CURRICULUM GUIDE

FOR

THREE YEAR DIPLOMA IN TEACHING

ENVIRONMENTAL EDUCATION
FOR TEACHERS IN EARLY CHILDHOOD
AND PRIMARY PROGRAMMES

JOINT BOARD OF TEACHER EDUCATION

2007
ENVIRONMENTAL EDUCATION
FOR TEACHERS IN EARLY CHILDHOOD
AND PRIMARY PROGRAMMES

A joint initiative of

The Joint Board of Teacher Education

and

The GOJ/CIDA ENACT Programme

to promote sustainable development in Jamaica.

2007
Preface

The Joint Board of Teacher Education (JBTE), in carrying out its mandate to ensure quality in the curriculum delivered by the consortium of teachers' colleges which form its membership, must ensure that the curriculum responds to the dynamic nature of knowledge and reflects current trends and practices of the various subject disciplines. To this end, periodic curriculum reviews must be undertaken in order to incorporate new material and approaches and to ensure congruence with the national curricula of the relevant levels of the education system.

The Sustainable Teacher Environmental Education Project funded by the ENACT Programme, a joint initiative of the Government of Jamaica and the Canadian International Development Agency, has provided funding to enable such a review in a number of areas of the JBTE programme offerings. This has resulted in the redesign of the Secondary Science options of Biology, Chemistry and Physics, and the Early Childhood programme, as well as the development of new elective courses in Environmental Education for the Secondary and Primary programmes. The project included activities to promote whole college strategies to make environmentally sustainable action a foundation of all teaching, research, operations and community outreach, strengthening the capacity for action research among college lecturers.

The curriculum revision/development process has focused on a number of the expected outputs of the JBTE programme as outlined in the regulations, inter alia,

- The development of teachers with a thorough, accurate and appropriate knowledge and understanding of their areas of specialization;
- The transformation of the college programme from a teacher-centred, didactic mode of teaching to a collaborative, interactive and student-centred learning environment;
- The development of a commitment, on the part of the teacher, to making the quality of life better for the children he/she teaches, through an awareness of, and an appreciation for, the importance of living in harmony with the environment.

The ENACT project formed important tiles in the mosaic of the JBTE activities, providing as it did

(a) a forum for students and staff at every level of JBTE member institutions to be exposed to the urgent and timely global issues related to environmental education and sustainable development,
(b) revised curriculum documents which reflect current theory and practices,
(c) workshops for lecturers to develop and deliver new curricula.

The project has therefore been an invaluable component of the process of transformation of the classroom environment, curriculum and assessment practices of the JBTE programmes.
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INTRODUCTION

The quality of human life depends on the constant interaction with one another and the earth's natural resources. These resources, which are essential for life, are being depleted and polluted at an accelerated rate; this will adversely affect the quality of life of future generations. An understanding of the relationship between human actions and other factors of the environment is necessary to minimize or curb environmental degradation and for the development of sustainable communities.

Environmental Education underpins the process of developing citizens who will accept the responsibility of practicing a lifestyle which will promote human progress, and at the same time care for the resources which allow such progress, - in other words, practice sustainable development.

This course provides the opportunity for students to become aware of and concerned about the environment. Students should be able to develop skills, attitudes, motivation and commitment to participate in programmes aimed at creating and maintaining a healthier and more sustainable environment. It will empower early childhood and primary student teachers not only to be proactive stewards of planet earth but also to infuse environmental education activities into the teaching and learning activities planned for their students, from their earliest years.
GOALS

This course aims to enable primary student teachers to

1. Understand the fundamental concepts of environmental education

2. Appreciate the relationship between human society and the environment

3. Evaluate the sustainability of their local environment.

4. Clarify their own beliefs and values concerning environmental issues

5. Participate in community action to ensure local sustainable development.

6. Recognize and teach environmental concepts in the Early Childhood and Primary Curricula

7. Devise appropriate teaching strategies to facilitate their students' acquisition of knowledge, skills and attitudes related to environmental studies.
Unit 1.                                        20 hours

FUNDAMENTALS OF ENVIRONMENTAL EDUCATION

GENERAL OBJECTIVES

Student teachers should:
1. appreciate the nature and functions of the environment
2. become aware of the relationship between humans and the environment
3. develop a personal view of their relationship with the environment

<table>
<thead>
<tr>
<th>SPECIFIC OBJECTIVES</th>
<th>SUGGESTED ACTIVITIES &amp; NOTES</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.1 Distinguish among aspects of environment, e.g., physical, social, cultural, political, economic, spiritual;</td>
<td>Group activity (pair-share) “What is the environment?” Review Jamaica’s Environment 2001 to identify examples of aspects/facets of the environment. Identify aspects/facets of environment present on the college campus. Make poster/chart to illustrate findings, exhibit on campus.</td>
</tr>
<tr>
<td>1.2 Explain the following concepts: - carrying capacity (natural, man-made systems) - finiteness of resources - cycling of resources, materials in natural systems (incl. water, carbon nitrogen cycles.) - how eco-systems are self-sustaining - bio-diversity</td>
<td>Discuss: (i) implications of human activities for earth’s carrying capacity (ii) Jamaica’s carrying capacity (iii) use/mis-use of resources Game: Lets Fish - illustrating concepts. Discuss environmental issues that arose in First Year Science, Social Studies, &amp; other courses.</td>
</tr>
<tr>
<td>1.3 Describe &amp; explain examples of inter-relationships within the Jamaican environment</td>
<td>Review/discuss case studies to determine inter-relationships, e.g., Ackee Town in NEEC Lifeline Kit, Johns’ Mountain Primary in NEEC Enhancing EE in the Curriculum. Draw flow diagrams to illustrate (i) feeding relationships (ii) energy flow (iii) poverty, population growth &amp; education relationships (iv) urbanization &amp; crime relationship (v) agriculture &amp; environmental degradation. Prepare webs to illustrate complexity of socio-cultural, socio-economic environment in a selected area.</td>
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<tr>
<td>1.4 Describe objects, institutions, values, behaviour patterns developed by humans as parts of the man-made (anthropogenic) environment</td>
<td>Group work (discussion) to illustrate features of natural/man-made environments, to identify and provide examples of anthropogenic environments. Analysis of selected newspaper articles.</td>
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</table>
1.5 Explain how and why humans have modified the natural environment

Group research and presentation, e.g., “Ways that humans have changed the environment with tools, skills, social institutions, learned behaviours”/“An evaluation of human interactions within the natural mountain ecosystems of Jamaica.” Discuss & list reasons for changing/modifying Jamaica’s natural environment, with specific examples of each. Construct timelines predicting the long term impact of human activities that alter the natural environment, on individual lifestyles, on education, on the economy of Jamaica. Group discussion: Implications of specific examples of human activity on (i) earth’s carrying capacity (ii) Jamaica’s carrying capacity.

1.6 Communicate orally/in writing feelings, values of individual responsibility for the environment

Values clarification activity: issues such as HIV AIDS, waste disposal, deforestation. Journal reflection on individual role in improving the environment, preserving it for future generations.

1.7 Define environmental education.

Group-work (jig-saw) - definition of EE to include: acquisition of knowledge, skills, attitudes, values, participation in the development of a sustainable society. Formulate class definition of EE. Research & presentation: Different meanings of EE, E Literacy within a historical perspective.

1.8 Give reasons for the inclusion of environmental education in the pre-primary & primary school curricula.

Debate: “There is no need/a great need for integrating EE into the curricula at Early Childhood and Primary levels.” Journal reflection on aspects of EE in your own school/college experience.
Unit 2. 20 hours

INTRODUCTION TO SUSTAINABLE DEVELOPMENT

GENERAL OBJECTIVES

Student teachers should:
1. develop the concept of sustainable development
2. understand the need for equity, justice, social cohesion, restrain in consumption, natural resource management, in the sustainable development process
3. consider policies that lead towards sustainable development.

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<thead>
<tr>
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<tbody>
<tr>
<td>2.1 Describe sustainable development as an emerging concept.</td>
<td>Group work (Think/pair/share): Review definitions of sustainable development from different perspectives, e.g., local &amp; global, developing &amp; developed countries. Derive individual definitions of sustainable development. Debate: 'Is SD a process of learning, rather than a pre-defined state?' Group work: (guided by questions from tutor) The dimensions/key pillars &amp; related issues of sustainable development.</td>
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<tr>
<td>2.2 Describe and illustrate features of a sustainable community</td>
<td>Small group discussion: “What makes a community sustainable?”</td>
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<tr>
<td>2.3 Identify, with reasons, issues that pose a challenge to sustainable development in Jamaica, and one other country.</td>
<td>Discuss case study on selected Jamaican issue, e.g., cockpit country ‘development’, Port Royal tourist resort, sustainable energy use. Research &amp; discussion on issues: population growth, urbanization, use of resources, food supply, wealth distribution/poverty, gender equity, housing, health, crime, human trafficking, education.</td>
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<tr>
<td>2.4 Analyse the sustainability of the major areas of human activity in Jamaica, including the issues, challenges &amp; possible solutions</td>
<td>Group work research &amp; presentation: “Elements of the dimensions of sustainability within agriculture, tourism, housing, education, industry, transportation, livelihood in Jamaica.”</td>
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<tr>
<td>2.5 Compare positions, (policies &amp; governmental/individual decisions), that seek to ensure that development is sustainable in different countries (Jamaica &amp; one other country)</td>
<td>Prepare comparison table of policies for countries (internet research, e.g., UNDP site) Discuss: the diversity of these positions &amp; decisions for ensuring sustainability in countries. E.g., “Why should Jamaican cease dumping wetlands to build housing schemes?”</td>
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<td>2.6 Describe Jamaica’s progress in implementing one of the international agreements related to SD (Earth charter/Agenda 21/Millenium goals)</td>
<td>Groupwork (jig-saw): Millenium Goals, Earth Charter, Agenda 21 summarized/discussed.</td>
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<td>2.7 Critically assess the relationship of selected aspects of human consumerism to sustainable development</td>
<td>Calculate individual ecological footprints. Discussion/debate comparing healthy/harmful consumer habits of Jamaica/one other country; Sustainable alternatives for agriculture, energy.</td>
</tr>
<tr>
<td>2.8 Investigate &amp; describe consumer habits/practices in the immediate environment</td>
<td>Group survey &amp; report on consumption practices in the college with regard to one resource, e.g., food, health services, water, plastics, electricity, waste production &amp; disposal.</td>
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<td>2.9 Construct and explain suggestions for personal changes that might promote more sustainable lifestyles, e.g., conservation measures.</td>
<td>Using data from previous activities, prepare/present suggestions for lifestyle changes towards sustainable lifestyles, including measures and tools for conservation.</td>
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<tr>
<td>2.10 Present and interpret data using appropriate technology and graphic organizers</td>
<td>Mount exhibition to display research and activities in this unit.</td>
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<tr>
<td>2.11 Using identified SD principles, values, &amp; concepts, in the Jamaican context, explain their relevance to education.</td>
<td>Discuss: “How should I promote e.g., conservation, as a useful value for educators?” “Of what importance is a sustainable school?”</td>
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Unit 3. 15 hours

ENVIRONMENTAL RESEARCH

GENERAL OBJECTIVES

Student teachers should:
1. become aware of environmental problems in Jamaica
2. display appropriate skills, attitudes and values in designing and carrying out environmental research
3. work cooperatively in groups.

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<tr>
<td>3.1 Identify and analyze contemporary, local environmental problems, e.g., urbanization effects, pollution, agricultural practices, energy and resource usage.</td>
<td>Presentation by resource person to help students to distinguish between environmental events, problems, issues Group-work: discussion, after reading, of case studies of local environmental events, problems, issues Guided discussion leading to formulation of criteria for selection of local problem to be investigated.</td>
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<tr>
<td>3.2 Identify &amp; describe an environmental problem on the college campus</td>
<td>Individual observation, with diary of campus areas, activities. Include variety of aspects of environment, e.g., social, economic in problem description. Prepare research questions/communicate research questions arising out of local problem. Identify different stakeholders and their value positions that are associated with the chosen problem.</td>
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<td>3.3 Design a programme to investigate a selected local problem (community/parish/college)</td>
<td>Brainstorming, using criteria previously developed, to decide on which problem to investigate Study UNESCO – Learning for a Sustainable Future, module 24. Working together as cooperative research teams: select a leader, assign tasks, discuss steps to be taken for research, prepare a timeline for steps of investigation.</td>
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<td>3.4. Prepare &amp; present a proposal for studying and mitigating/solving the problem e.g. origins, possible effects, stakeholders, possible solutions.</td>
<td>Prepare a literature review &amp; formulate methodology for analyzing the problem. Library/internet research &amp; interviews to document problem. Suggest practical and sustainable choices for resolving the problem, including implications and stakeholders for each one. Organize to present the proposal for grading.</td>
</tr>
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**ENVIRONMENTAL PARTICIPATION**

**GENERAL OBJECTIVES**

Student teachers should:
1. become aware of the different types of environmental participation
2. utilize acquired knowledge and skills to investigate and solve an environmental problem
3. appreciate the need for public education in environmental matters
4. demonstrate objectivity in self evaluation.

**SPECIFIC OBJECTIVES**

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<tr>
<td>4.1</td>
<td>Explain different strategies for environmental participation (incl. community service, political/consumer action, persuasion, eco-management) and suggest why and how each is appropriate for solving specific environmental problems</td>
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<tr>
<td>4.2</td>
<td>Describe personal performance in community participation in the past.</td>
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<tr>
<td>4.3</td>
<td>Investigate the problem described in Unit 3, using the methodology described in that proposal</td>
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<tr>
<td>4.4</td>
<td>Implement activities that should solve the problem</td>
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<td>4.5</td>
<td>Make a presentation to the relevant stakeholders at college (administration, student council, general assembly, school board) of the work done, using appropriate graphic organizers.</td>
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**SUGGESTED ACTIVITIES & NOTES**

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<td>4.1</td>
<td>Groups use role play, e.g., TV news report, panel discussion, community meeting, to dramatize differences among types of participation, citing examples, showing how the actions may be effectively applied. Study Agenda 21 to learn other ways of classifying participation.</td>
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<tr>
<td>4.2</td>
<td>Journal reflection on personal performance/inactivity in community participation in the past</td>
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<tr>
<td>4.3</td>
<td>Formulate a hypothesis regarding a practical &amp; sustainable solution. Carry out the investigation, working as a team, to meet the deadlines set by the group for the project. Revisit the hypothesis to reconsider its validity.</td>
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<td>4.4</td>
<td>Obtain approval/permission from relevant college authorities to attempt to address problem. Carry out appropriate actions to solve the problem Use a variety of media (posters, advertisements, flyers) to disseminate information and encourage college community to participate in solving the problem.</td>
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<td>4.5</td>
<td>Prepare &amp; present report, with suitable graphic organizers, for the appropriate audience of stakeholders.</td>
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**Unit 4.** 30 hours
| 4.6 Justify the strategies selected to solve the problem & evaluate the implementation of the strategies. | Engage in group discussion/peer evaluation of group-work efficiency, and prepare report on various aspects of solution strategies, challenges, lessons learnt, successes. |
ENVIRONMENTAL EDUCATION IN THE CURRICULUM

GENERAL OBJECTIVES

Student teachers should:
1. understand how teachers may infuse environmental education into the pre-primary and primary school curricula.
2. utilize a variety of teaching strategies and resource materials to achieve environmental education goals with learners at the pre-primary and primary levels.
3. integrate appropriate instructional technology into teaching activities.

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<tr>
<td>5.1 Identify topics in the curricula into which teachers may infuse environmental education, and justify the selection of these topics.</td>
<td>Read selected sections of the curricula, along with handouts relating to topics in environmental education, infusion, and integration. Small group discussion to decide which topics are suitable for infusion of environmental education concepts, skills. Groups present their findings, give reasons for their decisions.</td>
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<tr>
<td>5.2 Select and record suitable teaching strategies for use in environmental education in Jamaican pre-primary and primary schools.</td>
<td>Do readings, research on suitable strategies selected by the lecturer, to be used for infusing environmental education into the primary schools' curricula. Choose strategy, adapt it if necessary, model strategy and report on an example to show how it may be used appropriately in Jamaican primary schools.</td>
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<tr>
<td>5.3 List and describe a variety of teaching materials that may be adapted for infusing environmental education into the Ministry of Education’s curricula.</td>
<td>Group work: research, collection, exhibition of suitable teaching materials. Prepare a list of resources. Guided by the lecturer, adapt selected examples of materials for pre-primary and primary schools.</td>
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<tr>
<td>5.4 Use ICT and other innovations to communicate and strengthen teaching work in EESD.</td>
<td>Practise use of ICT &amp; prepare introduction/part of lesson using innovative technique. Mount exhibition in classroom.</td>
</tr>
<tr>
<td>5.5 Explain how the various value statements included in the Earth Charter &amp; other international documents may relate to teaching and learning in primary and pre-</td>
<td>Group work: list the attitudes, values, skills included in documents. Research and revise a variety of teaching techniques. Select those suitable for building the attitudes, values and</td>
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<tr>
<td>primary education.</td>
<td>skills needed to develop the principles. Select areas of the curriculum where these may be incorporated. Journal reflection: “How comfortable am I with teaching environmental education content, skills, &amp; attitudes?”</td>
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<td>5.6 Demonstrate infusion of environmental education into the pre-primary and primary curricula, by preparing teaching aids and lesson plans and by teaching a short lesson.</td>
<td>Write a teaching/learning activity to achieve a stated primary/pre-primary education objective(s) Design and produce two teaching aids utilizing different types of technology to be used in the activity. Teach a micro-lesson using the selected activities and teaching aids.</td>
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</table>
ASSESSMENT

Students will be assessed by coursework only, as follows:

- Proposal (unit 3) 15%
- Completed environmental participation project (unit 4) 30%
- Journal entries 10%
- Teacher generated assignments 15%
- Micro-teaching and teaching aids (unit 5) 30%

RESOURCES

Printed materials

*Enhancing Environmental Education in the Curriculum – a workshop session for teachers in Jamaican primary schools,* HoLung, J., et al, NEEC, 2004


*Environment Statistics, 2003 and Mineral Accounts*

*Handbook on Environment and Sustainable Development (draft)*

*Introduction to Sandwatch: an Educational Tool for sustainable development*

*Lifeline – an environmental education resource kit to promote sustainable development in Jamaica.*
NEEC, NEPA, 1999


**Teaching and Learning Activities for Environmental Education for Sustainable Development**, NEEC/Ministry of Education, Youth and Culture/NEPA/ENACT Programme


**Web-based materials**

**Education for Sustainable Development toolkit**
http://www.esdtoolkit.org

**Environmental Health and Safety (free, downloadable)**
http://www.ehsfreeware.com

**Environmental Foundation of Jamaica**
eee.efj.org.jm

**Jamaica Environment Trust**
www.jamentrust.org/

**National Environment & Planning Agency**
http://www.nepa.gov.jm/

**National Environmental Education Committee**
http://www.nepa.gov.jm/neec

**CDs and videos**

**Teaching and Learning for a Sustainable Future.**
Griffith University, Australia, UNESCI, 2002.

**Earth to Sea**
NEPA

**Cockpit Country**
APPENDIX 1. Examples of suitable investigations for project work in Units 3 & 4.

Solid Waste Management on Campus

- Recycling plastic bottles or scandal bags.
- Investigating composting on campus
- Developing alternatives to burning waste materials
- Creating a micro-landfill

Conserving Resources on Campus

- Reducing Paper Consumption
- Reducing the energy bills (JPS)
- Reducing water & paper usage
- Environmental consequences of cellular phone use
- Recycling water for plants

Greening Projects

- Creating a desert garden
- Preserving a rare species
- Reducing soil erosion

Social Projects

- Finding out about and celebrating (cultural OR religious OR ethnic) diversity
- Investigating the influence of advertising on students’ consumer choices.
FRAMEWORK FOR A WORK SHEET FOR PROPOSAL WRITING
(UNIT 3)

1. Write down four environmental problems/issues (from your community, your college, your parish) that come immediately to your mind.

2. How are the social, economic, governance and biological aspects reflected in these problems/issues?

3. Which problem/issue are you most interested in?

4. Which problem/issue will you be able to learn most about, and perhaps be able to address/solve?

5. Decide which problem/issue you will deal with.

6. From which sources can you find out more about this problem/issue? (e.g., from newspapers/magazines/journals/resource persons/your teachers)

7. Explain how you will study this problem from all aspects.

8. Who does this problem affect? How does it affect them? Who is responsible for this problem? Why?

9. Think of three possible solutions to the problem. How will each solution affect the persons involved? What will they feel about your solutions?

10. Decide which of the solutions is best for the majority of persons. Write out the steps & timeframe to be taken to implement the best solution.
APPENDIX 2. SUGGESTED CRITERIA FOR ASSESSMENT OF THE INVESTIGATION OF AN ENVIRONMENTAL PROBLEM (UNIT 4)

<table>
<thead>
<tr>
<th>Criteria</th>
<th>Marks</th>
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<tbody>
<tr>
<td>Clarity and detail of introduction and description of the problem/situation</td>
<td>5</td>
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<tr>
<td>Variety and appropriateness of techniques used for data collection</td>
<td>10</td>
</tr>
<tr>
<td>Quality of data collected</td>
<td>10</td>
</tr>
<tr>
<td>Logical selection and accurate use of methods for reporting data</td>
<td>10</td>
</tr>
<tr>
<td>Accuracy of inferences and conclusions</td>
<td>15</td>
</tr>
<tr>
<td>Action for solution planned with due consideration for social, economic and ecological consequences</td>
<td>15</td>
</tr>
<tr>
<td>Organization and coordination in implementation of action plan</td>
<td>15</td>
</tr>
<tr>
<td>Accuracy, organization and clarity of report &amp; presentation</td>
<td>10</td>
</tr>
<tr>
<td>Use of valid criteria for evaluation of project</td>
<td>10</td>
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APPENDIX 3. USING CASE STUDIES

1. Examining a Situation

Case studies may be used in this curriculum to inform students about a situation in their environment and how it has been managed. A short account is given to the class as a handout or students will do their own fact-finding. The class, individuals or small groups will read through, consider the situation and decisions made in the case.

2. Analyzing the Situation

Students may be asked to identify the problem and its sources and to discuss the way it was solved. They may be requested to suggest other courses of action that they themselves might have taken and present arguments to justify their choices. In the ensuing discussions they have the opportunity to question those whose solutions show conflicting values or those which are different from their own.

Debates, simulations of town/community meetings or talk-shows are useful for creating interest in this part of the activity, because they allow students to express their opinions in a situation where interruption or negative criticism is not allowed. Challenging one another’s positions and defending their own allows them to clarify values and practice problem solving and decision-making skills.

APPENDIX 4. USING JOURNALS

Journal activities in Environmental Education provide opportunities for students to think on paper and reflect on their own learning processes. They may record their experiences in class, make connections to past experiences and then think about possible implications for learning and teaching about the environment. Journal writing encourages recording of personal responses to new information and the generation of predictions, inferences and conclusions.

Students use their journals to record their observations/feelings on an ongoing basis, saving details they might otherwise have forgotten. Teachers sometimes find that these entries describe changes over a period of time. Students can compare their observations with those of their classmates and discuss reasons for the similarities and differences. Responding to questions that stimulate critical thinking is an important part of journal writing. Questions may be posed by the teacher, classmates or the writers themselves.

Journal worksheets save time and provide guidance in organizing thoughts and reflections on new information. Such teacher generated work-sheets may be
useful to match specific activities. In addition, each module of *Teaching and Learning for Sustainable Living (UNESCO)* includes journal worksheets. Teachers will find many of these helpful in their original form or as models from which new worksheets can be formulated.

A journal gives the teacher tangible evidence of students’ progress toward environmental literacy, provided that the students feel free to express their thoughts and opinions. It is important for them to know that they are not getting grades for having the “right” answers, but that the teacher is looking for evidence of growth of environmental awareness and responsibility. A growing sense of the value of infusing Environmental Education into the schools’ curricula could be another criterion for assessment. Journal entries may also be assessed for clarity, logical thinking, and completeness of responses to open-ended questions and justification of these responses.

**ADDITIONAL/ALTERNATIVE JOURNAL ASSIGNMENTS**

- Record the process by which you identified two aspects of the college environment. Include your observations as well as the criteria you used to classify each aspect of the environment on campus. (Unit 1, 1.1)
- Write a one paragraph reflection on your individual role in improving the environment and preserving it for future generations (Unit 1, 1.6)
- Write a one page essay on the possible long-term effects of your personal consumer habits/patterns. (Unit 2, 2.9)
- Write a half page description of one personal performance in community participation. (Unit 4, 4.2)
- Write a one page essay reflecting on your microteaching experience. (Unit 5, 5.6)

**APPENDIX 5. SUGGESTIONS FOR TEACHER GENERATED ASSIGNMENTS**

1. **GROUP WORK**:

- Make a poster/chart to show the aspects of environment present on the college campus, including examples of each. (Unit 1, 1.1)
- Create webs to show the complexity of the socio-cultural environment in a selected area (Unit 1, 1.3)
- Examine and chart at least ten inter-relationships within a named aspect of our Jamaican Environment. (Unit 1, 1.3)

2. **INDIVIDUAL WORK**

- Derive your individual definition of sustainable development, write up on poster paper and display in classroom. (Unit 2, 2.1)
- Draw diagrams to show feeding relationships and energy flow in the case studies reviewed in class. (Unit 1, 1.3)
- Calculate your Ecological footprint. (Unit 2, 2.7)
- Select materials, and in class presentation, show how they can be used to teach Environmental Education in selected grade of Jamaican Primary or Early Childhood School. (Unit 5, 5.3)

NB. Tutors are free to choose assignments for assessment from the above, or they may prefer to choose assignments from those suggested in the syllabus. At least four assignments will constitute the teacher’s mark.