

## Science: Science Understanding

Questioning & Predicting				Planning & Conducting									
Year 5	Year 6	Year 7	Year 8	Year 5			Year 6			Year 7		Year 8	
AC SIS 231	AC SIS 232	AC SIS 124	AC SIS 139	AC SIS 086	AC SIS 087	AC SIS 088	AC SIS 103	AC SIS 104	AC SIS 105	AC SIS 125	AC SIS 126	AC SIS 140	AC SIS 141
With guidance, pose questions to clarify practical problems or inform a scientific investigation, and predict what the findings of an investigation might be	With guidance, pose questions to clarify practical problems or inform a scientific investigation, and predict what the findings of an investigation might be	Identify questions and problems that can be investigated scientifically and make predictions based on scientific knowledge	Identify questions and problems that can be investigated scientifically and make predictions based on scientific knowledge	With guidance, select appropriate investigation methods to answer questions or solve problems	Decide which variable should be changed and measured in fair tests and accurately observe, measure and record data, using digital technologies as appropriate	Use equipment and materials safely, identifying potential risks	With guidance, select appropriate investigation methods to answer questions or solve problems	Decide which variable should be changed and measured in fair tests and accurately observe, measure and record data, using digital technologies as appropriate	Use equipment and materials safely, identifying potential risks	Collaboratively and individually plan and conduct a range of investigation types, including fieldwork and experiments, ensuring safety and ethical guidelines are followed	In fair tests, measure and control variables, and select equipment to collect data with accuracy appropriate to the task	Collaboratively and individually plan and conduct a range of investigation types, including fieldwork and experiments, ensuring safety and ethical guidelines are followed	In fair tests, measure and control variables, and select equipment to collect data with accuracy appropriate to the task

Processing & Analysing Data & Information								Evaluating						Communicating			
Year 5		Year 6		Year 7		Year 8		Year 5	Year 6	Year 7		Year 8		Year 5	Year 6	Year 7	Year 8
AC SIS 090	AC SIS 218	AC SIS 107	AC SIS 221	AC SIS 129	AC SIS 130	AC SIS 144	AC SIS 145	AC SIS 091	AC SIS 108	AC SIS 131	AC SIS 132	AC SIS 146	AC SIS 234	AC SIS 093	AC SIS 110	AC SIS 133	AC SIS 148
Construct and use a range of representations, including tables and graphs, to represent and describe observations, patterns or relationships in data using digital technologies as appropriate	Compare data with predictions and use as evidence in developing explanations	Construct and use a range of representations, including tables and graphs, to represent and describe observations, patterns or relationships in data using digital technologies as appropriate	Compare data with predictions and use as evidence in developing explanations	Construct and use a range of representations, including graphs, keys and models to represent and analyse patterns or relationships, including using digital technologies as appropriate	Summarise data, from students' own investigations and secondary sources, and use scientific understanding to identify relationships and draw conclusions	Construct and use a range of representations, including graphs, keys and models to represent and analyse patterns or relationships, including using digital technologies as appropriate	Summarise data, from students' own investigations and secondary sources, and use scientific understanding to identify relationships and draw conclusions	Suggest improvements to the methods used to investigate a question or solve a problem	Suggest improvements to the methods used to investigate a question or solve a problem	Reflect on the method used to investigate a question or solve a problem, including evaluating the quality of the data collected, and identify improvements to the method	Use scientific knowledge and findings from investigations to evaluate claims	Reflect on the method used to investigate a question or solve a problem, including evaluating the quality of the data collected, and identify improvements to the method	Use scientific knowledge and findings from investigations to evaluate claims	Communicate ideas, explanations and processes in a variety of ways, including multi-modal texts	Communicate ideas, explanations and processes in a variety of ways, including multi-modal texts	Communicate ideas, findings and solutions to problems using scientific language and representations using digital technologies as appropriate	Communicate ideas, findings and solutions to problems using scientific language and representations using digital technologies as appropriate

## Science: Science as a Human Endeavour

Nature & Development of Science								Use & Influence of Science									
Year 5		Year 6		Year 7		Year 8		Year 5		Year 6		Year 7			Year 8		
ACSHE 081	ACSHE 082	ACSHE 098	ACSHE 099	ACSHE 119	ACSHE 223	ACSHE 134	ACSHE 226	ACSHE 083	ACSHE 217	ACSHE 100	ACSHE 220	ACSHE 120	ACSHE 121	ACSHE 224	ACSHE 135	ACSHE 136	ACSHE 227
Science involves testing predictions by gathering data and using evidence to develop explanations of events and phenomena	Important contributions to the advancement of science have been made by people from a range of cultures	Science involves testing predictions by gathering data and using evidence to develop explanations of events and phenomena	Important contributions to the advancement of science have been made by people from a range of cultures	Scientific knowledge changes as new evidence becomes available, and some scientific discoveries have significantly changed people's understanding of the world	Science knowledge can develop through collaboration and connecting ideas across the disciplines of science	Scientific knowledge changes as new evidence becomes available, and some scientific discoveries have significantly changed people's understanding of the world	Science knowledge can develop through collaboration and connecting ideas across the disciplines of science	Scientific understandings, discoveries and inventions are used to solve problems that directly affect peoples' lives	Scientific knowledge is used to inform personal and community decisions	Scientific understandings, discoveries and inventions are used to solve problems that directly affect peoples' lives	Scientific knowledge is used to inform personal and community decisions	Science and technology contribute to finding solutions to a range of contemporary issues; these solutions may impact on other areas of society and involve ethical considerations	Science understanding influences the development of practices in areas of human activity such as industry, agriculture and marine and terrestrial resource management	People use understanding and skills from across the disciplines of science in their occupations	Science and technology contribute to finding solutions to a range of contemporary issues; these solutions may impact on other areas of society and involve ethical considerations	Science understandings influence the development of practices in areas of human activity such as industry, agriculture and marine and terrestrial resource management	People use understanding and skills from across the disciplines of science in their occupations

# Science: Science Understanding

Biological Sciences						Chemical Sciences					
Year 5	Year 6	Year 7		Year 8		Year 5	Year 6	Year 7	Year 8		
ACSSU 043	ACSSU 094	ACSSU 111	ACSSU 112	ACSSU 149	ACSSU 150	ACSSU 077	ACSSU 095	ACSSU 113	ACSSU 151	ACSSU 152	ACSSU 225
Living things have structural features and adaptations that help them to survive in their environment	The growth and survival of living things are affected by the physical conditions of their environment	There are differences within and between groups of organisms; classification helps organise this diversity	Interactions between organisms can be described in terms of food chains and food webs; human activity can affect these interactions	Cells are the basic units of living things and have specialised structures and functions	Multi-cellular organisms contain systems of organs that carry out specialised functions that enable them to survive and reproduce	Solids, liquids and gases have different observable properties and behave in different ways	Changes to materials can be reversible, such as melting, freezing, evaporating, or irreversible, such as burning and rusting	Mixtures, including solutions, contain a combination of pure substances that can be separated using a range of techniques	The properties of the different states of matter can be explained in terms of the motion and arrangement of particles	Differences between elements, compounds and mixtures can be described at a particle level	Chemical change involves substances reacting to form new substances

Earth & Space Sciences						Physical Sciences					
Year 5	Year 6	Year 7		Year 8		Year 5	Year 6	Year 7		Year 8	
ACSSU 078	ACSSU 096	ACSSU 115	ACSSU 116	ACSSU 222	ACSSU 153	ACSSU 080	ACSSU 097	ACSSU 219	ACSSU 117	ACSSU 118	ACSSU 155
The Earth is part of a system of planets orbiting around a star (the sun)	Sudden geological changes or extreme weather conditions can affect Earth's surface	Predictable phenomena on Earth, including seasons and eclipses, are caused by the relative positions of the sun, Earth and the moon	Some of Earth's resources are renewable, but others are non-renewable	Water is an important resource that cycles through the environment	Sedimentary, igneous and metamorphic rocks contain minerals and are formed by processes that occur within Earth over a variety of timescales	Light from a source forms shadows and can be absorbed, reflected and refracted	Electrical circuits provide a means of transferring and transforming electricity	Energy from a variety of sources can be used to generate electricity	Change to an object's motion is caused by unbalanced forces acting on the object	Earth's gravity pulls objects towards the centre of the Earth	Energy appears in different forms including movement (kinetic energy), heat and potential energy, and causes change within systems