

The Ministry of Education THE CROPPER FOUNDATION

Follow-up Seminar for CAPE and CSEC Science Teachers

Venue: EMA Conference Room

Thursday 8th November 2007

8:00 a.m. – 3:15 p.m.

Seminar Objectives

This one-day seminar will follow-up on the Seminar for CAPE and CSEC Science teachers held on June 16th 2006. The specific objectives of the Seminar are to:

1. Discuss with teachers any progress /setbacks /developments since the last seminar, focusing especially on lessons and best practices which can be shared amongst the group;
2. Provide an overview of the education projects that have been prioritized by The Cropper Foundation and the Ministry of Education for 2007/2008; and receive feedback from teachers on the relevance of these projects to their needs, and ideas for refining the scope and content of the projects;
3. Present and discuss some key concepts, terms, case studies and examples related to sustainable development issues covered in the CAPE and CSEC science syllabi.

Proposed Programme

Chair – Dr. John Agard

8:00 a.m.	Registration (and showing of a DVD on Nelson Island)
9:00 a.m. – 9:20 a.m.	<ul style="list-style-type: none">▪ Welcome (<i>The Environmental Management Authority</i>)▪ Remarks from the Ministry of Education (<i>Henry Saunders</i>)▪ Objectives of the Seminar (<i>Keisha Garcia</i>)
9:20 a.m. – 10:15 a.m.	<p><u>Session 1:</u></p> <ul style="list-style-type: none">▪ Recap of the main problems and needs identified by teachers at the Teachers' seminar of June 16th 2006 (<i>Joe Cazabon – St. Mary's College</i>)▪ Discussion:<ul style="list-style-type: none">- have any of these problems been addressed – by curriculum revision; by teachers themselves; by the Ministry of Education?- are there additional problems?- lessons and best practices that can be shared
10:15 a.m. – 10:30 a.m.	<i>Coffee break</i>

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10:30 a.m. – 1:00 p.m.

Session 2:

Overview presentation: priority projects for 2007/2008 identified by The Cropper Foundation and the Ministry of Education for meeting the needs of teachers under the CAPE and CSEC syllabi related to environment/sustainable development (*Keisha Garcia*)

- DVD on the Five Islands
- Teaching brochure and posters on the Northern Range
- Glossary of Sustainable Development Terms and Concepts
- Pilot tutorial for teachers, focusing on Biodiversity
- Development of a case study booklet for CAPE Environmental Sciences, Geography and Biology
- Poster on the Caribbean Sea Assessment

Discussion:

- Feedback from teachers on the usefulness and feasibility of the projects proposed
- Refinement of the scope of projects, especially the case study booklet
- Identification of teachers/ schools to be involved in the development of the case study booklet
- Additional ideas for projects.....

1:00 p.m. – 2:00 p.m.

Lunch

(optional discussion of an idea for catalyzing a 'Friends of the Northern Range' group)

2:00 p.m. – 3:00 p.m.

Session 3:

Presentation on Sustainable Development: terms, concepts, key information and examples (*Simone Dieffenthaler and Nicola Cross*)

Discussion

- sustainable development issues which are most problematic for teachers, and ways of addressing these
- information sources

3:00 p.m. – 3:15 p.m.

Summary and Closing remarks (*John Agard and Keisha Garcia*)

3:15 p.m.

Adjourn

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DRAFT WORKING PAPER

BACKGROUND

In June 2006, The Cropper Foundation, the Ministry of Education and the Environmental Management Authority jointly hosted a seminar for CAPE and CSEC science teachers to explore problems and needs in meeting the curriculum requirements; and to discuss ways in which The Cropper Foundation, through its Programme in Environment and Resource Education (IERE), might help to address some of these needs.

The main categories of problems/ needs expressed by teachers are summarized as follows:

- Inadequate resource materials for meeting the requirements under the new CAPE syllabi, and under some section of the CXC syllabi
- In some cases, the requirements under the CAPE syllabi are vague, and there is a mismatch between the syllabi requirements and examination questions
- Unrealistic timeframe for completing syllabi
- Poor networking among teachers
- Meeting fieldwork requirements is difficult

In the wake of the seminar, and on the basis of ongoing discussions with teachers, The Cropper Foundation and the Ministry of Education have embarked on a joint programme to help support the needs of the formal school system especially at the CAPE and CSEC levels. As a part of this programme, a number of very specific activities and products have been planned for completion in 2007/2008 – a brief description of each is given in Annex 1.

The current seminar seeks to follow-up on the seminar in June 2006, and will specifically aim to:

1. Discuss with teachers any progress /setbacks /developments since the last seminar, focusing especially on lessons and best practices which can be shared amongst the group;
2. Provide an overview of the education projects that have been prioritized by The Cropper Foundation and the Ministry of Education for 2007/2008; and receive feedback from teachers on the relevance of these projects to their needs, and ideas for refining the scope and content of the projects;
3. Present and discuss some key concepts, terms, case studies and examples related to sustainable development issues covered in the CAPE and CSEC science syllabi.

The seminar is divided into three sessions, in keeping with the above objectives.

- Session 1: Progress since June 2006
- Session 2: Priority projects identified by the Ministry of Education and The Cropper Foundation
- Session 3: Sustainable Development: an introduction

A series of questions, to assist in more effective facilitation of discussions, is given below.

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POINTS AND ISSUES FOR DISCUSSION

Session 1: Progress since June 2006

How are teachers and students generally coping with the CAPE and CSEC science syllabi, especially the CAPE Environmental Sciences syllabus?

- Have the problems identified by teachers at last year's seminar persisted? If so, which, and why?
- Are there new problems that have emerged?
 - What factors have led to the problems?
- Have any problems been resolved, at least in part? What has led to any resolutions identified?
 - Have there been any changes to the syllabi/curricula in the past year which take into consideration the problems being faced by teachers?
 - Have there been any moves to better prepare the students entering CAPE for meeting the requirements?
 - Have teachers come together, whether within any one school or across schools, to deal with any of the problems identified? If so, what activities have been put in place or are planned? This can help to generate ideas that can be extended to other schools, or to other groups.
 - Have teachers been able to use the information on the Northern Range, Caribbean Sea and Millennium Ecosystem Assessments, presented at last year's seminar, to help meet specific needs and requirements? If so, how?
 - Have other organizations/institutions produced materials/ provided opportunities that have been useful to teachers? If so, which are these?
- What support can be provided by the Student Support Services of the Ministry of Education?

Session 2: Priority projects identified by the Ministry of Education and The Cropper Foundation

The Ministry of Education and The Cropper Foundation have embarked on a joint programme to support aspects of the school syllabi related to environment/sustainable development. The overarching objectives of the programme are:

1. To assist in the provision of resource materials for meeting CAPE and CXC syllabi requirements related to environment/ sustainable development through:
 - identification and assimilation of relevant, available resources;
 - continued production of resource materials;
 - access to The Cropper Foundation's library.
2. To approach the development of resource materials in ways that:
 - facilitate learning-by-doing through involvement of teachers and students in joint field work
 - contribute to a comprehensive body of materials, within a collaborative framework that complements what other organisations are contributing, in order to avoid duplication
 - make information easily accessible to all teachers;
3. To make information and technical assistance available to teachers through a series of seminars and workshops
4. To assist in networking and information sharing among teachers
5. To contribute to assessing CAPE and CXC syllabi, and providing feedback to the Ministry of Education.

Seven priority projects, earmarked for completion in 2007/early 2008, have been identified, and a brief description of each project is given in Annex 1. The projects are (not given in order of importance):

- DVD on the Five Islands
- Brochure and accompanying series of posters on the Northern Range

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- Pilot tutorial focusing on the Biodiversity of Rocky shores
- Glossary of terms on Environment/Sustainable Development
- Case Study booklet incorporating information from seven sites throughout Trinidad and Tobago
- Follow-up seminar for CAPE and CSEC Science teachers
- Teaching poster/brochure on the Caribbean Sea

Several criteria were used to identify and design these priority projects to ensure that they meet the needs of the school systems, and also to ensure that they are completed in a relatively short timeframe so that they are available for immediate use in the school system:

- To make the best use of existing information:
 - Northern Range, Caribbean Sea and Millennium Ecosystem Assessments
 - Case studies applied at the University of the West Indies in teaching
 - Work already completed or underway in Trinidad and Tobago eg. on Environmental Sensitive Areas and Species
- To capitalize on The Cropper Foundation's network of colleagues with expertise in a broad range of areas
- To focus primarily on the needs of the CAPE Environmental Sciences syllabus, but also be relevant to other CAPE science syllabi (Geography, Biology), and to related CXC subjects

Discussion questions on Priority Projects

Based on time limitations, during this discussion, focus will be placed on two projects – (1) the Glossary of Sustainable Development terms and Concepts, and (2) the Case Study booklet. If time permits, all projects will be covered. If not, however, teachers are invited to submit comments on projects not covered to The Cropper Foundation in the wake of the seminar.

- Are the suggested projects in keeping with the needs of teachers?
 - considering each project individually
 - specific ideas for improvement of individual projects?
 - considering the projects collectively
- Are the criteria for project selection reasonable from the teachers' point of view?
 - if not, what are the criteria that should be applied?
- Are teachers more interested in the development of material, or would they rather be exposed to capacity building workshops and seminars? Or would a combination of the two be most suitable? In answering this question, it will be useful to consider the pros and cons of each approach.
- Are there specific ideas for other projects which should be undertaken as a priority?

Session 3: Sustainable Development: an introduction

- What are the sustainable development issues/ concepts etc. that are most challenging for teachers and students?
 - Why are they so challenging? For example, some issues may be too theoretical, and there may be a lack of applied examples.
 - Other reasons?
- What are the ways in which the teacher support programme might best address these challenges?
 - is the Glossary useful?
 - would a series of tutorials covering one (or a few) aspects at a time help?
 - What would be a tentative list of topics and an order for delivery of topics?
 - Names of experts to cover different topics?
 - other ideas?

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Annex 1: Abstracts of Seven Projects prioritized for development in collaboration with the Ministry of Education

1. Production of a DVD on the Five Islands, which builds on the work already undertaken by The Cropper Foundation in producing the DVD on Nelson Island. However, this project will focus more heavily on meeting discrete environment-related aspects of the CAPE and CXC science syllabi, especially by involving students in the production process. This project is expected to begin in July 2007, and completion of the DVD is expected by the end of 2007.
2. Production of a brochure on the main findings and conclusions of the Northern Range Assessment, and a series of four accompanying posters which will each cover one of the sub-components of the Northern Range Assessment – freshwater resources, forest ecosystems, coastal ecosystems, and biodiversity. This project is also expected to be completed by the end of 2007.
3. Production of a glossary of terms and concepts related to sustainable development/ environment, along with a workshop which will facilitate discussion between teachers and experts on issues covered in the glossary. This project will respond directly to one of the needs expressed by CAPE and CXC science teachers at the Seminar of June 26th 2006.
4. A pilot tutorial for teachers on the Biodiversity of Trinidad and Tobago. While this tutorial will be designed to address biodiversity-related issues across the CAPE and CXC Science syllabi, it will also be used to help refine the approach and methodology for ‘training the trainers’ (teachers). In addition to this, the session will be taped and edited so that it can be made available to the Ministry as e-learning material. This tutorial will take place at some point during the first term of the next school year (November-December 2007).
5. Production of a Case Study Booklet, in collaboration with the Department of Life Sciences at the University of the West Indies. The booklet will cover the plethora of environment/ development issues included in the CAPE and CXC Science syllabi, by using seven areas throughout Trinidad and Tobago. The project is expected to involve field work with seven schools (one at each site), in order to collect data and hold on-site tutorials. Some of these field exercises may also be filmed and edited so as to be made available to the Ministry of Education as e-learning material. Given the scope of this project, it is expected that work will begin in late 2007, and extend well into 2008.
6. Follow-up seminar for CAPE and CSEC Science Teachers: this seminar follows-up on the seminar held in June 2006, and hopes to put in train a series of seminars for teachers, aimed at networking and stock-taking.
7. A teaching poster/brochure on the Caribbean Sea: this is a brochure which folds out as a full-sized poster. It includes the major findings of the Caribbean Sea Assessment and focuses on the benefits provided by the Caribbean Sea; the ways in which we use the Sea and the results of patterns of use. Some ideas for how we might better manage the Sea as a Region are also suggested.