



INTEGRATED SCIENCES GRADE 7

Unit title and teaching hours	Key Concept	Related concepts	Global Context	Statement of inquiry	Objectives	ATL Skills	Brief description of content
Modelling Movement	Relationships	Movement Models	Orientation in space and time	Through the use of models, we gain a better understanding of the relationships between movement, place and time.	A B C D	<p>Communication: Use and interpret a range of discipline-specific terms and symbols, make effective summary notes for studying</p> <p>Social: Manage and resolve conflict, and work collaboratively in teams</p> <p>Organization skills: use appropriate strategies for organizing complex information</p> <p>Research skills: Collect, record and verify data</p> <p>Thinking skills: Use models and simulations to explore complex systems and issues</p>	<ul style="list-style-type: none"> -properties of waves and wave motion -speed of sound and light -speed calculations -reflection, absorption, transmission, refraction -the human eye and ear -the electromagnetic spectrum -ozone and UV light -white light in terms of addition of frequencies -colour of a surface in terms of subtraction and selective reflection of frequencies -sound waves -describe the subjective experience of -sound in terms of pitch and volume -echo location and ultrasonic imaging -sound insulation. -coordinate system is used to specify location
Chemical change	Change	Patterns Models	Scientific and technical innovation	The use of models to identify patterns has enabled us to better	A B C	<p>Communication skills:</p> <p>Share ideas with multiple audiences</p>	<ul style="list-style-type: none"> - elements, mixtures, molecules -compounds and polymers - periodic table



				<p>understand changes and to drive forward scientific and technical innovation.</p>	D	<p>using a variety of digital environments and media Make inferences and draw conclusions Social Skills: Delegate and share responsibility for decision-making Self-management skills: Mindful awareness: Practise focus and concentration Self-motivation: Practise managing self-talk Research skills: Use memory techniques to develop long-term memory Thinking skills: Revise understanding based on new information and evidence Interpret data</p>	<ul style="list-style-type: none"> - atomic structure in terms of nuclei, electrons and their respective electric charges -conservation of mass in chemical reactions -chemical reactions in terms of word equations -metals and non-metals in terms of their physical properties -reactivity series and patterns within the periodic table - combustion, corrosion, rust - uses of metals in terms of their physical properties - chemical processes used to extract a metal from its ore
Who are we?	Relationships	Patterns Models	Identities and relationships	<p>Through the use of models, we gain a better understanding of how we respond to the world, of our relationship to all living</p>	A B C D	<p>Communication skills: Use appropriate forms of writing for different purposes and audiences Social Skills:</p>	<ul style="list-style-type: none"> - sexual and asexual reproduction. - DNA, genes - relationship between inherited characteristics and genes



things and of who we are.

Give and receive meaningful feedback
Self-management skills:

Set goals that are challenging and realistic
Consider content:
◦What did I learn about today? What don't I yet understand? What questions do I have now?

Research skills:
Collect and analyse data to identify solutions and make informed decisions
Process data and report results
Thinking skills:
Interpret data

- how genes and characteristics are inherited
- modifying the genes that make up the human genome
- mitosis and meiosis
- genetic patterns identified
- DNA evidence in order to make judgments about a person's identity
- sense organs and their functions
- importance of different senses in terms of long-term survival of the species
- the role of the central nervous system in our perception of and response to different stimuli
- stimulus response mechanism
- other (non- human) organisms respond to different stimuli
- investigation to test how a plant or invertebrate animal responds to stimuli
- natural selection
- adaptation