Wyoming Project Learning Tree
Correlation Key
to
The Wyoming Science Performance and Content Standards
for
Grades 5-8

Introduction:

The purpose of this document is to provide Wyoming educators who use Project Learning Tree materials with an easy reference guide in how PLT's activities correlate to the Wyoming Science Content and Performance Standards for grades 5-8. Project Learning Tree is an interdisciplinary environmental education program. PLT activities supplement curriculum and can be used to organize instructional units in a variety of subjects. Educators can use PLT activities to teach or assess mastery of science skills in basic concepts and knowledge, unifying concepts and processes, inquiry, habits of mind, communicating and applying scientific concepts and principles, history and nature of science, science and technology, and safety in scientific inquiry.

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CONTENT STANDARD: *1. BASIC CONCEPTS AND KNOWLEDGE*
Students develop an understanding of scientific concepts using facts, theories, principles, and models.

Matter and Energy

Benchmark 1: Students identify physical and chemical properties and changes of matter, including characteristics of chemical elements, properties of mixtures and compounds, chemical reactions, and conservation of mass.

28. Air Plants
73. Waste Watchers

Benchmark 2: Students identify forms and uses of energy and describing transfer, conservation, and transformation of energy.

39. Energy Sleuths
73. Waste Watchers
82. Resource-Go-Round

Force and Motion

Benchmark 3: Students describe the effects of motion and force by analyzing the position and speed of an object.

PLT activities do not apply as written, but with some modifications and adjustments, some activities may correlate with the benchmark.

Ecology

Benchmark 4: **Students explain the interrelationships of populations and ecosystems, including:**

- **makeup and interdependence of ecosystems**
- **role of producers, consumers, and decomposers in a food web**
- **human influences on ecosystems and the environment and role as stewards**
- **sunlight as the major source of energy**
- **limiting factors of biotic and abiotic resources**
- **carrying capacity, population growth, and decline.**

7. Habitat Pen-Pals
9. Planet Of Plenty
11. Can It Be Real?
14. Renewable Or Not?
17. People Of The Forest
20. Environmental Exchange Box
22. Trees As Habitats
23. The Fallen Log
24. Nature's Recyclers
26. Dynamic Duos
29. Rain Reasons
35. Loving It Too Much
37. Talking Trash, Not!
38. Every Drop Counts
39. Energy Sleuths
45. Web Of Life
46. School Yard Safari
47. Are Vacant Lots Vacant?
48. Field, Forest and Stream
49. Tropical Treehouse
50. 400-Acre Wood
70. Soil Stories
71. Watch On Wetlands
72. Air We Breathe
77. Trees In Trouble
79. Tree Lifecycle
80. Nothing Succeeds Like Succession
81. Living With Fire
82. Resource-Go-Round
83. Reduce, Reuse, Recycle
86. Our Changing World
88. Life On The Edge
89. Trees For Many Reasons
92. A Look At Lifestyles
94. Where Are The Trees Of Lebanon?
95. Did You Notice?

Adaptation

Benchmark 5: **Students recognize the diversity of organisms and describe adaptations by examining similarities and differences among species, natural selection, species extinction, and fossil evidence.**

2. Get In Touch With Trees
7. Habitat Pen-Pals
8. The Forest Of S. T. Shrew
9. Planet Of Plenty
10. Charting Diversity
11. Can It Be Real?
22. Trees As Habitats

23. The Fallen Log
25. Birds and Worms
26. Dynamic Duos
29. Rain Reasons
41. How Plants Grow
43. Have Seeds Will Travel
45. Web Of Life
46. School Yard Safari
47. Are Vacant Lots Vacant?
48. Field, Forest and Stream
49. Tropical Treehouse
71. Watch On Wetlands
88. Life On The Edge

Benchmark 6: **Students describe homeostasis, stimulus/response, and adaptive behaviors to the environment.**

7. Habitat Pen-Pals
9. Planet Of Plenty
10. Charting Diversity
11. Can It Be Real?
25. Birds and Worms
29. Rain Reasons
43. Have Seeds Will Travel
49. Tropical Treehouse
71. Watch On Wetlands
88. Life On The Edge

Reproduction

Benchmark 7: **Students apply life cycles of organisms to explain reproduction and heredity.**

43. Have Seeds Will Travel

Classification

Benchmark 8: **Students identify patterns to observe classification systems.**

3. The Peppermint Beetle
4. Sounds Around
80. Nothing Succeeds Like Succession

Structure and Function

Benchmark 9: **Students identify structure and describe function in living systems involving cells, levels of organization, human body systems, and disease.**

Earth and Space

Benchmark 10: **Students recognize the earth's place in the solar system and describe it's motion, the effects of gravity on motion, the sun as a major source of energy, and the impact of space exploration.**

39. Energy Sleuths

Benchmark 11: **Students explain the structure of the earth system, including layers of the earth and it's atmosphere, plate tectonics, and landforms.**

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Benchmark 12: Students interpret earth's history by examining geological evidence and change.

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CONTENT STANDARD: *2. UNIFYING CONCEPTS AND PROCESSES*
Students recognize patterns and processes, making connections in terms of systems and subsystems that explain the interrelationships of the natural and designed world.

Benchmark 1: Students develop descriptions, explanations, predictions, and models using scientific evidence.

7. Habitat Pen-Pals
8. The Forest Of S.T. Shrew
9. Planet Of Plenty
11. Can It Be Real?
14. Renewable Or Not?
15. A Few Of My Favorite Things
20. Environmental Exchange Box
21. Adopt A Tree
23. The Fallen Log
24. Nature's Recyclers
25. Birds and Worms
26. Dynamic Duos
27. Every Tree For Itself
28. Air Plants
29. Rain Reasons
30. Three Cheers For Trees
35. Loving It Too Much
36. Pollution Search
37. Talking Trash, Not!
38. Every Drop Counts
40. Then and Now
42. Sunlight and Shades Of Green
44. Water Wonders
46. School Yard Safari
47. Are Vacant Lots Vacant?
49. Tropical Treehouse
51. Make Your Own Paper
52. A Look At Aluminum
54. I'd Like To Visit A Place Where...
61. The Closer You Look
63. Tree Factory
64. Looking At Leaves
65. Bursting Buds
70. Soil Stories
75. Tipi Talk
77. Trees In Trouble
78. Signs Of Fall
79. Tree Lifecycle
81. Living With Fire
82. Resource-Go-Round
85. Air To Drive
90. The Native Way

91. In The Good Old Days

Benchmark 2: Students recognize and illustrate systems, order, and organization.

10. Charting Diversity
41. How Plants Grow
43. Have Seeds Will Travel
45. Web Of Life
47. Are Vacant Lots Vacant?
48. Field, Forest and Stream
49. Tropical Treehouse

Benchmark 3: Students recognize evolution as a change over time in relation to astronomical, geological, technological and biological systems.

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Benchmark 4: Students recognize how cycles, balance, constancy, and change are interrelated.

21. Adopt A Tree
25. Birds and Worms
26. Dynamic Duos
27. Every Tree For Itself
28. Air Plants
29. Rain Reasons
31. Plant A Tree
35. Loving It Too Much
36. Pollution Search
76. Tree Cookies
77. Trees In Trouble
78. Signs Of Fall
79. Tree Lifecycle
80. Nothing Succeeds Like Succession
81. Living With Fire
86. Our Changing World

Benchmark 5: Students recognize the function and importance of measurement.

41. How Plants Grow
48. Field, Forest and Stream
66. Germinating Giants
67. How Big Is Your Tree?

Benchmark 6: Students recognize that the form or structure of an object or system is related to use or function.

68. Name That Tree
70. Soil Stories
78. Signs Of Fall
79. Tree Lifecycle\

Benchmark 7: Students recognize connections among science disciplines.

29. Rain Reasons

CONTENT STANDARD: *3. SCIENCE AS INQUIRY*

Students demonstrate knowledge and skills necessary to perform scientific inquiry.

Benchmark 1: Students identify problems and form hypotheses.

70. Soil Stories
77. Trees In Trouble

Benchmark 2: Students design and conduct scientific experiments.

41. How Plants Grow
42. Sunlight And Shades Of Green
44. Water Wonders
70. Soil Stories
71. Watch On Wetlands
77. Trees In Trouble
78. Signs Of Fall
81. Living With Fire

Benchmark 3: Students demonstrate the relationship between evidence and the explanation.

41. How Plants Grow
42. Sunlight and Shades Of Green
44. Water Wonders
48. Field, Forest and Stream
70. Soil Stories
71. Watch On Wetlands
77. Trees In Trouble
78. Signs Of Fall
81. Living With Fire

Benchmark 4: Students make inferences and predictions and draw conclusions based on data, observation or experimental evidence.

22. Trees As Habitats
27. Every Tree For Itself
28. Air Plants
29. Rain Reasons
37. Talking Trash, Not!
38. Every Drop Counts
41. How Plants Grow
42. Sunlight and Shades Of Green
43. Have Seeds Will Travel
44. Water Wonders
43. Have Seeds Will Travel
70. Soil Stories
78. Signs Of Fall

Benchmark 5: Students describe methods, report results, and pose follow-up questions.

70. Soil Stories
77. Trees In Trouble

CONTENT STANDARD: *4. HABITS OF MIND*
Students develop habits of mind including curiosity, open-mindedness and persistence.

Benchmark: **Students develop habits of mind that include curiosity to pursue scientific questioning, acceptance of uncertainty and current limitations in science, persistence in learning, and appreciation for the world around them.**

8. The Forest Of S.T. Shrew
21. Adopt A Tree
23. The Fallen Log
24. Nature's Recyclers
30. Three Cheers For Trees
31. Plant A Tree
90. The Native Way
91. In The Good Old Days
92. A Look At Lifestyles
96. Improve Your Place

CONTENT STANDARD: ***5. COMMUNICATION***
Students communicate and apply scientific concepts.

Benchmark 1: **Students research scientific information using a variety of sources including technological, written, and human resources.**

7. Habitat Pen-Pals
10. Charting Diversity
12. Tree Treasures
16. Pass The Plants, Please
37. Talking Trash, Not!
40. Then and Now
45. Web Of Life
49. Tropical Treehouse
76. Tree Cookies
77. Trees In Trouble
88. Life On The Edge
94. Where Are The Cedars Of Lebanon?

Benchmark 2: **Students use scientific vocabulary, mathematics and technology to communicate information and results through oral, written and visual forms.**

9. Planet Of Plenty
11. Can It Be Real?
14. Renewable Or Not?
21. Adopt A Tree
22. Trees As Habitats
23. The Fallen Log
25. Birds and Worms
33. Forest Consequences
35. Loving It Too Much
36. Pollution Search
38. Every Drop Counts
39. Energy Sleuths
41. How Plants Grow
42. Sunlight and Shades Of Green
45. Web Of Life
46. School Yard Safari
47. Are Vacant Lots Vacant?
48. Field, Forest and Stream

49. Tropical Treehouse
50. 400-Acre Wood
66. Germinating Giants
67. How Big Is Your Tree?
70. Soil Stories
71. Watch On Wetlands
77. Trees In Trouble
79. Tree Lifecycle
80. Nothing Succeeds Like Succession
86. Our Changing World
89. Trees For Many Reasons

CONTENT STANDARD: ***6. SCIENCE IN PERSONAL AND SOCIAL PERSPECTIVES***
Students apply scientific principles to personal and social issues.

Benchmark 1: **Students consider a cause and effect with regard to personal and community health, population growth, natural resources, and environmental quality.**

25. Birds and Worms
27. Every Tree For Itself
29. Rain Reasons
72. Air We Breathe

Benchmark 2: **Students exhibit ethical awareness to recognize the nature and characteristics of science and technology.**

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Benchmark 3: **Students explore options for a career in scientific or technical fields.**

34. Who Works In This Forest?

Benchmark 4: **Students apply the interdisciplinary relationships of science to social, economic, and political issues.**

14. Renewable Or Not?
19. Values On The Line
20. Environmental Exchange Box
32. A Forest Of Many Uses
33. Forest Consequences
34. Who Works In The Forest?
35. Loving It Too Much
38. Every Drop Counts
39. Energy Sleuths
50. 400-Acre Wood
69. Forest For The Trees
73. Waste Watchers
82. Resource-Go-Round
84. A Peek At Packaging

CONTENT STANDARD: ***7. HISTORY AND SCIENCE OF NATURE***
Students develop an understanding of the nature of science, its history, and science as a human endeavor.

Benchmark 1: Students recognize science as a dynamic process.

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Benchmark 2: Students describe scientific contributions made by men and women in varying cultures, times, and settings.

34. Who Works In The Forest?
91. In The Good Old Days

Benchmark 3: Students describe scientific contributions to society.

13. We All Need Trees
15. A Few Of My Favorite Things
38. Every Drop Counts
39. Energy Sleuths
52. A Look At Aluminum
53. On The Move
72. Air We Breathe
73. Waste Watchers
83. Reduce, Reuse, Recycle
84. A Peek At Packaging

Benchmark 5: Students explain how scientists go about their work and frequently question each other's findings.

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Benchmark 6: Students recognize that scientific knowledge changes and grows over time, building on earlier knowledge.

86. Our Changing World
91. In The Good Old Days
92. A Look At Lifestyles
81. Living With Fire
84. A Peek At Packaging
85. Air To Drive
89. Trees For Many Reasons
94. Where Are The Cedars Of Lebanon?

CONTENT STANDARD: *8. SCIENCE and TECHNOLOGY*
Students develop skills in using technology and recognize the relationship between technology and science, including its potential and limits.

Benchmark 1: Students examine and identify the interrelationship between science and technology, i.e., meeting human needs, solving human problems, and creating new products.

36. Pollution Search
37. Talking Trash, Not
53. On The Move
82. Resource-Go-Round
83. Reduce, Reuse, Recycle
84. A Peek At Packaging
93. Paper Civilizations

CONTENT STANDARD: ***9. SAFETY***
Students exercise care in scientific inquiry and recognize the importance of safety.

Benchmark 1: **Students incorporate and maintain safety in the design and execution of scientific investigation.**

42. Sunlight And Shades Of Green
81. Living With Fire

Benchmark 2: **Students select and use appropriate safety equipment.**

81. Living With Fire

Benchmark 3: **Students recognize hazards and appropriate safety symbols.**

81. Living With Fire

Benchmark 4: **Students observe safety procedures.**

42. Sunlight And Shades Of Green
81. Living With Fire

Benchmark 5: **Students exhibit responsible, appropriate conduct.**

42. Sunlight And Shades Of Green
81. Living With Fire

Benchmark 6: **Students apply knowledge of safety techniques to life situations.**

81. Living With Fire