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1st Form
**INTEGRATED SCIENCE
YEARLY CURRICULUM**

**Text: Mcmonagle (2016) Integrated Science for CSEC 2nd
edition
Credit Hours: 5**

Facilitator: Mr. Erick Santizo

Course Description

Integrated Science is very important and relevant; it deals with the study of our biological, physical and chemical environment. The knowledge and understanding of oneself and other organisms will undoubtedly improve the life of the individual as a whole.

It is expected that students will participate in all CCSLC exercise and make sure that all assignments are done and passed in on time. Students are strongly encouraged to pay keen attention to their CCSLC exercises since the grading criteria to be used will be as recommended by CCSLC.

Grading Scheme	1st Semester	2nd Semester
Tests	40%	30%
Quizzes	30%	15%
Presentation	10%	20%
Assignments	10%	10%
Participation	10%	None
EXAM	None	25%
Total	100%	100%

Semester 1, 2018

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Date	Module/Topics	Objectives	Activities
Week 1 Aug 27 th – 31 st Aug	MODULE I: WORKING LIKE A SCIENTIST ▶▶ Science and Technology *Science and technology	** Establish rules with students **Distinguish between science and technology	Review Quiz Handout
Week 2 Sept 3 rd – 7 th	▶▶ Science and Technology *Apply the scientific method	**Describe ways in which scientists do their work **Apply the scientific method in a given situation	Investigation: <i>Planning and designing activity</i> (CCSLC)
Week 3 Sept 10 th – 14	▶▶ Safety *Maintaining a safe environment *Safety symbols	**Discuss the importance of maintaining a safe environment **State the meaning of common safety symbols	
Week 4 Sept 17 th – 22 st	▶▶ Responses to challenges using Science and Technology *Challenges in the Caribbean *Using Science and technology to solve problems	**Identify TWO challenges specific to the Caribbean **Discuss how science and technology have been utilized to solve ONE of the challenges	Recording and communication: <i>Research/Report Obj. 2</i> (CCSLC)
Week 5 Sept 24 th – 28 th	▶▶ Responses to challenges using Science and Technology *Caribbean Scientists	**Describe the work of at least TWO Caribbean scientists	Group work: <i>Reflective piece</i> (CCSLC)
Week 6 Oct 1 st – 5 th	▶▶ Responses to challenges using Science and Technology *Non-Caribbean Scientists	**Describe the work of ONE non-Caribbean scientists	
Week 7 Oct 8 th – 12 th	▶▶ Measurement: an important scientific skill *	* Discuss two reasons measurement is important * Define the terms length, mass, volume, temperature and time;	-Demonstration experiment - Stimulus material for understanding terms
Week 8 Oct 15 th – 19 th	* SI units	* State the SI units and instruments used to measure length, mass, volume, temperature and time. *Demonstrate the correct use of measuring instruments	Use checklist to evaluate students' mastery in using measuring devices
Week 9 Oct 22 nd – 26 th	MODULE II: INVESTIGATING MATTER ▶▶ Water *Properties of water *Uses of water *Water pollution *Effects of pollutants	**Discuss the uses of water **Carry out investigations to show the physical properties of water **Relate the properties of water with its uses **Explain the effects of pollution on aquatic life	Investigation: <i>Planning and designing activity</i> (CCSLC) -Recording and communication: <i>Research/Report Obj. 2</i> (CCSLC)
Week 10 Oct 29 th – Nov 2 nd	MODULE III: UNDERSTANDING LIFE ▶▶ Living Organisms *Characteristics of living things *Cell Concept *Function of cell part *Plant and animal cells	**Describe characteristics of living things **Classify living things as plants and animals **Explain the concept of a cell **State one function of each major cell part **Differentiate between plant and animal cells	
Week 11 Nov 5 th – 9 th	▶▶ Living Organisms *Relationship from cells through tissues and organs to systems *Functions of the major systems in organisms	**Describe the relationship from cells through tissues and organs to systems **State one function of the major systems in an organism	

Week 12 Nov 12 th – 16 th	▶▶Plants *Importance of plants/Food chain *Parts of a leaf *Photosynthesis *Parts of a flower *Pollination	**Explain the importance of plants to humans **Draw and label a diagram of a simple leaf **Describe the process of photosynthesis **State the functions of each part of a flower **Describe pollination **Identify two agents of pollination	
Week 13 Nov 19 th – 23 rd	▶▶Plants *Fertilization & seed production *Germination	**Describe fertilization and seed production in plants **Investigate the conditions necessary for germination	Quiz
Week 14 Nov 26 th – 30 th	MODULE IV: FOCUSING ON ME ▶▶Reproduction *Secondary growth in humans *human reproductive systems	**Compare secondary growth in humans **Identify and state the function of the parts of the human reproductive system (male and female)	Test
Week 15 Dec 3 rd – 7 th	▶▶Reproduction *Sexual reproduction in humans *Contraceptive methods	**Describe the process of sexual reproduction in humans **Briefly describe the principles governing different contraceptive methods* *Explain the need for pre- and post-natal care in humans	
Week 16 Nov 27 th – Dec 1st	▶▶Reproduction *Pre- and post-natal care in humans *Screening Examination *Teenage Pregnancy	**Justify the need for screening examination in maintaining good reproductive health **Discuss the impact of pregnancy on the body of a teenager	
Week 15 Dec 4 th – 8 th	MODULE IV: FOCUSING ON ME ▶▶Drugs *Definition & Effects of drugs	**Define the term drug **Discuss the effects of drugs on individuals	Skits
Week 16 10 th – 14 th	▶▶Diseases *Comparing different types of diseases *Maintaining personal hygiene *Practicing healthy lifestyle	**Explain what is a disease **Compare the different types of diseases **Explain the importance of maintaining personal hygiene **Explain the importance of practicing healthy lifestyle	Test
Dec 14- Jan 4	Christmas Vacation	Three weeks	
Week 17 Jan 7 th – 11 th	MODULE V: EXPLORING ENERGY ▶▶Forms of energy *Concept of energy *Forms of energy present in named object or situation	**State at least THREE forms of energy **Explain the concept of energy **Identify the form of energy present in a named object or situation	
Week 18 Jan 14 th – 18 th	▶▶Forms of energy *Energy conversions *Impact of energy conversions on way of life	**Predict the energy conversions (changes) occurring in given situations **Discuss the impact of energy conversions on our way of life	

SEMESTER 2, 2019

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Week 1 Jan 21-25	▶▶Energy sources *Renewable and non-renewable energy sources *Alternative energy sources	**Classify energy as renewable and non-renewable** **Compare the feasibility of alternative energy sources	
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Week 2 Jan 28- Feb 1 st	▶▶Energy sources *Fossil fuels *Effects of fossil fuel on the environment	**Define the term fossil fuel **Discuss the effects of fossil fuels on the environment	
Week 3 Feb 4 th – 8 th	▶▶Energy sources *Conservation of energy	**Discuss the need to conserve energy	
Week 4 Feb 11 - 15	MODULE V: HEAT ENERGY+- ▶▶Heat & its Effects *Heat and Temperature	**Describe how thermometers are used to measure an object’s temperature **Explain the difference between heat energy and temperature **Describe some of the effects of changing a material’s temperature, including changes of state, and expansion and contraction	
Week 5 Feb 18-22	▶▶Heat & its Effects *How heat energy travels	**State the difference between conductors and insulators of heat, and give examples of each **Explain why metals are better conductors of heat than plastics	Investigation: <i>laboratory report</i> {3 activities using the THREE methods of heat transfer} (CCSLC)
Week 6 Feb 25 -Mar 1	▶▶Heat & its Effects	**Explain how convection currents occur in liquids and gases **Describe how heat energy can travel as radiation	
Week 7 March 5-9	UNIT VIII: THE UNIVERSE ▶▶The Universe *The Solar system	**Name the different objects that make up the solar system **Describe how the planets, asteroids and comets orbit the Sun	
Week 8 March 12-16	*Moon and Earth	**Explain how the phases of the Moon occur **Explain how eclipses of the Sun and Moon occur **Explain the role of the Moon in the creation of tides	
Week 9 March 18-22	▶▶The Universe **Building blocks of the Universe	**Understand that there are many different objects beyond our solar system **Describe a galaxy	
Week 10 & 11 March 25- April 5	EASTER BREAK		
Week 12 April 8 -12	*The History of the Universe	**Explain what is meant by a light year **Describe how telescopes help us to understand the Universe **State that many scientists believe that the Universe started billions of years ago, with a Big Bang	
Week 13 April 15-19	▶▶The Universe *Exploring Space	**Describe how distant galaxies are moving rapidly away from us **Outline some of the uses of spacecraft **State some requirements for life in space and other planets	
Week 14 April 22-26	▶▶Atomic structure *History of the atomic structure	* Describe the scientists involved in the evolution of the atomic structure	

	*Parts of an atom	*Distinguish between sub atomic particles *Create a model of the atom	
Week 15 April 29 th – May 3 rd	*Periodic table * Bohrs model and Lewis dot structure.	Use periodic table to calculate neutron number. *Draw structures of atoms using the Bohr model and lewis dot structure.	
Week 16 May 5 th – 9 th	* Metals, Non metals, Metalloids	* Differentiate between characteristics of elements.	
Week 17 May 12 – 17	* Ionic bonds	* Explain what are ionic bonds *Draw Ionic bonds	
Week 18 May 20-24	covalent bonds	*explain covalent bonds * Draw covalent bonds.	
Week 19 May 27 - 31	Review Week		
Week 20 June 3 rd – 7 th	EXAM		

****Activities in **BOLD** MUST be done for CCSLC