



UNITS

OLLIE SAVES THE PLANET

Introduction

Environmental education is a valuable tool that teachers and community educators can use to deliver meaningful curriculum to their students.

Research into environmental education has indicated that students need to know what practical steps they can take to tackle environmental problems and issues. Hence educators need to focus on actions that others have undertaken and actions that students can undertake within their own school, homes and local community.

Further research in the United States has shown that students who engage in their curriculum through environmental issues are making academic gains and developing higher-level thinking skills. The same study goes on to say that students who engage in environmental issues are able to deal with complex problems and issues, are more resourceful, more strategic thinkers, and more willing to deal with problems.

Combine this with the fact that most students genuinely enjoy connecting with the natural world, and educators should understand that environmental education is not only beneficial to their students but also an invaluable means of making their own task more interesting, stimulating and fun.

Process of Learning

The Generic Units of Work are designed on the enquiry learning process and incorporate a range of forms - including analysis, problem solving, discovery and creative activities - both in the classroom and in the community. Throughout the units, students are initially presented with relevant background data to enable them to explore a local issue. The investigation of a local issue encourages students to process the data they are working with in order to reach their own conclusions.

Problem solving provides students with an opportunity to practice the skills needed to find solutions to the local issues that concern them. This helps to develop the important citizenship objectives of learning for a sustainable future and integrates skills - for both students and teachers - of using experiential and enquiry-based strategies.

These units will fit into a number of teaching styles and lend themselves to student directed learning and the role of the teacher in the units is to facilitate the learning process.

How to use the Units

Each unit is structured in the following way:

Section A: Background Information

This section will provide background information for the unit. The information will allow teachers to plan and organize learning opportunities for their class and



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provide suggested ways to present the information in the unit. The Background Information is comprised of:

- Part 1: Goals & Objectives
- Part 2: Planning
- Part 3: Links to Curriculum
- Part 4: Preparation Checklist
- Part 5: Assessment

Section B: Unit

Each unit is designed to promote enquiry-based learning and encourage students to change behavior to reduce their impact in that particular area. The units are designed so that:

1. Teachers lead *Part 1: Introduction* and *Part 2: Scene Setters* to provide students with the skills and knowledge to explore a local issue.
2. Having completed the Introduction teachers are encouraged to facilitate the learner centered processes provided in *Part 3: Identifying a Local Issue* through to *Part 8: Reflection*.

Each unit is comprised of:

- Part 1: Introduction
- Part 2: Scene Setters
- Part 3: Identifying a Local Issue
- Part 4: Investigate
- Part 5: Vision
- Part 6: What Can We Do?
- Part 7: Lets Do It
- Part 8: Reflection
- Part 9: Additional Activities
- Part 10: Appendix: Blooms Taxonomy/Multiple Intelligence Activity Grid

Links to Curriculum

These units have been developed for teachers at grades 4-8 in the United States. Teachers may obviously need to modify or omit certain activities, depending on the age and ability of students, and the complexity required. Although they are based on the American school curriculum, the units are still suitable for educators in community groups or parents to use to facilitate learning in the area of the environment.

The units have been designed so they can be *integrated* into the existing curriculum rather than creating a new subject area. The units should be viewed and used as *interdisciplinary* in nature and therefore meet the needs of the following subject areas:

- Science
- Language Arts
- Math
- Geography
- Social Science



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- Information Technology
- Art
- Personal Development: group work and critical thinking.

A range of additional activities will be included at the end of each unit. This section is a useful resource for teachers keen to explore the particular issue further or provide additional learning opportunities for the students.

Preparation Checklist

Use this checklist as a guide to ensure that the students' involvement in actions to help the environment meet local regulations and all health and safety guidelines.

- Does the Principal need to be informed prior to the activity? What information may they require?
- Do local authorities, landowners, neighbors, etc need to be informed or to be part of the process?
- Is permission from parents required?
- Have all health and safety issues been addressed?
- Are the relevant health and safety issues fully understood by all students?
- Do students understand and comply with the school's code of conduct?
- Do you need further advice in setting up the projects?
- Do you need to discuss any issues with a second educator?

Assessment

Each unit contains examples of where teachers can assess the students' understanding and interpretation of the material being explored. A Blooms Taxonomy and Multiple Intelligence Activity Grid has been provided for each unit as a guide to the types of learning that aim to take place during each activity. This could be used as a guide to assessing the learning achieved by students throughout the unit.

Each unit provides suggested assessment pieces that take place throughout the learning process rather than at the end of the unit in the form a written test. Use these as an ongoing guide to gauge the students' level of understanding and knowledge of the unit's content.

TABLE OF CONTENTS FOR ALL UNITS

Name of Unit	Content Description	Activities it Contains
Sustainability	– Students will learn about the importance of sustainability and how population and resource issues are a part of their lives.	– Scene setters x 17 activities – Additional activities x 6



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Waste (1)	<ul style="list-style-type: none">– Students will learn about the impact of waste and litter on their lives.– Students will cover Reduce & Reuse issues.	<ul style="list-style-type: none">– Scene setters x 13 activities– Additional activities x 7
Waste (2)	<ul style="list-style-type: none">– Students will learn about the importance of waste management and the role that it plays in their lives.– Students will cover Recycling & Compost issues.	<ul style="list-style-type: none">– Scene setters x 15 activities– Additional activities x 7
Water	<ul style="list-style-type: none">– Students will learn about the importance of water quality and the role that water plays in their lives.– Students will cover water quality and water use issues.	<ul style="list-style-type: none">– Scene setters x 6 activities– Additional activities x 5
Energy	<ul style="list-style-type: none">– Students will learn about the importance of energy and the role that it plays in their lives.– Students will cover energy production and energy use issues	<ul style="list-style-type: none">– Scene setters x 8 activities– Additional activities x 1
Air	<ul style="list-style-type: none">– Students will learn about the importance of air quality and the role it plays in their lives.– Students will cover air quality and air pollution issues.	<ul style="list-style-type: none">– Scene setters x 6 activities– Additional activities x 2
Biodiversity	<ul style="list-style-type: none">– Students will learn about the importance of biodiversity and the role that it plays in their lives.– Students will cover ecosystem, species and genetic biodiversity.	<ul style="list-style-type: none">– Scene setters x 9 activities– Additional activities x 5