



WOLMER'S BOYS'
SCHOOL
Department of Science
Form 6B
Environmental Science
Course Outline

WOLMER'S BOYS' SCHOOL SIXTH- FORM ENVIRONMENTAL SCIENCE COURSE OUTLINE

RATIONALE

CAPE Environmental Science includes independent study, laboratory investigations (School Based Assessments [SBAs]), Field trips and lectures, with evaluation by objective and essay examination. The course consists of two Units; Unit 1 covered in lower six and Unit 2 in upper six. Unit 1 consists of three (3) Modules: **Ecology, Human Population and Natural resources**

Module 1: Fundamental Ecological Principles

Module 2: Human Population and the Environment

Module 3: Sustainable Use of Natural Resources

A quiz will be given at the end of each completed topic to recap the concept(s) and assess students' comprehension. Please note that the results obtained from the quizzes may contribute to classwork grades. Tutorial sessions will also be used during this course, to demonstrate how to accurately answer past paper questions, in particular, data analysis.

The skills and abilities which students are expected to develop on completion of the syllabus have been grouped under three main headings:

- (i) Knowledge and Comprehension;
- (ii) Application of Knowledge;
- (iii) Practical Abilities.

GOALS

Similar to CSEC subjects, SBAs are done as Paper III and contribute to 30% of the overall external examination grade. Each student is required to have a Journal. The journal will comprise: (a) an entry for each site visit

(b) a report for the journal

(c) a final report on the set of site-visits

Students will type and submit each component on or before the deadlines given by the instructor.

Transitioning from CSEC to CAPE is not simple and as such, students will need to prepare for each class by completing outside reading and assignments. Encourage your sons/wards to not become nervous or discouraged if the concepts are not easily grasped at first. If they apply an attitude of stick-to-itiveness (perseverance), they will do well.

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I may be contacted by my email address if there are any concerns regarding the course and course contents.

Email address: princess.hemmings@wolmers.org

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6B BIOLOGY COURSE OUTLINE [ADAPTED FROM THE CAPE ENVIRONMENTAL SCIENCE SYLLABUS (2011)]

TERM ONE: OCT - DEC 2021

Week	CAPE Objective	Mode of delivery	Use of ICT	Practical/ Assessment
FUNDAMENTAL ECOLOGICAL PRINCIPLES				
WEEK 1 - 3	Differentiate between key ecological terms and concepts;	Think-pair-share, Research, Discussions,	Use of Videos from online, include in a powerpoint and allow students to discuss what was found.	
	Explain the relationship between living organisms and their environment	Lecture , Discussion	Powerpoint, Campus site visit	Identify the different relationships in their environment
	Outline the importance of biogeochemical cycles;	Lecture, Diagrams representation, powerpoint, student research	Videos, powerpoint, students research.	Draw label and explain each cycle in a group activity.

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	Explain the significance of biogeochemical cycles to organisms			
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Week	CAPE Objective	Mode Of Delivery	Use of ICT	Suggested Practical/Assessment
	Explain how energy and nutrients flows within ecosystems	Observation around the environment, research, discussion, food web activity.	Powerpoint	
	Discuss types of interactions between organisms in communities			Site visits on campus
	Explain how ecosystems are self sustaining;	Discussions, research		Analysis of Case study

Week	CAPE Objective	Mode of Delivery	Use of ICT	Suggested Practical/Assessment
FUNDAMENTAL ECOLOGICAL PRINCIPLES (Cont'd)				
WEEK 4 - 6	Explain the process of natural selection and adaptation to the environment;	. Use of real life simulation, lecture, discussion	video, powerpoint	
	Determine population size using	Videos, lecture, practical activity in student's	Laptop	Worksheet – Based on week 1-3

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	appropriate sampling methods; Calculate species diversity;	environment, Use of sampling technique		H.W. Grade
	Analyse the relationship between species diversity and ecosystem stability;	Discussion		

Week	CAPE Objective	Mode of delivery	Use of ICT	Suggested Practical/Assignment
	Identify factors affecting population growth in a natural ecosystem;			
	Explain the concept of carrying capacity;			

Week	CAPE Objective	Mode of delivery	Use of ICT	Suggested Practical/Assignment
(WEEK)	Evaluate human interactions within natural ecosystems			
	Investigate at least two ecosystems in a territory;*			
	Measure and discuss environmental parameters in a given habitat;*		PowerPoint presentation	

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Date	CAPE Objective	Mode of Delivery	Use of ICT	Suggested practical/Assignment
FUNDAMENTAL ECOLOGICAL PRINCIPLES (Cont'd)				
(WEEK 6-8)	<p>Apply scientific method to experimental design and analysis;</p> <p>Present and interpret data using appropriate charts, tables, graphs.</p>		Quizizz online quiz platform	

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Date	CAPE Objective	Mode of delivery	Use of ICT	Practical/Assessment
MODULE 2: HUMAN POPULATION AND THE ENVIRONMENT				
Week 8				

Date	CAPE Objective	Mode of delivery	Use of ICT	Practical/Assessment
Week 9				

Date	CAPE Objective	Mode of delivery	Use of ICT	Practical/Assessment
Week 10				

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Date	CAPE Objective	Mode of delivery	Use of ICT	Practical/Assessment
Week 11				Self-paced testing using Quizlet.com

Week 11

REVISION & CLARIFICATION

END OF TERM EXAMINATIONS

LAB PRACTICALS:

PROJECT:

- Lab 3 – to be done as group work

CLASSWORK:

- Will be given in weeks 2, 7 & 8

HOMEWORK:

- Will be given in weeks 3, 4, 6

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TERM TWO: JAN – APRIL 2021

Date	CAPE Objective	Mode of Delivery	Use of ICT	Practical/ Assessment
MODULE 2: HUMAN POPULATION AND THE ENVIRONMENT				
Week 1	Assess the relationship between people and the environment. Explain the demographic characteristics of human population.			

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	<p>Describe historical trends in human population size.</p> <p>Describe the current geographical distribution of human population growth.</p> <p>Interpret demographic tables, graphs and charts</p> <p>Calculate changes in demographic characteristics</p> <p>Assess the factors affecting population growth rate</p>			
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Date	CAPE Objective	Mode of Delivery	Use of ICT	Practical/ Assessment
Week	Assess the effectiveness of population control methods and measures			Edpuzzle interactive video lessons.
	Assess the relationship between population growth and poverty			
	Describe current geographical variation			

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	<p>in human consumption patterns.</p> <p>Explain the principal way in which people impact on the environment</p> <p>Explain how the impact negatively on the environment</p> <p>Explain how the impacts mentioned in Specific Objective 11 may be mitigated.</p>			
Week 3	<p>Explain the environmental impacts of urbanisation.</p> <p>Explain the relationship between population growth and sustainable development.</p>			<p>1. .</p>

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Date	CAPE Objective	Mode of Delivery	Use of ICT	Practical/Assessment
MODULE 3: SUSTAINABLE USE OF NATURAL RESOURCES				
Week 3 Cont'd	<p>Explain the term natural resources</p> <p>differentiate renewable and non-renewable natural resources exhaustible and inexhaustible resources</p> <p>Differentiate between the consumptive and non-consumptive use of natural resources</p> <p>Identify the major categories of natural resources in Caribbean countries</p>			
Week	<p>Identify the location and distribution of natural resources in the Caribbean.</p> <p>Assess the importance of natural resources in the Caribbean.</p> <p>evaluate factors affecting natural resource use in the Caribbean.</p> <p>Assess the Environmental impact of natural resource use including tourism</p>			

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MODULE 3: SUSTAINABLE USE OF NATURAL RESOURCES (Cont'd)				
	<p>Justify the need for natural resource conservation</p> <p>Describe measures and tools available for natural resource management and conservation</p> <p>Analyse the effectiveness of measures implemented for natural resources management and conservation.</p> <p>Describe ways in which Indegenous people have used and managed their natural resources</p>			

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Week 13				
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LAB PRACTICALS:

PROJECT:

- TBD

CLASSWORK:

- Will be given in weeks 1, 5 and 11

HOMEWORK:

- Will be given in weeks 2, 6 and 10