

Grade Course	S1E International advanced	Subject	Science
Class Hours	4 Hours / Week		

Competencies

① Investigation	Students will complete various investigations regarding phenomena in biology. Students will use the scientific method.
② Problem Solving	Investigations regarding real world problems will be posed which students can consider solutions. Considering potential methods of testing and finding solution.
③ Creativity	Consider solutions to problems, create their own investigations, and participate in various activities and projects to express concepts they've learned.

3	Recognize natural phenomena and make connections to material discussed in class.	Apply concepts to real world situations.	Model basic and more complex concepts in elementally creative assessments.
2		Determine methods of experimenting practical for the topics in mind.	
1	Know the meaning of key vocabulary and basic concepts.		Communicate basic concepts in guided creative assessments.
	A Recognition	B Logical Thinking	C Creative Thinking

Term	Month	Unit	Unit Goals	Activities
1	4	UNIT 1: Scientific Investigation Skills	<ul style="list-style-type: none"> Students will apply the essential concepts of the scientific method, understanding the importance of objective research following concrete and empirical based data and results from other researchers. Students will understand the main theories on Earth's structure, and how it has changed over time. They will also describe how atoms interact with others to produce chemical compounds via chemical reactions. Students will apply the concepts of meteorology to provide valid arguments about weather patterns, and how climate change is affecting living organisms. 	Student centered, inquiry-based classwork and group work activities and projects, laboratory investigations, various types of assessments.
	5	Module 1: Scientific Research and Writing		
	6	UNIT 2: Earth Science/Biological Science		
	7	Module 2: The periodic table Module 3: Chemical Reactions Module 4: Geological time Module 5: Global Systems		
2	9	UNIT 3: Biological Science/ Physical Science	<ul style="list-style-type: none"> Students will describe what is motion and its relationship to speed and direction. They will differentiate between the 3 different laws of motion. Students will compare the different types of energy that exists in the universe and describe how the laws of thermodynamics relates to living systems. Students will understand the cell theory unites all living organisms, and describe the different characteristics between the various grouping of life. 	Student centered, inquiry-based classwork and group work activities and projects, laboratory investigations, various types of assessments.
	10	Module 6: Motion and Energy		
	11	Module 7: Natural Selection and Evolution		
	12	Module 8: DNA and Genetics Module 9: Structure of Organisms		

3	1	WACE UNIT 1 - Ecosystems and biodiversity	<ul style="list-style-type: none"> - Students will understand how classification helps to organise, analyse, and communicate data about biodiversity. 	Student centered, inquiry-based classwork and group work activities and projects, laboratory investigations, various types of assessments.
	2	Module 1: Biodiversity and Classification	<ul style="list-style-type: none"> - They will understand that ecosystem diversity and dynamics can be described and compared with reference to biotic and abiotic components and their functions. 	
	3	Module 2: Ecosystem classification and relationships	<ul style="list-style-type: none"> - Students will communicate scientific ideas and information for a particular purpose, including constructing evidence-based arguments and using appropriate scientific language, conventions, and representations. 	
		Module 3: Energy and Matter in Ecosystems Module 4: Population Dynamics	<ul style="list-style-type: none"> - understand how classification helps to organise, analyse and communicate data about biodiversity - understand that ecosystem diversity and dynamics can be described and compared with reference to biotic and abiotic components and their interactions - understand how theories and models have developed based on evidence from multiple disciplines; and the uses and limitations of biological knowledge in a range of contexts - use science inquiry skills to design, conduct, evaluate and communicate investigations into biodiversity and flows of matter and energy in a range of ecosystems - 	