

Wyoming Project Learning Tree
Correlation Key
to
The Wyoming Mathematics Content and Performance Standards
for
Grades K-4

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 Mathematics Content and Performance Standards for grades K-4. 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 mathematical skills in number operations and concepts, geometry, measurement, algebraic concepts and relationships, statistics and probability, tools and technology, problem-solving and mathematical reasoning.

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CONTENT STANDARD: 1. NUMBER OPERATIONS AND CONCEPTS
Students use numbers, number sense and number relationships in a problem-solving situation. Students communicate the reasoning used in solving these problems.

Benchmark 1: Students use the concept of place value to read and write numbers up to 999,999.

- 21. Adopt A Tree
- 25. Birds And Worms
- 27. Every Tree For Itself
- 38. Every Drop Counts
- 41. How Plants Grow
- 48. Field, Forest And Stream
- 66. Germinating Giants
- 67. How Big Is Your Tree?
- 77. Trees In Trouble
- 80. Nothing Succeeds Like Succession

Benchmark 2: Students compare number values and order sets of numbers.

- 21. Adopt A Tree
- 25. Birds And Worms
- 27. Every Tree For Itself
- 38. Every Drop Counts
- 41. How Plants Grow
- 48. Field, Forest And Stream
- 67. How Big Is Your Tree?
- 77. Trees In Trouble
- 80. Nothing Succeeds Like Succession

Benchmark 3: Students perform arithmetic operations on whole numbers fluently applying knowledge of math facts.

- 21. Adopt A Tree
- 28. Air Plants
- 53. On The Move
- 67. How Big Is Your Tree?

Benchmark 4: Students justify their choice of procedures for performing whole number operations and the relationships between various methods of computations.

- 21. Adopt A Tree
- 53. On The Move

Benchmark 5: Students use a variety of mental computations and estimation techniques in solving problems.

- 38. Every Drop Counts
- 67. How Big Is Your Tree?

Benchmark 6: Students evaluate the reasonableness of results in number operations.

- 21. Adopt A Tree
- 28. Air Plants
- 53. On The Move
- 67. How Big Is Your Tree?

CONTENT STANDARD: 2. GEOMETRY

Students apply geometric concepts, properties, and relationships in a problem solving situation. Students communicate the reasoning used in solving these problems.

Benchmark 1: Students identify, classify, and describe common geometric figures and relationships.

- 1. The Shape Of Things

Benchmark 2: Students identify, describe, and compare various plane geometric figures using congruency (same size and shape) and lines of symmetry (both halves look the same).

Benchmark 3: Students informally determine perimeter of triangles, rectangles, and squares in real-world problems.

- 47. Are Vacant Lots Vacant?
- 28. Air Plants

CONTENT STANDARD: 3. MEASUREMENT

Students use a variety of tools and techniques of measurement in a problem-solving situation. Students communicate the reasoning used in solving these problems.

Benchmark 1: Students apply estimation and measurement of weight/mass to content problems using actual measuring devices and express the results in both metric (grams and kilograms) and U.S. Customary units (ounces and pounds).

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

Benchmark 2: Students apply estimation and measurement of length to content problems using actual measuring devices and describe the results in both metric (millimeters, centimeters, and meters) and U.S. Customary units (parts of an inch, inches, feet, and yards).

- 21. Adopt A Tree
- 28. Air Plants
- 47. Are Vacant Lots Vacant?
- 66. Germinating Giants
- 67. How Big Is Your Tree?
- 77. Trees In Trouble
- 80. Nothing Succeeds Like Succession

Benchmark 3: Students apply estimation and measurement of capacity in real world and content problems using actual measuring devices and using metric (milliliters and liters) and U.S. Customary units (cups, pints, quarts, and gallons).

- 38. Every Drop Counts

Benchmark 4: Students demonstrate relationships within the metric system and within the U.S. Customary system to solve content problems.

- 21. Adopt A Tree
- 28. Air Plants
- 37. Talking Trash, Not!
- 38. Every Drop Counts
- 47. Are Vacant Lots Vacant?
- 66. Germinating Giants
- 67. How Big Is Your Tree?
- 77. Trees In Trouble

Benchmark 5: Students determine by counting, the value of a collection of bills and coins up to \$10.00, compare the value of the coins or bills, and make change from \$5.00.

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Benchmark 6: Students tell time using both digital and analog clocks, to to the nearest minute.

- 38. Every Drop Counts

Benchmark 7: Students identify relationships among seconds, minutes, and hours to solve real-world problems.

- 38. Every Drop Counts

CONTENT STANDARD: 4. ALGEBRAIC CONCEPTS AND RELATIONSHIPS

Students use algebraic methods to investigate, model, and interpret patterns and functions involving numbers, shapes, data, and graphs in a problem-solving situation. Students evaluate and communicate the reasoning used in solving these problems.

Benchmark 1: Students recognize, describe, extend, create, and generalize patterns by using manipulatives, numbers, and graphic representations.

25. Birds And Worms

Benchmark 2: Students use knowledge of patterns when solving problems.

25. Birds And Worms

CONTENT STANDARD: 5. STATISTICS AND PROBABILITY

Students use statistics and probability to analyze given situations and the results of experiments. Students communicate the reasoning used in arriving at a conclusion.

Benchmark 1: Students collect and organize information to create and use simple tables, graphs, and charts to represent relationships.

4. Sounds Around
16. Pass The Plants, Please
22. Trees As Habitats
28. Air Plants
25. Birds And Worms
36. Pollution Search
37. Talking, Trash, Not!
38. Every Drop Counts
41. How Plants Grow
66. Germinating Giants
80. Nothing Succeeds Like Succession

Benchmark 2: Students draw and state conclusions from a set of data by interpreting and predicting information using tables, graphs, and charts.

4. Sounds Around
16. Pass The Plants, Please
22. Trees As Habitats
25. Birds And Worms
28. Air Plants
36. Pollution Search
37. Talking, Trash, Not!
38. Every Drop Counts
41. How Plants Grow
66. Germinating Giants
80. Nothing Succeeds Like Succession

Benchmark 3: Students predict, perform, and record results of simple probability experiments.

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CONTENT STANDARD: 6. TOOLS AND TECHNOLOGY

Students use appropriate tools and technologies to model, measure, and apply the results in a problem-solving situation. Students communicate the reasoning used in solving these problems.

Benchmark 1: Students elect and use appropriate manipulatives and/or tools to solve problems and justify their answers.

1. The Shape Of Things
6. Picture This!
21. Adopt A Tree
25. Birds And Worms
28. Air Plants
37. Talking Trash, Not!
41. How Plants Grow
47. Are Vacant Lots Vacant?
48. Field, Forest And Stream
66. Germinating Giants
67. How Big Is Your Tree?
77. Trees In Trouble
80. Nothing Succeeds Like Succession

Benchmark 2: Students use calculators as a problem-solving tool.

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Benchmark 3: Students use computers and software to find, sort, classify and display data or represent spatial relationships and patterns, to develop mathematical understanding and to solve problems.

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

CONTENT STANDARD: 7. PROBLEM-SOLVING AND MATHEMATICAL REASONING

Students apply a variety of problem-solving strategies to investigate and solve problems from across the curriculum as well as from practical applications.

Benchmark 1: Students make predictions and decisions based on observations.

6. Picture This!
21. Adopt A Tree
22. Trees As Habitats
36. Pollution Search
37. Talking Trash, Not!
41. How Plants Grow
47. Are Vacant Lots Vacant?
67. How Big Is Your Tree?
77. Trees In Trouble
80. Nothing Succeeds Like Succession

Benchmark 2: Students select strategies appropriate for solving

problems.

- 37. Talking Trash, Not!
- 38. Every Drop Counts
- 53. On The Move
- 66. Germinating Giants

Benchmark 3: Students select and use appropriate operations.

- 21. Adopt A Tree
- 28. Air Plants
- 53. On The Move
- 67. How Big Is Your Tree?

Benchmark 4: Students use mathematical language to solve real-world and content problems, communicating the reasonableness of the methods and results.

- 36. Pollution Search
- 37. Talking Trash, Not!
- 38. Every Drop Counts
- 53. On The Move
- 66. Germinating Giants
- 67. How Big Is Your Tree?

Benchmark 5: Students sort and classify objects and numbers to demonstrate logical connections.

- 6. Picture This!
- 37. Talking Trash, Not!
- 80. Nothing Succeeds Like Succession
- 83. Reduce, Reuse, Recycle

