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The New Zealand Curriculum

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	Living World																Planet Earth and Beyond					Physical World									Material World							Nature of Science		Science Capabilities	
	Cells	Plant Cells	Stem Cells	Body Systems	Reproduction	The Nervous System	The Endocrine System	The Immune System	Microbiomes	Food Chains and Food Webs	Invasive Species	Ecosystems	Simple Inheritance	Genetics	Evolution	Human Evolution	Earth Systems	Active Earth	Earthquakes	The Universe	Our Place in Space	Energy Conservation	Kinematics	Newtons Laws of Motion	Magnetism	Light	Sound	Electrical Circuits	Heat	Radiation	Atoms	Elements and Compounds	Acids and Bases	Reactions and Energy	Reaction Types	Metals	Chemical Bonds	Introduction to Science	Science News	Engineering Challenges	Science Investigations
NATURE OF SCIENCE																																								
Understanding about science																																								
Understand that scientists' investigations are informed by current scientific theories and aim to collect evidence that will be interpreted through processes of logical argument.	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Investigation in science																																								
Develop and carry out more complex investigations, including using models.	✓		✓	✓		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		✓	✓		✓	✓	✓	✓	✓	✓			✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		✓	✓
Show an increasing awareness of the complexity of working scientifically, including recognition of multiple variables.	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		✓	✓
Begin to evaluate the suitability of the investigative methods chosen.	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		✓	✓
Communicating in science																																								
Use a wider range of science vocabulary, symbols, and conventions.	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Apply their understandings of science to evaluate both popular and scientific texts (including visual and numerical literacy).	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Participating and contributing																																								
Develop an understanding of socio-scientific issues by gathering relevant scientific information in order to draw evidence-based conclusions and to take action where appropriate.	✓			✓				✓			✓	✓	✓	✓			✓	✓	✓	✓				✓						✓		✓	✓	✓	✓		✓	✓	✓	✓	✓
LIVING WORLD																																								
Life processes																																								
Describe the organisation of life at the cellular level.	✓	✓	✓					✓																																
Identify the key structural features and functions involved in the life processes of plants and animals.	✓	✓	✓	✓	✓	✓	✓	✓				✓																												
Ecology																																								
Investigate the interdependence of living things (including humans) in an ecosystem.									✓	✓	✓	✓																												
Investigate the impact of natural events and human actions on a New Zealand ecosystem.												✓																												
Evolution																																								

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Describe the basic processes by which genetic information is passed from one generation to the next.													☑	☑	☑	☑																									
Explore patterns in the inheritance of genetically controlled characteristics.													☑	☑	☑	☑																									
Explain the importance of variation within a changing environment.													☑	☑	☑	☑																									
PLANET EARTH AND BEYOND																																								
Earth systems																																								
Investigate the composition, structure, and features of the geosphere, hydrosphere, and atmosphere.																	☑	☑																							
Investigate the external and internal processes that shape and change the surface features of New Zealand.																	☑	☑																							
Interacting systems																																								
Investigate how heat from the Sun, the Earth, and human activities is distributed around Earth by the geosphere, hydrosphere, and atmosphere.																	☑	☑		☑																					
Develop an understanding of how the geosphere, hydrosphere, atmosphere, and biosphere interact to cycle carbon around Earth.																	☑																							
Astronomical systems																																								
Investigate the conditions on the planets and their moons, and the factors affecting them.																				☑	☑																			
Investigate the interactions between the solar, lunar, and Earth cycles and the effect of these on Earth.																				☑	☑																			
PHYSICAL WORLD																																								
Physical inquiry and physics concepts																																								
Identify and describe the patterns associated with physical phenomena found in simple everyday situations involving movement, forces, electricity and magnetism, light, sound, waves, and heat. For example, identify and describe energy changes and conservation of energy, simple electrical circuits, and the effect of contact and non-contact on the motion of objects.																						☑	☑	☑	☑	☑	☑	☑	☑	☑										
Investigate trends and relationships in physical phenomena (in the areas of mechanics, electricity, electromagnetism, heat, light and waves, and atomic and nuclear physics).																						☑	☑	☑	☑	☑	☑	☑	☑	☑										

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Demonstrate an understanding of physical phenomena and concepts by explaining and solving questions and problems that relate to straightforward situations.																						✓	✓	✓	✓	✓	✓	✓	✓	✓										
Using physics																																								
Explore & investigate a technological or biological application of physics.																						✓	✓	✓	✓	✓	✓	✓	✓	✓										
MATERIAL WORLD																																								
Properties and changes of matter																																								
Investigate the chemical and physical properties of different groups of substances, for example, acids and bases, fuels, and metals.																																✓	✓	✓	✓	✓				
Explore factors that affect chemical processes.																															✓	✓	✓	✓	✓				
Distinguish between pure substances and mixtures and between elements and compounds.																															✓				✓				
The structure of matter																																								
Describe the structure of the atoms of different elements.																														✓	✓		✓	✓	✓	✓				
Distinguish between atoms, molecules, and ions (includes covalent and ionic bonding).																														✓	✓	✓	✓	✓	✓	✓				
Distinguish between an element and a compound, a pure substance and a mixture at particle level.																														✓	✓				✓	✓				
Link atomic structure to the organisation of the periodic table.																																			✓	✓				
Use particle theory to explain factors that affect chemical processes.																																	✓	✓						
Chemistry and society																																								
Link the properties of different groups of substances to the way they are used in society or occur in nature.												✓																			✓	✓	✓	✓	✓	✓	✓				