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NSW EDUCATION STANDARDS AUTHORITY

			Biology										Chemistry					Earth and Space						Physics				General Science		Templates	
			Classification	Kingdoms	Food Chains and Food Webs	Invasive Species	Cells	Plant Cells	Stem Cells	Reproduction	Healthy Eating	Body Systems	States of Matter	Elements and Compounds	Physical & Chemical Change	Mixtures	Separation Techniques	Our Place In Space	Tides	Resources	The Water Cycle	Minerals	Active Earth	Forces	Simple Machines	Energy	Magnetism	Introduction to Science	Science News	Engineering Challenges	Science Investigations
Stage 4																															
Working scientifically																															
Identifies questions and problems that can be tested or researched and makes predictions based on scientific knowledge	WS4	ACSIS124/139				✓	✓	✓	✓	✓			✓	✓	✓			✓			✓		✓	✓		✓		✓			✓
Identifying data to be collected in an investigation - identifying the purpose of an investigation, proposing the type of information and data that needs to be collected and locating possible sources of data and information	WS5.1					✓	✓						✓		✓					✓			✓	✓		✓	✓	✓			✓
Collaboratively and individually produces a plan to investigate questions and problems	WS5.2	ACSIS125/140					✓	✓						✓	✓	✓				✓			✓	✓			✓	✓			✓
Choosing equipment or resources for an investigation - identifying suitable equipment or resources to perform the task and selecting equipment to collect data with accuracy appropriate to the task.	WS5.3	ACSIS126/141					✓						✓		✓						✓		✓	✓			✓	✓			✓
Follows a sequence of instructions to safely undertake a range of investigation types, collaboratively and individually	WS6	ACSIS 125/126/140/141/131/146					✓	✓				✓	✓	✓	✓	✓	✓	✓		✓	✓		✓	✓	✓	✓		✓			✓
Processing data and information from a first-hand investigation and secondary sources, to access, extract and summarise data using a range of representations.	WS7.1	ACSIS130/145			✓	✓	✓					✓	✓	✓	✓	✓		✓	✓	✓		✓	✓	✓	✓	✓	✓	✓			✓
Analysing data and information from a first-hand investigation and secondary sources to identify trends, patterns and relationships, and draw conclusions	WS7.2	ACSIS129/130/131/144/145		✓	✓	✓	✓		✓				✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		✓	✓	✓			✓
Selects and uses appropriate strategies, understanding and skills to produce creative and plausible solutions to identified problems	WS8	ACSIS132/234	✓			✓		✓						✓	✓	✓		✓					✓	✓	✓	✓	✓	✓			✓
Presents science ideas, findings and information to a given audience using appropriate scientific language, text types and representations	WS9	ACSIS133/148	✓			✓	✓	✓	✓		✓	✓		✓	✓	✓				✓		✓	✓	✓		✓	✓	✓			✓
Living World																															
There are differences within and between groups of organisms; classification helps organise this diversity.	LW1	ACSSU111	✓	✓	✓	✓	✓																								
Cells are the basic units of living things and have specialised structures and functions.	LW2	ACSSU149					✓	✓	✓																						
Multicellular organisms contain systems of organs that carry out specialised functions that enable them to survive and reproduce	LW3	ACSSU150					✓	✓		✓	✓	✓																			

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Scientific knowledge changes as new evidence becomes available, and some scientific discoveries have significantly changed people's understanding of the world.	LW4	ACSHE119/134	✓	✓	✓		✓		✓	✓																					
Science and technology contribute to finding solutions to conserving and managing sustainable ecosystems.	LW5	ACSSU112			✓	✓																									
Chemical World																															
The properties of the different states of matter can be explained in terms of the motion and arrangement of particles.	CW1	ACSSU151											✓		✓																
Scientific knowledge and developments in technology have changed our understanding of the structure and properties of matter.	CW2	ACSSU152												✓																	
Mixtures, including solutions, contain a combination of pure substances that can be separated using a range of techniques.	CW3	ACSSU113												✓		✓	✓														
In a chemical change, new substances are formed, which may have specific properties related to their uses in everyday life.	CW4	ACSSU225 ACSHE223/226													✓																
Earth and Space																															
Sedimentary, igneous and metamorphic rocks contain minerals and are formed by processes that occur within Earth over a variety of timescales.	ES1	ACSSU153 ACSHE224/227																✓				✓	✓								
Scientific knowledge changes as new evidence becomes available. Some technological developments and scientific discoveries have significantly changed people's understanding of the solar system.	ES2	ACSSU115																✓	✓				✓								
Scientific knowledge influences the choices people make in regard to the use and management of the Earth's resources.	ES3	ACSSU116																✓		✓	✓		✓								
Science understanding influences the development of practices in areas of human activity such as industry, agriculture and marine and terrestrial resource management.	ES4	ACSHE121/136 ACSSU222																		✓	✓		✓								
Physical World																															

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Change to an object's motion is caused by unbalanced forces acting on the object.	PW1	ACSSU117																					☑	☑						
The action of forces that act at a distance may be observed and related to everyday situations.	PW2	ACSSU118																					☑			☑				
Energy appears in different forms including movement (kinetic energy), heat and potential energy, and causes change within systems.	PW3	ACSSU155																					☑		☑	☑				
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.	PW4	ACSHE120/135																					☑		☑	☑				

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			Biology								Chemistry							Earth and Space						Physics							Science News	Templates	
			The Nervous System	The Endocrine System	The Immune System	Microbiomes	Ecosystems	Simple Inheritance	Genetics	Evolution	Human Evolution	Atoms	Chemical Reactions	Acids and Bases	Reactions and Energy	The Periodic Table	Metals	Reaction Types	Active Earth	Earthquakes	The Universe	Comets	Earth Systems	Mass extinctions	Light	Sound	Heat	Radiation	Electrical circuits	Energy Conservation	Kinematics	Newtons Laws of Motion	Science News	Engineering Challenges	Science Investigations
Stage 5																																		
Working scientifically																																		
Develops questions or hypotheses to be investigated scientifically	WS4	ACSIS164/198			✓		✓						✓	✓	✓		✓	✓	✓			✓	✓	✓			✓		✓			✓			✓
Identify data to be collected for an investigation by describing the purpose of the investigation, selecting different types of information, variables and sources of data.	WS5.1				✓		✓												✓				✓				✓					✓			✓
Planning and selecting appropriate investigation methods, describing a logical procedure with appropriate variables to collect data first-hand	WS5.2	ACSIS165/199			✓		✓						✓						✓			✓	✓				✓		✓			✓			✓
Choose equipment or resources for an investigation by identifying and selecting the appropriate equipment and units to be measured and assessing risks and addressing ethical issues associated with these methods.	WS5.3	ACSIS165/199			✓		✓						✓		✓				✓				✓				✓		✓			✓			✓
Undertakes first-hand investigations to collect valid and reliable data and information, individually and collaboratively	WS6	ACSIS165/166/199/200	✓		✓		✓											✓	✓		✓		✓				✓				✓	✓			✓
Select and use a variety of methods to organise data, applying numerical procedure where appropriate and describes ways to improve the quality of data.	WS7.1	ACSIS171/205			✓		✓						✓		✓			✓	✓		✓		✓		✓		✓		✓		✓	✓			✓
Critically analyses, describes, synthesises, evaluates and assesses the validity of data.	WS7.2	ACSIS169/170/171/203/204/205	✓	✓	✓	✓	✓	✓		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		✓		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓			✓
Applies scientific understanding and critical thinking skills to suggest possible solutions to identified problems	WS8	ACSIS172/206			✓	✓	✓								✓			✓	✓		✓	✓	✓		✓	✓	✓					✓			✓
Presents science ideas and evidence for a particular purpose and to a specific audience, using appropriate scientific language, conventions and representations	WS9	ACSIS174/208			✓		✓		✓	✓	✓				✓				✓	✓	✓	✓	✓		✓	✓	✓	✓		✓	✓	✓			✓
Living World																																		
Multicellular organisms rely on coordinated and interdependent internal systems to respond to changes in their environment.	LW1	ACSSU175	✓	✓	✓	✓																												
Conserving and maintaining the quality and sustainability of the environment requires scientific understanding of interactions within, the cycling of matter and the flow of energy through ecosystems.	LW2	ACSSU176					✓																											
Advances in scientific understanding often rely on developments in technology, and technological advances are often linked to scientific discoveries.	LW3	ACSSU184 ACSHE158/192			✓		✓	✓	✓	✓	✓																								
The theory of evolution by natural selection explains the diversity of living things and is supported by a range of scientific evidence.	LW4	ACSSU185								✓	✓																								
Chemical World																																		

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Scientific understanding changes and is refined over time through a process of review by the scientific community.	CW1	ACSSU177			☑							☑																							
The atomic structure and properties of elements are used to organise them in the Periodic Table.	CW2	ACSSU186														☑	☑																			
Chemical reactions involve rearranging atoms to form new substances; during a chemical reaction mass is not created or destroyed.	CW3	ACSSU178/179					☑						☑	☑	☑			☑																		
Different types of chemical reactions are used to produce a range of products and can occur at different rates and involve energy transfer.	CW4	ACSSU187 ACSHE161/195	☑			☑	☑						☑				☑	☑																		
Earth and Space																																			
Scientific understanding, including models and theories, are contestable and are refined over time through a process of review by the scientific community.	ES1	ACSHE157/191										☑							☑	☑	☑	☑		☑												
The theory of plate tectonics explains global patterns of geological activity and continental movement.	ES2	ACSSU180 ACSHE160/194																	☑	☑																
People use scientific knowledge to evaluate claims, explanations or predictions in relation to interactions involving the atmosphere, biosphere, hydrosphere and lithosphere.	ES3	ACSHE160/194 ACSSU189												☑					☑	☑			☑	☑												
Physical World																																			
Energy transfer through different mediums can be explained using wave and particle models.	PW1	ACSSU182																							☑	☑	☑	☑	☑							
The motion of objects can be described and predicted using the laws of physics.	PW2	ACSSU229																													☑	☑				
Scientific understanding of current electricity has resulted in technological developments designed to improve the efficiency in generation and use of electricity.	PW3																															☑			
Energy conservation in a system can be explained by describing energy transfers and transformations.	PW4	ACSSU190 ACSHE228/230																												☑		☑				