

MYP Chemistry – Grade 10

Topic/ Unit Title	Key Concept	Related Concept	Global Context/ Exploration	ATL Skills	Statement of Inquiry	Summative Assessments	Assessment Objectives	Service as Action
Matter and Materials	Change	Relationships, Patterns	Personal and cultural expressions	Communica- tion, Research	The development of our modern ideas about matter, including the Periodic table, is a story about the creative work of philosophers and chemists from a variety of cultures over a long period of time.	Laboratory skills/techniques: students will know how to separate materials both homogenous and heterogenous.	Criterion A: Test on homogeneous and Heterogeneous mixtures Criterion B: Separation of mixtures laboratory experiment.	: Service: students will create a flyer educating the community on how to preserve metallic objects such as jewelry or furniture from corrosion.
Periodic Table	Relationships	Interaction, Models	Orientation in Space and Time	Thinking, Communica- tion	There is a relationship between the modern developments in science and the creative work of scientists from a variety of cultures and over a long period of time.	1. Students will be able to understand the periodic trends on the periodic table, this include the trend in Ionization energies, electron affinities, ionic radii, atomic numbers and masses, 2. To be able to describe the atoms in terms of the number of protons, neutrons	Criterion A: Test on the elements of the periodic table, electron configurations Criterion B: Atomic model design	Action: Students will identify the elements from the Periodic table that can help with plant growth investigate on their availability in compound fertilizers.



						and electrons.		
Chemical Bonding	Relationships	Interaction, Systems	Scientific and Technological innovation	Research and Thinking skills	By responsibly approaching the study of interactions within and between systems, inherent risk and undesirable consequences can be satisfactorily minimized.	Criterion B: i, ii, iii, iv Criterion C: i, ii, iii, iv, v	Criterion D essay: What patterns exist in the interaction of atoms that allow us to predict and uniquely identify the products that form?	Service: Students will educate the school community particularly the lower grades about the bonding properties of some daily materials in our homes.
Rates of reactions	Relationships	Models, Movement	Scientific and Technical Innovation Explorations to develop systems, models, methods (the nature and behavior of the components of a system must be consistent with the behavior of the system)	Thinking, Communication	In developing a satisfactory model of any dynamic system, the proposed relationship and movements of the components of the system must be consistent with the patterns of behavior observed in the system as a whole	Criterion A: Calculations of rates of reactions from Kinetics graphs Criterion B: Experimental determination of the effect of concentration on the rate of reaction between Hydrochloric acid and Calcium carbonate.	To describe the factors that affect the rates of chemical reactions.	Service: Students will create a podcast or video explaining the importance of faster reactions and ways to speed up reactions.
Electrochemistry	Relationships	Energy, Transformations	Scientific and Technical Innovation	Thinking, Research	Many systems (both natural and man-made)	Criterion A: Multiple choice test Criterion B:	To be able to describe the electrochemical series and use it to determine the reactivity of metals.	Service: Research and create an awareness about how to take good care of



			Explorations to develop: Systems, models, methods (balanced interaction of system components, and consequences of imbalance)		involve complex relationships between matter and energy that control the transformations within the system. Understanding these interactions can serve as a basis for guiding public policy	Laboratory experiment to determine the anode and cathode given a set of metal combinations. Criterion D: Essay to assess the impact of batteries to the environment.		batteries.
Organic Chemistry	Change	Interaction, consequences	Globalizations and Sustainability Explorations to develop: Human impact on the environment (e.g., our globally shared atmosphere)	Collaborative, creative	Developing a model to explain the interactions of the components of a system allows for greater understanding of the cyclic nature of the system.	Criterion A: End of unit test	Describe the homologous series and understand the functional groups and their reactions.	Action: Engage in a campaign to educate the community about the importance of organic chemistry in drug synthesis and its wide applications.
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Please note: At times areas of the curriculum will change based on the learning needs and interests of the students.

