ENVIRONMENTAL SCIENCE

Unit 3

How Can Biodiversity and Development be Sustained?

AREAS OF STUDY:

- Why is maintaining biodiversity worth a sustained effort?
- When is development sustainable?

OUTCOMES:

On completion of this unit, students should be able to:

1. Explain the importance of Earth's biodiversity and how it has changed over time, analyse the threats to biodiversity, and evaluate management strategies to maintain biodiversity in the context of one selected threatened endemic species.

2. Explain how sustainability principles relate to environmental management, analyse how stakeholder perspectives can influence environmental decision-making, and evaluate the effectiveness of environmental management strategies in a selected case study.

ASSESSMENT:

School–assessed Coursework

- Analysis and evaluation of a case study with reference to sustainability principles and stakeholder perspectives.
- Application of Earth systems thinking in the evaluation of a response to an environmental challenge.

Unit 4

How Can Climate Change and the Impacts of Human Energy Use be Managed?

AREAS OF STUDY:

- How can we respond to climate change?
- What might be a more sustainable mix of energy sources?
- How is scientific enquiry used to investigate contemporary environmental challenges?

OUTCOMES:

On completion of this unit, students should be able to:

1. Analyse the major factors that affect Earth's climate, explain how past and future climate variability can be measured and modelled, and evaluate options for managing climate change.

2. Compare the advantages and disadvantages of using a range of energy sources, and evaluate the suitability and impacts of their use in terms of upholding sustainability principles.

3. Design and conduct a scientific investigation related to biodiversity, environmental management, climate change and/or energy use, and present an aim, methodology and method, results, discussion and a conclusion in a scientific poster.

ASSESSMENT:

School–assessed Coursework

- Designed response to a real environmental issue.
- Presentation of recommendations using evidence-based decision making.
- Science investigation poster and logbook.

Final assessments for Units 3 & 4

S or N based on the demonstrated achievement of the outcomes specified for the unit. School-Assessed Coursework in Unit 3 will contribute 20% to the study score, Unit 4 will contribute 30% to the study score. The end-of-year examination will contribute 50% to the study score.