



CARIBBEAN EXAMINATIONS COUNCIL

**Caribbean Advanced Proficiency Examination
CAPE[®]**

GEOGRAPHY

Effective for examinations from May/June 2010



CXC A21/U2/09

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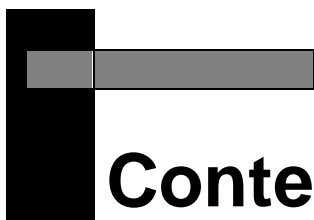
Correspondence related to the syllabus should be addressed to:

The Pro-Registrar
Caribbean Examinations Council
Caenwood Centre
37 Arnold Road, Kingston 5, Jamaica, W.I.

Telephone: (876) 630-5200
Facsimile Number: (876) 967-4972
E-mail address: cxcwzo@exc.org
Website: www.exc.org

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The Garrison, St Michael BB14038, Barbados





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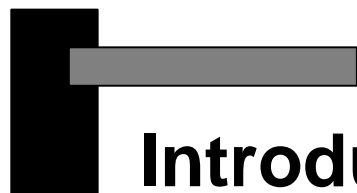
Please note that the syllabus has been revised and amendments are indicated by italics.

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Revised 2009

Please check the website, www.cxc.org for updates on CXC's syllabuses.






Introduction

The Caribbean Advanced Proficiency Examination (CAPE) is designed to provide certification of the academic, vocational and technical achievement of students in the Caribbean who, having completed a minimum of five years of secondary education, wish to further their studies. The examinations address the skills and knowledge acquired by students under a flexible and articulated system where subjects are organised in 1-Unit or 2-Unit courses with each Unit containing three Modules. Subjects examined under CAPE may be studied concurrently or singly.

The Caribbean Examinations Council offers three types of certification. The first is the award of a certificate showing each CAPE Unit completed. The second is the CAPE diploma, awarded to candidates who have satisfactorily completed at least six Units, including Caribbean Studies. The third is the CAPE Associate Degree, awarded for the satisfactory completion of a prescribed cluster of seven CAPE Units including Caribbean Studies and Communication Studies. For the CAPE diploma and the CAPE Associate Degree, candidates must complete the cluster of required Units within a maximum period of five years.

Recognized educational institutions presenting candidates for CAPE Associate Degree in one of the nine categories must, on registering these candidates at the start of the qualifying year, have them confirm in the required form, the Associate Degree they wish to be awarded. Candidates will not be awarded any possible alternatives for which they did not apply.





Geography Syllabus

◆ RATIONALE

Geography is a discipline transcending the boundaries of the natural and social sciences. Central to the development of geographical understanding is the ability to appreciate how physical and human forces interact to give identity to places and to create recognisable spatial patterns. The study of Geography allows a clear understanding of causal relationships at different geographic scales - local, regional and global. It facilitates an understanding of many of the central issues emerging from human exploitation of natural resources.

A course in CAPE Geography must cultivate in students an appreciation of the complexity and inter-relatedness of the environment in the Caribbean and the wider world. Specifically, the course in CAPE Geography must respond to the needs of individuals and society. For individuals, it must respond by deepening their interest in geographical knowledge and skills and enabling them to pursue higher education goals. It must also equip individuals for the increasing number of work situations in which integrative and graphical skills are important. For the society, it must respond by creating an awareness of *the importance of living in harmony with the environment. It must foster an informed respect for cultural heritage and an understanding of the need for the sustainable use of resources and the consequences of their misuse.*

◆ AIMS

The syllabus aims to:

1. develop an understanding of the location and distribution of geographic phenomena;
2. develop an understanding of the nature of Physical and Human Geography and their interactions;
3. explain the processes at work in Physical and Human Geography;
4. develop an understanding of the environmental consequences of human action;
5. develop an appreciation of the current social and economic problems in their geographical setting;
6. encourage an appreciation of the dynamic nature of Geography;

7. help in the understanding and application of spatial models and concepts to the study of Geography;
8. develop an understanding of the range of techniques, the acquisition of practical skills, and an appreciation of information technology that enhance geographical knowledge;
9. create awareness of the variety of Caribbean environments through field activities;
10. promote knowledge and understanding of world geography;
11. develop an understanding of the place of the Caribbean in the wider world;
12. encourage a critical and reflective approach to the study of Geography.

◆ SKILLS AND ABILITIES TO BE ASSESSED

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

- (i) Knowledge and Comprehension;
- (ii) Use of Knowledge;
- (iii) Practical Skills.

Knowledge and Comprehension (KC)

The ability to:

- *define terms and recall facts on a range of geographic phenomena;*
- *describe geographical processes;*
- *describe factors contributing to the development of natural and human environments;*

Use of Knowledge (UK)

The ability to:

- | | | |
|-----------------------------|---|---|
| Application | - | use facts, concepts and principles in unfamiliar situations; |
| Analysis and Interpretation | - | organise information as a basis for classification, apply skills to illustrate geographical phenomena, interpret and make inferences from geographical data, compare and contrast geographical information, and appreciate the limitations of data; |
| Synthesis | - | combine parts to make a meaningful whole and draw conclusions from geographical information; |
| Evaluation | - | make judgements based on evidence and make relevant recommendations. |

Practical Skills (PS)

The ability to:

- use scales for measurement;
- interpret maps and a variety of stimulus material used in Geography;
- collect and collate data used in geographic analysis;
- select techniques and methodologies appropriate to different contexts;
- draw maps, diagrams, sketches and graphs;
- use quantitative techniques appropriately.

◆ PRE-REQUISITES OF THE SYLLABUS

Any person with a good grasp of the Caribbean Secondary Education Certificate (CSEC) Geography Syllabus, or the equivalent, should be able to pursue the course of study defined by this syllabus. However, success in the course of study will also depend on the possession of good verbal and written skills.

◆ STRUCTURE OF THE SYLLABUS

This syllabus consists of two Units of 150 hours each, comprising three Modules of 50 hours each. Each Module is compulsory. Each Unit comprises a physical, human and integrated component.

Each Unit forms a coherent course of study, which should prepare candidates for the world of work, and further studies at the tertiary level.

Unit 1: Population Geography, Geomorphic Processes and Hazards

- Module 1 - Population and Settlement
- Module 2 - Hydrological, Fluvial, Coastal and Limestone Environments
- Module 3 - Natural Events and Hazards

Unit 2: Climate, Economic Activity and Development

- Module 1 - Climate, Vegetation and Soils
- Module 2 - Economic Activity
- Module 3 - Development and *Disparities in Development*



◆ UNIT 1: POPULATION GEOGRAPHY, GEOMORPHIC PROCESSES AND HAZARDS

MODULE 1: POPULATION AND SETTLEMENT

GENERAL OBJECTIVES

On completion of this Module, students should:

1. understand the factors affecting the growth and distribution of human populations and the forms and functions of their settlements;
2. *develop an understanding of demographic processes;*
3. develop appropriate skills and techniques in Human Geography.

SPECIFIC OBJECTIVES

Students should be able to:

1. *explain the factors that influence population distribution using case studies;*
2. assess the methods that depict population distribution;
3. *analyse components of population change;*
4. *analyse the components of population structure;*
5. explain the causes and consequences of population change;
6. assess the method of depicting population density;
7. explain the factors that influence population density;
8. explain the relationship between population density and resources;
9. analyse the types, patterns and factors affecting the location of rural settlements;
10. analyse changes in rural settlements in *more developed countries* (MDCs);
11. *apply urban models to the growth of the city and the development of functional zones in less developed countries* (LDC);
12. explain the processes and problems of urbanisation in MDCs and LDCs and the solutions to urban growth;
13. use topographical maps to analyse population distribution and settlement patterns;
14. apply appropriate investigative and practical techniques.



UNIT 1
MODULE 1: POPULATION AND SETTLEMENT (cont'd)

CONTENT

1. **Population Distribution**

- (i) Factors influencing population distribution on a global scale.
- (ii) *Case studies of factors affecting population distribution at a local and regional scale.*
- (iii) Methods of depicting population distribution- dot, *Lorenz curves*.
- (iv) The merits and demerits of the methods of depicting population distribution.

2. **Population Change - Natural**

- (i) Factors influencing birth rate, death rate, natural increase, fertility rate, *life expectancy, doubling time*.
- (ii) The demographic transition model and its applicability to the experiences of developed and developing countries.
- (iii) *Population policy - case studies of pro-natalist and anti-natalist policies.*

3. **Population Change - Migration**

- (i) Types of migration: *international, internal, permanent, temporary, voluntary, forced*.
- (ii) *Causes and consequences to source (sending) and host (receiving) countries. Case studies.*
- (iii) *Calculation of population growth rates and construction of flow lines.*

4. **Population Structure**

- (i) Population structure in LDCs and MDCs.
- (ii) Construction and interpretation of population pyramids.
- (iii) Interpretation of population structure in LDCs and MDCs.
- (iv) Dependency ratios - calculation and implications.
- (v) *Youthful and ageing populations. Case studies.*



UNIT 1

MODULE 1: POPULATION AND SETTLEMENT (cont'd)

5. Population and Resources

- (i) Population density and method of depicting population density - choropleth maps.
- (ii) The merits and demerits of choropleth maps.
- (iii) Optimum population, underpopulation and overpopulation.
- (iv) *Carrying capacity and factors influencing changes in carrying capacity.*
- (v) Models of population growth in relation to resources - Boserup and Malthus.

6. Settlement Processes

- (i) *Rural settlements - types and patterns.*
- (ii) Physical and human factors affecting the location of rural settlements. Case study.
- (iii) *The effects of changes in rural settlements in MDCs.*
- (iv) The process and problems of urbanization in MDCs and LDCs *including the rank - size rule and primacy.*
- (v) *Causes and consequences of sub-urbanization, counter-urbanization, re-urbanization or gentrification in MDCs.*
- (vi) The models of Burgess, Hoyt, Ullman & Harris *and their applicability to cities in the developing world.*
- (vii) Solutions to urban growth in MDCs and LDCs.

Suggested Teaching and Learning Activities

To facilitate students' attainment of the objectives of this Module, teachers are advised to engage students in the teaching and learning activities listed below.

- 1. Use transparencies to show world population distribution and discuss patterns.
- 2. Use overlays with relief and vegetation to show relationship between population distribution, landforms and vegetation.
- 3. Teach students how to construct and interpret dot maps and choropleth maps using statistics. Care must be taken to distinguish between map representation of distribution and density.



UNIT 1

MODULE 1: POPULATION AND SETTLEMENT (cont'd)

4. Advise students to collect population statistics from the Internet and use these to construct population pyramids for a MDC and a LDC.
5. Have students design and administer questionnaires to conduct a survey on population movement in a neighbourhood.
6. Teach students to construct flowline maps depicting population movement, including migration in and out of the Caribbean.
7. Use topographic maps to identify and analyse settlement patterns.
8. Organise group presentations on urban problems and solutions.

Please note that many of these activities can be used in preparation for the school-based assessment.

RESOURCES

- Chrispin, J. and Francis, J. *Population Resources and Development*, London: Collins, 1996.
- Caribbean Examinations Council *Population Geography, Geomorphic Processes and Hazards, Unit 1, 2009.*
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- Waugh, D. *Geography - An Integrated Approach*, London: Nelson, 2000.

UNIT 1
MODULE 1: POPULATION AND SETTLEMENT (cont'd)

<http://www.popnet.org/>
<http://www.library.advanced.org/174571>
<http://www.members.ad.com/bowenand/101.htm>
<http://www.askjeeves.com/main/metaAnswer.asp>
<http://www.geog.ovc.bc.ca/physgeog/contents/table>
<http://web.unfpa.org/swp.html/>
<http://www.africa2000.com/swdx/charts.htm> <http://www.prb.org>

UNIT 1

MODULE 2: HYDROLOGICAL, FLUVIAL, COASTAL AND LIMESTONE ENVIRONMENTS

GENERAL OBJECTIVES

On completion of this Module, students should:

1. develop an understanding of geomorphic processes;
2. develop appropriate skills and techniques in Physical Geography.

SPECIFIC OBJECTIVES

Students should be able to:

1. explain the main concepts, flows and processes associated with the hydrological cycle, fluvial, coastal and limestone environments;
2. explain hydrological, fluvial, coastal and limestone processes which influence the development of related landforms;
3. analyse the factors which affect the processes operating within drainage basins and within coastal and limestone environments;
4. explain the effects of human and physical interactions within drainage basins and within coastal and limestone environments over time;
5. apply concepts and processes related to drainage basins, rivers, coastal and limestone environments at different geographical scales;
6. *analyse the effect of sea level changes on rivers and coastal landforms;*
7. apply map reading skills, appropriate investigative and practical techniques *to the identification of hydrological, fluvial, coastal and limestone environments.*

CONTENT

1. **Hydrology**
 - (i) Concepts associated with the hydrological cycle and the river basin.
 - (ii) Major flows and factors influencing flows within the hydrological cycle, *including precipitation, stem flow, interception, channel precipitation, pathways of water movement, storage.*



UNIT 1

MODULE 2: HYDROLOGICAL, FLUVIAL, COASTAL AND LIMESTONE ENVIRONMENTS (cont'd)

- (iii) The storm hydrograph and water budgets (spatial and temporal changes).
- (iv) Climatic, physical and biotic (human and vegetation) factors affecting drainage basin characteristics and flows.
- (v) Factors influencing drainage patterns, drainage density *and their measurements, including stream ordering.*

2. Fluvial Processes and Landforms

- (i) Concepts associated with fluvial landforms and processes, (include competence and capacity) erosion, transportation, deposition.
- (ii) The major flows and processes operating within the river channel, including types of flow and variations of flow.
- (iii) *Stream channel morphology, including width, depth and wetted perimeter.*
- (iv) Stream channel characteristics, including meandering.
- (v) The influence of physical, biotic (human and vegetation) and geological factors on the long and cross-profiles of rivers, valleys and changes over time. *Include sea level changes.*
- (vi) The measurement and calculation of stream velocity, stream width, and channel geometry.
- (vii) Weathering and its influence on river basins: aerial and sub-aerial processes.

3. Coastal Processes and Landforms

- (i) Wave formation, structure, types.
- (ii) Major flows (for example, longshore drift) and processes (for example, marine erosion, deposition and wave refraction) operating in coastal environments.
- (iii) The influence of the processes of erosion, transportation and deposition on the development of related landforms, including cliffs, beaches, bars.
- (iv) Formation and distribution of coral reefs (including the theories). *Threats to coral reefs.*



UNIT 1

MODULE 2: HYDROLOGICAL, FLUVIAL, COASTAL AND LIMESTONE ENVIRONMENTS (cont'd)

- (v) The influence of *human* and geological factors (rock type and structure) on the shape and form of coastal landforms.
 - (vi) *The influence of sea level changes on coastal landforms.*
4. **Processes and Landforms in Limestone Environments**
- (i) Characteristics of limestone as a rock.
 - (ii) Chemical weathering *processes and* limestone. *Include formula.*
 - (iii) *Characteristics and development of limestone landscapes. Cite specific examples.*
 - (iv) *Factors affecting the development of limestone landscapes.*

Suggested Teaching and Learning Activities

To facilitate students' attainment of the objectives of this Module, teachers are advised to engage students in the teaching and learning activities listed below.

1. Use diagrams in the teaching of concepts and flows, such as the hydrological cycle, the storm hydrograph and water budgets.
2. Illustrate how the shape of the storm hydrograph reflects factors operating within the drainage basin, for example, in rural and urban environments.
3. Integrate the following concepts in the teaching of hydrological cycle – precipitation, evaporation, evapotranspiration, interception, infiltration, percolation, runoff, overland flow, base flow, through flow, field capacity and soil moisture deficit.
4. Promote a holistic understanding of the drainage basin as being influenced by climatic, physical and biotic factors.
5. Use case studies, for example, Caribbean examples of water budgets or hydrographs, in the teaching and assessment of this topic.
6. Compile a list of interesting websites on hydrology where students can extend their knowledge and view 3-dimensional simulations of flows and processes.



UNIT 1

MODULE 2: HYDROLOGICAL, FLUVIAL, COASTAL AND LIMESTONE ENVIRONMENTS (cont'd)

7. Organize simple field exercises where students can measure and calculate stream velocity, stream width and channel geometry.
8. Select at least two contrasting rivers to be used as case studies in the study of concepts, processes and landforms. This will help students to apply general and theoretical understandings to examples of concrete phenomena.
9. Use topographic maps to show how geology, vegetation and human factors influence the long and cross-profile of rivers.
10. Discuss with students the variety of coastal environments found in the Caribbean, for example, volcanic, limestone, mangrove, coral reefs, deltas and estuaries. This will provide a framework for the study of coastal flows and processes.
11. Teach students the rudiments of drawing and labelling of field sketches.
12. Discuss with students the range of limestone landscapes. Change in limestone landscapes over time should be highlighted.
13. Use topographic maps to integrate concepts related to rivers, coasts and limestone.
14. Incorporate the formula describing the chemical weathering of limestone into the teaching of this topic.

Please note that many of these activities can be used in preparation for the school-based assessment.

UNIT 1

MODULE 2: HYDROLOGICAL, FLUVIAL, COASTAL AND LIMESTONE ENVIRONMENTS (cont'd)

RESOURCES

- Bishop, V. and Prosser, R. *Landform Systems*, London: Collins, 1997.
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<http://www.askjeeves.com/main/metaAnswer.asp>
<http://www.geog.ouc.bc.ca/physgeog/contents/table>
http://www.uwsp.edu/geo/faculty/ritter/geog_101
<http://www.geographyalltheway.com>



UNIT 1

MODULE 3: NATURAL EVENTS AND HAZARDS

GENERAL OBJECTIVES

On completion of this Module, students should:

1. understand *and appreciate* the differences between natural events and natural hazards;
2. *appreciate the relationship between the natural and human environments;*
3. *develop appropriate skills and techniques in Geography.*

SPECIFIC OBJECTIVES

Students should be able to:

1. distinguish *among* a natural event, a natural hazard and a *disaster*;
2. describe the different types of hazards;
3. explain the causes and consequences of flooding;
4. explain as natural events, the formation of plates and the processes involved in the movement of plates;
5. describe the distribution and characteristics of landforms resulting from plate movement;
6. describe the impact of floods, volcanoes and earthquakes as hazards;
7. assess the responses to hazards;
8. *use topographical maps to analyse vulnerability to hazards;*
9. apply appropriate investigative and practical techniques.

UNIT 1
MODULE 3: NATURAL EVENTS AND HAZARDS (cont'd)

CONTENT

1. *Natural Events, Hazards and Disasters*
 - (i) Concept of a natural event, hazard and *disaster*.
 - (ii) Types of hazards - technological, tectonic, climatic and geomorphological.

2. **Flooding**
 - (i) *Types of floods - riverine, coastal, estuarine.*
 - (ii) Causes of floods - types of precipitation events, influence of human activity, sea level changes, drainage basin characteristics.

3. **Plate Tectonics**
 - (i) Continental drift and plate tectonics.
 - (ii) The formation of plates, global distribution and the direction of movement of plates.
 - (iii) Processes operating at different types of plate margins and hot spots.
 - (iv) *Earthquakes - magnitude, relationship to plate boundaries, seismic waves and faulting.*
 - (v) *Distribution and characteristics of volcanoes in relation to plate boundaries.*
 - (vi) Formation of island arcs and origin of fold mountains.
 - (vii) Positive impact of volcanic and earthquake activity.
 - (viii) Value of folded and faulted landscapes.

4. **Volcanoes, Earthquakes and Floods as Hazards**
 - (i) Earthquakes - *primary and secondary effects and factors influencing these effects.*
 - (ii) Types of volcanic eruptions, characteristics of volcanic material, nature of the hazards.
 - (iii) Case studies of the negative impact of floods, earthquakes and volcanic eruptions.
 - (iv) *Photo interpretation, hazard risk maps.*



UNIT 1

MODULE 3: NATURAL EVENTS AND HAZARDS (cont'd)

5. Response to Hazards

- (i) Current capabilities in predicting earthquake, flooding and volcanic activities.
- (ii) Individual and collective responses to earthquake, floods and volcanic hazards before the occurrence and after the occurrence.
- (iii) Government responses to hazards - earthquakes, floods and volcanoes.

Suggested Teaching and Learning Activities

To facilitate students' attainment of the objectives of this Module, teachers are advised to engage students in the teaching and learning activities listed below.

1. Provide students with opportunities for organising and categorising an array of different hazards. In this way students will grasp the variety of types of hazards that occur. This exercise also provides opportunities for teachers and students to choose a hazard for purposes of school-based assessment that is different from those emphasised in the syllabus. Thus, if landslides are more contextually relevant to certain locations than floods, volcanoes or earthquakes, then students and teachers can offer a study of such phenomena for the school-based assessment.
2. Organise discussions with students so that the distinction between natural events and hazards becomes clear. For example, the effect on man is important in defining an extreme event as either a natural event or a hazard. At the same time, the role of man is also important in creating and intensifying the risk of hazards.
3. Vary the kind of studies offered for school-based assessment. For example, if one's context does not offer suitable studies of natural events and hazards, the interpretation of photographs could be used.
4. Explore the use of different resources as an aid in the teaching of this topic. For example, the Internet can provide up-to-date information, such as photographs, statistics and commentaries on news, such as a recent hazard.
5. Advise students to undertake research on natural events and hazards in libraries and on the Internet. Discuss the findings. This would enable students to have a better understanding of the concepts of plate margins, hazards and natural events.
6. Organise a debate between two (2) groups of students on positive and negative effects of volcanic and/or earthquake activity. Positive effects of earthquakes that can be researched by students include value of seismic waves in revealing the interior structure of earth, other scientific value, formation of scenic landscapes, exposure of economic minerals, and formation of waterfalls.



UNIT 1

MODULE 3: NATURAL EVENTS AND HAZARDS (cont'd)

7. Organise visits to areas that have experienced disasters. The visits could assist students to appreciate the causes and consequences of different types of hazards.
8. Advise students to compile records in scrapbooks with photographs and newspaper clippings as sources of current information. This should provide material for students to develop case studies.
9. Utilize documentaries from audio visual and other media to broaden and deepen knowledge of different types of hazards and responses.

Many of these activities can be used in preparation for the school-based assessment.

Note to Teacher:

Transcend the normal disciplinary boundaries of geography. This topic is integrated (physical and human) and interdisciplinary. Thus, there is a general sociological input in this issue that should be teased out in "Response to Hazards". For example, it is evident that how people respond to a disaster is linked to the concept of symbolisation - disasters create an image which is uniform, compelling and shared by those who experience the event. However, victims of earthquakes and other disasters, if not injured, become a significant source of help, if they are trained in first aid.

RESOURCES

- | | |
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| Witherick, M. | <i>Environment and People</i> , Cheltenham: Stanley Thornes Publishers, 1995. |



UNIT 1

MODULE 3: NATURAL EVENTS AND HAZARDS (cont'd)

<http://www.cedera.org>

<http://www.volcano.und.nodak.edu/vw.html>

<http://www.vulcan.wr.usgs.gov/servers/wolcservers.html>

<http://www.geology.usgs.gov/quake.html>

<http://www.gldss7.cr.usgs.gov/neis/eqlists/eqlists.html>

http://www.kto.co.jp/living/diary_of_an_earthquake.html

<http://www.city.kobe.jp/>

<http://www.maff.gov.uk/envirom/fed/>

<http://www.uwiseismic.com>

<http://www.mvo.ms>

◆ UNIT 2: CLIMATE, ECONOMIC ACTIVITY AND DEVELOPMENT

MODULE 1: CLIMATE, VEGETATION AND SOILS

GENERAL OBJECTIVES

On completion of this Module, students should:

1. understand the principles governing climate and weather systems, the development of vegetation and soil;
2. develop appropriate skills and techniques in Geography;
3. apply appropriate investigative and practical techniques.

SPECIFIC OBJECTIVES

Students should be able to:

1. explain the factors affecting the receipt of solar radiation;
2. explain the factors influencing atmospheric circulation;
3. explain the conditions influencing and resulting from moisture in the atmosphere;
4. explain weather systems and their associated conditions;
5. *analyse climate change and global warming;*
6. explain microclimates and the formation of local winds and fogs in mountains and valleys;
7. explain the distribution and the characteristics of the major types of vegetation;
8. explain soil formation, soil types, soil erosion and conservation;
9. explain the interrelationships among climate, soil, vegetation and human activities;
10. use topographical maps to analyse the distribution of vegetation;
11. apply appropriate investigative and practical techniques.

UNIT 2

MODULE 1: CLIMATE, VEGETATION AND SOILS (cont'd)

CONTENT

1. Atmosphere and Weather Systems

- (i) Global heat budget, *including long and short wave radiation, albedo.*
- (ii) Global surface and upper wind circulation, *including jet streams, Rossby waves.*
- (iii) Global patterns of vertical and horizontal temperature and pressure variations.
- (iv) Atmospheric humidity (absolute and relative humidity).
- (v) Condensation, types of precipitation, *types of rainfall and mechanisms of raindrop formation.*
- (vi) Lapse rates.
- (vii) Weather conditions resulting from atmospheric stability, instability and *conditional instability.*
- (viii) Development of high and low pressure systems: anticyclones, depressions, hurricanes, Inter Tropical Convergence Zone (ITCZ) *and weather conditions associated with weather systems, air masses and fronts.*
- (ix) Interpretation of synoptic charts.
- (x) *Long and short-term climate change, global warming – causes, effects, solutions.*
- (xi) The concept of *microclimates.*
- (xii) Urban, rural and mountain microclimates.

2. Vegetation Types

- (i) The distribution and characteristics of tropical rainforest, tropical grasslands, temperate grasslands, northern coniferous forests.
- (ii) The relationships between vegetation types and climate and human factors.
- (iii) The opportunities and problems associated with the development of the tropical rain forests.



UNIT 2

MODULE 1: CLIMATE, VEGETATION AND SOILS (cont'd)

- (iv) Variations in vegetation in response to differences in rock type, altitude, slope angle and drainage in a local area.
- (v) Vegetation studies using quadrats and transects.

3. Soil Formation and Soil Conservation

- (i) The nature and properties of soil: soil profile, texture, structure, organic matter content, water, air.
- (ii) *Processes of soil formation, including weathering, leaching.*
- (iii) The interrelationships among parent material, climate, vegetation, topography, human activity and time on soil formation.
- (iv) The formation *and characteristics* of the soil types which develop under tropical rainforest and temperate grasslands.
- (v) The study of soil horizons in the field.
- (vi) *Soil erosion and effectiveness of soil conservation methods, including agroforestry. Cite specific examples.*

Suggested Teaching and Learning Activities

To facilitate students' attainment of the objectives of this Module, teachers are advised to engage students in the teaching and learning activities listed below.

1. Sketch a profile of the atmosphere to identify zones such as, the troposphere and emphasise that weather changes take place in the troposphere.
2. Provide the data for the construction of temperature/height graphs to teach the concept of lapse rates. Emphasise the different mechanisms influencing the environmental and adiabatic lapse rates.
3. Listen to and look at the weather news on the radio and television to appreciate daily weather phenomena.
4. Practise interpreting synoptic weather charts.
5. Visit a meteorological station to understand the use of instruments in weather forecasting.
6. Use quadrats and transects to study vegetation distribution and density in a local area.



UNIT 2

MODULE 1: CLIMATE, VEGETATION AND SOILS (cont'd)

7. Conduct field trips to study soil profiles.
8. Organise discussions to explain the relationships among climate, vegetation, soil and human actions.
9. Organise field visits to local areas to collect soil samples and conduct simple tests for texture and structure.

Please note that many of these activities can be used in preparation for the school-based assessment.

RESOURCES

- Caribbean Examinations Council *Population Geography, Geomorphic Processes and Hazards, Unit 1, 2009.*
- Caribbean Examinations Council *CAPE Internal Assessment for Geography, 2008.*
- Guinness, P. and Nagle, G. *AS Geography, Concepts and Cases*, London: Hodder and Stoughton, 2000.
- Lenon, Barnaby and Cleves, P. *Fieldwork techniques and projects in Geography* (Landmark Geography), UK: Harper Collins, 1994.
- O'Hare, G. *Soils, Vegetation and Ecosystem*, Edingburgh: Oliver and Boyd, 1999.
- O'Hare, G. and Sweeney, J. *The Atmospheric System*, Edingburg: Oliver and Boyd, 1986.
- Park, C. *Tropical Rainforest*, London: Routledge, 1992.
- Richardson, D. and St. John, P. *Methods of Presenting Fieldwork Data*, UK: The Geographical Association, 1997.
- Strahler, A. and Strahler, A. *Introducing Physical Geography*, New York: John Wiley and Sons, 2005.
- Warburton, P. *Atmospheric Processes and Human Influence*, London: Collins, 1995.

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UNIT 2

MODULE 2: ECONOMIC ACTIVITY

GENERAL OBJECTIVES

On completion of this Module, students should:

1. appreciate the pattern of economic activities;
2. develop appropriate skills and techniques used in Geography;
3. apply appropriate investigative and practical techniques.

SPECIFIC OBJECTIVES

Students should be able to:

1. classify economic activities and examine their changing relative importance;
2. explain the factors influencing the types and organization of agriculture;
3. describe the factors affecting the location and development of manufacturing industries;
4. evaluate the effects of agriculture, *industry and tourism on the environment in MDC's and LDC's*;
5. *evaluate the potential impact of climate change on farming systems*;
6. account for economic changes in agriculture and industry;
7. analyse the factors contributing to the development of tourism;
8. apply models of economic activity;
9. use topographical maps to analyse the location of economic activities;
10. apply appropriate investigative and practical techniques.

CONTENT

1. **Economic Structure**
 - (i) The characteristics of primary, secondary, tertiary, quaternary and *quinary economic activities*.
 - (ii) *The changing relative importance of the types of economic activities, the reasons for the changes and the relationship to economic development.*



UNIT 2

MODULE 2: ECONOMIC ACTIVITY (cont'd)

2. Agriculture

- (i) *Modern farming in the European Union (arable, livestock).*
- (ii) *Traditional (plantation, commercial and non-commercial small farming) and non-traditional agriculture (including aquaculture, hydroponics) in the Caribbean.*
- (iii) The environmental, economic, cultural and political factors which influence farming in the Caribbean and the European Union (for example, transnational trading blocs, government policies, changes in trading agreements).
- (iv) *The environmental impact of and environmental conflicts arising from agriculture in MDCs and LDCs.*
- (v) *Von Thunen's model of rural land use and its applicability at both the local and the international scales.*
- (vi) Graphs to show net profit curves and to calculate locational rents based on *Von Thunen's* model.
- (vii) *The potential impact of climate change on farming systems in LDCs.*

3. Industry

- (i) The relevance of Weber's model of industrial location.
- (ii) *The factors responsible for development and change in a major industrial region in an MDC - raw materials, technology, transport, New Industrial Division of Labour (role of Multi National Corporations (MNC), globalisation, outsourcing, specialization, off-shoring, comparative advantage).*
- (iii) *Case study of industrial change in an LDC.*
- (iv) *Approaches to and problems of industrial development in the Caribbean.*
- (v) Economic and social characteristics of the informal sector.
- (vi) *The environmental impact of industrial development in MDCs and LDCs. Case studies.*



UNIT 2

MODULE 2: ECONOMIC ACTIVITY (cont'd)

Tourism

- (i) *Types of Tourism, Recreation and Leisure.*
- (ii) *The social and economic factors accounting for the growth and changing nature of tourism globally.*
- (iii) *Island and mainland tourism - location, patterns of arrival, organization. Cite specific examples.*
- (iv) *Apply Butler's Tourism Lifecycle Model to a resort in an MDC.*
- (v) *Case Study - Tourism in a Caribbean territory - location, resource base, trends in arrivals, marketing, foreign and/or local entrepreneurship, positive and negative impacts and conflicts.*
- (vi) *Effect of tourism on the environment in LDCs and MDCs.*

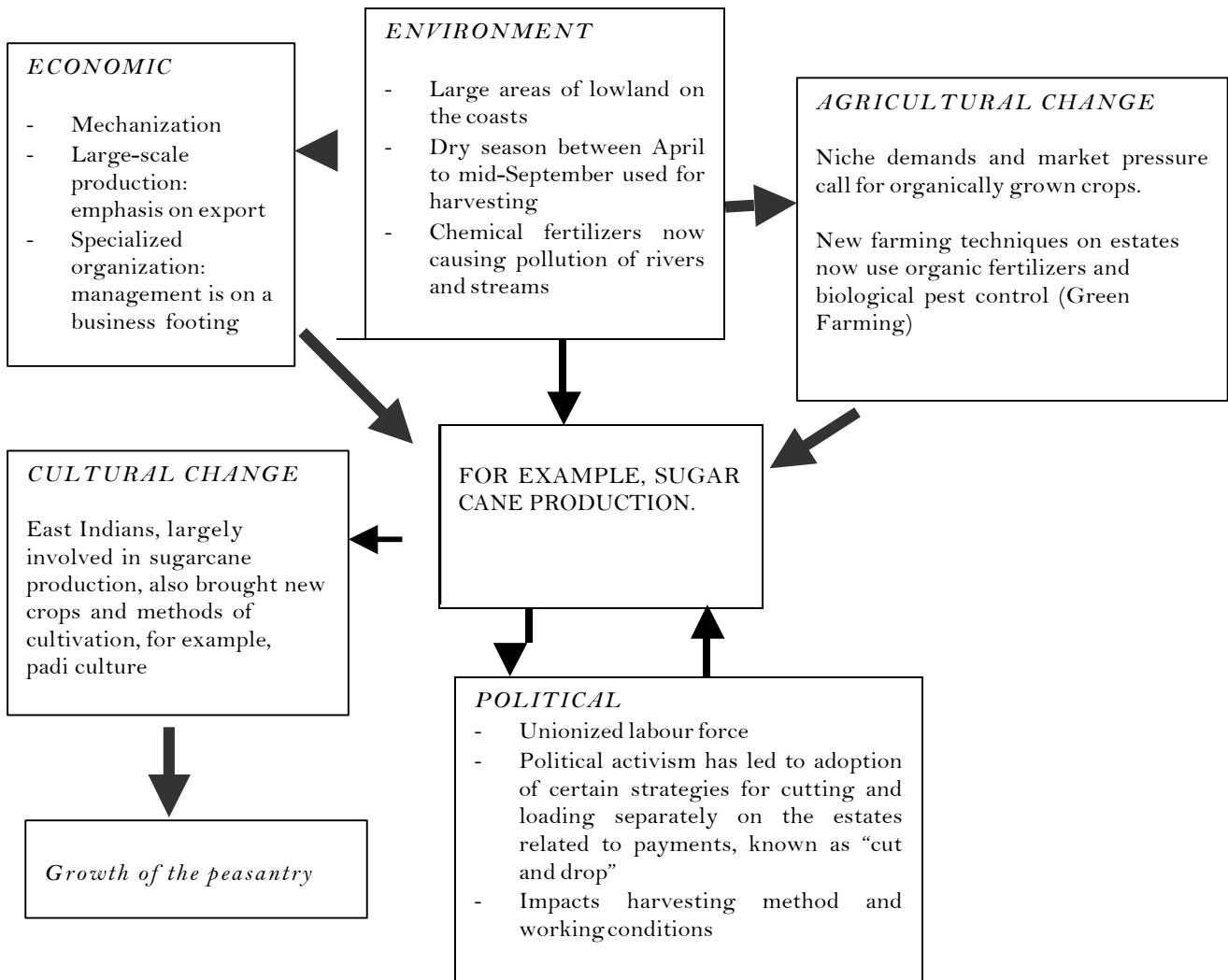
Suggested Teaching and Learning Activities

To facilitate students' attainment of the objectives of this Module, teachers are advised to engage students in the teaching and learning activities listed below.

1. Use pie charts to compare the structure of economic activities (primary, secondary, tertiary, quaternary and quinary) between countries. Students can be guided in the interpretation of these pie charts.
2. Prepare for complex topics, such as "the environmental, economic, cultural and political factors which influence farming" in a particular area by using concept maps as a brainstorming exercise (see next page). The results of such an exercise can provide a useful summary.

UNIT 2
MODULE 2: ECONOMIC ACTIVITY (cont'd)

SOME FACTORS INFLUENCING FARMING IN GUYANA



UNIT 2

MODULE 2: ECONOMIC ACTIVITY (cont'd)

Suggested Teaching and Learning Activities (cont'd)

3. Compare the effects of agriculture on the physical environment in both the LDC's and the MDC's to explore the differences in primary economic activity between these two groups of countries.
4. Compile a list of interesting websites that students can use to develop up-to-date knowledge on economic activity. There are websites about Dominica that offer commentary on the banana dispute between the World Trade Organization (WTO) and European Union (EU) from a Caribbean perspective.
5. Organize students into small groups to research agricultural change at the local level. For example, interviews held with established residents can yield information about farming in an area over the last 40 years. This information can be used to compare with what obtains today. Land use maps can also be used as a source of information.
6. Choose a major industrial region in a MDC, such as the Ruhr that can easily incorporate many of the content areas listed under 'Industry'. For example, the history of the Ruhr will yield traditional factors affecting the location of industry and this can be supported by Weber's model. A study of the area today will show the impact of change, particularly those brought about by new technologies and globalization.
7. Draw from the students' knowledge of the economic and social characteristics of the informal industrial sector. They may have personal knowledge of community members engaged in services, cottage industries and crafts. Compiling what they know about these people's lives can help to formulate categories, such as "social" and "economic".
8. Illustrate tourist arrivals and the growth of tourism by maps showing flow lines, proportional divided circles and bar graphs.
9. Collect information about island and mainland tourism through brochures from travel agencies, from the local tourist board, from Internet sites, advertisements in newspapers and magazines, and from cable television.
10. Use topographical maps to analyse the location of economic activities. For example, students can be asked to explain the distribution of different crops in an area.

Please note that many of these activities can be used in preparation for the school-based assessment.



UNIT 2

MODULE 2: ECONOMIC ACTIVITY (cont'd)

RESOURCES

- Bale, J. *The Location of Manufacturing Industry*, Essex: Oliver and Boyd, 1977.
- Caribbean Examinations Council *A Study Guide for Tourism, Unit 2, Module 2*, 2002.
- Caribbean Examinations Council *CAPE Internal Assessment for Geography*, 2008.
- Lenon, Barnaby and Cleves, P. *Fieldwork techniques and projects in Geography* (Landmark Geography), UK: Harper Collins, 1994.
- Nagle, G. *Tourism, Leisure, Recreation*, London: Nelson, 1999.
- Potter, R. and Barker, D., et.al. *The Contemporary Caribbean*, Harlow UK: Pearson/Prentice Hall, 2004.
- Raw, M. *Manufacturing Industry – The Impact of Change*, London: Collins, 2000.
- Raw, M. and Atkins, P. *Agriculture and Food*, London: Collins, 1995.
- Richardson, D. and St. John, P. *Methods of Presenting Fieldwork Data*, UK: The Geographical Association, 1997.
- Waugh, D. *Geography: An Integrated Approach*, London: Nelson, 2000.

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<http://www.wfp.org/index.html> <http://www.igc.org/wri/wri/wr-98-99/feeding.html>
<http://www.geog.umd.edu/webspinner/bkearney/fall2002/economicdevelopment.html>

UNIT 2

MODULE 3: DEVELOPMENT AND DISPARITIES IN DEVELOPMENT

GENERAL OBJECTIVES

On completion of this Module, students should:

1. understand the nature of development and disparities in development;
2. develop appropriate skills and techniques in Geography;
3. apply appropriate investigative and practical techniques.

SPECIFIC OBJECTIVES

Students should be able to:

1. explain the concept and nature of development, underdevelopment and *sustainable development*;
2. *measure disparities in development*;
3. *apply models of development*;
4. *analyse global disparities in development*;
5. *analyse regional disparities in development*;
6. *analyse local disparities in development*;
7. *evaluate measures to overcome disparities*;
8. *use topographic maps to analyse spatial disparities*;
9. *apply appropriate investigative and practical techniques*.

CONTENT

1. **Development and Under-development**
 - (i) *Definition of development, underdevelopment and sustainable development.*
 - (ii) *Economic and non-economic indicators of development.*



UNIT 2

MODULE 3: DEVELOPMENT AND DISPARITIES IN DEVELOPMENT (cont'd)

- (iii) *Strengths, weaknesses of economic and non-economic indicators of development.*
- (iv) *The representation of the data collected in the form of charts, graphs and maps.*
- (v) *Analysis of disparities from the data collected.*

2. Global Disparities in Development

- (i) *Definitions of poverty, life expectancy, gender.*
- (ii) *Global disparities in income, poverty, life expectancy and education, including gender disparities.*
- (iii) *Rostow's model, Colonialism, Dependency model and their utility in explaining disparities in development between Britain and the Caribbean.*
- (iv) *The concept of Small Island Developing States (SIDS) (include, for example, the role of disasters, debt burden, technology and government policy) and its utility in explaining disparities in development between Britain and the Caribbean.*
- (v) *The consequences of global disparities (economic, political, environmental and social consequences).*

3. Regional Disparities in Development

- (i) *Myrdal's cumulative causation model.*
- (ii) *The application of Myrdal's cumulative causation model to an understanding of regional disparities in income, poverty or health in a specific country.*
- (iii) *Apply Spearman's rank correlation coefficient to measure disparities.*

4. Local Disparities in Development

- (i) *Friedman's core-periphery model.*
- (ii) *The application of Friedman's core-periphery model to an understanding of urban-rural disparities in levels of economic development within a specific country.*
- (iii) *Apply Spearman's rank correlation coefficient to measure disparities.*



UNIT 2

MODULE 3: DEVELOPMENT AND DISPARITIES IN DEVELOPMENT (cont'd)

5. Measures to overcome Disparities

- (i) *Aid-forms or types, global patterns (donors, recipients), impact, effectiveness, conditionalities.*
- (ii) *Debt relief.*
- (iii) *Appropriate technology.*

Suggested Teaching and Learning Activities

To facilitate students' attainment of the objectives of this Module, teachers are advised to engage students in the teaching and learning activities listed below.

1. Provide students with opportunities for classroom discussions so that they are able to clearly understand and differentiate between concepts, for example, students should be able to define the concepts of absolute poverty and relative poverty and explain the difference between them.
2. Students should visit libraries, government statistical offices within their own country and collect data on such aspects as employment levels, mortality rates and make comparisons for different regions within their country. They could also prepare maps to reflect the spatial differences.
3. Students are advised to visit Websites and collect and share information on development theories, for example, Friedman, Myrdal, and also regional statistical information.
4. Students are advised to visit the libraries of various regional institutions, for example, Caribbean Community (CARICOM), Pan American Health Organization, (PAHO), World Health Organization (WHO), Economic Commission for Latin America and the Caribbean (ECLAC) and collect comparative data for Caribbean countries.
5. Teachers are advised to take students on field visits to different regions within their own countries and conduct interviews, take photographs so that comparisons could be made of socio-economic conditions. They could also be encouraged to describe programmes that are undertaken to combat disparities.
6. Students should collect data and compute the Spearman's Rank Correlation Coefficient from the data acquired.
7. Students should utilize the field information they collect for the development of models of regional development.

Please note that many of these activities can be used in preparation for the school-based assessment.



UNIT 2

MODULE 3: DEVELOPMENT AND DISPARITIES IN DEVELOPMENT (cont'd)

RESOURCES

- Allen, T. and Thomas, A. (Eds.) *Poverty & Development in the 21st Century*, New York: Oxford University Press, 2000.
- Caribbean Examinations Council *CAPE Internal Assessment for Geography, 2008.*
- Chrispin, J. and Francis, J. *Population, Resources and Development*, London: Collins, 2000.
- Lenon, Barnaby and Cleves, P. *Fieldwork techniques and projects in Geography* (Landmark Geography), UK: Harper Collins, 1994.
- Morgan, J. *Development, Globalisation and Sustainability*, London: Nelson Thornes, 2001.
- Nagle, G. *Advanced Geography*, New York: Oxford University Press, 2000.
- Nagle, G. *Development and Underdevelopment*, London: Nelson, 1998.
- Potter, R. and Barker, D., et.al. *The Contemporary Caribbean*, Harlow, UK: Pearson/Prentice Hall 2004.
- Richardson, D. and St. John, P. *Methods of Presenting Fieldwork Data*, UK: The Geographical Association, 1997.
- Witherick, M. *Environment and People*, Cheltenham: Stanley Thornes Publishers, 1995.

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<http://www.findarticles.com>
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<http://www.worldbank.org>
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<http://www.ch/>



◆ OUTLINE OF ASSESSMENT

Each Unit of the syllabus is assessed separately. The assessment scheme is identical in each Unit; however, grades are awarded independently.

The Assessment will comprise two components, one external and one internal. Candidates must complete the School-based Assessment for the first Unit that they write. Candidates may carry forward the School-based Assessment mark from the first Unit written to the second Unit (irrespective of the mark earned), or may opt to complete the School-Based Assessment for the second Unit as well.

EXTERNAL ASSESSMENT FOR EACH UNIT (80%)

Written Papers – 4 hours 30 minutes

Paper 01 (1 hour 30 minutes)	The paper will consist of forty-five (45) compulsory multiple-choice items. There will be fifteen (15) items based on each Module.	30%
Paper 02 (3 hours)	<u>Section A</u> This section comprises one compulsory question, testing the application of practical skills from the three Modules. <u>Section B</u> This section will consist of six extended-response questions; two questions based on each Module. Candidates will be required to answer one question from each Module; a total of THREE questions.	50%

SCHOOL-BASED ASSESSMENT FOR EACH UNIT (20%)

Paper 03/1

A research paper of approximately 1500 words, based on any topic covered in any of the three (3) Modules of a Unit.

Candidates who, in the same year, register for both Units of CAPE Geography may opt to:

- (a) submit a single School-Based Assessment assignment for both Units; or*
- (b) submit a separate School-Based Assessment assignment for each Unit.*

Candidates who are doing two Units of CAPE Geography at the same sitting must indicate from which Unit the School-Based Assessment assignment was selected.

If a candidate is repeating a Unit, the moderated School-Based Assessment score obtained for that Unit may be used for both Units taken at the same time.



Paper 03/2

Private candidates are required to write an Alternative Paper - Paper 03/2. Details are on page 43.

MODERATION OF SCHOOL-BASED ASSESSMENT

All School-based Assessment Record Sheets and sample of projects must be submitted to the Local Registrar who will forward these to CXC by May 31st of the year of the examination. A sample of projects will be requested by CXC for moderation purposes. These samples will be re-assessed by CXC examiners who moderate the School-Based Assessment. Teachers' marks may be adjusted as a result of moderation. The Examiner's comments will be sent to schools.

Copies of the students' projects that are not submitted must be retained by the school until three months after publication by CXC of the examination results.

ASSESSMENT DETAILS

External Assessment by Written Papers (80% of Total Assessment)

Paper 01 (1 hour 30 minutes - 30% of the Total Assessment)

1. *Composition of Paper*

- (i) *This paper will consist of forty-five (45) multiple-choice items. There will be fifteen (15) items based on each Module.*
- (ii) *All items are compulsory.*

2. **Syllabus Coverage**

- (i) Knowledge of the entire syllabus is required.
- (ii) The intention of this paper is to test candidates' knowledge across the breadth of the syllabus.

3. *Question Type*

Questions may be presented using a combination of words and a variety of stimuli including photographs, maps and diagrams.

4. **Mark Allocation**

- (i) One mark will be assigned for each *item*.
- (ii) The *maximum mark* available for this paper is 45 and will be weighted to 81.
- (iii) This paper contributes 30% towards the final assessment.
- (iv) *Marks will be awarded for knowledge, use of knowledge and practical skills.*



5. Use of Calculators

Candidates are allowed to use non-programmable calculators in the examinations. Each candidate is responsible for providing his or her own calculator and *for ensuring* that it functions throughout the examination.

6. Use of Geometrical Instruments

Candidates are allowed to use geometrical instruments in the examinations. Each candidate is responsible for providing his or her own instruments.

Paper 02 (3 hours - 50% of Total Assessment)

1. Composition of Paper

- (i) Section A consists of one compulsory question, based on the three Modules and examines the application of practical and map-reading skills.
- (ii) Section B consists of three pairs of free-response questions with each pair based on a different Module. Candidates are required to select and answer three questions, one question from each pair (*Module*).

2. Syllabus Coverage

- (i) Each question may focus *on* or develop a single theme or several unconnected themes.
- (ii) Comprehensive knowledge of the syllabus is required.

3. Question Type

- (i) The question in Section A is *arranged* into several subtasks which examine the application of practical skills.
- (ii) The questions in Section B are *of* a free-response form and will require extended *responses or essays*.

4. Mark Allocation

- (i) The paper is worth 135 marks.
- (ii) Section A - *The maximum mark available for this section is 45 with 15 marks allocated to each Module.*



- (iii) Section B - The *maximum mark available* for this section is 90. Each Module is allocated 30 marks. *In essays, marks will be awarded for the introduction and conclusion.*
- (iv) *The marks will be awarded for Knowledge, Use of Knowledge and Practical Skills.*

5. Use of Calculators

Candidates are allowed to use non-programmable calculators in the examinations. Each candidate is responsible for providing his or her own calculator and *for ensuring* that it functions throughout the examination.

6. Use of Geometrical Instruments

Candidates are allowed to use geometrical instruments in the examinations. Each candidate is responsible for providing his or her own instruments.

Paper 03/1 – School-Based Assessment (20% of Total Assessment)

School-Based Assessment is an integral part of student assessment in the course covered by this syllabus. It is intended to assist students in acquiring certain knowledge, skills and attitudes that are associated with the subject. The activities for the School-Based Assessment are linked to the syllabus and should form part of the learning activities to enable the student to achieve the objectives of the syllabus.

During the course of study for the subject, students obtain marks for the competence they develop and demonstrate in undertaking their School-Based Assessment assignment. These marks contribute to the final marks and grades that are awarded to students for their performance in the examination.

The guidelines provided in this syllabus for selecting appropriate tasks are intended to assist teachers and students in selecting assignments that are valid for the purpose of School-Based Assessment. The guidelines provided for the assessment of these assignments are intended to assist teachers in awarding marks that are reliable estimates of the achievement of students in the School-Based Assessment component of the course. In order to ensure that the scores awarded by teachers *at a centre* are not out of line with the CXC standards, the Council undertakes the moderation of a sample of the School-Based Assessment assignments marked *from each centre*.

School-Based Assessment provides an opportunity to individualise a part of the curriculum to meet the needs of students. It facilitates feedback to the student at various stages of the experience. This helps to build the self-confidence of students as they proceed with their studies. School-Based Assessment also facilitates the development of the critical skills and abilities emphasised by this CAPE subject and it enhances the validity of the examination on which candidate performance is reported. School-Based Assessment, therefore, makes a significant and unique contribution to both the development of relevant skills, and the testing and rewarding of students for the development of those skills.

Skills to be Assessed

The following practical skills will be assessed:

1. The use of scales for measurement;
2. The ability to read maps as well as a variety of stimulus material used in Geography;
3. The collection and collation of data used in geographic analysis;
4. The selection of techniques and methodologies appropriate to different contexts;
5. The drawing of maps, diagrams, sketches and graphs;
6. The appropriate use of quantitative techniques.

Paper 03/1

School-Based_Assessment will take the form of a research project. This research project will incorporate the skills outlined above and must emphasize the relevant areas outlined in Table 1 below.

The skills that should be selected for assessment from each Unit are presented in the table below.

Table 1

UNIT 1	UNIT 2
<p>The project must involve the use and interpretation of one or more of the following:</p> <ul style="list-style-type: none"> • Questionnaire • Dot maps, choropleths • Population pyramids • Proportional circles, flowlines • Maps • Stream velocity • Soil moisture, water budgets • Storm hydrograph • Photographs • Diagrams • Field sketches 	<p>The project must involve the use and interpretation of one or more of the following:</p> <ul style="list-style-type: none"> • Questionnaire • Synoptic chart • Weather instruments • Vegetation sampling • Soil horizons • Graphs, flowlines • Choropleths • Isolines • Sampling techniques • Maps • Charts and statistics • <i>Spearman's rank correlation coefficient</i>

The topic selected for the research project can be drawn from the *practical areas of the* content listed in each Module, for example:

1. Analysis of the population structure of two Caribbean islands (Unit 1, Module 1);
2. *Measurement* of stream velocity (Unit 1, Module 2);
3. Community response to hazards (Unit 1, Module 3);
4. Variations in temperature with altitude (Unit 2, Module 1);
5. *An analysis* of informal commercial activity (Unit 2, Module 2);
6. *An analysis of* disparities in development within countries (parishes, *counties*), (Unit 2, Module 3).

The following steps are intended to provide further guidance in completing the research project:

1. Identify the skills that are to be used in the investigation.
2. The area(s) must be chosen from those listed for the relevant Unit as indicated in Table 1, for example, dot maps, choropleth, diagrams or field sketches. Please note that field sketches are done in the field and not sketched from photographs. Photographs should not be used in place of field sketches.
3. The project should focus on a specific geographical problem or an investigation. Examples of suitable topics are:
 - (a) For Unit 1, **“The purpose of this investigation is to use dot maps to analyse how the population distribution in Montserrat has changed over the last ten years.”**
 - (b) For Unit 2, **“The aim of this investigation is to examine the effects of rock types on the development of soil profiles in two (2) areas.”**
4. The skill to be used should be made clear in the statement of purpose or in the methodology.
5. If the project is based on a practical exercise in the field, there must be evidence that information was collected in the field and not from a secondary source.
6. For the example given in 3 (a) above, some important steps are:
 - (a) Constructing dot maps to show population changes over the ten-year period;
 - (b) Describing the changes shown on the maps;
 - (c) Referring to the maps in the description and analysis in order to maximise credit for integration;
 - (d) Integrating the maps into the body of the report – the maps should be neat, well labelled with title and key;

- (e) Focusing on the maps in the investigation and not using them as mere illustrations.
7. For the example given in 3 (b) above, some important steps are:
- (a) Conducting investigations in the field;
 - (b) Drawing detailed soil profiles for each site;
 - (c) Describing each soil profile;
 - (d) Accounting for any differences seen in the two profiles based on information collected in the field;
 - (e) Integrating the profiles into the body of the report - the profiles should be neat and well labelled;
 - (f) Focusing on the information shown in the profiles - information from the text may be used to support the analysis.
8. (a) For an investigation involving the use and interpretation of weather instruments, the data must be collected with the instruments and not from a secondary source.
- (b) For an investigation involving the use of a quadrat in vegetation sampling, the results must be meaningful, for example, the sampling may be used to show *how* vegetation varies with soil type, altitude or some other variable.
9. Reminders:
- (a) The report should not include information that is downloaded directly from the Internet.
 - (b) It is not expected that all the areas in the Unit will be included in any one investigation.
 - (c) The topic should be manageable.
 - (d) The word limit should be observed.

GUIDELINES FOR COMPILING AND ASSESSING THE RESEARCH PROJECT

1. The research project will involve at least one of the practical skills shown in Table 1 on page 37.
2. The maximum mark for the projects would be 54.
3. The project is to be marked by the teacher. CXC will require a sample of the projects.
4. The suggested format for the research project is as follows:

(a)	Cover page - with title, name, date, candidate number	2 marks
(b)	Statement(s) of purpose of investigation - with elaboration of aims	3 marks
(c)	Methodology	6 marks
(d)	Description of data with maps and diagrams, analysis and discussion	29 marks

This may be presented as one chapter, incorporating description of data, analysis of data and discussion of findings.

OR

As two (2) chapters, the first chapter, a description of the data, the second chapter, analysis of data and discussion of the findings.

In either case, maps and diagrams must be fully integrated within the text. Discussions must be related to previous studies and/or textbook information.

- | | | |
|-----|---|-----------|
| (e) | Conclusion - Answers to the purpose; includes a summary of findings | 4 marks |
| (f) | Recommendations, based on methods or on findings | 2 marks |
| (g) | Bibliography | 3 marks |
| (h) | Communication of Information | 5 marks |
| (i) | Exceeding word limit (1500 words) by 200 words | - 5 marks |

5. The teacher is required to mark the projects and marks are to be recorded out of 54. No fractional marks *should be awarded*.
6. The school must retain all projects for at least three months after publication of the results since additional projects may be requested by CXC for moderation purposes.
7. The reliability of the marks awarded is a significant factor in the School-Based Assessment and has far reaching implications for the candidate's final grade. Teachers are asked to note the following:
 - (a) the relationship between the marks for the project and those submitted to CXC on the school-based assessment form should be clearly shown;
 - (b) the teacher is required to allocate one-third of the total score for the School-Based Assessment to each Module. Fractional marks should not be awarded. In cases where the mark is not divisible by three, then:
 - (i) when the remainder is 1 mark, the mark should be allocated to Module 3;
 - (ii) when the remainder is 2, then a mark should be allocated to Module 3 and the other mark to Module 2.for example, 35 marks would be allocated as follows:
 $35/3 = 11$ remainder 2 so 11 marks to Module 1 and 12 marks to each of Modules 2 and 3.
 - (c) the standard of marking should be consistent.



SCHOOL-BASED ASSESSMENT – GENERAL GUIDELINES FOR TEACHERS

1. For each Unit, marks must be submitted to CXC on the School-Based Assessment forms provided. The forms should be despatched through the Local Registrar for submission to CXC by May 31st of the Year of the examination.
2. The project for each Unit should be completed in duplicate. The original should be submitted to CXC and the copy kept by the school.
3. **The research project should focus on at least one specific objective in the Unit.**
4. **Candidates who do not fulfil the requirements for the School-Based Assessment will be reported “Ungraded”.**

CRITERIA FOR MARKING THE RESEARCH PROJECT

- | | |
|--|----------------|
| 1. Cover Page - Title page, name, date | (2) |
| • Title clearly understood, concise, relates to project | 2 |
| • Title clearly understood and relates to project | 1 |
| 2. Statements of Purpose of Investigation | (3) |
| • Context and purpose very clearly stated and explained | 3 |
| • Context and purpose clearly stated and explained | 2 |
| • Context and purpose stated but unclear | 1 |
| 3. Methodology | (6) |
| • Methods of data collection, procedures very clearly stated and described | 6
4 - 5 |
| • Methods of data collection, procedures clearly stated and described | 2 - 3 |
| • Methods of data collection, procedures not clearly stated or described | 1 |
| • Methods of data collection, procedures unclear and description weak | |
| 4. (a) Presentation | (8) |
| • Extremely neat <i>with</i> adequate number of diagrams <i>that are</i> relevant, accurate <i>and</i> well labelled | 7 - 8 |
| • Very neat <i>with</i> adequate number of diagrams <i>that are</i> relevant <i>and</i> labelled satisfactorily | 5 - 6
3 - 4 |
| • Neat <i>with</i> limited number of diagrams <i>that are</i> relevant but not well labelled | 1 - 2 |
| • Untidy Maps and/or diagrams attempted | |
| (b) Use of Maps, Diagrams with Text | (3) |
| • Diagrams well integrated into text, appropriate reference made to each diagram | 3 |
| • Diagrams satisfactorily integrated into text, appropriate reference made to some diagrams | 2 |
| • Attempt to integrate diagrams into text | 1 |

CRITERIA FOR MARKING THE PROJECT (cont'd)

5. Analysis of Data		(23)
(a) <i>Description of Findings (8)</i>		7 - 8
• Very coherent organization of comprehensive and accurate data		5 - 6
• Fairly coherent organization of adequate and fairly accurate data		3 - 4
• Satisfactory organization of limited and fairly accurate data		1 - 2
• Organization of limited and fairly accurate data attempted		
(b) <i>Analysis and Discussion of Findings (10)</i>		
• Logical and coherent organization of data, points well developed, supported and valid		9 - 10
• Data fairly well organised, points fairly well developed and supported		7 - 8
• Satisfactory arguments including some valid points supported by findings		5 - 6
• Satisfactory arguments including some points supported by findings		3 - 4
• Limited arguments with few points supported by findings		1 - 2
(c) <i>Communication of Information (5)</i>		
• Few grammatical errors or flaws and extensive use of appropriate geographical terms		5
• Few grammatical errors or flaws and good use of appropriate geographical terms		4
• Some grammatical errors or flaws and limited use of appropriate geographical terms		3
• Some grammatical errors or flaws and poor use of appropriate geographical terms		2
• Several grammatical errors or flaws and poor use of appropriate geographical terms		1
6. Conclusion		(4)
• Conclusion clear, based on findings, valid and related to the purposes of the project		4
• Conclusion clear, based on findings and related to the purpose of the project		3
• Conclusion relates to the purpose of the project		2
• Conclusion based on some findings		1
7. Recommendations		(2)
• At least two recommendations fully derived from findings or methodology		2
• One recommendation based on findings and/or methodology		1
8. Bibliography		(3)
• Alphabetical order by author with title, publisher and date - for several relevant, up-to-date references		3
• Alphabetical order by author with title, publisher, and date - for a minimal number of relevant, up-to-date references		2
• References relevant and written in a consistent manner		1
9. Exceeding the word limit by more than 200 words		(-5)
Total		(54)



◆ REGULATIONS FOR PRIVATE CANDIDATES

Paper 03/2 (1 hour 30 minutes)

1. *Composition of Paper*

This Paper is based on case studies relating to the content of all three Modules of the Unit assessed. There will be three compulsory questions, one based on each Module. The three questions may be divided into parts. The Paper tests skills similar to those listed in the *section on the School-Based Assessment (Paper 03/1)*.

2. **Question Type**

Each question requires candidates to respond either in the form of an extended essay or a short paragraph.

3. **Mark Allocation**

The Paper is worth 54 marks (18 marks per question) and contributes 20% toward the final assessment.

4. **Award of Marks**

Marks are awarded for the cognitive abilities, *Knowledge, Use of Knowledge or Practical Skills that are* exhibited.

5. **Use of Calculators**

Candidates are allowed to use non-programmable calculators in the examinations. Each candidate is responsible for providing his or her own calculator and for *ensuring* that it functions throughout the examination.

6. **Use of Geometrical Instruments**

Candidates are allowed to use geometrical instruments in the examinations. Each candidate is responsible for providing his or her own instruments.

◆ REGULATIONS FOR RESIT CANDIDATES

Resit candidates must complete Papers 01 and 02 and Paper 03 of the examination for the year for which they re-register. Resit candidates may elect not to repeat the School-Based Assessment component, provided they re-write the examination no later than two years following their first attempt.

Candidates may opt to complete a School-Based Assessment (SBA) for each Unit written or may opt to re-use another SBA score which satisfies any of the conditions listed at (i) to (ii) below.



- (i) *A candidate who re-writes the examination in the same Unit within two years may re-use the moderated SBA score earned in the previous sitting within the preceding two years. Candidates re-using SBA scores in this way must register as “Resit candidates” and provide the previous candidate number.*
- (ii) *For CAPE Geography, candidates who enter for Unit 1 or Unit 2, in different sittings, may re-use a moderated SBA score obtained in a previous sitting of either Unit within the preceding two years. The SBA score may be re-used in either Unit, or in both Units, irrespective of the Unit in which it was first obtained. Candidates re-using SBA scores in this way must register as ‘Transfer’ candidates.*

All resit candidates may enter through schools, recognised educational institutions, or the Local Registrar’s Office.

◆ ASSESSMENT GRID

The Assessment Grid for each Unit contains marks assigned to papers and to Modules and the percentage contribution of each paper to the total score.

PAPERS	Module 1	Module 2	Module 3	Total	(%)
External Assessment Paper 01 <i>1 hour 30 minutes</i> Multiple-Choice Items	15 (raw) 27 (wtd)	15 (raw) 27 (wtd)	15 (raw) 27 (wtd)	45 (raw) 81 (wtd)	(30)
Paper 02 <i>3 hours</i> Section A (Practical Skills)	15	15	15	$\left. \begin{array}{l} 45 \\ 90 \end{array} \right\} 135 \left. \right\} (50)$	
Section B (Free Response)	30	30	30		
School-Based Assessment Paper 03/1 Paper 03/2 <i>1 hour 30 minutes</i>	18	18	18	54	(20)
Total	90	90	90	270	100

◆ GLOSSARY

KEY TO ABBREVIATIONS

K - Knowledge; UK - Use of Knowledge; PS Practical Skills

WORD	DEFINITION	COGNITIVE LEVEL
Advise	Write an extended answer identifying the issue; Suggest solution or action to be taken	UK
Analyse	Examine methodically and in detail the structure of an object or a process or a situation and then draw (a) conclusion(s).	UK
Annotate	Add a brief note to label	K
Apply	Use knowledge and or principles to solve problems.	UK
Assess	Present reasons for the importance of particular structures, relationships or processes.	UK
Calculate	Arrive at a solution to a numerical problem. Steps should be shown and units included.	PS
Cite	Provide a quotation or a reference to the subject.	K
Classify	Divide into groups according to observable characteristics.	UK
Comment	State opinion or view with supporting reasons.	UK
Compare and contrast	Write an extended answer stating, describing and elaborating on the similarities and differences; and providing specific examples of these similarities and differences.	UK
Construct	Use a specific format to make or draw a graph, histogram, pie chart or other representation using numerical data or material provided or drawn from practical investigations, build (for example, a model), draw scale diagram. Such representations should bear a title, appropriate headings and legend where appropriate.	PS
Deduce	Make a logical connection between two or more pieces of information; use data to arrive at a conclusion.	UK

WORD	DEFINITION	COGNITIVE LEVEL
Define	Provide a precise statement giving the nature or the scope or the meaning of a term; or using the term in one or more sentences so that the meaning is clear and precise.	K
Demonstrate	Show how or direct attention to an area or object of focus.	PS
Derive	Deduce, determine or extract from data by a set of logical steps, some relationship, formula or result.	UK
Describe	Provide statements of the features or characteristics of a situation.	K
Determine	Calculate the value of a physical quantity.	PS
Develop	Elaborate on or expand an idea or argument with supporting reasons.	UK
Differentiate or Distinguish	State or explain briefly those differences between or among items or situations which can be used to define them or place them into separate categories.	K
Discuss	Write an extended answer defining key concepts, stating what is, exploring related concepts and principles, present reasoned arguments for and against, using detailed examples but not necessarily drawing a conclusion.	UK
Draw	Make a line representation of specimens, objects to show accurate relationship between the parts, to show location.	PS
Estimate	Make an approximate quantitative judgement	UK
Evaluate	Weigh evidence and make judgements based on given criteria. The use of logical supporting reasons for a particular point is more important than the view held; usually both sides of an argument should be considered.	UK
Explain	Provide statements on what happened, how it happened and why it happened.	K
Find	Locate a feature or obtain a solution (for example, from a graph).	PS

WORD	DEFINITION	COGNITIVE LEVEL
Formulate	Devise a hypothesis.	PS, AK
Give	Provide short, concise responses.	K
Identify	Name specific components or features. Point out, indicate without explanation or recognise and select.	K
Illustrate	Show clearly by using appropriate examples, diagrams or sketches	PS
Interpret	Explain the meaning of.	K
Investigate	Use simple systematic procedures to observe, record data and draw logical conclusions.	PS, AK
Justify	Explain the correctness of	UK
Label	Add names to identify structures or parts indicated by pointers Use headings only.	K
List	Take accurate quantitative readings using appropriate instruments.	K
Measure		PS
Name	Provide actual names (but no other details).	K
Note	Write observations.	PS
Observe	Pay attention to details which characterize a change, specimen, or reaction taking place; to examine and note.	PS
Outline	Give basic steps only. Provide main points, or features only without details	K
Plan	Prepare to conduct an investigation.	UK, PS
Predict	Use information provided to arrive at a likely conclusion or suggest a possible outcome.	UK
Record	Write an accurate description of the full range of observations made during a given procedure. This includes the values for any variables being investigated. Where appropriate, data may be depicted in graphs, histograms or tables.	PS

WORD	DEFINITION	COGNITIVE LEVEL
Relate	Show connection between; explain how one set of facts or data depend on others or are determined by them.	UK
Sketch	Make a simple freehand diagram showing relevant proportions and any important details	PS
State	Provide factual information in concise terms; outlining explanations	UK
Suggest	Offer an explanation deduced from information provided or previous knowledge and consistent with subject knowledge	UK

Western Zone Office
13 May 2009