Grade 7 Science

Curricular Competencies

		Questioning & Predicting					Planning & Conduting				Processing & Analyzing Data & Info				Evaluating						Applying & Innovating				Communicating	
Big Ideas	*The theory of 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 appropriate to the task	Ensure that safety and ethical guidelines are followed in their investigations	Experience and interpret the local environment	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 and the quality of the data collected	Identify possible sources of error and suggest improvements to their investigation methods	Critique an array of sources of assumptions and bias in 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 problem solving		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	natural selection throughadaptive radiation - a proposed mechanism of the theory of evolution																									
	survival needs and interactions between organisms and the environment																									
	elements and compounds aresubstances																									
	chemical changes																									
	crystalline structure of solids																									
	electricity - generated in different ways with different environmental impacts																									
	electricity - used to generate magnetism																									
	fossil records and geological dating																									
	evidence of climate change over geological time and the recent impacts of humans																									