



INTEGRATED PEST MANAGEMENT

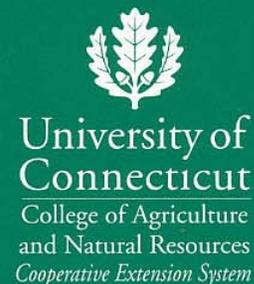
Unit 3 Lesson 9 Consuming Passions

Focus Areas: Biodiversity; Science,
Language Arts

Focus Skills: Comprehending expository
materials, critical thinking, synthesizing
information

Level of Involvement: MAXIMUM

INTEGRATED PEST MANAGEMENT
Unit 3 Lesson 9: Consuming Passions





*Dedicated
to Reducing
Pesticides*



University of
Connecticut
College of Agriculture
and Natural Resources
Cooperative Extension System

Unit 3 Lesson 9: Consuming Passions

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Focus Skills: Comprehending expository materials, critical thinking, synthesizing information

Level of Involvement: MAXIMUM

H I P P **O** = Overconsumption

Objectives

- * To identify various perspectives regarding environmental issues
- * To choose a plan of action in which individuals, communities, businesses, and governments can deal effectively with biodiversity loss
- * To present logical arguments to support individual opinions regarding biodiversity issues

Essential Questions

- * What are the various strategies for dealing with the HIPPO dilemma?
- * What compromises do various constituencies have to make to implement solutions?

Essential Understandings

- * There are a variety of strategies to deal with biodiversity loss.
- * All strategies to solve environmental issues require compromises by various groups.
- * Citizens in a democracy need to be educated regarding all of the options and how they will impact the lives of individuals, communities, businesses, and governments.



Unit 3 Lesson 9: Consuming Passions

Background

This is one of the final activities in the biodiversity strand. As such, it is a synthesis of many explorations and discussions that have taken place. The ultimate goal is to inspire some students to move beyond research, reporting, and debating issues to solving environmental problems in their own community.

The Biodiversity Debate: Exploring the Issue discussion guide is the fourth in the Environmental Issues Forum series. It is designed by the North American Association for Environmental Education (NAAEE) to assist citizens and students in understanding complex environmental issues. It consists of a series of news stories, articles excerpted from newspapers, cartoons, and editorials that inform the public while presenting different perspectives on the issues.

It has an excellent synthesis of the various points of view on pages 40-41 where it summarizes the ways that individuals, communities, businesses, and governments can take action to deal effectively with biodiversity loss. As such, it provides essential information for students to use in selecting which policy they wish to support and why. The great biodiversity debate can begin right in your own classroom!

People in industrialized countries make up only a quarter of the world's population but consume three-quarters of its resources. In the United States, we enjoy the highest standard of living in the world. In fact, if everyone lived at our standard, we would need 6 more earths to support all the needs. While we make up only 5% of the world's population, we use 25% of the Earth's oil resources.

While wealth and opportunity are unevenly distributed, the United States has started down a road where environmentalists argue, We are not only using our interest but are depleting our capital as well.

Review Overhead 1 Earth Facts and Handout 1 2, 4-D: Is the D for Danger?.



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Vocabulary



biodiversity

the number and variety of creatures that live on the Earth

consumption

the act of utilizing resources

ecological impact

the effect of human activity on global habitats

genetic diversity

variety of species in the plant and animal kingdom

global consumer

populations that consume world resources

reconcile

to bring divergent points of view together

sustainable

resources that can be renewed, such as forests and water, at a rate equal to the rate at which those resources are used or lost

variable

factors that change rapidly due to environmental conditions



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Challenge Develop a defensible personal point of view regarding biodiversity issues.

Logistics

Time: 2-week research study

Group size: 2 to 25

Space: a classroom or library

Materials

The Biodiversity Debate: Exploring the Issue

Overhead 1 Earth Facts *

Handout 1 2,4-D: Is the D for Danger? *

Assessment for a Position Paper *



* single copy provided

Note: There are many excellent books and articles dealing with environmental issues. An important aspect of this research effort is to have teams of participants locate documents with researched facts and not merely opinions. Many of these are available through government agencies such as the Environmental Protection Agency (EPA).

Preparations

1. Put library materials on reserve.
2. Make copies of the article *How Much is Enough?* on page 28 of *The Biodiversity Debate*.

Activity

Introduction

1. Post the following quote: The world has enough to support every man's need, not every man's greed.
2. Discuss the meaning of the quote.
3. Read the article *How Much Is Enough?* .
4. Have individuals respond to the article in journals.
5. Have volunteers share responses.



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Activity

Involvement

Discuss the following:

1. What problems arise when people form opinions on environmental issues without investigating both sides of the issue?
2. How can citizens become better informed about environmental issues?
3. How can people whose opinions on environmental issues reach a compromise?

Answer Key

Accept any logical answers.

Follow Up

1. Have individuals select a biodiversity issue from the HIPPO dilemma to research.
2. Conduct research on the chosen topic using a minimum of four sources that include both sides of the issue.
3. Develop a position paper on the environmental issue chosen.

Assessment

Evaluate the position papers using the Assessment provided.



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Follow Through

Focus Area: Social Studies

Focus Skill: Civic involvement

Interested individuals become actively involved in environmental projects in their area. For example, tracking endangered wood turtles for the Goodwin Conservation Center or participating in Connecticut Environmental Action Day.



Resources

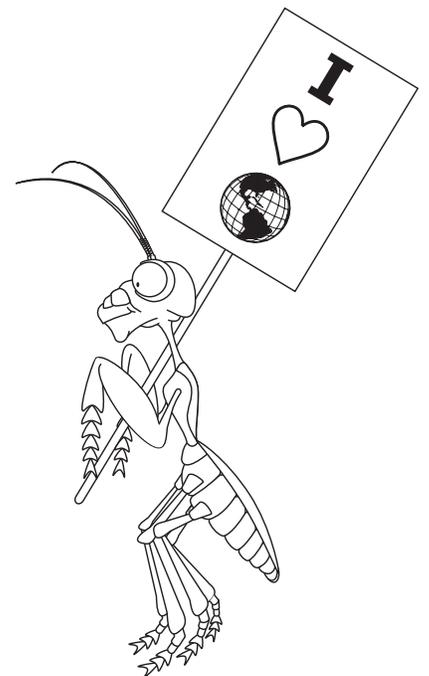
Selected Reading

Our Stolen Future. Colburn, Dumanoski, Meyers (Dutton 1996)



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Notes





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Notes



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Handout 1

2, 4-D: Is the 'D' for Danger?

First introduced in Britain in the 1940s, 2,4-D, the chemical also known as dichlorophenoxyacetic acid has for decades been the herbicide of choice for farmers and homeowners alike. Its ability to kill broad leaved plants such as dandelions while leaving grass unaffected has catapulted 2,4-D based weed killers to the position of the most widely used herbicides in the world today.

Simply put, the chemical triggers a growth hormone in targeted plants causing them to literally grow themselves to death. 2,4-D is rather like a cancer-producing trigger for plants, and therein lies the problem. Environmentalists and medical researchers are asking if a chemical that causes uncontrolled cell production in weeds might cause a similar result in humans exposed to 2,4-D!

As early as the mid 1980s studies began to report alarming trends among population segments exposed to the chemical herbicide. While manufacturers of related products contend there is no clear link between the chemical 2,4-D and various human cancers and that the products are perfectly safe when used according to directions, the Environmental Protection Agency (EPA) is not so sure. The agency has to date not gone so far as to classify 2,4-D as a human carcinogen. However, they are continuing to review the need for the chemical's registration restrictions.

Studies over the last several years conducted by various universities, EPA committees and the National Cancer Institute have discovered elevated incidences of birth defects, non-Hodgkin's lymphoma as well as cancers of the esophagus, larynx, stomach, rectum, throat, pancreas, prostate, kidney and brain in farm workers and other segments of the population where 2,4-D was applied as a herbicide.

The EPA will publish its decision on the registration restrictions regarding 2,4-D in 2004. In the meantime, we might do well to ask ourselves, What price am I willing to pay for the perfect lawn?

- Adapted from an article published in *The Hartford Courant*, June 2, 2002.



Unit 3 Lesson 9: Consuming Passions

Overhead 1

Earth Facts

- * In the past 20 years, 25% of our topsoil has been lost.
- * 20% of the agricultural land has been swallowed up over the past 50 years. The San Francisco Valley, some of the most fertile land in the country, is now covered in concrete.
- * The ozone layer continues to be depleted at a rate of 6 to 7% each year.
- * The skin cancer rate has increased by 25%.
- * One-third of the forests in our country have been cut down without replanting them.
- * 10 times more carbon dioxide has been added to the atmosphere. 25% of this increase is attributed to human activity.
- * The breeding populations of Atlantic blue fin have declined 90% since 1970.
- * The breeding population of yellowtail flounder in southern New England declined 94% between 1989 and 1992.



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Assessment for a Position Paper

	Possible Points	Points Earned
1. The problem is identified in a strong opening statement.	_____	_____
2. Relevant scientific concepts are included and used correctly.	_____	_____
3. Scientific vocabulary is explained.	_____	_____
4. Information is accurate.	_____	_____
5. The causes of the problem are summarized.	_____	_____
6. Recommendations for the solution are made.	_____	_____
7. Recommendations are logical and plausible.	_____	_____
8. Visual aids are used effectively.	_____	_____
9. There is a strong closing position statement.	_____	_____
10. Mechanics, spelling and neatness are exemplary.	_____	_____

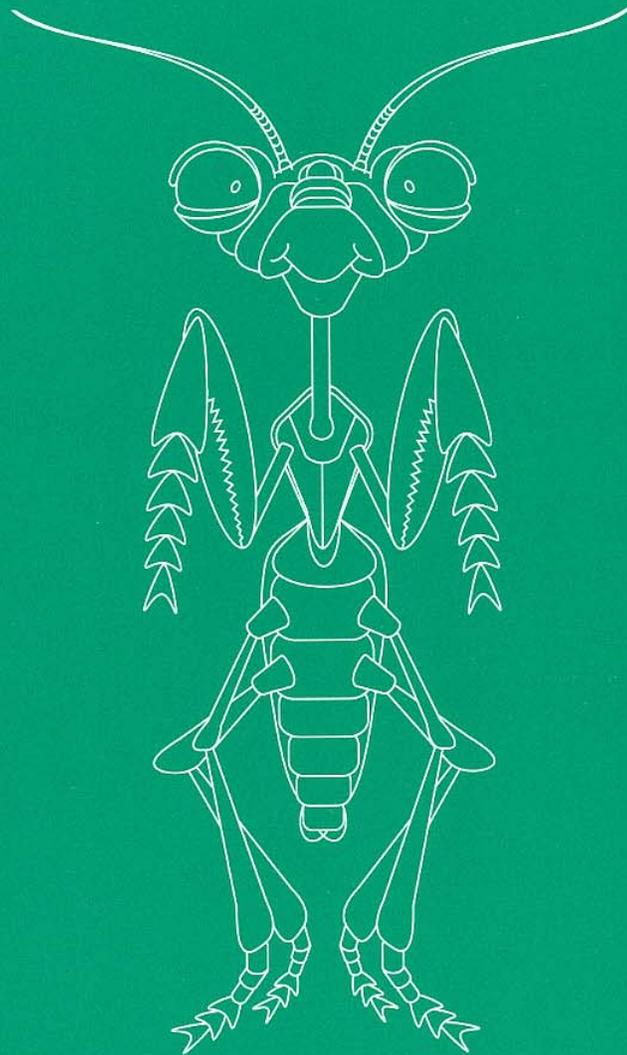
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