

Wyoming Project Learning Tree

Correlation Key for Grades 5-8

Wyoming Science Content and Performance Standards

Introduction: The purpose of this document is to provide Wyoming educators who use the *Project Learning Tree Pre-K - 8 Environmental Educational Activity Guide* (2006 edition) with a reference guide in how PLT's activities correlate to the Wyoming Science Content and Performance Standards for grades 5-8. Educators may use PLT activities to teach or assess mastery of science skills in unifying concepts and processes, scientific inquiry, recognizing the nature and history of science, and integration of those areas.

Key to symbols and abbreviations:

- * **Concept is a main focus of the activity or teaches to the standard.**
- o **Concept is part of the focus of the activity and supports the standard.**
- n/c **No correlation**
- SC **Science**

SCIENCE, Grades 5-8

SC 1. CONCEPTS AND PROCESSES:

In the context of unifying concepts and processes, students develop an understanding of scientific content through inquiry.

LIFE SYSTEMS

SC 8.1.1: Levels of Organization in Living Systems: Students model the cell as the basic unit of a living system. They realize that all functions that sustain life act within a cell and cells differentiate into specialized cells, tissues, organs, and organ systems.

| | | | |
|----|------------------------|---|-----|
| 28 | Air Plants | o | 3-6 |
| 41 | How Plants Grow | * | 4-8 |
| 42 | Shades of Green | o | 2-8 |
| 43 | Have Seeds Will Travel | * | K-8 |
| 61 | The Closer You Look | o | K-6 |
| 63 | Tree Factory | o | K-6 |
| 68 | Name that Tree | o | 2-8 |

SC 8.1.2: Reproduction and Heredity: Students describe reproduction as a characteristic of all living systems, which is essential to the continuation of species, and identify and interpret traits, patterns of inheritance, and the interaction between genetics and environment.

| | | | |
|----|------------------------|---|-----|
| 41 | How Plants Grow | o | 4-8 |
| 43 | Have Seeds Will Travel | o | K-8 |
| 66 | Germinating Giants | o | 4-6 |

SC 8.1.3: Evolution as a Theory: Students explain evolution as a theory and apply the theory to the diversity of species, which results from natural selection and the acquisition of unique characteristics through biological adaptation.

n/c

SC 8.1.4: Diversity of Organisms: Students investigate the interconnectedness of organisms, identifying similarity and diversity of organisms through a classification system of hierarchical relationships and structural adaptation.

| | | | |
|----|-------------------------|---|-----|
| 2 | Get in Touch with Trees | o | 5-6 |
| 3 | Peppermint Beetle | * | 5-6 |
| 4 | Sounds Around | * | 6-8 |
| 5 | Poet Tree | * | 3-8 |
| 7 | Habitat Pen Pals | * | 3-6 |
| 8 | Forest of S.T. Shrew | * | 1-6 |
| 9 | Planet Diversity | o | 4-6 |
| 10 | Charting Diversity | o | 4-8 |
| 11 | Can It Be Real? | o | 4-8 |
| 12 | Invasive Species | * | 5-8 |
| 18 | Tale of the Sun | o | K-6 |
| 21 | Adopt a Tree | o | K-8 |
| 22 | Trees as Habitats | * | K-8 |
| 23 | Fallen Log | * | 4-8 |
| 25 | Birds and Worms | o | K-6 |
| 45 | Web of Life | * | 4-8 |
| 46 | School Yard Safari | * | K-5 |
| 48 | Field Forest and Stream | o | 1-8 |

SC 8.1.5: Behavior and Adaptation: Students recognize behavior as a response of an organism to an internal or environmental stimulus and connect the characteristics and behaviors of an organism to biological adaptation.

| | | | |
|----|------------------------|---|-----|
| 3 | Peppermint Beetle | * | 5-6 |
| 4 | Sounds Around | * | 6-8 |
| 10 | Charting Diversity | o | 4-8 |
| 11 | Can It Be Real? | o | 4-8 |
| 12 | Invasive Species | o | 5-8 |
| 25 | Birds and Worms | * | K-6 |
| 41 | How Plants Grow | * | 4-8 |
| 42 | Shades of Green | o | 2-8 |
| 43 | Have Seeds Will Travel | o | K-8 |
| 84 | The Global Climate | o | 6-8 |
| 88 | Life on the Edge | o | 4-8 |

SC 8.1.6: Interrelationships of Populations & Ecosystems: Students illustrate populations of organisms and their interconnectedness within an ecosystem, identifying relationships among producers, consumers and decomposers.

| | | | |
|----|----------------------------|---|-----|
| 4 | Sounds Around | * | 6-8 |
| 12 | Invasive Species | o | 5-8 |
| 13 | We All Need Trees | o | K-6 |
| 18 | Tale of the Sun | o | K-6 |
| 20 | Environmental Exchange Box | * | K-8 |
| 21 | Adopt a Tree | o | K-8 |
| 22 | Trees as Habitats | * | K-8 |
| 23 | Fallen Log | * | 4-8 |
| 24 | Nature's Recyclers | * | 1-6 |
| 25 | Birds and Worms | * | K-6 |
| 26 | Dynamic Duos | o | 5-8 |
| 28 | Air Plants | o | 3-6 |
| 29 | Rain Reasons | * | 6-8 |
| 30 | Three Cheers for Trees | o | 1-6 |
| 32 | Forest of Many Uses | o | 1-8 |
| 33 | Forest Consequences | o | 6-8 |
| 37 | Reduce, Reuse, Recycle | o | 1-6 |
| 45 | Web of Life | * | 4-8 |
| 46 | School Yard Safari | * | K-5 |
| 47 | Are Vacant Lots Vacant? | o | K-8 |
| 49 | Tropical Treehouse | o | K-8 |
| 50 | 400-Acre Wood | o | 7-8 |
| 71 | Watch on Wetlands | o | 7-8 |
| 77 | Trees in Trouble | o | 1-8 |

SC 8.1.6: (continued)

| | | | |
|----|----------------------------------|---|-----|
| 79 | Tree Life Cycle | o | K-6 |
| 80 | Nothing Succeeds Like Succession | o | 3-6 |
| 84 | The Global Climate | * | 6-8 |
| 88 | Life on the Edge | o | 4-8 |

EARTH, SPACE, AND PHYSICAL SYSTEMS

SC 8.1.7: **The Earth in the Solar System:** Students describe Earth as the third planet in the Solar System and understand the effects of the sun as a major source of energy gravitational forces, and motion of objects....

SC 8.1.8: **The Structure of the Earth System:** Students examine the structure of the Earth, identifying layers of the Earth, considering plate movement and its effects, and recognizing landforms resulting from constructive and destructive forces.

SC 8.1.9: **The Earth's History:** Students systematize the Earth's history in terms of geologic evidence, comparing past and present Earth processes and identifying catastrophic events and fossil evidence.

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SC 8.1.10: **The Structure and Properties of Matter:** Students identify characteristic properties of matter such as density, solubility, and boiling point and understand that elements are the basic components of matter

| | | | |
|----|--------------------|---|-----|
| 44 | Water Wonders | o | 4-8 |
| 84 | The Global Climate | o | 6-8 |

SC 8.1.11: **Physical and Chemical Changes in Matter:** Students evaluate chemical and physical changes, recognizing that chemical change forms compounds with different properties and that physical change alters the appearance but not the composition of a substance.

| | | | |
|----|--------------------|---|-----|
| 23 | Fallen Log | o | 4-8 |
| 44 | Water Wonders | o | 4-8 |
| 52 | A Look at Aluminum | o | 5-8 |
| 84 | The Global Climate | o | 6-8 |

SC 8.1.12: **Forms and Uses of Energy:** Students investigate energy as a property of substances in a variety of forms with a range of uses.

| | | | |
|----|---------------------|---|-----|
| 39 | Energy Sleuths | * | K-8 |
| 53 | On the Move | o | K-8 |
| 73 | Waste Watchers | o | 4-8 |
| 85 | In the Drivers Seat | o | 5-8 |

SC 8.1.13: Conservation of Matter and Energy: Students identify supporting evidence to explain conservation of matter and energy, indicating that matter or energy cannot be created or destroyed but is transferred from one object to another.

| | | | |
|----|--------------------|---|-----|
| 14 | Renewable or Not | o | 4-8 |
| 52 | A Look at Aluminum | o | 5-8 |
| 53 | On the Move | o | K-8 |
| 73 | Waste Watchers | o | 4-8 |

SC 8.1.14: Effects of Motions and Forces: Students describe motion of an object by position, direction, and speed, and identify the effects of force and inertia on an object.

n/c

SC 2. SCIENCE AS INQUIRY:

Students demonstrate knowledge, skills, and habits of mind necessary to safely perform scientific inquiry.

SC 8.2.1: Students research scientific information and present findings through appropriate means.

| | | | |
|----|-----------------------------|---|-----|
| 2 | Get in Touch with Trees | o | 5-6 |
| 3 | Peppermint Beetle | o | 5-6 |
| 4 | Sounds Around | * | 6-8 |
| 7 | Habitat Pen Pals | * | 3-6 |
| 10 | Charting Diversity | o | 4-8 |
| 11 | Can It Be Real? | o | 4-8 |
| 12 | Invasive Species | o | 5-8 |
| 13 | We All Need Trees | o | K-6 |
| 14 | Renewable or Not | o | 4-8 |
| 15 | A Few of My Favorite Things | o | 4-8 |
| 16 | Pass the Plants | o | K-8 |
| 17 | People of the Forest | o | 5-8 |
| 20 | Environmental Exchange Box | o | K-8 |
| 21 | Adopt a Tree | o | K-8 |
| 22 | Trees as Habitats | * | K-8 |
| 23 | Fallen Log | o | 4-8 |
| 24 | Nature's Recyclers | o | 1-6 |
| 25 | Birds and Worms | o | K-6 |
| 32 | Forest of Many Uses | o | 1-8 |
| 33 | Forest Consequences | o | 6-8 |
| 39 | Energy Sleuths | * | K-8 |
| 41 | How Plants Grow | * | 4-8 |

SC 8.2.1: (continued)

| | | | |
|----|----------------------|---|-----|
| 42 | Shades of Green | o | 2-8 |
| 45 | Web of Life | o | 4-8 |
| 70 | Soil Stories | o | 5-8 |
| 71 | Watch on Wetlands | o | 7-8 |
| 72 | Air We Breathe | o | 6-8 |
| 73 | Waste Watchers | o | 4-8 |
| 76 | Tree Cookies | o | 1-8 |
| 77 | Trees in Trouble | o | 1-8 |
| 81 | Living with Fire | o | K-8 |
| 82 | Resource-Go-Round | o | 4-8 |
| 85 | In the Drivers Seat | * | 5-8 |
| 86 | Our Changing World | o | 5-8 |
| 92 | A Look at Lifestyles | * | 5-8 |

SC 8.2.2: Students use inquiry to conduct scientific investigations.

| | | | |
|----|----------------------------------|---|-----|
| 4 | Sounds Around-Part B | * | 6-8 |
| 9 | Planet Diversity | o | 4-6 |
| 21 | Adopt a Tree | o | K-8 |
| 22 | Trees as Habitats | * | K-8 |
| 24 | Nature's Recyclers | * | 1-6 |
| 25 | Birds and Worms | o | K-6 |
| 29 | Rain Reasons | * | 6-8 |
| 41 | How Plants Grow | * | 4-8 |
| 42 | Shades of Green | o | 2-8 |
| 70 | Soil Stories | o | 5-8 |
| 71 | Watch on Wetlands | o | 7-8 |
| 72 | Air We Breathe | o | 6-8 |
| 73 | Waste Watchers | o | 4-8 |
| 76 | Tree Cookies | o | 1-8 |
| 77 | Trees in Trouble | o | 1-8 |
| 80 | Nothing Succeeds Like Succession | * | 3-6 |
| 81 | Living with Fire | o | K-8 |

SC 8.2.3: Students clearly and accurately communicate the result of their own work, as well as information obtained from other sources.

| | | | |
|----|--------------------|---|-----|
| 9 | Planet Diversity | o | 4-6 |
| 12 | Invasive Species | o | 5-8 |
| 22 | Trees as Habitats | * | K-8 |
| 24 | Nature's Recyclers | * | 1-6 |
| 25 | Birds and Worms | o | K-6 |
| 71 | Watch on Wetlands | o | 7-8 |
| 72 | Air We Breathe | o | 6-8 |
| 84 | The Global Climate | o | 6-8 |

SC 8.2.4: Students recognize the relationship between science and technology in meeting human needs.

| | | | |
|----|--------------------------|---|-----|
| 13 | We All Need Trees | * | K-6 |
| 34 | Who Works In This Forest | * | 3-6 |
| 35 | Loving It Too Much | o | 6-8 |
| 36 | Pollution Search | o | K-6 |
| 37 | Reduce, Reuse, Recycle | o | 1-6 |
| 39 | Energy Sleuths | o | K-8 |
| 51 | Make Your Own Paper | o | 1-8 |
| 52 | A Look at Aluminum | o | 5-8 |
| 53 | On the Move | o | K-8 |
| 72 | Air We Breathe | o | 6-8 |
| 82 | Resource-Go-Round | o | 4-8 |
| 86 | Our Changing World | o | 5-8 |
| 93 | Paper Civilization | o | 4-8 |

SC 8.2.5 Students properly use scientific and safety equipment, recognize hazards and safety symbols, and observe standard safety procedures.

| | | | |
|----|-------------------|---|-----|
| 9 | Planet Diversity | o | 4-6 |
| 71 | Watch on Wetlands | o | 7-8 |
| 72 | Air We Breathe | o | 6-8 |

SC 3. HISTORY AND NATURE OF SCIENCE IN PERSONAL/SOCIAL DECISIONS:

Students recognize the nature of science, its history, and its connections to personal, social, economic, and political decisions. Historically, scientific events have had significant impacts on our cultural heritage.

SC 8.3.1: Students explore the nature and history of science. (A) Students explore how scientific knowledge changes and grows over time, and impacts personal and social decisions. (B) Students explore the historical use of scientific information to make personal and social decision.

| | | | |
|----|----------------------|---|-----|
| 12 | Invasive Species | o | 5-8 |
| 18 | Tale of the Sun | o | K-6 |
| 91 | In the Good Old Days | * | 4-8 |

SC 8.3.2: Students explore how scientific information is used to make decisions. (A) The role of science in solving personal, local and national problems. (B) Interdisciplinary connections to other subject areas and careers in science or technical fields. (C) Origins and conservation of natural resources including Wyoming examples.

SC 8.3.2: (continued)

| | | | |
|----|-------------------------------------|---|-----|
| 4 | Sounds Around-Part B | * | 6-8 |
| 12 | Invasive Species | * | 5-8 |
| 13 | We All Need Trees | o | K-6 |
| 14 | Renewable or Not | * | 4-8 |
| 15 | A Few of My Favorite Things | o | 4-8 |
| 16 | Pass the Plants | o | K-8 |
| 19 | Viewpoints on the Line | o | 6-8 |
| 20 | Environmental Exchange Box | o | K-8 |
| 28 | Air Plants | o | 3-6 |
| 30 | Three Cheers for Trees | o | 1-6 |
| 32 | Forest of Many Uses | * | 1-8 |
| 33 | Forest Consequences | o | 6-8 |
| 34 | Who Works In This Forest | * | 3-6 |
| 35 | Loving It Too Much | * | 6-8 |
| 36 | Pollution Search | o | K-6 |
| 37 | Reduce, Reuse, Recycle | o | 1-6 |
| 38 | Every Drop Counts | * | 4-8 |
| 39 | Energy Sleuths | o | K-8 |
| 49 | Tropical Treehouse | o | K-8 |
| 50 | 400-Acre Wood | o | 7-8 |
| 52 | A Look At Aluminum | o | 5-8 |
| 53 | On the Move | o | K-8 |
| 54 | I'd Like to Visit a Place Where.... | o | K-8 |
| 60 | Publicize It | o | 5-8 |
| 69 | Forest for the Trees | o | 4-8 |
| 70 | Soil Stories | o | 5-8 |
| 71 | Watch on Wetlands | o | 7-8 |
| 72 | Air We Breathe | o | 6-8 |
| 73 | Waste Watchers | o | 4-8 |
| 81 | Living with Fire | o | K-8 |
| 82 | Resource-Go-Round | o | 4-8 |
| 83 | Peek at Packaging | o | 5-8 |
| 84 | The Global Climate | * | 6-8 |
| 85 | In the Drivers Seat | o | 5-8 |
| 86 | Our Changing World | o | 5-8 |
| 89 | Trees for Many Reasons | o | 2-8 |
| 91 | In the Good Old Days | o | 4-8 |

*This document was researched and prepared by Pat Renton, Education Consultant, supported by a grant through National Project Learning Tree, website: www.plt.org
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