Grade 7 Science

Curricular Competencies

		Questioning & Predicting					Planning & Conduting					Processing & Analyzing Data & Info					Evaluating						Applying & Innovating				Communicating	
Big Ideas	*Evolution by natural selection provides an explanation for the diversity and survival of living things. *Elements consist of one type of atom, and compounds consist of atoms of different elements chemically combined. *The electromagnetic force produces both electricity and magnetism. *Earth and its climate have changed over geological time.	Demonstrate a sustained intellectual curiosity about a scientific topic or problem of personal interest	Make observations aimed at identifying their own questions about the natural world	Identify questions to answer or problems to solve through scientific inquiry	Formulate alternative "if…then…" hypotheses based on their questions	Make predictions about the findings of their inquiry	Collaboratively plan a range of investigation types, including field work and experiments, to answer their questions or solve problems they have identified	Measure and control variables through fair tests	Observe, measure, and record data (qualitative and quantitative), using equipment, including digital technologies, with accuracy and precision	Use appropriate SI units and perform simple unit conversions	Ensure that safety and ethical guidelines are followed in their investigations	Experience and interpret the local environment	Apply First Peoples perspectives and knowledge,	Construct and use a range of methods to represent patterns or relationships in data, including tables, graphs, key, scale models, and digital technologies as appropriate	Seek patterns and connections in data from their own investigations and secondary sources	Use scientific understandings to identify relationships and draw conclusions	Reflect on their investigation methods, including the adequacy of controls on variables (dependent and independent) and the quality of the data collected	Identify possible sources of error and suggest improvements to their investigation methods	Demonstrate an awareness of assumptions and identify information given and bias in their own work and secondary sources	Demonstrate an understanding and appreciation of evidence (qualitative and quantitative)	Exercise a healthy, informed skepticism and use scientific knowledge and findings for their own investigations to evaluate claims in secondary sources	Consider social, ethical, and environmental implications of the findings from their own and others' investigations	Contribute to care for self, others, community, and world through personal or collaborative approaches	Co-operatively design projects	Transfer and apply learning to new situations	Generate and introduce new or refined ideas when	Communicate ideas, findings, and solutions to problems, using scientific language, representations, and digital technologies as appropriate	Express and reflect on a variety of experiences and perspectives of place
Content	organisms have evolved over time																										
	survival needs																										
	natural selection																										
	elements and compounds are pure substances																										
	crystalline structure of solids																										
	chemical changes																										
	electricity: generated in different ways with different environmental impacts																										
	electricity: electromagnetism																										
	the fossil record provides evidence for changes in biodiversity over geological time																										
	First Peoples knowledge of changes in biodiversity over time																										
	evidence of climate changeover geological time and the recent impacts of humans: physical records																										
	evidence of climate changeover geological time and the recent impacts of humans: local First Peoples knowledge of climate change																										