



**Correlation of the National Science
Education Standards to
Project Learning Tree's
Secondary Environmental
Education Program**



Grades 9 - 12



ACKNOWLEDGMENTS

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A GUIDE TO USING THE CORRELATIONS

Setting national education standards is part of the education reform movement that has been occurring across the country over the past decade and a half. As part of this reform movement, the National Science Education Standards, published by the National Research Council in 1996, were developed to provide a set of criteria against which we can measure the quality of science education. The purpose of *this* document is to provide educators with an easy reference guide as to how Project Learning Tree's activities for high school students correlate to the National Science Education Content Standards.

The document is divided into three parts:

! Part I of this document identifies which PLT activities help teach a particular National Science Education Content Standard.

Each standard is listed according to its fundamental concepts in the first column. The PLT secondary module title is listed in the second column, and the specific activities from that module which support the corresponding standard are listed in the third column.

At the bottom of each page you will find a key to the symbols that appear after each activity title. A filled in circle (●) indicates that the activity teaches the concept and that the concept is the main focus of the activity. A square with a dot in the middle (◻) indicates that the activity includes some teaching of the concept, reinforces the concept, and that the concept is part of the focus of the activity. And an open circle (○) indicates that the activity reinforces, supports, or addresses the concept and that it connects the concept to an environmental issue.

You can use **Part I** to identify individual PLT activities that support a specific standard. Or, you can use this section to identify a group of activities that can be used together to cover a particular standard.

! Part II of this document identifies which of the National Science Education Content Standards are covered by each PLT activity.

The title of each PLT secondary module is listed in column one, followed by the titles of the specific activities in column two. The correlation symbol is listed in column three (see above for a description of the correlation symbols), and the national science education standards that are covered by the activity are listed in column four.

You can use **Part II** if you have a particular PLT activity in mind and you want to know which of the national science education standards it supports.

! Part III of this document identifies how PLT's conceptual framework correlates to the National Science Education Content Standards.

All of PLT's activities are based on the PLT Conceptual Framework. Therefore, **Part III** of the document has been included to illustrate the parallels between the National Science Education Standards and the PLT Conceptual Framework. Column one lists the standard and its fundamental concepts. Column two indicates the PLT conceptual framework theme, and column three lists the PLT concepts within each theme that correspond to the standard.

We hope you find this document useful and we welcome any comments you may have.

Sincerely,

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PART I:

**CORRELATION OF PROJECT LEARNING TREE'S
SECONDARY MODULE ENVIRONMENTAL EDUCATION ACTIVITIES
TO THE NATIONAL SCIENCE EDUCATION CONTENT STANDARDS**

**National Science Education
Standards (Content, 9-12):
Unifying Concepts and
Processes**

	PLT Secondary Module	PLT Activity # and Title
Systems, Order, and Organization	Introductory Handbook	3 - Trees as Habitats / 7 - Watch on Wetlands /
	The Changing Forest: Forest Ecology	1 - Adopt a Forest t 2 - Cast of Thousands t 3 - The Nature of Plants / 5 - Saga of the Gypsy Moth / 6 - Story of Succession 6 7 - Understanding Fire / 8 - Fire Management /
	Exploring Environmental Issues: Focus on Risk	7 - Decision Making: Ecological Risk, Wildfires, and Natural Hazards (Part A) t

Evidence, Models, and Explanation

Evidence, Models, and Explanation	Introductory Handbook	3 - Trees as Habitats / 5 - 400-Acre Wood / 7 - Watch on Wetlands t 8 - Waste Watchers /
	The Changing Forest: Forest Ecology	1 - Adopt a Forest t 2 - Cast of Thousands 6 3 - The Nature of Plants 6 6 - Story of Succession t 7 - Understanding Fire /
	Exploring Environmental Issues: Municipal Solid Waste	1 - Introduction to MSW: The Waste Stream t 3 - Recycling and Economics / 4 - Composting 6 6 - Landfills 6 7 - Where Does Your Garbage Go? t

National Science Education

PLT Secondary Module

PLT Activity # and Title

6 teaches the concept; main focus of the activity

t includes some teaching of the concept; reinforces the concept; concept is part of the focus of the activity

/ reinforces, supports, or addresses the concept; connects concept to an environmental issue

Standards (Content, 9-12):
Unifying Concepts and Processes

Evidence, Models, and Explanation (cont.)

Exploring Environmental Issues: Focus on Risk	3 - Chances Are ... Understanding Probability and Risk (Parts A+B) / 4 - Risk Assessment: Tools of the Trade \uparrow 5 - Communicating Risk (Parts A-D) \uparrow 7 - Decision Making: Ecological Risk, Wildfires, and Natural Hazards (Part B) / Appendix 8: The Monte Carlo Method 6
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Constancy, Change, and Measurement

Introductory Handbook	7 - Watch on Wetlands \uparrow 8 - Waste Watchers /
The Changing Forest: Forest Ecology	1 - Adopt a Forest / 2 - Cast of Thousands 6 3 - The Nature of Plants \uparrow 7 - Understanding Fire 6
Exploring Environmental Issues: Municipal Solid Waste	1 - Introduction to MSW: The Waste Stream \uparrow 4 - Composting /
Exploring Environmental Issues: Focus on Risk	3 - Chances Are ... Understanding Probability and Risk (Parts A+B)/ 4 - Risk Assessment: Tools of the Trade (Part C) / 5 - Communicating Risk (Part D) / Special Topic EMFs (Part A) \uparrow

National Science Education Standards (Content, 9-12):
Unifying Concepts and

PLT Secondary Module

PLT Activity # and Title

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Processes

Evolution and Equilibrium

Introductory Handbook	7 - Watch on Wetlands /
Exploring Environmental Issues: Focus on Forests	2 - Case Study: Old Growth Forests /
The Changing Forest: Forest Ecology	3 - The Nature of Plants / 4 - Home Sweet Home / 5 - Saga of the Gypsy Moth / 6 - The Story of Succession t

Form and Function

Introductory Handbook	3 - Trees as Habitats / 4 - Energy Sleuths / 7 - Watch on Wetlands /
Exploring Environmental Issues: Focus on Forests	1 - What's a Forest to You? / 2 - Case Study: Old Growth Forests /
The Changing Forest: forest Ecology	1 - Adopt a Forest / 2 - Cast of Thousands t 3 - The Nature of Plants 6 6 - Story of Succession / 7 - Understanding Fire /
Exploring Environmental Issues: Municipal Solid Waste	1- Introduction to MSW: The Waste Stream / 2 - Source Reduction / 4 - Composting / 5 - Waste-to-Energy / 6 - Landfills /

**National Science Education
Standards (Content, 9-12):**

Standard A: Science as Inquiry

PLT Secondary Module

PLT Activity # and Title

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Ability to do Scientific Inquiry

Introductory Handbook	<ul style="list-style-type: none"> 3 - Trees as Habitats † 4 - Energy Sleuths / 5 - 400-Acre Wood / 7 - Watch on Wetlands 6 8 - Waste Watchers † 10 - Improve Your Place 6
Exploring Environmental Issues: Focus on Forests	<ul style="list-style-type: none"> 1 - What's a Forest to You? / 4 - Who Owns America's Forests? † 8 - Take Action! †
The Changing Forest: Forest Ecology	<ul style="list-style-type: none"> 1 - Adopt a Forest † 2 - Cast of Thousands 6 3 - The Nature of Plants 6 4- Home Sweet Home / 6 - Story of Succession †
Exploring Environmental Issues: Municipal Solid Waste	<ul style="list-style-type: none"> 1 - Introduction to MSW: The Waste Stream 6 2 - Source Reduction / 3 -Recycling and Economics † 4 - Composting † 6 - Landfills / 7 - Where Does Your Garbage Go? † 8 - Take Action: Success Stories and Personal Choices /
Exploring Environmental Issues: Focus on Risk	<ul style="list-style-type: none"> 3 - Chances Are... Understanding Probability and Risk † 4 - Risk Assessment: Tools of the Trade 6 5 - Communicating Risk (Parts A - D) † 8 - Taking Action: Reducing Risk in Your School/Community 6 Special Topic- EMFs / Special Topic-Chlorine: A Look at Tradeoffs / Special Topic-Plastics, Risk/Benefit Analysis, and Environmental Legislation †

**National Science Education
Standards (Content, 9-12):**

Standard A: Science as Inquiry

PLT Secondary Module

PLT Activity # and Title

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Understanding about Scientific Inquiry

Introductory Handbook	7 - Watch on Wetlands / 8 - Waste watchers / 10 - Improve your Place t
Exploring Environmental Issues: Focus on Forests	4 - Who Owns America's Forests? / 8 - Take Action! /
The Changing Forest: Forest Ecology	2 - Cast of Thousands 6 3 - The Nature of Plants t
Exploring Environmental Issues: Municipal Solid Waste	1 - Introduction to MSW: The Waste Stream t 2 - Source Reduction / 3 - Recycling and Economics t
Exploring Environmental Issues: Focus on Risk	3 - Chances Are... Understanding Probability and Risk t 4 - Risk Assessment: Tools of the Trade t 5 - Communicating Risk (Parts A - D) t 8 - Taking Action: Reducing Risk in Your School/Community / Special Topic- EMFs / Special Topic-Chlorine: A Look at Tradeoffs / Special Topic-Plastics, Risk/Benefit Analysis, and Environmental Legislation / Appendix 8: The Monte Carlo Method t

National Science Education Standards (Content, 9-12):
Standard B: Physical Science

PLT Secondary Module

PLT Activity # and Title

Structure of Atoms

Structure and Properties of Matter

Exploring Environmental Issues: Focus on Risk	Special Topic- Chlorine: Looking at Tradeoffs /
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Chemical Reactions

Introductory Handbook	4 - Energy Sleuths / 8 - Waste Watchers /
The Changing Forest: Forest	3 - The Nature of Plants /

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Ecology

Exploring Environmental Issues: Municipal Solid Waste	4 - Composting † 5 - Waste-to-Energy / 6 - Landfills /
Exploring Environmental Issues: Focus on Risk	Special Topic- Chlorine: Looking at Tradeoffs /

Motion and Forces

Exploring Environmental Issues: Focus on Risk	Special Topic-EMFs (Part A) †
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Conservation of Energy and the Increase in Disorder

Introductory Handbook	4 - Energy Sleuths / 8 - Waste Watchers 6
The Changing Forest: Forest Ecology	3 - The Nature of Plants /
Exploring Environmental Issues: Municipal Solid Waste	5 - Waste-to-Energy /

**National Science Education Standards (Content, 9-12):
Standard B: Physical Science**

PLT Secondary Module PLT Activity # and Title

Interactions of Energy and Matter

Introductory Handbook	4 - Energy Sleuths /
Exploring Environmental Issues: focus on Risk	Special Topic-EMFs 6

**National Science Education Standards (Content, 9-12):
Standard C: Life Science**

PLT Secondary Module PLT Activity # and Title

The Cell

The Changing Forest: Forest	3 - The Nature of Plants †
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Ecology

The Molecular Basis of Heredity

Biological Evolution

The Changing Forest: Forest Ecology	2 - Cast of Thousands / 6 - Story of Succession / 7 - Understanding Fire /
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Interdependence of Organisms

Introductory Handbook	2 - Environmental Exchange Box / 3 - Trees as Habitats [†] 5 - 400-Acre Wood / 7 - Watch on Wetlands /
The Changing Forest: Forest Ecology	1 - Adopt a Forest [†] 2 - Cast of Thousands ⁶ 3 - The Nature of Plants / 4 - Home Sweet Home / 5 - Saga of the Gypsy Moth / 6 - Story of Succession / 7 - Understanding Fire / 8 - Fire Management /

National Science Education Standards (Content, 9-12): *Standard C: Life Science*

PLT Secondary Module

PLT Activity # and Title

Interdependence of Organisms (cont.)

Exploring Environmental Issues: Focus on Forests	3 - Tough Choices / 6 - Squirrels vs. Scopes /
Exploring Environmental Issues: Municipal Solid Waste	1 - Introduction to MSW: The Waste Stream / 7 - Where Does Your Garbage Go? /
Exploring Environmental Issues: Focus on Risk	Activity 7 - Decision Making: Ecological Risk, Wildfires, and Natural Hazards (Part A) / Special Topic-Chlorine: A Look at Tradeoffs (Part A) /

⁶ teaches the concept; main focus of the activity

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Matter, Energy, and Organization
in Living Systems

Introductory Handbook	1 - Renewable or Not / 7 - Watch on Wetlands /
The Changing Forest: Forest Ecology	1 - Adopt a Forest / 2 - Cast of Thousands / 3 - The Nature of Plants / 6 - Story of Succession /
Exploring Environmental Issues: Municipal Solid Waste	4 - Composting /

Behavior of Organisms

The Changing Forest: forest Ecology	1 - Adopt a Forest / 2 - Cast of Thousands / 3 - The Nature of Plants / 4 - Home Sweet Home / 5 - Saga of the Gypsy Moth / 6 - Story of Succession / 7 - Understanding Fire /
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**National Science Education
Standards (Content, 9-12):
Standard D: Earth and Space
Science**

PLT Secondary Module PLT Activity # and Title

Energy in the Earth System

Introductory Handbook	4 - Energy Sleuths / 8 - Waste Watchers /
The Changing Forest: forest Ecology	3 - The Nature of Plants /

Geochemical Cycles

Introductory Handbook	4 - Energy Sleuths / 8 - Waste Watchers /
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1 includes some teaching of the concept; reinforces the concept; concept is part of the focus of the activity

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National Science Education Standards (Content, 9-12):
Standard E: Science & Technology

	PLT Secondary Module	PLT Activity # and Title
Abilities of Technological Design		
	Introductory Handbook	5 - 400-Acre Wood / 9 - A Look at Lifestyles / 10 - Improve Your Place 6
	Exploring Environmental Issues: Focus on Forests	8 - Take Action /
	The Changing Forest: Forest Ecology	5 - Saga of the Gypsy Moth 6
	Exploring Environmental Issues: Municipal Solid Waste	4 - Composting † 6 - Landfills † 8 - Take Action: Success Stories and Personal Choices /
	Exploring Environmental Issues: Focus on Risk	4 - Risk Assessment: Tools of the Trade † 5 - Communicating Risk (Parts A-C) / 5 - Communicating Risk (Part E) †

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7 - Decision Making: Ecological Risk, Wildfires, and Natural Hazards \uparrow
 8 - Taking Action: Reducing Risk in Your School/Community \uparrow
 Special Topic- EMFs 6
 Special Topic-Chlorine: A Look at Tradeoffs 6
 Special Topic-Plastics, Risk/Benefit Analysis, and Environmental Legislation 6

Understanding About Science and Technology

Introductory Handbook	1 - Renewable or Not / 4 - Energy Sleuths \uparrow 8 - Waste Watchers / 9 - A Look at Lifestyles /
Exploring Environmental Issues: Focus on Forests	3 - Tough Choices / 5 - Balancing America’s Forests / 6 - Squirrels vs. Scopes / 8 - Take Action /

**National Science Education Standards (Content, 9-12):
 Standard E: Science & Technology**

PLT Secondary Module	PLT Activity # and Title
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Understanding About Science and Technology (cont.)

Exploring Environmental Issues: Municipal Solid Waste	1 - Introduction to MSW: The Waste Stream / 2 - Source Reduction / 3 - Recycling and Economics / 4 - Composting / 5 - Waste-to-Energy / 6 - Landfills / 7 - Where Does Your Garbage Go? / 8 - Take Action: Success Stories and Personal Choices /
Exploring Environmental Issues: Focus on Risk	2 - Things Aren’t Always What They Seem (Parts A+B) \uparrow 2 - Things Aren’t Always What They Seem (Part C) 6 4 - Risk Assessment: Tools of the Trade / 5 - Communicating Risk /

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7 - Decision Making: Ecological Risk, Wildfires, and Natural Hazards \uparrow
 Special Topic- EMFs 6
 Special Topic-Chlorine: A Look at Tradeoffs 6
 Special Topic-Plastics, Risk/Benefit Analysis, and Environmental Legislation 6

National Science Education Standards (Content, 9-12):
Standard F: Science in Personal and Social Perspectives

	PLT Secondary Module	PLT Activity # and Title
Personal and Community Health		
	Introductory Handbook	9 - A Look at Lifestyles /
	Exploring Environmental Issues: Focus on Forests	3 - Tough Choices /
	Exploring Environmental Issues: Municipal Solid Waste	1 - Introduction to MSW: The Waste Stream / 2 - Source Reduction / 4 - Composting / 5 - Waste-to-Energy / 6 - Landfills / 7 - Where Does Your Garbage Go? /
	Exploring Environmental Issues: Focus on Risk	1 - What Is Risk? (Part A) / 1 - What Is Risk? (Part B)6 1 - What Is Risk? (Part C) \uparrow 2 - Things Aren't Always What They Seem \uparrow 4 - Risk Assessment: Tools of the Trade (Part A) / 4 - Risk Assessment: Tools of the Trade (Part C) 6 5 - Communicating Risk 6 7 - Decision Making: Ecological Risk, Wildfires, and Natural Hazards \uparrow 8 - Taking Action: Reducing Risk in Your School/Community \uparrow Special Topic- EMFs \uparrow Special Topic-Chlorine: A Look at Tradeoffs 6 Special Topic-Plastics, Risk/Benefit Analysis, and Environmental Legislation 6

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**National Science Education
Standards (Content, 9-12):
Standard F: Science in Personal
and Social Perspectives**

	PLT Secondary Module	PLT Activity # and Title
Population Growth		
	Introductory Handbook	1 - Renewable or Not † 5 - 400-Acre Wood / 7 - Watch on Wetlands / 9 - A Look at Lifestyles /
	Exploring Environmental Issues: Focus on Forests	3 - Tough Choices /
	The Changing Forest: Forest Ecology	5 - Saga of the Gypsy Moth /
Natural Resources		
	Introductory Handbook	1 - Renewable or Not 6 4 - Energy Sleuths † 5 - 400-Acre Wood / 7 - Watch on Wetlands / 8 - Waste Watchers / 9 - A Look at Lifestyles /
	Exploring Environmental Issues: Focus on Forests	1 - What's a Forest to You? / 2 - Case Study: Old Growth Forests † 3 - Tough Choices † 5 - Balancing America's Forests / 6 - Squirrels vs. Scopes /
	The Changing Forest: Forest Ecology	2 - Cast of Thousands / 4 - Home Sweet Home / 7 - Understanding Fire / 8 - Fire Management /
	Exploring Environmental Issues: Municipal Solid Waste	4 - Composting (Part A) /
	Exploring Environmental Issues: Focus on Risk	6 - Weighing the Options: A Look at Tradeoffs (Part B) / 7 - Decision Making: Ecological Risk, Wildfires, and Natural Hazards † Special Topic-Plastics, Risk/Benefit

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National Science Education Standards (Content, 9-12):

Standard F: Science in Personal and Social Perspectives

	PLT Secondary Module	PLT Activity # and Title
Environmental Quality		
	Introductory Handbook	1 - Renewable or Not / 6 - Democracy in Action / 7 - Watch on Wetlands / 9 - A Look at Lifestyles /
	Exploring Environmental Issues: Focus on Forests	1 - What's A Forest To You? † 2 - Case Study: Old Growth Forests / 3 - Tough Choices / 6 - Squirrels vs. Scopes /
	Exploring Environmental Issues: Municipal Solid Waste	1 - Introduction to MSW: The Waste Stream / 3 - Recycling and Economics / 5 - Waste-to-Energy / 6 - Landfills / 7 - Where Does Your Garbage Go? /
	Exploring Environmental Issues: Focus on Risk	1 - What Is Risk? (Part A+B) / 2 - Things Aren't Always What They Seem / 6 - Weighing the Options: A Look at Tradeoffs (Part B) 6 7 - Decision Making: Ecological Risk, Wildfires, and Natural Hazards 6 8 - Taking Action: Reducing Risk in Your School/Community † Special Topic EMFs 6 Special Topic-Chlorine: A Look at Tradeoffs 6 Special Topic-Plastics, Risk/Benefit Analysis, and Environmental Legislation 6

Natural and Human-induced Hazards

Introductory Handbook	4 - Energy Sleuths / 7 - Watch on Wetlands /
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Exploring Environmental Issues: 3 - Tough Choices /
Focus on Forests

**National Science Education
Standards (Content, 9-12):
Standard F: Science in Personal
and Social Perspectives**

	PLT Secondary Module	PLT Activity and Title
Natural and Human-induced Hazards, cont.	Exploring Environmental Issues: Municipal Solid Waste	1 - Introduction to MSW: The Waste Stream /
	Exploring Environmental Issues: Focus on Risk	1 - What Is Risk? † 2 - Things Aren't Always What They Seem † 3 - Chances Are ... Understanding Probability and Risk / 4 - Risk Assessment: Tools of the Trade (Part A)/ 4 - Risk Assessment: Tools of the Trade (Part C) 6 5 - Communicating Risk 6 6 - Weighing the Options: A Look at Tradeoffs (Part B) 6 7 - Decision Making: Ecological Risk, Wildfires, and Natural Hazards 6 8 - Taking Action: Reducing Risk in Your School/Community † Special Topic EMFs 6 Special Topic-Chlorine: A Look at Tradeoffs 6 Special Topic-Plastics, Risk/Benefit Analysis, and Environmental Legislation 6
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Science and Technology in Local, National, and Global Challenges	Introductory Handbook	1 - Renewable or Not / 2 - Environmental Exchange Box / 6 - Democracy in Action / 9 - A Look at Lifestyles /
	Exploring Environmental Issues: Focus on Forests	1 - What's a Forest to You? / 3 - Tough Choices † 6 - Squirrels vs. Scopes †
	The Changing Forest: Forest Ecology	5 - Saga of the Gypsy Moth / 8 - Fire Management †

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**National Science Education
Standards (Content, 9-12):
Standard F: Science in Personal
and Social Perspectives**

	PLT Secondary Module	PLT Activity and Title
Science and Technology in Local, National, and Global Challenges, cont.	Exploring Environmental Issues: Municipal Solid Waste	1 - Introduction to MSW: The Waste Stream / 3 - Recycling and Economics / 7 - Where Does Your Garbage Go? † 8 - Take Action: Success Stories and Personal Choices /
	Exploring Environmental Issues: Focus on Risk	2 - Things Aren't Always What They Seem (Part C) / 5 - Communicating Risk † 6 - Weighing the Options: A Look at Tradeoffs 6 7 - Decision Making: Ecological Risk, Wildfires, and Natural Hazards 6 8 - Taking Action: Reducing Risk in your School/Community † Special Topic EMFs 6 Special Topic-Chlorine: A Look at Tradeoffs 6 Special Topic-Plastics, Risk/Benefit Analysis, and Environmental Legislation 6

**National Science Education
Standards (Content, 9-12):
Standard G: History and Nature
of Science**

	PLT Secondary Module	PLT Activity and Title
Science as a Human Endeavor	Exploring Environmental Issues: Focus on Forests	3 - Tough Choices † 4 - Who Owns America's Forests? † 5 - Balancing America's Forests † 6 - Squirrels vs. Scopes /
	Exploring Environmental Issues: Municipal Solid Waste	1 - Introduction to MSW: The Waste Stream /
	Exploring Environmental Issues:	2 - Things Aren't Always What They Seem (Parts B+C) /

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Focus on Risk	4 - Risk Assessment: Tools of the Trade / Special Topic EMFs / Special Topic-Chlorine: A Look at Tradeoffs / Special Topic-Plastics, Risk/Benefit Analysis, and Environmental Legislation /
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Nature of Scientific Knowledge

Introductory Handbook	4 - Energy Sleuths / 5 - 400-Acre Wood /
Exploring Environmental Issues: Focus on Forests	3 - Tough Choices / 5 - Balancing America's Forests /
Exploring Environmental Issues: Focus on Risk	3 - Chances Are ... Understanding Probability and Risk /

Historical Perspectives

Introductory Handbook	9 - A Look at Lifestyles [†]
Exploring Environmental Issues: Focus on Forests	7 - Words to Live By [†]
Exploring Environmental Issues: Municipal Solid Waste	1 - Introduction to MSW: The Waste Stream [†]

**National Science Education
Standards (Content, 9-12):
Standard G: History and Nature
of Science**

PLT Secondary Module	PLT Activity and Title
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Historical Perspectives (cont.)

Exploring Environmental Issues: Focus on Risk	Special Topic EMFs / Special Topic-Chlorine: A Look at Tradeoffs / Special Topic-Plastics, Risk/Benefit Analysis, and Environmental Legislation /
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PART II:

**CORRELATION OF THE NATIONAL SCIENCE EDUCATION CONTENT
STANDARDS TO PROJECT LEARNING TREE'S SECONDARY MODULE
ENVIRONMENTAL EDUCATION ACTIVITIES
(listed by PLT module)**

PLT Secondary Module	PLT Activity # and Title	Correlation Symbol	National Science Education Standards (Content, 9-12) :
Introductory Handbook	1 - Renewable or Not	/	Standard C: Life Science <i>Matter, Energy, and Organization in Living Systems</i>
		/	Standard E: Science & Technology: <i>Understanding About Science and Technology</i>
		t	Standard F: Science in Personal and Social Perspectives: <i>Population Growth</i>
		6	<i>Natural Resources</i>
		/	<i>Environmental Quality</i>
		/	<i>Science and Technology in Local, National, and Global Challenges</i>
	2 - Environmental Exchange Box	/	Standard C: Life Science: <i>Interdependence of Organisms</i>
		/	Standard F: Science in Personal and Social Perspectives: <i>Science and Technology in Local, National, and Global Challenges</i>
	3 - Trees as Habitats	/	Unifying Concepts and Processes: <i>Systems, Order, and Organization</i>
		/	<i>Evidence, Models, and Explanation</i>
		/	<i>Form and Function</i>
		t	Standard A: Science as Inquiry: <i>Ability to do Scientific Inquiry</i>
		t	Standard C: Life Science: <i>Interdependence of Organisms</i>
	4 - Energy Sleuths	/	Unifying Concepts and Processes: <i>Form and Function</i>
		/	Standard A: Science as Inquiry: <i>Ability to do Scientific Inquiry</i>
			Standard B: Physical Science:

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PLT Secondary Module	PLT Activity# and Title	Correlation Symbol	National Science Education Standards (Content, 9-12) :
		/	<i>Chemical Reactions</i>
		/	<i>Conservation of Energy and the Increase in Disorder</i>
Introductory Handbook	4 - Energy Sleuths, cont.	/	Standard B: Physical Science: <i>Interactions of Energy and Matter</i>
		/	Standard D: Earth and Space Science: <i>Energy in the Earth System</i>
		/	<i>Geochemical Cycles</i>
		t	Standard E: Science & Technology: <i>Understanding About Science and Technology</i>
		t	Standard F: Science in Personal and Social Perspectives: <i>Natural Resources</i>
		/	<i>Natural and Human-induced Hazards</i>
		/	Standard G: History and Nature of Science: <i>Nature of Scientific Knowledge</i>
	5 - 400 - Acre Wood	/	Unifying Concepts and Processes: <i>Evidence, Models, and Explanation</i>
		/	Standard A: Science as Inquiry: <i>Ability to do Scientific Inquiry</i>
		/	Standard C: Life Science: <i>Interdependence of Organisms</i>
		/	Standard E: Science & Technology: <i>Abilities of Technological Design</i>
		/	Standard F: Science in Personal and Social Perspectives: <i>Population Growth</i>
		/	<i>Natural Resources</i>
		/	Standard G: History and Nature of Science: <i>Nature of Scientific Knowledge</i>
	6 - Democracy in Action	/	Standard F: Science in Personal and Social Perspectives: <i>Environmental Quality</i>

6 teaches the concept; main focus of the activity

t includes some teaching of the concept; reinforces the concept; concept is part of the focus of the activity

/ reinforces, supports, or addresses the concept; connects concept to an environmental issue

/ *Science and Technology in Local, National and Global Challenges*

PLT Secondary Module	PLT Activity # and Title	Correlation Symbol	National Science Education Standards (Content, 9-12) :
Introductory Handbook	7 - Watch on Wetlands	/	Unifying Concepts and Processes: <i>Systems, Order and Organization</i>
		†	<i>Evidence, Models, and Explanation</i>
		†	<i>Constancy, Change and Measurement</i>
		/	<i>Evolution and Equilibrium</i>
		/	<i>Form and Function</i>
		6	Standard A: Science as Inquiry: <i>Ability to do Scientific Inquiry</i>
		/	<i>Understanding about Scientific Inquiry</i>
		/	Standard C: Life Science: <i>Interdependence of Organisms</i>
		/	<i>Matter, Energy and Organization in Living Systems</i>
		/	Standard F: Science in Personal and Social Perspectives: <i>Population Growth</i>
		/	<i>Natural Resources</i>
		/	<i>Environmental Quality</i>
		/	<i>Natural and Human-induced Hazards</i>
		8 - Waste Watchers	
/	<i>Constancy, Change, and Measurement</i>		
†	Standard A: Science as Inquiry: <i>Ability to do Scientific Inquiry</i>		
/	<i>Understanding about Scientific Inquiry</i>		
/	Standard B: Physical Science: <i>Chemical Reactions</i>		
6	<i>Conservation of Energy and the Increase in Disorder</i>		

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PLT Secondary Module	PLT Activity # and Title	Correlation Symbol	National Science Education Standards (Content, 9-12) :
		/	Standard D: Earth and Space Science: <i>Energy in the Earth System</i>
		/	<i>Geochemical Cycles</i>
Introductory Handbook	8 - Waste Watchers, cont.	/	Standard E: Science & Technology: <i>Understanding About Science and Technology</i>
		/	Standard F: Science in Personal and Social Perspectives: <i>Natural Resources</i>
	9 - A Look at Lifestyles	/	Standard E: Science & Technology: <i>Abilities of Technological Design</i>
		/	<i>Understanding About Science and Technology</i>
		/	Standard F: Science in Personal and Social Perspectives: <i>Personal and Community Health</i>
		/	<i>Population Growth</i>
		/	<i>Natural Resources</i>
		/	<i>Environmental Quality</i>
		/	<i>Science and Technology in Local, National and Global Challenges</i>
		t	Standard G: History and Nature of Science: <i>Historical Perspectives</i>
	10 - Improve Your Place	6	Standard A: Science as Inquiry: <i>Ability to do Scientific Inquiry</i>
		t	<i>Understanding About Scientific Inquiry</i>
		6	Standard E: Science & Technology: <i>Abilities of Technological Design</i>

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PLT Secondary Module	PLT Activity # and Title	Correlation Symbol	National Science Education Standards (Content, 9-12) :		
The Changing Forest: Forest Ecology	1 - Adopt a Forest	1	Unifying Concepts and Processes: <i>Systems, Order and Organization</i>		
		1	<i>Evidence, Models and Explanation</i>		
		/	<i>Constancy, Change and Measurement</i>		
		/	<i>Form and Function</i>		
		1	Standard A: Science as Inquiry: <i>Ability to do Scientific Inquiry</i>		
		1	Standard C: Life Science: <i>Interdependence of Organisms</i>		
		/	<i>Matter, Energy, and Organization in Living Systems</i>		
		/	<i>Behavior of Organisms</i>		
		<hr/>			
		2 - Cast of Thousands		1	Unifying Concepts and Processes: <i>Systems, Order, and Organization</i>
6	<i>Evidence, Models, and Explanation</i>				
6	<i>Constancy, Change and Measurement</i>				
1	<i>Form and Function</i>				
6	Standard A: Science as Inquiry: <i>Ability to do Scientific Inquiry</i>				
6	<i>Understanding about Scientific Inquiry</i>				
/	Standard C: Life Science: <i>Biological Evolution</i>				
6	<i>Interdependence of Organisms</i>				
/	<i>Matter, Energy, and Organization in Living Systems</i>				
/	<i>Behavior of Organisms</i>				
/	Standard F: Science in Personal and Social Perspectives: <i>Natural Resources</i>				

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PLT Secondary Module	PLT Activity # and Title	Correlation Symbol	National Science Education Standards (Content, 9-12) :
The Changing Forest: Forest Ecology	3 - The Nature of Plants	/	Unifying Concepts and Processes: <i>Systems, Order, and Organization</i>
		6	<i>Evidence, Models, and Explanation</i>
		1	<i>Constancy, Change, and Measurement</i>
		/	<i>Evolution and Equilibrium</i>
		6	<i>Form and Function</i>
		6	Standard A: Science as Inquiry: <i>Ability to do Scientific Inquiry</i>
		1	<i>Understanding about Scientific Inquiry</i>
		/	Standard B: Physical Science: <i>Chemical Reactions</i>
		/	<i>Conservation of Energy and the Increase in Disorder</i>
		1	Standard C: Life Science: <i>The Cell</i>
		/	<i>Interdependence of Organisms</i>
		1	<i>Matter, Energy, and Organization in Living Systems</i>
		/	<i>Behavior of Organisms</i>
		/	Standard D: Earth and Space Science: <i>Energy in the Earth System</i>
<hr/>			
	4 - Home Sweet Home	/	Unifying Concepts and Processes: <i>Evolution and Equilibrium</i>
		/	Standard A: Science as Inquiry: <i>Ability to do Scientific Inquiry</i>
		/	Standard C: Life Science: <i>Interdependence of Organisms</i>
		/	<i>Behavior of Organisms</i>
		/	Standard F: Science in Personal and Social Perspectives: <i>Natural Resources</i>

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PLT Secondary Module	PLT Activity # and Title	Correlation Symbol	National Science Education Standards (Content, 9-12) :
The Changing Forest: Forest Ecology	5 - Saga of the Gypsy Moth	/	Unifying Concepts and Processes: <i>Systems, Order and Organization</i>
		/	<i>Evolution and Equilibrium</i>
		/	Standard C: Life Science: <i>Interdependence of Organisms</i>
		/	<i>Behavior of Organisms</i>
		6	Standard E: Science & Technology: <i>Abilities of Technological Design</i>
		/	Standard F: Science in Personal and Social Perspectives: <i>Population Growth</i>
		/	<i>Science and Technology in Local, National, and Global Challenges</i>
6- Story of Succession		6	Unifying Concepts and Processes: <i>Systems, Order and Organization</i>
		t	<i>Evidence, Models, and Explanation</i>
		t	<i>Evolution and Equilibrium</i>
		/	<i>Form and Function</i>
		t	Standard A: Science as Inquiry: <i>Ability to do Scientific Inquiry</i>
		/	Standard C: Life Science: <i>Biological Evolution</i>
		/	<i>Interdependence of Organisms</i>
		/	<i>Matter, Energy, and Organization in Living Systems</i>
/	<i>Behavior of Organisms</i>		
7 - Understanding Fire		/	Unifying Concepts and Processes: <i>Systems, Order, and Organization</i>
		/	<i>Evidence, Models, and Explanation</i>
		6	<i>Constancy, Change, and Measurement</i>

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PLT Secondary Module	PLT Activity # and Title	Correlation Symbol	National Science Education Standards (Content, 9-12) :
		/	<i>Form and Function</i>
The Changing Forest: Forest Ecology	7 - Understanding Fire, cont.	/	Standard C: Life Science: <i>Biological Evolution</i>
		/	<i>Interdependence of Organisms</i>
		/	<i>Behavior of Organisms</i>
		/	Standard F: Science in Personal and Social Perspectives: <i>Natural Resources</i>
	8 - Fire Management	/	Unifying Concepts and Processes: <i>Systems, Order, and Organization</i>
		/	Standard C: Life Science: <i>Interdependence of Organisms</i>
		/	Standard F: Science in Personal and Social Perspectives: <i>Natural Resources</i>
		†	<i>Science and Technology in Local, National, and Global Challenges</i>
Exploring Environmental Issues: Focus on Forests	1 - What's a Forest to You?	/	Unifying Concepts and Processes: <i>Form and Function</i>
		/	Standard A: Science as Inquiry: <i>Ability to do Scientific Inquiry</i>
		/	Standard F: Science in Personal and Social Perspectives: <i>Natural Resources</i>
		†	<i>Environmental Quality</i>
		/	<i>Science and Technology in Local, National, and Global Challenges</i>
	2 - Case Study: Old Growth Forests	/	Unifying Concepts and Processes: <i>Evolution and Equilibrium</i>
		/	<i>Form and Function</i>
		†	Standard F: Science in Personal and Social Perspectives: <i>Natural Resources</i>

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PLT Secondary Module	PLT Activity # and Title	Correlation Symbol	National Science Education Standards (Content, 9-12) :
Exploring Environmental Issues: Focus on Forests	3 - Tough Choices	/	<i>Environmental Quality</i>
		/	Standard C: Life Science: <i>Interdependence of Organisms</i>
		/	Standard E: Science & Technology: Understanding About Science and Technology
		/	Standard F: Science in Personal and Social Perspectives: <i>Personal and Community Health</i>
		/	<i>Population Growth</i>
		t	<i>Natural Resources</i>
		/	<i>Environmental Quality</i>
		/	Natural and Human-induced Hazards
		t	<i>Science and Technology in Local, National, and Global Challenges</i>
		/	Standard G: History and Nature of Science: <i>Science as a Human Endeavor</i>
		/	Nature of Scientific Knowledge
4 - Who Owns America's Forests?		t	Standard A: Science as Inquiry: <i>Ability to do Scientific Inquiry</i>
		/	<i>Understanding about Scientific Inquiry</i>
		t	Standard G: History and Nature of Science: <i>Science as Human Endeavor</i>
5 - Balancing America's Forests		/	Standard E: Science & Technology: <i>Understanding About Science and Technology</i>
		/	Standard F: Science in Personal and Social Perspectives: <i>Natural Resources</i>
		t	Standard G: History and Nature of Science: <i>Science as Human Endeavor</i>
		/	<i>Nature of Scientific Knowledge</i>

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PLT Secondary Module	PLT Activity # and Title	Correlation Symbol	National Science Education Standard (Content, 9-12) :
Exploring Environmental Issues: Focus on Forests	6 - Squirrels vs. Scopes	/	Standard C: Life Science: <i>Interdependence of Organisms</i>
		/	Standard E: Science & Technology: <i>Understanding About Science and Technology</i>
		/	Standard F: Science in Personal and Social Perspectives: <i>Natural Resources</i>
		/	<i>Environmental Quality</i>
		†	<i>Science and Technology in Local, National, and Global Challenges</i>
		/	Standard G: History and Nature of Science: <i>Science as a Human Endeavor</i>
	7 - Words to Live By	†	Standard G: History and Nature of Science: <i>Historical Perspectives</i>
8 - Take Action		†	Standard A: Science as Inquiry: <i>Ability to do Scientific Inquiry</i>
		/	<i>Understanding about Scientific Inquiry</i>
		/	Standard E: Science & Technology: <i>Abilities of Technological Design</i>
		/	<i>Understanding About Science and Technology</i>
Exploring Environmental Issues: Focus on Risk	1 - What Is Risk?		
	Part A	/	Standard F: Science in Personal and Social Perspectives: <i>Personal and Community Health</i>
	Part B	6	<i>Personal and Community Health</i>
	Part C	†	<i>Personal and Community Health</i>
	Parts A + B	/	<i>Environmental Quality</i>
	Parts A, B + C	†	<i>Natural and Human-induced Hazards</i>
	2 - Things Aren't Always What They Seem		
	Parts A + B	†	Standard E: Science & Technology: <i>Understanding About Science and Technology</i>

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Part C 6 *Understanding About Science and Technology*

PLT Secondary Module	PLT Activity # and Title	Correlation Symbol	National Science Education Standards (Content, 9-12) :	
Exploring Environmental Issues: Focus and Risk	2 - Things Aren't Always What They Seem, cont. Parts A, B + C	t	Standard F: Science in Personal and Social Perspectives: <i>Personal and Community Health</i>	
		/	<i>Environmental Quality</i>	
		t	<i>Natural and Human-induced Hazards</i>	
		/	<i>Science and Technology in Local, National, and Global Challenges</i>	
		/		
	Parts B + C	/	Standard G: History and Nature of Science: <i>Science as a Human Endeavor</i>	
		<hr/>		
		3 - Chances Are...Understanding Probability and Risks	/	Unifying Concepts and Processes: <i>Evidence, Models and Explanation</i>
			/	<i>Constancy, Change, and Measurement</i>
			t	Standard A: Science as Inquiry: <i>Ability to do Scientific Inquiry</i>
t	<i>Understanding about Scientific Inquiry</i>			
/	Standard F: Science in Personal and Social Perspectives: <i>Natural and Human-induced Hazards</i>			
	/	Standard G: History and Nature of Science: <i>Nature of Scientific Knowledge</i>		
	<hr/>			
	4 - Risk Assessment: Tools of the Trade Parts A - C	t	Unifying Concepts and Processes: <i>Evidence, Models, and Explanation</i>	
		/	<i>Constancy, Change, and Measurement</i>	
		6	Standard A: Science as Inquiry: <i>Ability to do Scientific Inquiry</i>	
t		<i>Understanding about Scientific Inquiry</i>		
t		Standard E: Science & Technology: <i>Abilities of Technology Design</i>		

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	/	<i>Understanding About Science and Technology</i>
Part A	/	Standard F: Science in Personal and Social Perspectives: <i>Personal and Community Health</i>

PLT Secondary Module	PLT Activity # and Title	Correlation Symbol	National Science Education Standards (Content, 9-12) :
Exploring Environmental Issues: Focus on Risk	4 - Risk Assessment: Tools of the Trade, cont. Part C	6	Standard F: Science in Personal and Social Perspectives, cont. <i>Personal and Community Health</i>
	Part A	/	<i>Natural and Human-induced Hazards</i>
	Part C	6	<i>Natural and Human-induced Hazards</i>
	Parts A - C	/	Standard G: History and Nature of Science: <i>Science as a Human Endeavor</i>
	5 - Communicating Risk Parts A - D	1	Unifying Concepts and Processes: <i>Evidence, Models, and Explanation</i>
	Part D	/	<i>Constancy, Change, and Measurement</i>
	Parts A - D	1	Standard A: Science as Inquiry: <i>Ability to do Scientific Inquiry</i>
	Parts A - D	1	<i>Understanding about Scientific Inquiry</i>
	Parts A - C	/	Standard E: Science & Technology: <i>Abilities of Technological Design</i>
	Part E	1	<i>Abilities of Technological Design</i>
	Parts A - E	/	<i>Understanding about Science and Technology</i>
		6	Standard F: Science in Personal and Social Perspectives: <i>Personal and Community Health</i>
		6	<i>Natural and Human-induced Hazards</i>
		1	<i>Science and Technology in Local, National, and Global Challenges</i>
6- Weighing the Options: A Look at Tradeoffs	Part B	/	Standard F: Science in Personal and Social Perspectives: <i>Natural Resources</i>
	Part B	6	<i>Environmental Quality</i>

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	6	<i>Natural and Human-induced Hazards</i>
Parts A + B	6	<i>Science and Technology in Local, National, and Global Challenges</i>

PLT Secondary Module	PLT Activity # and Title	Correlation Symbol	National Science Education Standards (Content, 9-12) :
Exploring Environmental Issues: Focus on Risk	7 - Decision Making: Ecological Risk, Wildfires, and Natural Hazards Part A Part B Part A Parts A - C	t	Unifying Concepts and Processes: <i>Systems, Order, and Organization</i>
		/	<i>Evidence, Models, and Explanation</i>
		/	Standard C: Life Science: <i>Interdependence of Organisms</i>
		t	Standard E: Science & Technology: <i>Abilities of Technological Design</i>
		t	<i>Understanding About Science and Technology</i>
		t	Standard F: Science in Personal and Social Perspectives: <i>Personal and Community Health</i>
		t	<i>Natural Resources</i>
		6	<i>Environmental Quality</i>
		6	<i>Natural and Human-induced Hazards</i>
		6	<i>Science and Technology in Local, National, and Global Challenges</i>
	8 - Taking Action: Reducing Risk in Your School/Community	6	Standard A: Science as Inquiry: <i>Ability to do Scientific Inquiry</i>
		/	<i>Understanding about Scientific Inquiry</i>
		t	Standard E: Science & Technology: <i>Abilities of Technological Design</i>
		t	Standard F: Science in Personal and Social Perspectives: <i>Personal and Community Health</i>
		t	<i>Environmental Quality</i>

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1	<i>Natural and Human-induced Hazards</i>
1	<i>Science and Technology in Local, National, and Global Challenges</i>

PLT Secondary Module	PLT Activity # and Title	Correlation Symbol	National Science Education Standards (Content, 9-12) :
Exploring Environmental Issues: Focus on Risk	Appendix 8: The Monte Carlo Method	6	Unifying Concepts and Processes: <i>Evidence, Models, and Explanation</i>
		1	Standard A: Science as Inquiry <i>Understanding about Scientific Inquiry</i>
	Special Topic - EMFs Part A	1	Unifying Concepts and Processes: <i>Constancy, Change, and Measurement</i>
	Parts A + B	/	Standard A: Science as Inquiry: <i>Ability to do Scientific Inquiry</i>
		/	<i>Understanding about Scientific Inquiry</i>
	Part A	1	Standard B: Physical Science: <i>Motion and Forces</i>
	Parts A + B	6	<i>Interactions of Energy and Matter</i>
		6	Standard E: Science & Technology: <i>Abilities of Technological Design</i>
		6	<i>Understanding About Science and Technology</i>
		1	Standard F: Science in Personal and Social Perspectives: <i>Personal and Community Health</i>
		6	Environmental Quality
		6	<i>Natural and Human-induced Hazards</i>
		6	<i>Science and Technology in Local, National, and Global Challenges</i>
		/	Standard G: History and Nature of Science: <i>Science as a Human Endeavor</i>
		/	<i>Historical Perspectives</i>

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Special Topic - Chlorine: A Look at Tradeoffs Parts A + B	/	Standard A: Science as Inquiry: <i>Ability to do Scientific Inquiry</i>
	/	<i>Understanding about Scientific Inquiry</i>
	/	Standard B: Physical Science: <i>Structure and Properties of Matter</i>

PLT Secondary Module	PLT Activity # and Title	Correlation Symbol	National Science Education Standards (Content, 9-12) :
Exploring Environmental Issues: Focus on Risk	Special Topic-Chlorine: A Look at Tradeoffs, cont. Parts A + B, cont.	/	Standard B: Physical Science, cont: <i>Chemical Reactions</i>
	Part A	/	Standard C: Life Science: <i>Interdependence of Organisms</i>
		6	Standard E: Science & Technology: <i>Abilities of Technological Design</i>
		6	Standard E: Science & Technology: <i>Understanding About Science and Technology</i>
		6	Standard F: Science in Personal and Social Perspectives: <i>Personal and Community Health</i>
		6	Environmental Quality
		6	<i>Natural and Human-induced Hazards</i>
	Parts A + B	6	Standard F: Science in Personal and Social Perspectives: <i>Science and Technology in Local, National, and Global Challenges</i>
		/	Standard G: History and Nature of Science: <i>Science as a Human Endeavor</i>
		/	<i>Historical Perspectives</i>
	Special Topic-Plastics, Risk/Benefit Analysis, and Environmental Legislation	†	Standard A: Science as Inquiry: <i>Ability to do Scientific Inquiry</i>
		/	<i>Understanding about Scientific Inquiry</i>
		6	Standard E: Science & Technology: <i>Abilities of Technological Design</i>

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6	<i>Understanding About Science and Technology</i>
6	Standard F: Science in Personal and Social Perspectives: <i>Personal and Community Health</i>
6	<i>Natural Resources</i>
6	Environmental Quality
6	<i>Natural and Human-induced Hazards</i>

PLT Secondary Module	PLT Activity # and Title	Correlation Symbol	National Science Education Standards (Content, 9-12) :
Exploring Environmental Issues: Focus on Risk	Special Topic-Plastics, Risk/Benefit Analysis, and Environmental Legislation, cont.	6	<i>Science and Technology in Local, National, and Global Challenges</i>
		/	Standard G: History and Nature of Science: <i>Science as a Human Endeavor</i>
		/	<i>Historical Perspectives</i>

PLT Secondary Module	PLT Activity # and Title	Correlation Symbol	National Science Education Standards (Content, 9-12) :
Exploring Environmental Issues: Municipal Solid Waste	1 - Introduction to MSW: The Waste Stream	1	Unifying Concepts and Processes: <i>Evidence, Models, and Explanation</i>
		1	<i>Constancy, Change, and Measurement</i>
		/	<i>Form and Function</i>
		6	Standard A: Science as Inquiry: <i>Ability to do Scientific Inquiry</i>
		1	<i>Understanding about Scientific Inquiry</i>
		/	Standard C: Life Science: <i>Interdependence of Organisms</i>
		/	Standard E: Science & Technology: <i>Understanding About Science and Technology</i>
		/	Standard F: Science in Personal and Social Perspectives: <i>Personal and Community Health</i>
/	<i>Environmental Quality</i>		

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/ *Natural and Human-induced Hazards*

/ *Science and Technology in Local, National, and Global Challenges*

/ Standard G: History and Nature of Science:
Science as a Human Endeavor

† *Historical Perspectives*

2 - Source Reduction / Unifying Concepts and Processes: *Form and Function*

/ Standard A: Science as Inquiry:
Ability to do Scientific Inquiry

/ *Understanding about Scientific Inquiry*

/ Standard E: Science & Technology:
Understanding About Science and Technology

/ Standard F: Science in Personal and Social Perspectives:
Personal and Community Health

PLT Secondary Module	PLT Activity # and Title	Correlation Symbol	National Science Education Standards (Content, 9-12) :
Exploring Environmental Issues: Municipal Solid Waste	3-Recycling and Economics	/	Unifying Concepts and Processes: <i>Evidence, Models, and Explanation</i>
		†	Standard A: Science as Inquiry: <i>Ability to do Scientific Inquiry</i>
		†	<i>Understanding about Scientific Inquiry</i>
		/	Standard E: Science & Technology: <i>Understanding About Science and Technology</i>
		/	Standard F: Science in Personal and Social Perspectives: <i>Environmental Quality</i>
		/	<i>Science and Technology in Local, National, and Global Challenges</i>
4 - Composting			Unifying Concepts and Processes:

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6	<i>Evidence, Models, and Explanation</i>
/	<i>Constancy, Change, and Measurement</i>
/	<i>Form and Function</i>
t	Standard A: Science as Inquiry: <i>Ability to do Scientific Inquiry</i>
t	Standard B: Physical Science: <i>Chemical Reactions</i>
/	Standard C: Life Science: <i>Matter, Energy, and Organization in Living Systems</i>
t	Standard E: Science & Technology: <i>Abilities of Technological Design</i>
/	<i>Understanding About Science and Technology</i>
/	Standard F: Science in Personal and Social Perspectives: <i>Personal and Community Health</i>
/	<i>Natural Resources</i>

PLT Secondary Module	PLT Activity # and Title	Correlation Symbol	National Science Education Standards (Content, 9-12) :
Exploring Environmental Issues: Municipal Solid Waste	5 - Waste-to-Energy	/	Unifying Concepts and Processes: <i>Form and Function</i>
		/	Standard B: Physical Science: <i>Chemical Reactions</i>
		/	<i>Conservation of Energy and the Increase in Disorder</i>
		/	Standard E: Science & Technology: <i>Understanding About Science and Technology</i>
		/	Standard F: Science in Personal and Social Perspectives: <i>Personal and Community Health</i>
		/	<i>Environmental Quality</i>
	6 - Landfills	6	Unifying Concepts and Processes: <i>Evidence, Models, and Explanation</i>
		/	<i>Form and Function</i>

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/ Standard A: Science as Inquiry:
Ability to do Scientific Inquiry

/ Standard B: Physical Science:
Chemical Reactions

† Standard E: Science & Technology:
Abilities of Technological Design

/ *Understanding About Science and Technology*

/ Standard F: Science in Personal and Social Perspectives:
Personal and Community Health

/ *Environmental Quality*

7 - Where Does Your Garbage Go? † Unifying Concepts and Processes:
Evidence, Models, and Explanation

† Standard A: Science as Inquiry:
Ability to do Scientific Inquiry

/ Standard C: Life Science:
Interdependence of Organisms

PLT Secondary Module	PLT Activity # and Title	Correlation Symbol	National Science Education Standards (Content, 9-12) :
Exploring Environmental Issues: Municipal Solid Waste	7 - Where Does Your Garbage Go?, cont.	/	Standard E: Science & Technology: <i>Understanding About Science and Technology</i>
		/	Standard F: Science in Personal and Social Perspectives: <i>Personal and Community Health</i>
		/	<i>Environmental Quality</i>
		†	<i>Science and Technology in Local, National, and Global Challenges</i>
8- Take Action: Success Stories and Personal Choices		/	Standard A: Science as Inquiry: <i>Ability to do Scientific Inquiry</i>
		/	Standard E: Science & Technology: <i>Abilities of Technological Design</i>
		/	<i>Understanding About Science and Technology</i>

6 teaches the concept; main focus of the activity

† includes some teaching of the concept; reinforces the concept; concept is part of the focus of the activity

/ reinforces, supports, or addresses the concept; connects concept to an environmental issue

/ Standard F: Science in Personal and Social Perspectives:
*Science and Technology in Local, National, and Global
Challenges*

6 teaches the concept; main focus of the activity

t includes some teaching of the concept; reinforces the concept; concept is part of the focus of the activity

/ reinforces, supports, or addresses the concept; connects concept to an environmental issue

PART III:

**CORRELATION BETWEEN PROJECT LEARNING TREE'S CONCEPTUAL
FRAMEWORK AND THE NATIONAL SCIENCE EDUCATION CONTENT
STANDARDS**

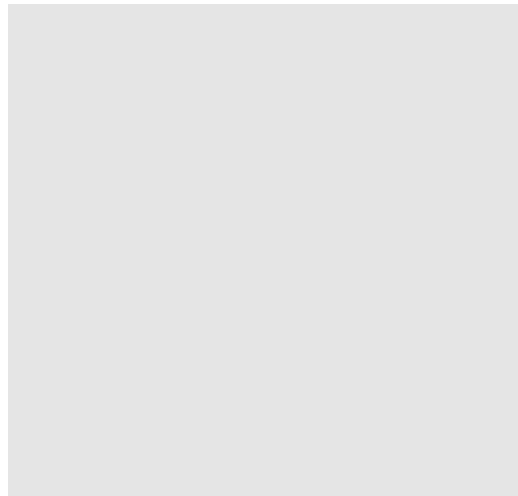
Correlation Between PLT's Conceptual Framework and the National Science Education Standards

National Science Education Standards Content, 9-12	PLT Conceptual Framework Theme	PLT Conceptual Framework Concept #, Concept	
UNIFYING CONCEPTS AND PROCESSES . Systems, Order, and Organization . Evidence, Models, and Explanation . Change, Constancy, and Measurement . Evolution and Equilibrium . Form and Function	Diversity	1.1	Biological diversity results from the interaction of living and nonliving environmental components such as air, water, climate, and geologic features.
		1.2	Forests, as well as other ecosystems, contain numerous habitats that support diverse populations of organisms.
		1.3	The Earth's atmosphere, water, soil, climate, and geology vary from region to region, thus creating a wide diversity of biological communities.
		3.2	Humans throughout the world create differing social, cultural, and economic systems and organizations to help them meet their physical and spiritual needs.
	Interrelationships	3.4	Natural beauty, as experienced in forests and other habitats, enhances the quality of human life by providing artistic and spiritual inspiration, as well as recreational and intellectual opportunities.
		4.2	Altering the environment affects all life forms, including humans, and the interrelationships that link them.
		4.3	Organisms adapt to changes in the environment according to the genetic and behavioral capacity.
		5.2	While technological advances decrease the incidence of disease and death, the ever-increasing world population is placing heavy demands on the finite resources of the Earth.
		6.1	Human societies and cultures throughout the world interact with each other and affect the natural systems upon which they depend.
		6.2	The quantity and quality of resources and their use, or misuse, by humans affects the standard of living of societies.
	Systems	7.1	In biological systems, energy flows and materials continually cycle in predictable and measurable patterns.
		7.2	Plant and animal populations exhibit interrelated cycles of growth and decline.
		7.4	Ecosystems possess measurable indicators of environmental health.
8.1		The application of scientific knowledge and technological systems can have positive and negative effects on the environment.	

National Science Education Standards Content, 9-12	PLT Conceptual Framework Theme	PLT Conceptual Framework Concept #, Concept
UNIFYING CONCEPTS AND PROCESSES: cont. . Systems, Order, and Organization . Evidence, Models, and Explanation . Change, Constancy, and Measurement . Evolution and Equilibrium . Form and Function	Structure and Scale	10.1 Populations of organisms exhibit variations in size and structure as a result of their adaptation to their habitats.
		10.2 The structure and scale of an ecosystem are influenced by factors such as soil type, climate, availability of water, and human activities.
		10.3 When the Earth is studied as an interacting ecological system, every action, regardless of its scale, affects the biosphere in some way.
		11.3 Human-built environments, if planned, constructed, and landscaped to be compatible with the environment in which they will be located, can conserve resources, enhance environmental quality, and promote the comfort and well-being of those who will live within them.
	Patterns of Change	13.1 Organisms change throughout their lifetimes. Species of organisms change over long periods of time.
		13.3 As organisms go through their life cycle of growth, maturity, decline, and death, their role in the ecosystem also changes.
		13.4 Ecosystems change over time through patterns of growth and succession. They are also affected by other phenomena such as disease, insects, fire, weather, and human intervention.
National Science Education Standards Content, 9-12	PLT Conceptual Framework Theme	PLT Conceptual Framework Concept #, Concept
STANDARD A: SCIENCE AS INQUIRY . Abilities Necessary to Do Scientific Inquiry . Understanding About Scientific Inquiry	Integrated Throughout the PLT Program Materials	
STANDARD B: PHYSICAL SCIENCE:	Diversity	1.1 Biological diversity results from the interaction of living and nonliving environmental components such as air, water, climate, and geologic features.

	Interrelationships	4.2	Altering the environment affects all life forms, including humans, and the interrelationships that link them.
	Systems	7.1	In biological systems, energy flows and materials continually cycle in predictable and measurable patterns.

National Science Education Standards Content, 9-12	PLT Conceptual Framework Theme	PLT Conceptual Framework Concept #, Concept
STANDARD C: LIFE SCIENCE	Diversity	1.1 Biological diversity results from the interaction of living and nonliving environmental components such as air, water, climate, and geologic features.
. The Cell		1.2 Forests, as well as other ecosystems, contain numerous habitats that support diverse populations of organisms.
. The Molecular Basis of Heredity		1.3 The Earth's atmosphere, water, soil, climate, and geology vary from region to region, thus creating a wide diversity of biological communities.
. Biological Evolution		3.1 Human societies vary greatly and inhabit many land forms and climates throughout the world.



Interrelationships	4.1	Organisms are interdependent and depend on nonliving components of the Earth.
	4.2	Altering the environment affects all life forms, including humans, and the interrelationships that link them.
	4.3	Organisms adapt to changes in the environment according to the genetic and behavioral capacity
	5.3	International cooperation directed toward conserving resources and protecting environmental quality is beneficial to human health and the well-being of other life forms.
	6.1	Human societies and cultures throughout the world interact with each other and affect the natural systems upon which they depend.
	6.2	The quantity and quality of resources and their use, or misuse, by humans affects the standard of living of societies.
	6.4	All humans consume products and thereby affect the availability of renewable and nonrenewable natural resources.
Systems	7.1	In biological systems, energy flows and materials continually cycle in predictable and measurable patterns.
	7.2	Plant and animal populations exhibit interrelated cycles of growth and decline.
	7.3	Pollutants are harmful by-products of human and natural systems that can enter ecosystems in various ways.
	7.4	Ecosystems possess measurable indicators of environmental health.

**National Science Education Standards
Content, 9-12**

**PLT Conceptual
Framework
Theme**

**PLT Conceptual Framework
Concept #, Concept**

STANDARD C: LIFE SCIENCE cont. . The Cell . The Molecular Basis of Heredity . Biological Evolution . Interdependence of Organisms . Matter, Energy, and Organization in Living Systems . Behavior of Organisms	Structure and Scale	10.1	Populations of organisms exhibit variations in size and structure as a result of their adaptation to their habitats.
		10.2	The structure and scale of an ecosystem are influenced by factors such as soil type, climate, availability of water, and human activities.
		11.2	Conservation and management technologies, when appropriately applied to the use or preservation of natural resources, can enhance and extend the usefulness of the resource, as well as the quality of the environment.
		11.3	Human-built environments, if planned, constructed, and landscaped to be compatible with the environment in which they will be located, can conserve resources, enhance environmental quality, and promote the comfort and well-being of those who will live within them.
	11.4	International cooperation on resource management and environmental improvement programs can be beneficial to people in many parts of the world.	
	Patterns of Change	13.1	Organisms change throughout their lifetimes. Species of organisms change over long periods of time.
		13.3	As organisms go through their life cycle of growth, maturity, decline, and death, their role in the ecosystem also changes.
		13.4	Ecosystems change over time through patterns of growth and succession. They are also affected by other phenomena such as disease, insects, fire, weather, and human intervention.

National Science Education Standards Content, 9-12	PLT Conceptual Framework Theme		PLT Conceptual Framework Concept #, Concept
STANDARD D: EARTH AND SPACE SCIENCE . Energy in the Earth System . Geochemical Cycles . The Origin and Evolution of the Earth System	Diversity	1.3	The Earth's atmosphere, water, soil, climate, and geology vary from region to region, thus creating a wide diversity of biological communities.
	Systems	7.1	In biological systems, energy flows and materials continually cycle in predictable and measurable patterns.
	Structure and Scale	10.3	When the Earth is studied as an interacting ecological system, every action, regardless of its scale, affects the biosphere in some way.

	Patterns of Change	13.1	Organisms change throughout their lifetimes. Species of organisms change over long periods of time.
		13.4	Ecosystems change over time through patterns of growth and succession. They are also affected by other phenomena such as disease, insects, fire, weather, and human intervention.

National Science Education Standards Content, 9-12	PLT Conceptual Framework Theme	PLT Conceptual Framework Concept #, Concept	
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STANDARD E: SCIENCE AND TECHNOLOGY . Abilities of Technological Design . Understandings About Science and Technology	Diversity	2.1	Humans use tools and technologies to adapt and alter environments and resources to meet their physical, social, and cultural needs.
		2.2	Technologies vary from simple hand tools to large-scale and complex machinery, mechanisms, and systems.
		2.3	Successful technologies are those that are appropriate to the efficient and sustainable use of resources, and to the preservation and enhancement of environmental quality.
	Interrelationships	5.1	Resource management technologies interact and influence environmental quality; the acquisition, extraction, and transportation of natural resources; all life forms; and each other.
		5.2	While technological advances decrease the incidence of disease and death, the ever-increasing world population is placing heavy demands on the finite resources of the Earth.
		5.3	International cooperation directed toward conserving resources and protecting environmental quality is beneficial to human health and the well-being of other life forms.
		5.4	By reducing waste and recycling materials, individuals and societies can extend the value and utility of resources and can promote environmental quality.

Systems	8.1	The application of scientific knowledge and technological systems can have positive and negative effects on the environment.
	8.2	Resource management and technological systems help societies to meet, within limits, the needs of a growing human population.
	8.3	Conservation technology enables humans to maintain and extend the productivity of vital resources.
	9.1	Most cultures have beliefs, values, and traditions that shape human interactions with the environment and its resources.
	9.2	In democratic societies, citizens have a voice in shaping resource and environmental management policies. They also share in the responsibility of conserving resources and behaving in an environmentally responsible manner.
	9.3	In democratic societies, individuals and groups, working through governmental channels, can influence the way public and private lands and resources are managed.
	9.4	Effective citizen involvement in the environmental decision-making process involves a careful study of all sides of the issues, along with the ability to differentiate between honest, factually accurate information and propaganda.

National Science Education Standards Content, 9-12	PLT Conceptual Framework Theme	PLT Conceptual Framework Concept #, Concept
STANDARD E: SCIENCE AND TECHNOLOGY cont. . Abilities of Technological Design	Systems, cont.	9.4 Effective citizen involvement in the environmental decision-making process involves a careful study of all sides of the issues, along with the ability to differentiate between honest, factually accurate information and propaganda.
. Understandings About Science and Technology	Structure and Scale	11.1 Technologies vary in size, structure, and complexity and in their positive and negative effects on the environment. 11.2 Conservation and management technologies, when appropriately applied to the

Patterns of Change	14.1	Our increasing knowledge of the Earth’s ecosystems influences strategies used for resource management and environmental stewardship.
	14.2	Technologies that are developed to meet the needs of an increasing world population should also be environmentally sound.
	14.3	To be most effective, new technologies require well-informed and highly skilled workers.

National Science Education Standards Content, 9-12	PLT Conceptual Framework Theme	PLT Conceptual Framework Concept #, Concept
STANDARD F: SCIENCE IN PERSONAL AND SOCIAL PERSPECTIVES . Personal and Community Health . Population Growth . Natural Resources . Environmental Quality . Natural and Human-induced Hazards . Science and Technology in Local, National, and Global challenges	Diversity	2.1 Humans use tools and technologies to adapt and alter environments and resources to meet their physical, social, and cultural needs.
		2.3 Successful technologies are those that are appropriate to the efficient and sustainable use of resources, and to the preservation and enhancement of environmental quality.
		3.2 Humans throughout the world create differing social, cultural, and economic systems and organizations to help them meet their physical and spiritual needs.
		3.3 The standard of living of various peoples throughout the world depends on the environmental quality; the availability, use, and distribution of resources; the government; and the culture of Earth’s inhabitants.
		4.2 Altering the environment affects all life forms, including humans, and the interrelationships that link them.
	Interrelationships	5.1 Resource management technologies interact and influence environmental quality; the acquisition, extraction, and transportation of natural resources; all life forms; and each other.
		5.2 While technological advances decrease the incidence of disease and death, the ever-increasing world population is placing heavy demands on the finite resources of the Earth.
		5.3 International cooperation directed toward conserving resources and protecting environmental quality is beneficial to human health and the well-being of other life forms.

- 5.4 By reducing waste and recycling materials, individuals and societies can extend the value and utility of resources and can promote environmental quality.
- 6.1 Human societies and cultures throughout the world interact with each other and affect the natural systems upon which they depend.
- 6.2 The quantity and quality of resources and their use, or misuse, by humans affects the standard of living of societies.
- 6.3 Cultural and societal perspectives influence the attitudes, beliefs, and biases of people toward the use of resources and environmental protection.
- 6.4 All humans consume products and thereby affect the availability of renewable and nonrenewable natural resources.

National Science Education Standards Content, 9-12	PLT Conceptual Framework Theme	PLT Conceptual Framework Concept #, Concept
STANDARD F: SCIENCE IN PERSONAL AND SOCIAL PERSPECTIVES, cont. . Personal and Community Health . Population Growth . Natural Resources . Environmental Quality . Natural and Human-induced Hazards . Science and Technology in Local, National, and Global Challenges	Systems	7.4 Ecosystems possess measurable indicators of environmental health.
		7.3 Pollutants are harmful by-products of human and natural systems that can enter ecosystems in various ways.
		8.1 The application of scientific knowledge and technological systems can have positive and negative effects on the environment.
		8.2 Resource management and technological systems help societies to meet, within limits, the needs of a growing human population.
		8.3 Conservation technology enables humans to maintain and extend the productivity of vital resources.
		9.2 In democratic societies, citizens have a voice in shaping resource and environmental management policies. They also share in the responsibility of conserving resources and behaving in an environmentally responsible manner.
		9.3 In democratic societies, individuals and groups, working through governmental channels, can influence the way public and private lands and resources are managed.
		9.4 Effective citizen involvement in the environmental decision-making process involves a careful study of all sides of the issues, along with the ability to differentiate between honest, factually accurate information and propaganda.
		11.1 Technologies vary in size, structure, and complexity and in their positive and negative effects on the environment.
		Structure and Scale

National Science Education Standards Content, 9-12	PLT Conceptual Framework Theme	PLT Conceptual Framework Concept #, Concept
STANDARD F: SCIENCE IN PERSONAL AND SOCIAL PERSPECTIVES, cont. . Personal and Community Health . Population Growth . Natural Resources . Environmental Quality . Natural and Human-induced Hazards . Science and Technology in Local, National, and Global Challenges	Patterns of Change	13.2 Although species become extinct naturally, the increasing number of extinctions in recent history may be linked to the rapid increase in human population. 13.4 Ecosystems change over time through patterns of growth and succession. They are also affected by other phenomena such as disease, insects, fire, weather, and human intervention. 14.1 Our increasing knowledge of the Earth’s ecosystems influences strategies used for resource management and environmental stewardship. 14.2 Technologies that are developed to meet the needs of an increasing world population should also be environmentally sound. 15.2 Consumers “drive” the marketplace with their demands for goods and services. Such demands shift with time and may have positive or negative effects on the availability of natural resources and on environmental quality. 15.3 Industries usually respond to consumer demand for recyclable, recycled, or otherwise environmentally friendly products. 15.4 Leisure and recreational pursuits can have an impact on forests and other resource-producing areas. 15.5 Increased public knowledge of the environment and the need for conservation of natural resources

National Science Education Standards Content, 9-12	PLT Conceptual Framework Theme	PLT Conceptual Framework Concept #, Concept
STANDARD G: HISTORY AND NATURE OF SCIENCE . Science as Human Endeavor . Nature of Scientific Knowledge . Historical Perspectives	Diversity	2.1 Humans use tools and technologies to adapt and alter environments and resources to meet their physical, social, and cultural needs. 2.3 Successful technologies are those that are appropriate to the efficient and sustainable use of resources, and to the preservation and enhancement of environmental quality. 3.3 The standard of living of various peoples throughout the world depends on the environmental quality; the availability, use, and distribution of resources; the government; and the culture of Earth’s inhabitants.

Interrelationships	5.1	Resource management technologies interact and influence environmental quality; the acquisition, extraction, and transportation of natural resources; all life forms; and each other.
	6.1	Human societies and cultures throughout the world interact with each other and affect the natural systems upon which they depend.
	6.3	Cultural and societal perspectives influence the attitudes, beliefs, and biases of people toward the use of resources and environmental protection.
	6.5	The extracting, processing, transporting, and marketing of natural resources provide employment opportunities for many people.
Systems	8.1	The application of scientific knowledge and technological systems can have positive and negative effects on the environment.
	8.2	Resource management and technological systems help societies to meet, within limits, the needs of a growing human population.
	8.3	Conservation technology enables humans to maintain and extend the productivity of vital resources.
	9.4	Effective citizen involvement in the environmental decision-making process involves a careful study of all sides of the issues, along with the ability to differentiate between honest, factually accurate information and propaganda.
Structure and Scale	11.2	Conservation and management technologies, when appropriately applied to the use or preservation of natural resources, can enhance and extend the usefulness of the resource, as well as the quality of the environment.
	11.3	Human-built environments, if planned, constructed, and landscaped to be compatible with the environment in which they will be located, can conserve resources, enhance environmental quality, and promote the comfort and well-being of those who will live within them.

**National Science Education Standards
Content, 9-12**

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Theme**

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Concept #, Concept**

STANDARD G: HISTORY AND NATURE OF SCIENCE, cont.	Structure and Scale, cont.	12.2	Governmental, social, and cultural structures and actions affect the management of resources and environmental quality.
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Patterns of
Change

- 14.1 Our increasing knowledge of the Earth's ecosystems influences strategies used for resource management and environmental stewardship.
 - 14.2 Technologies that are developed to meet the needs of an increasing world population should also be environmentally sound.
 - 14.3 To be most effective, new technologies require well-informed and highly skilled workers.
 - 15.1 Governments change and evolve over the years. Such changes affect the lives of their citizens, as well as resource management and environmental policies.
 - 15.5 Increased public knowledge of the environment and the need for conservation of natural resources have resulted in lifestyle changes in many cultures.
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