the atom changed following the discovery of electrons, protons and neutrons and describe how natural radioactive decay results in stable atoms	<p><b>1. Atomic Structure</b></p> <ul style="list-style-type: none"><li>• <a href="#">Atoms, Pure Substances and Mixtures</a></li><li>• <a href="#">The Structure of an Atom</a></li><li>• <a href="#">Atomic Symbols</a></li><li>• <a href="#">Models of the Atom</a></li></ul> <p><i>Build an Atom</i></p> <ul style="list-style-type: none"><li>• <a href="#">Build an Atom</a></li><li>• <a href="#">Risk Assessment (in RiskAssess)</a></li><li>• <a href="#">Student Worksheet PDF</a></li><li>• <a href="#">Teacher Guide PDF</a></li><li>• <a href="#">Laboratory Technician Guide PDF</a></li></ul> <p><b>2. Ions and Isotopes</b></p> <ul style="list-style-type: none"><li>• <a href="#">Introduction to Ions</a></li><li>• <a href="#">Electron Configuration of Ions</a></li><li>• <a href="#">Ionic Compounds</a></li><li>• <a href="#">Naming Ionic Compounds</a></li><li>• <a href="#">What are Isotopes?</a></li></ul> <p><b>3. Radioactivity</b></p> <ul style="list-style-type: none"><li>• <a href="#">What is Radioactivity?</a></li><li>• <a href="#">Types of Radiation</a></li><li>• <a href="#">Properties of Radiation</a></li><li>• <a href="#">Half-Lives</a></li><li>• <a href="#">Radioactivity in Industry</a></li><li>• <a href="#">Radioactivity in Medicine</a></li><li>• <a href="#">Effects of Radiation on Humans</a></li><li>• <a href="#">Data Interpretation: Name That Radiation!</a></li></ul> <p><i>Skittle Half Lives</i></p> <ul style="list-style-type: none"><li>• <a href="#">Skittle Half-Lives</a></li><li>• <a href="#">Risk Assessment (in RiskAssess)</a></li><li>• <a href="#">Student Worksheet PDF</a></li><li>• <a href="#">Teacher Guide PDF</a></li><li>• <a href="#">Laboratory Technician Guide PDF</a></li></ul>	<p><b>4. Extension</b></p> <ul style="list-style-type: none"><li>• <a href="#">Marie Curie and Radioactivity</a></li><li>• <a href="#">Nuclear Bombs</a></li><li>• <a href="#">Nuclear Fission</a></li><li>• <a href="#">Nuclear Power</a></li><li>• <a href="#">Polyatomic Ions and Compounds</a></li><li>• <a href="#">Writing Nuclear Equations</a></li><li>• <a href="#">Comprehension: The Cave of the Crystals</a></li></ul> <p><b>5. Glossary</b></p> <ul style="list-style-type: none"><li>• <a href="#">Definitions List: Atoms and Radioactivity</a></li><li>• <a href="#">Definitions MCQ: Atoms and Radioactivity</a></li><li>• <a href="#">Spelling List: Atoms and Radioactivity</a></li></ul> <p><b>6. Topic Tests</b></p> <ul style="list-style-type: none"><li>• <a href="#">Atoms &amp; The Periodic Table with Radioactivity</a></li></ul>



## Content Descriptor

AC9S9U07 model the rearrangement of atoms in chemical reactions using a range of representations, including word and simple balanced chemical equations, and use these to demonstrate the law of conservation of mass

## EP Lessons in 7. Chemical Reactions (AC9S9U07)

### 1. Chemical Reactions

- [Introduction to Chemical Reactions](#)
- [Reactants and Products](#)
- [Writing Word Equations](#)
- [Constructing Molecular Models](#)
- [Data Interpretation: Identifying Chemical Reactions](#)

#### *Identifying Chemical Reactions*

- [Identifying Chemical Reactions](#)
- [Risk Assessment \(in RiskAssess\)](#)
- [Student Worksheet PDF](#)
- [Lab Report Material PDF](#)
- [Teacher Guide PDF](#)
- [Laboratory Technician Guide PDF](#)

### 2. Conservation of Mass

- [Conservation of Mass - Basic](#)
- [Conservation of Mass - Advanced](#)
- [Data Interpretation: Breaking the Law \(of Conservation of Mass\)?](#)

#### *Conservation of Mass*

- [Conservation of Mass](#)
- [Risk Assessment \(in RiskAssess\)](#)
- [Student Worksheet PDF](#)
- [Lab Report Material PDF](#)
- [Teacher Guide PDF](#)
- [Laboratory Technician Guide PDF](#)

### 3. Balancing Equations

- [Chemical Reactions and Equations](#)
- [Balancing Equations](#)

#### *Marshmolecules*

- [Marshmolecules](#)
- [Risk Assessment \(in RiskAssess\)](#)
- [Student Worksheet PDF](#)
- [Teacher Guide PDF](#)
- [Laboratory Technician Guide PDF](#)

### 4. Green Chemistry

- [Waste Management](#)
- [Combustion and the Environment](#)
- [Fuels and Pharmaceuticals](#)
- [Alternate Fuels](#)

### 5. Extension

- [Balancing Chemical Equations](#)
- [Comprehension: Chemical Clocks](#)
- [Comprehension: Chemistry: Glorified Baking?](#)
- [Reactants and Products & Spontaneous vs Non-Spontaneous Reactions](#)
- [Writing Chemical and Molecular Equations](#)
- [Writing Chemical Equations 1](#)
- [Writing Chemical Equations 2](#)

### 6. Glossary

- [Definitions List: Chemical Reactions](#)
- [Definitions MCQ: Chemical Reactions](#)
- [Spelling List: Chemical Reactions](#)

### 7. Topic Tests

- [Chemical Reactions Basics](#)
- [Writing Chemical Equations](#)

## Biological Sciences

Content Descriptor	EP Lessons in <b>1. Genetics (AC9S10U01)</b>	
<p>AC9S10U01 explain the role of meiosis and mitosis and the function of chromosomes, DNA and genes in heredity and predict patterns of Mendelian inheritance</p>	<p><b>1. DNA the Molecule</b></p> <ul style="list-style-type: none"> <li>• <a href="#">Discovering the Double Helix</a></li> <li>• <a href="#">Basics of DNA</a></li> <li>• <a href="#">Structure of DNA</a></li> <li>• <a href="#">Nitrogenous Bases</a></li> <li>• <a href="#">Data Interpretation: DNA Fingerprinting: Thirsty Thievery</a></li> </ul> <p><i>Extracting DNA</i></p> <ul style="list-style-type: none"> <li>• <a href="#">Extracting DNA</a></li> <li>• <a href="#">Risk Assessment (in RiskAssess)</a></li> <li>• <a href="#">Student Worksheet PDF</a></li> <li>• <a href="#">Lab Report Material PDF</a></li> <li>• <a href="#">Teacher Guide PDF</a></li> <li>• <a href="#">Laboratory Technician Guide PDF</a></li> </ul> <p><b>2. Cell Division</b></p> <ul style="list-style-type: none"> <li>• <a href="#">Mitosis</a></li> <li>• <a href="#">Meiosis</a></li> <li>• <a href="#">Mitosis vs. Meiosis</a></li> <li>• <a href="#">DNA Replication</a></li> <li>• <a href="#">Gametes and Fertilisation</a></li> <li>• <a href="#">Asexual and Sexual Reproduction</a></li> </ul> <p><i>Observing Mitosis</i></p> <ul style="list-style-type: none"> <li>• <a href="#">Observing Mitosis</a></li> <li>• <a href="#">Risk Assessment (in RiskAssess)</a></li> <li>• <a href="#">Student Worksheet PDF</a></li> <li>• <a href="#">Lab Report Material PDF</a></li> <li>• <a href="#">Teacher Guide PDF</a></li> <li>• <a href="#">Laboratory Technician Guide PDF</a></li> </ul> <p><b>3. Genes and Chromosomes</b></p> <ul style="list-style-type: none"> <li>• <a href="#">Genes and Genetic Information</a></li> <li>• <a href="#">Homologous Chromosomes</a></li> <li>• <a href="#">Sex Chromosomes</a></li> </ul>	<p><b>4. Inheritance</b></p> <ul style="list-style-type: none"> <li>• <a href="#">The History of Genetic Thought</a></li> <li>• <a href="#">Mendel</a></li> <li>• <a href="#">Alleles</a></li> <li>• <a href="#">Dominant/Recessive Interactions</a></li> <li>• <a href="#">Inheriting Alleles and Punnett Squares</a></li> <li>• <a href="#">Making Punnett Squares</a></li> <li>• <a href="#">Pedigrees</a></li> <li>• <a href="#">Data Interpretation: The Blue People of Troublesome Creek</a></li> <li>• <a href="#">Comprehension: Epigenetics: Inheritance is Strange</a></li> </ul> <p><i>Modelling Inheritance of Alleles</i></p> <ul style="list-style-type: none"> <li>• <a href="#">Modelling Inheritance of Alleles</a></li> <li>• <a href="#">Risk Assessment (in RiskAssess)</a></li> <li>• <a href="#">Allele Card Handout PDF</a></li> <li>• <a href="#">Student Worksheet PDF</a></li> <li>• <a href="#">Lab Report Material PDF</a></li> <li>• <a href="#">Teacher Guide PDF</a></li> <li>• <a href="#">Laboratory Technician Guide PDF</a></li> </ul> <p><b>5. Mutations</b></p> <ul style="list-style-type: none"> <li>• <a href="#">Mutations</a></li> <li>• <a href="#">Mutations and Mutagens</a></li> <li>• <a href="#">Chromosomal Abnormalities</a></li> <li>• <a href="#">Genetic Diseases</a></li> <li>• <a href="#">Cancer</a></li> </ul> <p><i>Researching Inbreeding in Dogs</i></p> <ul style="list-style-type: none"> <li>• <a href="#">Background Information - The Consequences of Inbreeding</a></li> <li>• <a href="#">Research Project - Inbreeding in Dogs</a></li> <li>• <a href="#">Student Worksheet PDF</a></li> <li>• <a href="#">Teacher Guide PDF</a></li> </ul>

	<p><b>6. Extension</b></p> <ul style="list-style-type: none"> <li>• <a href="#">Incomplete Dominance</a></li> <li>• <a href="#">Sex Linkage</a></li> <li>• <a href="#">Sex Linkage, Punnett Squares and Pedigrees</a></li> <li>• <a href="#">The Ethics of Genetics</a></li> <li>• <a href="#">The Knotty New DNA Structure!</a></li> <li>• <a href="#">Codominance</a></li> <li>• <a href="#">Proteins</a></li> <li>• <a href="#">Comprehension: Attraction: It's all in the Armpits</a></li> </ul>	<p><b>7. Glossary</b></p> <ul style="list-style-type: none"> <li>• <a href="#">Definitions List: Genetics</a></li> <li>• <a href="#">Definitions MCQ: Genetics</a></li> <li>• <a href="#">Spelling List: Genetics</a></li> </ul> <p><b>8. Topic Tests</b></p> <ul style="list-style-type: none"> <li>• <a href="#">Topic Test: Cell Division</a></li> <li>• <a href="#">Topic Test: DNA, Genes, and Chromosomes</a></li> </ul>
<p><b>Content Descriptor</b></p>		
<p>AC9S10U02 use the theory of evolution by natural selection to explain past and present diversity and analyse the scientific evidence supporting the theory</p>	<p><b>EP Lessons in 2. Evolution (AC9S10U02)</b></p> <p><b>1. The Theory of Evolution</b></p> <ul style="list-style-type: none"> <li>• <a href="#">The History of Evolutionary Thought</a></li> <li>• <a href="#">Darwin's Theory of Evolution</a></li> <li>• <a href="#">Theories and Evidence of Evolution</a></li> <li>• <a href="#">Geological Time</a></li> <li>• <a href="#">Data Interpretation: Natural Selection in Action!</a></li> </ul> <p><i>Building an Evolutionary Timeline</i></p> <ul style="list-style-type: none"> <li>• <a href="#">Building an Evolutionary Timeline</a></li> <li>• <a href="#">Timeline Guide PDF</a></li> <li>• <a href="#">Student Worksheet PDF</a></li> <li>• <a href="#">Teacher Guide PDF</a></li> <li>• <a href="#">Laboratory Technician Guide PDF</a></li> </ul> <p><b>2. Mechanisms of Evolution</b></p> <ul style="list-style-type: none"> <li>• <a href="#">Mechanisms of Evolution</a></li> <li>• <a href="#">Biodiversity</a></li> <li>• <a href="#">Extinction</a></li> <li>• <a href="#">Comprehension: Evolution and Extinction</a></li> <li>• <a href="#">Data Interpretation: The Biodiversity Gradient</a></li> </ul>	<p><i>Assessing Biodiversity</i></p> <ul style="list-style-type: none"> <li>• <a href="#">Assessing Biodiversity</a></li> <li>• <a href="#">Risk Assessment (in RiskAssess)</a></li> <li>• <a href="#">Invertebrate Guide PDF</a></li> <li>• <a href="#">Lab Report Material PDF</a></li> <li>• <a href="#">Student Worksheet PDF</a></li> <li>• <a href="#">Teacher Guide PDF</a></li> <li>• <a href="#">Laboratory Technician Guide PDF</a></li> </ul> <p><i>Survival of the Mutants</i></p> <ul style="list-style-type: none"> <li>• <a href="#">Survival of the Mutants</a></li> <li>• <a href="#">Risk Assessment (in RiskAssess)</a></li> <li>• <a href="#">Student Worksheet PDF</a></li> <li>• <a href="#">Lab Report Material PDF</a></li> <li>• <a href="#">Teacher Guide PDF</a></li> <li>• <a href="#">Laboratory Technician Guide PDF</a></li> </ul> <p><b>3. Evidence for Evolution</b></p> <ul style="list-style-type: none"> <li>• <a href="#">Fossils and the Fossil Record</a></li> <li>• <a href="#">Evidence from Living Species</a></li> <li>• <a href="#">Geographical Distribution</a></li> <li>• <a href="#">The Wallace Line</a></li> <li>• <a href="#">Comprehension: The Ancestor of All Things</a></li> </ul> <p><i>Resources continue on the next page</i></p>

	<p><b>4. Human Evolution</b></p> <ul style="list-style-type: none"> <li>• <a href="#">Our Evolution</a></li> <li>• <a href="#">Rewriting Human History</a></li> </ul> <p><i>Great Ape Genealogy</i></p> <ul style="list-style-type: none"> <li>• <a href="#">Great Ape Genealogy</a></li> <li>• <a href="#">Risk Assessment (in RiskAssess)</a></li> <li>• <a href="#">Student Worksheet PDF</a></li> <li>• <a href="#">Lab Report Material PDF</a></li> <li>• <a href="#">Teacher Guide PDF</a></li> <li>• <a href="#">Laboratory Technician Guide PDF</a></li> </ul> <p><b>5. Extension</b></p> <ul style="list-style-type: none"> <li>• <a href="#">Adaptations: Mimicry</a></li> <li>• <a href="#">Evolution: Sexual Selection</a></li> <li>• <a href="#">Feathery Dinosaurs</a></li> <li>• <a href="#">The Science of Puppy Dog Eyes</a></li> <li>• <a href="#">Coevolution</a></li> </ul>	<p><b>7. Glossary</b></p> <ul style="list-style-type: none"> <li>• <a href="#">Definitions List: Evolution</a></li> <li>• <a href="#">Definitions MCQ: Evolution</a></li> <li>• <a href="#">Spelling List: Evolution</a></li> </ul> <p><b>8. Topic Tests</b></p> <ul style="list-style-type: none"> <li>• <a href="#">Topic Test: The Evidence for Evolution</a></li> <li>• <a href="#">Topic Test: The Mechanisms of Evolution</a></li> </ul>
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## Earth and Space Sciences

Content Descriptor	EP Lessons in <b>3. The Universe (AC9S10U03)</b>	
<p>AC9S10U03 describe how the big bang theory models the origin and evolution of the universe and analyse the supporting evidence for the theory</p>	<p><b>1. The Universe</b></p> <ul style="list-style-type: none"> <li>• <a href="#">The Solar System and Beyond</a></li> <li>• <a href="#">Models of the Solar System</a></li> <li>• <a href="#">Scientific Theory</a></li> <li>• <a href="#">Scientific Notation</a></li> <li>• <a href="#">Indigenous Australian Constellations</a></li> <li>• <a href="#">Comprehension: Black Holes</a></li> </ul> <p><b>2. Measuring the Universe</b></p> <ul style="list-style-type: none"> <li>• <a href="#">Distances in Space</a></li> <li>• <a href="#">Observing Space</a></li> <li>• <a href="#">Gravity and the Cosmological Principle</a></li> <li>• <a href="#">Light Speed and Light Years</a></li> <li>• <a href="#">Seconds and Years</a></li> <li>• <a href="#">Converting Light Years</a></li> </ul>	<p><i>Measuring Parallax</i></p> <ul style="list-style-type: none"> <li>• <a href="#">Measuring Parallax</a></li> <li>• <a href="#">Risk Assessment (in RiskAssess)</a></li> <li>• <a href="#">Student Worksheet PDF</a></li> <li>• <a href="#">Lab Report Material PDF</a></li> <li>• <a href="#">Teacher Guide PDF</a></li> <li>• <a href="#">Laboratory Technician Guide PDF</a></li> </ul> <p><b>3. Stars and Galaxies</b></p> <ul style="list-style-type: none"> <li>• <a href="#">The Life Cycle of Stars</a></li> <li>• <a href="#">Properties of Stars</a></li> <li>• <a href="#">Calculating Distance to Stars</a></li> <li>• <a href="#">Parallax and Distances Between Stars</a></li> <li>• <a href="#">Distances to Stars and Parsecs</a></li> <li>• <a href="#">Reading Hertzsprung-Russell Diagrams</a></li> </ul> <p><i>Resources continue on the next page</i></p>

	<p><i>Flame Tests</i></p> <ul style="list-style-type: none"> <li>• <a href="#">Flame Tests</a></li> <li>• <a href="#">Pre Lab: Flame Test</a></li> <li>• <a href="#">Post Lab: Flame Test</a></li> <li>• <a href="#">Risk Assessment (in RiskAssess)</a></li> <li>• <a href="#">Student Worksheet PDF</a></li> <li>• <a href="#">Teacher Guide PDF</a></li> <li>• <a href="#">Laboratory Technician Guide PDF</a></li> </ul> <p><b>4. The Big Bang Theory</b></p> <ul style="list-style-type: none"> <li>• <a href="#">The Big Bang Theory</a></li> <li>• <a href="#">End of the Universe</a></li> <li>• <a href="#">The Big Bang Theory vs. Steady State Theory</a></li> <li>• <a href="#">The Cosmic Microwave Background</a></li> <li>• <a href="#">Red Shift</a></li> <li>• <a href="#">Data Interpretation: Redshift and the Expanding Universe</a></li> </ul>	<p><b>5. Extension</b></p> <ul style="list-style-type: none"> <li>• <a href="#">Radar Ranging</a></li> <li>• <a href="#">The Secret Lives of Ultra-Cool Dwarf Stars</a></li> <li>• <a href="#">Relativity</a></li> </ul> <p><b>6. Glossary</b></p> <ul style="list-style-type: none"> <li>• <a href="#">Definitions List: The Universe</a></li> <li>• <a href="#">Definitions MCQ: The Universe</a></li> <li>• <a href="#">Spelling List: The Universe</a></li> </ul> <p><b>7. Topic Tests</b></p> <ul style="list-style-type: none"> <li>• <a href="#">Topic Test: Measuring the Universe</a></li> </ul>
<p><b>Content Descriptor</b></p>	<p><b>EP Lessons in 4. Global Systems (AC9S10U04)</b></p>	
<p>AC9S10U04 use models of energy flow between the geosphere, biosphere, hydrosphere and atmosphere to explain patterns of global climate change</p>	<p><b>1. Spheres and Global Cycles</b></p> <ul style="list-style-type: none"> <li>• <a href="#">Spheres</a></li> <li>• <a href="#">Water Cycle</a></li> <li>• <a href="#">Influences on the Water Cycle</a></li> <li>• <a href="#">The Carbon Cycle</a></li> <li>• <a href="#">Carbon Capture</a></li> <li>• <a href="#">The Nitrogen Cycle</a></li> <li>• <a href="#">Phosphorus Cycle</a></li> </ul> <p><b>2. A Changing Climate</b></p> <ul style="list-style-type: none"> <li>• <a href="#">Climate and Weather</a></li> <li>• <a href="#">The Greenhouse Effect</a></li> <li>• <a href="#">The Enhanced Greenhouse Effect</a></li> <li>• <a href="#">Human Influences on Climate</a></li> <li>• <a href="#">El Niño and La Niña</a></li> <li>• <a href="#">Ocean Currents</a></li> <li>• <a href="#">CFCs and the Ozone Layer</a></li> <li>• <a href="#">Examining Past Climate</a></li> <li>• <a href="#">Computer Modelling and the Environment</a></li> </ul>	<p><i>Climate Change</i></p> <ul style="list-style-type: none"> <li>• <a href="#">Climate Change</a></li> <li>• <a href="#">Student Worksheet PDF</a></li> <li>• <a href="#">Lab Report Material PDF</a></li> <li>• <a href="#">Teacher Guide PDF</a></li> <li>• <a href="#">Laboratory Technician Guide PDF</a></li> </ul> <p><i>Convection Currents</i></p> <ul style="list-style-type: none"> <li>• <a href="#">Convection Currents</a></li> <li>• <a href="#">Risk Assessment (in RiskAssess)</a></li> <li>• <a href="#">Student Worksheet PDF</a></li> <li>• <a href="#">Lab Report Material PDF</a></li> <li>• <a href="#">Teacher Guide PDF</a></li> <li>• <a href="#">Laboratory Technician Guide PDF</a></li> </ul> <p><i>Resources continue on the next page</i></p>

*The Greenhouse Effect*

- [The Greenhouse Effect](#)
- [Risk Assessment \(in RiskAssess\)](#)
- [Student Worksheet PDF](#)
- [Lab Report Material PDF](#)
- [Teacher Guide PDF](#)
- [Laboratory Technician Guide PDF](#)

**3. The Effects of Climate Changes**

- [Effects of Climate Change on Biodiversity](#)
- [Effects: Temperature](#)
- [Disappearing Polar Ice](#)
- [Where Have all the Turtles Gone?](#)
- [Pollution](#)
- [Comprehension: Troubled Waters](#)

*Polar Ice*

- [Polar Ice](#)
- [Risk Assessment \(in RiskAssess\)](#)
- [Student Worksheet PDF](#)
- [Lab Report Material PDF](#)
- [Teacher Guide PDF](#)
- [Laboratory Technician Guide PDF](#)

**4. Reclaiming Our Climate**

- [Carbon Footprints](#)
- [Save the Great Barrier Reef!](#)
- [Alternate Fuels](#)
- [If Climate Change is Real, How Come...?](#)
- [STEM: Alternate Fuels](#)
- [Scientific Writing: Arguing For or Against Climate Change](#)

**5. Extension**

- [Apocalypse Now: Natural Disasters](#)
- [Carbon Capture](#)
- [Data Interpretation: Reading a Weather Map](#)
- [Data Interpretation: The Southern Oscillation Index](#)

**6. Glossary**

- [Definitions List: Global Systems](#)
- [Definitions MCO: Global Systems](#)
- [Spelling List: Global Systems](#)

**7. Topic Tests**

- [Topic Test: Climate Change](#)
- [Topic Test: Global Cycles](#)

# Physical Sciences

Content Descriptor	EP Lessons in 5. Force and Motion (AC9S10U05)	
AC9S10U05 investigate Newton's laws of motion and quantitatively analyse the relationship between force, mass and acceleration of objects	<p><b>1. Motion</b></p> <ul style="list-style-type: none"><li>• <a href="#">Distance and Time</a></li><li>• <a href="#">Displacement and Compass Directions</a></li><li>• <a href="#">Calculating Displacement</a></li><li>• <a href="#">Speed</a></li><li>• <a href="#">Acceleration</a></li><li>• <a href="#">Using the Acceleration Formula to Calculate Final Velocity</a></li><li>• <a href="#">Using the Acceleration Formula to Calculate Initial Velocity</a></li><li>• <a href="#">Using the Acceleration Formula to Calculate Time</a></li><li>• <a href="#">Ancient Tools and Weapons</a></li></ul> <p><i>Ticker Timers</i></p> <ul style="list-style-type: none"><li>• <a href="#">Ticker Timers</a></li><li>• <a href="#">Risk Assessment (in RiskAssess)</a></li><li>• <a href="#">Student Worksheet PDF</a></li><li>• <a href="#">Teacher Guide PDF</a></li><li>• <a href="#">Laboratory Technician Guide PDF</a></li></ul> <p><b>2. Graphing Motion</b></p> <ul style="list-style-type: none"><li>• <a href="#">Distance-Time Graphs</a></li><li>• <a href="#">Displacement-Time Graphs</a></li><li>• <a href="#">Velocity-Time Graphs</a></li><li>• <a href="#">Acceleration-Time Graphs</a></li><li>• <a href="#">Summary of Motion Graphs</a></li><li>• <a href="#">Data Interpretation: Graphing and Analysing Motion</a></li></ul> <p><b>3. Newton's Laws of Motion</b></p> <ul style="list-style-type: none"><li>• <a href="#">Newton's First Law</a></li><li>• <a href="#">Newton's Second Law</a></li><li>• <a href="#">Newton's Third Law</a></li><li>• <a href="#">Car Safety Systems</a></li><li>• <a href="#">Car Safety Systems Investigation</a></li><li>• <a href="#">Sports Science</a></li></ul>	<p><i>Balloon Rocket</i></p> <ul style="list-style-type: none"><li>• <a href="#">Balloon Rocket</a></li><li>• <a href="#">Risk Assessment (in RiskAssess)</a></li><li>• <a href="#">Student Worksheet PDF</a></li><li>• <a href="#">Lab Report Material PDF</a></li><li>• <a href="#">Teacher Guide PDF</a></li><li>• <a href="#">Laboratory Technician Guide PDF</a></li></ul> <p><i>Egg Drop</i></p> <ul style="list-style-type: none"><li>• <a href="#">Egg Drop</a></li><li>• <a href="#">Risk Assessment (in RiskAssess)</a></li><li>• <a href="#">Student Worksheet PDF</a></li><li>• <a href="#">Lab Report Material PDF</a></li><li>• <a href="#">Teacher Guide PDF</a></li><li>• <a href="#">Laboratory Technician Guide PDF</a></li></ul> <p><i>Truckapults</i></p> <ul style="list-style-type: none"><li>• <a href="#">Truckapults</a></li><li>• <a href="#">Risk Assessment (in RiskAssess)</a></li><li>• <a href="#">Student Worksheet PDF</a></li><li>• <a href="#">Lab Report Material PDF</a></li><li>• <a href="#">Teacher Guide PDF</a></li><li>• <a href="#">Laboratory Technician Guide PDF</a></li></ul> <p><b>4. Extension</b></p> <ul style="list-style-type: none"><li>• <a href="#">How BB-8 Works</a></li><li>• <a href="#">Maglev Trains</a></li><li>• <a href="#">Planetary Motion</a></li><li>• <a href="#">Rockets</a></li><li>• <a href="#">Comprehension: Crashing Drones</a></li><li>• <a href="#">Comprehension: History of Rockets</a></li><li>• <a href="#">Comprehension: How Planes Stay Up</a></li></ul> <p><b>8. Glossary</b></p> <ul style="list-style-type: none"><li>• <a href="#">Definitions List: Force and Motion</a></li><li>• <a href="#">Definitions MCQ: Force and Motion</a></li><li>• <a href="#">Spelling List: Force and Motion</a></li></ul> <p><b>9. Topic Tests</b></p> <ul style="list-style-type: none"><li>• <a href="#">Topic Test: Motion</a></li></ul>

# Chemical Sciences

Content Descriptor	EP Lessons in 6. <i>Atoms and the Periodic Table (AC9S10U06)</i>	
AC9S10U06 explain how the structure and properties of atoms relate to the organisation of the elements in the periodic table	<p><b>1. The Structure of Atoms</b></p> <ul style="list-style-type: none"><li>• <a href="#">The Structure of an Atom</a></li><li>• <a href="#">History of the Atomic Model</a></li><li>• <a href="#">Electron Configuration</a></li><li>• <a href="#">Flame Tests</a></li><li>• <a href="#">Spectroscopy</a></li></ul> <p><i>Flame Test</i></p> <ul style="list-style-type: none"><li>• <a href="#">Pre Lab: Flame Test</a></li><li>• <a href="#">Post Lab: Flame Test</a></li><li>• <a href="#">Risk Assessment (in RiskAssess)</a></li><li>• <a href="#">Student Worksheet PDF</a></li><li>• <a href="#">Lab Report Material PDF</a></li><li>• <a href="#">Teacher Guide PDF</a></li><li>• <a href="#">Laboratory Technician Guide PDF</a></li></ul> <p><b>2. The Periodic Table</b></p> <ul style="list-style-type: none"><li>• <a href="#">Overview: The Periodic Table</a></li><li>• <a href="#">Atomic Symbols</a></li><li>• <a href="#">Group 1 (The Alkali Metals) &amp; Group 2 (The Alkaline Earth Metals)</a></li><li>• <a href="#">Group 14–The Carbon Group</a></li><li>• <a href="#">Group 17–The Halogens</a></li><li>• <a href="#">Group 18 - The Noble Gases</a></li><li>• <a href="#">Other Groups</a></li><li>• <a href="#">Trends in the Periodic Table</a></li><li>• <a href="#">Designing the Periodic Table What's with the middle and bottom of the Periodic Table?</a></li><li>• <a href="#">Quiz- First 20 Elements (Name to Symbol)</a></li><li>• <a href="#">Quiz- First 20 Elements (Symbol to Name)</a></li><li>• <a href="#">Data Interpretation: Understanding the Periodic Table</a></li></ul>	<p><b>3. Metals and Non-Metals</b></p> <ul style="list-style-type: none"><li>• <a href="#">Metals, Non-Metals and Metalloids</a></li><li>• <a href="#">Physical Properties of Metals</a></li><li>• <a href="#">Chemical Properties of Metals</a></li><li>• <a href="#">Overview of Metal Properties</a></li><li>• <a href="#">Metals in the Periodic Table</a></li><li>• <a href="#">Metallic Bonding</a></li><li>• <a href="#">Overview of Metal Reactions</a></li><li>• <a href="#">Comprehension: Metallic Hydrogen or: How I Learned to Stop Worrying and Love the Scientific Process</a></li></ul> <p><b>4. Extension</b></p> <ul style="list-style-type: none"><li>• <a href="#">Alloys and Their Uses</a></li><li>• <a href="#">Chemicals: Friend or Foe?</a></li><li>• <a href="#">Comprehension: Helium: More Than a Bit of Squeaky Fun</a></li></ul> <p><b>5. Glossary</b></p> <ul style="list-style-type: none"><li>• <a href="#">Definitions List: Atoms and the Periodic Table</a></li><li>• <a href="#">Definitions MCO: Atoms and the Periodic Table</a></li><li>• <a href="#">Spelling List: Atoms and the Periodic Table</a></li></ul>



Content Descriptor	EP Lessons in 7. <i>Chemical Reactions and Reaction Rates (AC9S10U07)</i>	
<p>AC9S10U07 identify patterns in synthesis, decomposition and displacement reactions and investigate the factors that affect reaction rates</p>	<p><b>1. Types of Chemical Reactions</b></p> <ul style="list-style-type: none"> <li>• <a href="#">Chemical vs. Physical</a></li> <li>• <a href="#">Chemical Reactions</a></li> <li>• <a href="#">Types of Chemical Reactions</a></li> <li>• <a href="#">Combination and Decomposition Reactions</a></li> <li>• <a href="#">Neutralisation Reactions</a></li> <li>• <a href="#">Reaction in Action: Baking Soda and Vinegar</a></li> <li>• <a href="#">Acid-Metal Reactions</a></li> <li>• <a href="#">Metal Displacement Reactions</a></li> <li>• <a href="#">Metal Reactions with Oxygen</a></li> <li>• <a href="#">Comprehension: Acids and Bases</a></li> <li>• <a href="#">Data Interpretation: Identifying Chemical Reactions</a></li> </ul> <p><i>Acids and Metals</i></p> <ul style="list-style-type: none"> <li>• <a href="#">Acids and Metals</a></li> <li>• <a href="#">Student Worksheet PDF</a></li> <li>• <a href="#">Teacher Guide PDF</a></li> <li>• <a href="#">Laboratory Technician Guide PDF</a></li> </ul> <p><i>Identifying Chemical Reactions</i></p> <ul style="list-style-type: none"> <li>• <a href="#">Identifying Chemical Reactions</a></li> <li>• <a href="#">Risk Assessment (in RiskAssess)</a></li> <li>• <a href="#">Student Worksheet PDF</a></li> <li>• <a href="#">Lab Report Material PDF</a></li> <li>• <a href="#">Teacher Guide PDF</a></li> <li>• <a href="#">Laboratory Technician Guide PDF</a></li> </ul> <p><b>2. Reactions Around Us</b></p> <ul style="list-style-type: none"> <li>• <a href="#">Fermentation</a></li> <li>• <a href="#">Waste Management</a></li> <li>• <a href="#">Oxidation and Reduction</a></li> <li>• <a href="#">Analysing Chemical Reactions in Production Processes</a></li> <li>• <a href="#">Comprehension: Chemical Clocks</a></li> <li>• <a href="#">Comprehension: Chemistry: Glorified Baking?</a></li> </ul>	<p><b>3. Rates of Reaction</b></p> <ul style="list-style-type: none"> <li>• <a href="#">Rate of Reaction</a></li> <li>• <a href="#">Agitation, Concentration and Surface Area</a></li> <li>• <a href="#">Activation Energy, Temperature and Catalysts</a></li> <li>• <a href="#">Overview: Factors Affecting Reaction Rates</a></li> <li>• <a href="#">Graphing Rate of Reaction</a></li> </ul> <p><i>Modelling Rate of Reaction: Concentration</i></p> <ul style="list-style-type: none"> <li>• <a href="#">Modelling Rate of Reaction: Concentration</a></li> <li>• <a href="#">Risk Assessment (in RiskAssess)</a></li> <li>• <a href="#">Student Worksheet PDF</a></li> <li>• <a href="#">Teacher Guide PDF</a></li> <li>• <a href="#">Laboratory Technician Guide PDF</a></li> </ul> <p><i>Modelling Rate of Reaction: Temperature</i></p> <ul style="list-style-type: none"> <li>• <a href="#">Modelling Rate of Reaction: Temperature</a></li> <li>• <a href="#">Risk Assessment (in RiskAssess)</a></li> <li>• <a href="#">Student Worksheet PDF</a></li> <li>• <a href="#">Teacher Guide PDF</a></li> <li>• <a href="#">Laboratory Technician Guide PDF</a></li> </ul> <p><b>5. Creating with Chemistry</b></p> <ul style="list-style-type: none"> <li>• <a href="#">Analytical Chemistry</a></li> <li>• <a href="#">Fuels and Pharmaceuticals</a></li> <li>• <a href="#">Polymers</a></li> </ul> <p><i>Milk Plastic</i></p> <ul style="list-style-type: none"> <li>• <a href="#">Milk Plastic</a></li> <li>• <a href="#">Risk Assessment (in RiskAssess)</a></li> <li>• <a href="#">Student Worksheet PDF</a></li> <li>• <a href="#">Teacher Guide PDF</a></li> <li>• <a href="#">Laboratory Technician Guide PDF</a></li> </ul> <p><i>Resources continue on the next page</i></p>

## 5. Extension

- [Collision Theory](#)
- [Collision Theory and Rate of Reaction](#)
- [Empirical and Molecular Formulae](#)
- [Metal Reactions with Acid](#)
- [Metal Reactions with Water](#)
- [Moles and Equations](#)
- [Rate of Reaction Equations](#)
- [Reaction Equations](#)
- [The Mole](#)

## 6. Glossary

- [Definitions List: Balancing Equations](#)
- [Definitions List: Chemical Reactions and Rates of Reaction](#)
- [Definitions MCQ: Balancing Equations](#)
- [Definitions MCQ: Chemical Reactions and Rates of Reaction](#)
- [Spelling List: Balancing Equations](#)
- [Spelling List: Chemical Reactions and Rates of Reaction](#)

## 7. Topic Tests

- [Chemical Reactions Revision](#)
- [Topic Test: Chemical Reactions Basics](#)
- [Topic Test: Types of Chemical Reaction](#)
- [Topic Test: Writing Chemical Equations](#)