

Criterion: A: Knowing and Understanding  
Impact

B: Inquiring & Designing

C: Processing & Evaluating

D: Reflecting on

Sciences Subject Group Overview Year 1- Grade 6							
Unit Title	Key Concept	Related Concepts	Global Context	Statement of Inquiry	Subject Group Objectives	Approaches to Learning Skills	Content
Groundwater Contamination	Logic	Models Change	Scientific and Technological Innovation	Scientific models can be used to understand the logic behind changes that occur when pollution becomes a widespread concern in a community.	Criterion A i, ii, iii  Criterion D i, ii, iii, iv.	Organize information logically.  Practice observing carefully in order to recognize problems.  Identify obstacles and challenges to the solutions of problems.	Next Generation Science Standards: <b>MS-ESS2-1</b> <b>MS-ESS2-4</b>
Color and Spectrum	Relationships	Form Energy	Scientific and Technological Innovation	There is a relationship between the energy of light and its form in the world. This can have an impact on human life.	Criterion B I,ii,iii,iv  Criterion C i,ii,iii	Structure information appropriately in written, oral and visual work. (Organization/Self-management)  Utilize appropriate multimedia and multi-modal technology for effective presentation and representation. (Research/information literacy)	NGSS:  MS.PS4.2

						Communicate information and ideas effectively to multiple audiences using a variety of media and formats. (Research/ media literacy)	
The Scientific Method	Relationships	Patterns Interaction	Orientation in Space and Time	Relationships in the physical world can be understood by testing to see how different variables interact, and looking for patterns in the results.	Criterion B (inquiring and designing)	Communication (Language) Thinking (Critical Thinking) Thinking (Creativity and Innovation)	NGSS: MS.ESS3-3
Climate Change	Change	Consequences Environment	Scientific and Technical innovations	Environmental change is a consequence of human activity.	Criterion B	Thinking- critical thinking Thinking- critical thinking	
Atomic Structure: Let's Get Atomic	Change	Form Energy	Identities and Relationships	Energy can change the form of atoms and more complex structures.	Criterion A		
Human Health and Sexuality	Change	Choice Interactions	Identities and Relationships	Changes can impact our choices, identities, relationships, and interactions.	Criterion A	Communication-communication through language Self-management-reflection	

Sciences  
Year 2- Grade 7  
Subject Group Overview

Unit Title	Key Concept	Related Concepts	Global Context	Statement of Inquiry	Subject Group Objectives	Approaches to Learning Skills	Content
Studying Materials Scientifically	Change	Evidence, Design, Method	Scientific and Technological innovation	Carefully analyzing the elements of an experimental design allows an individual to evaluate the effectiveness of clinical and experimental trials.	B. Inquiring and Designing (i-iv)	III. Organization (In writing and Science Journals, Information Literacy, Collaboration	Experimental Design, Evidence, Control and Treatment Group, Placebo
Ecology Ecosystems, Energy, and the Environment	Change	Interaction, Environment, Energy	Globalization & Sustainability	Human actions may alter the way in which organisms interact with the natural environment.	A: Knowing and Understanding (i, ii, iii) C: Process and Evaluating (i,ii,v)	VI Research Skills, Creativity, Critical Thinking, Innovation	Population, Abiotic/Biotic Factors, Competition, Carrying Capacity, Habitat, Energy Pyramid, energy
Body Systems	Systems	Consequence, Interactions, Functions	Identities and Relationships	Understanding the functions of the body's organ systems helps humans to make day to day decisions to stay	A. Knowing and Understanding (i, ii, iii)	V. Reflection Skills, Communication Skills, Collaboration	Respiratory, Cardiovascular, Segments

				as healthy as possible.			
Exploring Space	Systems	Models, Development	Scientific and Technical Innovation	Knowledge of the relationships between the earth, sun, and mars helps us understand our length of days and years, our seasons and futility.	D: Reflecting on the Impacts of Science (i, ii, iii, iv)	I. Collaboration, Creativity and Innovation, and Organization	Gravity, Net Force, Conditions, Atmospheres and Sustainability, Space Shuttles, Space Probes, ISS

Sciences Subject Group Overview Year 3- Grade 8							
Unit Title	Key Concept	Related Concepts	Global Context	Statement of Inquiry	Subject Group Objectives	Approaches to Learning Skills	Content
Consumer Chemistry	The Chemical Makeup of Materials	Energy, Transformation, Development	Orientation in time and space	Knowledge and challenging discoveries evolve the periodic table's form to enhance its function of showing trends in the evolution of physical and chemical properties of consumer products.	A. Knowing and Understanding (i.ii.iii) B. Inquiring and Designing (i,ii,iii,iv)	Creativity and Innovation and Communication, Transfer	NGSS PS1A: Structure of Atoms, matter, elements, organization of periodic table, atomic mass, atomic number, additives, preservatives, processed food

Cells and Genetics	Systems	Form and Function	Identities and Relationships	Models can represent the structural and functional between DNA, relationships, and identities through inherited traits.	B. Inquiring and designing ii, iii, iv C. Processing and evaluating iii, iv, v	1.) Thinking (or critical thinking): Draw justifiable conclusions based on processing, interpreting and evaluating data gained from scientific investigation 2.) Communication (or interaction): Use appropriate scientific terminology, data tables and graphs.	<b>NGSS</b> ● <b>MS-LS1-2 Structure and Function of Life</b> ● <b>MS-LS1-3 Making a model</b>
Comparative Anatomy	Systems	Function, Movement	Orientation in time and space	Knowledge of the way systems function can be applicable to the human body.	A. Knowing and Understanding (i,ii,iii)	1. Media Literacy, 2. Collaboration	Digestive Systems, Muscular System
Force and Motion	Systems	Function and Movement	Scientific and Technological Innovation	Knowledge of the relationships between mass, speed, and gravity can be applied to everyday life.	C: Processing and evaluating (i, ii, iii, iv, v)	1. Information Literacy 2.	Newton's laws of motion, net force, potential, kinetic energy, gravitational pull, centripetal force

