

Grade 7 Grade Level Expectations correlated to Project Learning Tree  
PreK-8 Guide  
Science

Grade Level Expectation	PLT activity
<b>Science as Inquiry</b> <b>The Abilities Necessary to Do Scientific Inquiry</b>	
1. Generate testable questions about objects, organisms, and events that can be answered through scientific investigation (SI-M-A1)	22: Trees as Habitats 24: Nature’s Recyclers 28: Air Plants 29: Rain Reasons 41: How Plants Grow 42: Sunlight and Shades of Green 48: Field, Forest, and Stream 70: Soil Stories 77: Trees in Trouble
2. Identify problems, factors, and questions that must be considered in a scientific investigation (SI-M-A1)	24: Nature’s Recyclers 28: Air Plants 41: How Plants Grow 42: Sunlight and Shades of Green 77: Trees in Trouble
3. Use a variety of sources to answer questions (SI-M-A1)	9: Planet Diversity 21: Adopt a Tree 22: Trees as Habitats 23: The Fallen Log 24: Nature’s Recyclers 28: Air Plants 29: Rain Reasons 41: How Plants Grow 42: Sunlight and Shades of Green 47: Are Vacant Lots Vacant? 48: Field, Forest, and Stream 70: Soil Stories 71: Watch on Wetlands 77: Trees in Trouble 80: Nothing Succeeds Like Succession
4. Design, predict outcomes, and conduct experiments to answer guiding questions (SI-M-A2)	24: Nature’s Recyclers 28: Air Plants 41: How Plants Grow 42: Sunlight and Shades of Green 77: Trees in Trouble
5. Identify independent variables, dependent variables, and variables that should be controlled in designing an experiment (SI-M-A2)	24: Nature’s Recyclers 28: Air Plants 41: How Plants Grow 42: Sunlight and Shades of Green 77: Trees in Trouble

<p>6. Select and use appropriate equipment, technology, tools, and metric system units of measurement to make observations (SI-M-A3)</p>	<p>9: Planet Diversity  21: Adopt a Tree  22: Trees as Habitats  23: The Fallen Log  24: Nature’s Recyclers  28: Air Plants  29: Rain Reasons  41: How Plants Grow  42: Sunlight and Shades of Green  47: Are Vacant Lots Vacant?  48: Field, Forest, and Stream  70: Soil Stories  71: Watch on Wetlands  77: Trees in Trouble  80: Nothing Succeeds Like Succession</p>
<p>7. Record observations using methods that complement investigations (e.g., journals, tables, charts) (SI-M-A3)</p>	<p>9: Planet Diversity  21: Adopt a Tree  22: Trees as Habitats  23: The Fallen Log  24: Nature’s Recyclers  28: Air Plants  29: Rain Reasons  41: How Plants Grow  42: Sunlight and Shades of Green  47: Are Vacant Lots Vacant?  48: Field, Forest, and Stream  70: Soil Stories  71: Watch on Wetlands  77: Trees in Trouble  80: Nothing Succeeds Like Succession</p>
<p>8. Use consistency and precision in data collection, analysis, and reporting (SI-M-A3)</p>	<p>9: Planet Diversity  21: Adopt a Tree  22: Trees as Habitats  23: The Fallen Log  24: Nature’s Recyclers  28: Air Plants  29: Rain Reasons  41: How Plants Grow  42: Sunlight and Shades of Green  47: Are Vacant Lots Vacant?  48: Field, Forest, and Stream  70: Soil Stories  71: Watch on Wetlands  77: Trees in Trouble  80: Nothing Succeeds Like Succession</p>
<p>9. Use computers and/or calculators to analyze and interpret quantitative data (SI-M-A3)</p>	<p>9: Planet Diversity  24: Nature’s Recyclers  28: Air Plants  48: Field, Forest, and Stream  70: Soil Stories</p>

<p>10. Identify the difference between description and explanation (SI-M-A4)</p>	<p>9: Planet Diversity  21: Adopt a Tree  22: Trees as Habitats  23: The Fallen Log  24: Nature’s Recyclers  28: Air Plants  29: Rain Reasons  41: How Plants Grow  42: Sunlight and Shades of Green  47: Are Vacant Lots Vacant?  48: Field, Forest, and Stream  70: Soil Stories  71: Watch on Wetlands  77: Trees in Trouble  80: Nothing Succeeds Like Succession</p>
<p>11. Construct, use, and interpret appropriate graphical representations to collect, record, and report data (e.g., tables, charts, circle graphs, bar and line graphs, diagrams, scatter plots, symbols) (SI-M-A4)</p>	<p>9: Planet Diversity  21: Adopt a Tree  22: Trees as Habitats  23: The Fallen Log  24: Nature’s Recyclers  28: Air Plants  29: Rain Reasons  41: How Plants Grow  42: Sunlight and Shades of Green  47: Are Vacant Lots Vacant?  48: Field, Forest, and Stream  70: Soil Stories  71: Watch on Wetlands  77: Trees in Trouble  80: Nothing Succeeds Like Succession</p>
<p>12. Use data and information gathered to develop an explanation of experimental results (SI-M-A4)</p>	<p>9: Planet Diversity  21: Adopt a Tree  22: Trees as Habitats  23: The Fallen Log  24: Nature’s Recyclers  28: Air Plants  29: Rain Reasons  41: How Plants Grow  42: Sunlight and Shades of Green  47: Are Vacant Lots Vacant?  48: Field, Forest, and Stream  70: Soil Stories  71: Watch on Wetlands  77: Trees in Trouble  80: Nothing Succeeds Like Succession</p>

<p>13. Identify patterns in data to explain natural events (SI-M-A4)</p>	<p>9: Planet Diversity  21: Adopt a Tree  22: Trees as Habitats  23: The Fallen Log  24: Nature’s Recyclers  28: Air Plants  29: Rain Reasons  41: How Plants Grow  42: Sunlight and Shades of Green  47: Are Vacant Lots Vacant?  48: Field, Forest, and Stream  70: Soil Stories  71: Watch on Wetlands  77: Trees in Trouble  80: Nothing Succeeds Like Succession</p>
<p>14. Develop models to illustrate or explain conclusions reached through investigation (SI-M-A5)</p>	<p>9: Planet Diversity  23: The Fallen Log  24: Nature’s Recyclers  28: Air Plants  29: Rain Reasons  41: How Plants Grow  42: Sunlight and Shades of Green  80: Nothing Succeeds Like Succession</p>
<p>15. Identify and explain the limitations of models used to represent the natural world (SI-M-A5)</p>	<p>9: Planet Diversity  23: The Fallen Log  24: Nature’s Recyclers  28: Air Plants  29: Rain Reasons  41: How Plants Grow  42: Sunlight and Shades of Green  80: Nothing Succeeds Like Succession</p>
<p>16. Use evidence to make inferences and predict trends (SI-M-A5)</p>	<p>9: Planet Diversity  21: Adopt a Tree  22: Trees as Habitats  23: The Fallen Log  24: Nature’s Recyclers  28: Air Plants  29: Rain Reasons  41: How Plants Grow  42: Sunlight and Shades of Green  47: Are Vacant Lots Vacant?  48: Field, Forest, and Stream  70: Soil Stories  71: Watch on Wetlands  77: Trees in Trouble  80: Nothing Succeeds Like Succession</p>

<p>17. Recognize that there may be more than one way to interpret a given set of data, which can result in alternative scientific explanations and predictions (SI-M-A6)</p>	<p>9: Planet Diversity  21: Adopt a Tree  22: Trees as Habitats  23: The Fallen Log  24: Nature’s Recyclers  28: Air Plants  29: Rain Reasons  41: How Plants Grow  42: Sunlight and Shades of Green  47: Are Vacant Lots Vacant?  48: Field, Forest, and Stream  70: Soil Stories  71: Watch on Wetlands  77: Trees in Trouble  80: Nothing Succeeds Like Succession</p>
<p>18. Identify faulty reasoning and statements that misinterpret or are not supported by the evidence (SI-M-A6)</p>	<p>9: Planet Diversity  21: Adopt a Tree  22: Trees as Habitats  23: The Fallen Log  24: Nature’s Recyclers  28: Air Plants  29: Rain Reasons  41: How Plants Grow  42: Sunlight and Shades of Green  47: Are Vacant Lots Vacant?  48: Field, Forest, and Stream  70: Soil Stories  71: Watch on Wetlands  77: Trees in Trouble  80: Nothing Succeeds Like Succession</p>
<p>19. Communicate ideas in a variety of ways (e.g., symbols, illustrations, graphs, charts, spreadsheets, concept maps, oral and written reports, equations) (SI-M-A7)</p>	<p>9: Planet Diversity  21: Adopt a Tree  22: Trees as Habitats  23: The Fallen Log  24: Nature’s Recyclers  28: Air Plants  29: Rain Reasons  41: How Plants Grow  42: Sunlight and Shades of Green  47: Are Vacant Lots Vacant?  48: Field, Forest, and Stream  70: Soil Stories  71: Watch on Wetlands  77: Trees in Trouble  80: Nothing Succeeds Like Succession</p>
<p>20. Write clear, step-by-step instructions that others can follow to carry out procedures or conduct investigations (SI-M-A7)</p>	

<p>21. Distinguish between <i>observations</i> and <i>inferences</i> (SI-M-A7)</p>	<p>9: Planet Diversity  21: Adopt a Tree  22: Trees as Habitats  23: The Fallen Log  24: Nature’s Recyclers  28: Air Plants  29: Rain Reasons  41: How Plants Grow  42: Sunlight and Shades of Green  47: Are Vacant Lots Vacant?  48: Field, Forest, and Stream  70: Soil Stories  71: Watch on Wetlands  77: Trees in Trouble  80: Nothing Succeeds Like Succession</p>
<p>22. Use evidence and observations to explain and communicate the results of investigations (SI-M-A7)</p>	<p>9: Planet Diversity  21: Adopt a Tree  22: Trees as Habitats  23: The Fallen Log  24: Nature’s Recyclers  28: Air Plants  29: Rain Reasons  41: How Plants Grow  42: Sunlight and Shades of Green  47: Are Vacant Lots Vacant?  48: Field, Forest, and Stream  70: Soil Stories  71: Watch on Wetlands  77: Trees in Trouble  80: Nothing Succeeds Like Succession</p>
<p>23. Use relevant safety procedures and equipment to conduct scientific investigations (SI-M-A8)</p>	<p>9: Planet Diversity  21: Adopt a Tree  22: Trees as Habitats  23: The Fallen Log  24: Nature’s Recyclers  28: Air Plants  29: Rain Reasons  41: How Plants Grow  42: Sunlight and Shades of Green  47: Are Vacant Lots Vacant?  48: Field, Forest, and Stream  70: Soil Stories  71: Watch on Wetlands  77: Trees in Trouble  80: Nothing Succeeds Like Succession</p>

<p>24. Provide appropriate care and utilize safe practices and ethical treatment when animals are involved in scientific field and laboratory research (SI-M-A8)</p>	<p>9: Planet Diversity  21: Adopt a Tree  22: Trees as Habitats  23: The Fallen Log  24: Nature’s Recyclers  28: Air Plants  29: Rain Reasons  41: How Plants Grow  42: Sunlight and Shades of Green  47: Are Vacant Lots Vacant?  48: Field, Forest, and Stream  70: Soil Stories  71: Watch on Wetlands  77: Trees in Trouble  80: Nothing Succeeds Like Succession</p>
<p><b>Understanding Scientific Inquiry</b></p>	
<p>25. Compare and critique scientific investigations (SI-M-B1)</p>	
<p>26. Use and describe alternate methods for investigating different types of testable questions (SI-M-B1)</p>	<p>23: The Fallen Log  24: Nature’s Recyclers  41: How Plants Grow  42: Sunlight and Shades of Green  48: Field, Forest, and Stream  70: Soil Stories  77: Trees in Trouble</p>
<p>27. Recognize that science uses processes that involve a logical and empirical, but flexible, approach to problem solving (SI-M-B1)</p>	<p>9: Planet Diversity  21: Adopt a Tree  22: Trees as Habitats  23: The Fallen Log  24: Nature’s Recyclers  28: Air Plants  29: Rain Reasons  41: How Plants Grow  42: Sunlight and Shades of Green  47: Are Vacant Lots Vacant?  48: Field, Forest, and Stream  70: Soil Stories  71: Watch on Wetlands  77: Trees in Trouble  80: Nothing Succeeds Like Succession</p>
<p>28. Recognize that investigations generally begin with a review of the work of others (SI-M-B2)</p>	

<p>29. Explain how technology can expand the senses and contribute to the increase and/or modification of scientific knowledge (SI-M-B3)</p>	<p>9: Planet Diversity  21: Adopt a Tree  22: Trees as Habitats  23: The Fallen Log  24: Nature’s Recyclers  28: Air Plants  29: Rain Reasons  41: How Plants Grow  42: Sunlight and Shades of Green  47: Are Vacant Lots Vacant?  48: Field, Forest, and Stream  70: Soil Stories  71: Watch on Wetlands  77: Trees in Trouble  80: Nothing Succeeds Like Succession</p>
<p>30. Describe why all questions cannot be answered with present technologies (SI-M-B3)</p>	<p>9: Planet Diversity  21: Adopt a Tree  22: Trees as Habitats  23: The Fallen Log  24: Nature’s Recyclers  28: Air Plants  29: Rain Reasons  41: How Plants Grow  42: Sunlight and Shades of Green  47: Are Vacant Lots Vacant?  48: Field, Forest, and Stream  70: Soil Stories  71: Watch on Wetlands  77: Trees in Trouble  80: Nothing Succeeds Like Succession</p>
<p>31. Recognize that there is an acceptable range of variation in collected data (SI-M-B3)</p>	<p>9: Planet Diversity  23: The Fallen Log  24: Nature’s Recyclers  28: Air Plants  29: Rain Reasons  41: How Plants Grow  42: Sunlight and Shades of Green  47: Are Vacant Lots Vacant?  48: Field, Forest, and Stream  70: Soil Stories  71: Watch on Wetlands  77: Trees in Trouble  80: Nothing Succeeds Like Succession</p>
<p>32. Explain the use of statistical methods to confirm the significance of data (e.g., mean, median, mode, range) (SI-M-B3)</p>	

<p>33. Evaluate models, identify problems in design, and make recommendations for improvement (SI-M-B4)</p>	<p>24: Nature’s Recyclers  28: Air Plants  41: How Plants Grow  42: Sunlight and Shades of Green</p>
<p>34. Recognize the importance of communication among scientists about investigations in progress and the work of others (SI-M-B5)</p>	<p>9: Planet Diversity  21: Adopt a Tree  22: Trees as Habitats  23: The Fallen Log  24: Nature’s Recyclers  28: Air Plants  29: Rain Reasons  41: How Plants Grow  42: Sunlight and Shades of Green  47: Are Vacant Lots Vacant?  48: Field, Forest, and Stream  70: Soil Stories  71: Watch on Wetlands  77: Trees in Trouble  80: Nothing Succeeds Like Succession</p>
<p>35. Explain how skepticism about accepted scientific explanations (i.e., hypotheses and theories) leads to new understanding (SI-M-B5)</p>	<p>9: Planet Diversity  21: Adopt a Tree  22: Trees as Habitats  23: The Fallen Log  24: Nature’s Recyclers  28: Air Plants  29: Rain Reasons  41: How Plants Grow  42: Sunlight and Shades of Green  47: Are Vacant Lots Vacant?  48: Field, Forest, and Stream  70: Soil Stories  71: Watch on Wetlands  77: Trees in Trouble  80: Nothing Succeeds Like Succession</p>
<p>36. Explain why an experiment must be verified through multiple investigations and yield consistent results before the findings are accepted (SI-M-B5)</p>	<p>9: Planet Diversity  21: Adopt a Tree  22: Trees as Habitats  23: The Fallen Log  24: Nature’s Recyclers  28: Air Plants  29: Rain Reasons  41: How Plants Grow  42: Sunlight and Shades of Green  47: Are Vacant Lots Vacant?  48: Field, Forest, and Stream  70: Soil Stories  71: Watch on Wetlands  77: Trees in Trouble  80: Nothing Succeeds Like Succession</p>

<p>37. Critique and analyze their own inquiries and the inquiries of others (SI-M-B5)</p>	<p>9: Planet Diversity  21: Adopt a Tree  22: Trees as Habitats  23: The Fallen Log  24: Nature’s Recyclers  28: Air Plants  29: Rain Reasons  41: How Plants Grow  42: Sunlight and Shades of Green  47: Are Vacant Lots Vacant?  48: Field, Forest, and Stream  70: Soil Stories  71: Watch on Wetlands  77: Trees in Trouble  80: Nothing Succeeds Like Succession</p>
<p>38. Explain that, through the use of scientific processes and knowledge, people can solve problems, make decisions, and form new ideas (SI-M-B6)</p>	<p>9: Planet Diversity  21: Adopt a Tree  22: Trees as Habitats  23: The Fallen Log  24: Nature’s Recyclers  28: Air Plants  29: Rain Reasons  41: How Plants Grow  42: Sunlight and Shades of Green  47: Are Vacant Lots Vacant?  48: Field, Forest, and Stream  70: Soil Stories  71: Watch on Wetlands  77: Trees in Trouble  80: Nothing Succeeds Like Succession</p>
<p>39. Identify areas in which technology has changed human lives (e.g., transportation, communication, geographic information systems, DNA fingerprinting) (SI-M-B7)</p>	<p>12: Invasive Species  14: Renewable or Not  15: A Few of My Favorite Things  29: Rain Reasons  32: A Forest of Many Uses  52: A Look at Aluminum  71: Watch on Wetlands  77: Trees in Trouble  84: The Global Climate</p>
<p>40. Evaluate the impact of research on scientific thought, society, and the environment (SI-M-B7)</p>	<p>9: Planet Diversity  21: Adopt a Tree  22: Trees as Habitats  23: The Fallen Log  24: Nature’s Recyclers  28: Air Plants  29: Rain Reasons  41: How Plants Grow  42: Sunlight and Shades of Green  47: Are Vacant Lots Vacant?  48: Field, Forest, and Stream  70: Soil Stories  71: Watch on Wetlands  77: Trees in Trouble  80: Nothing Succeeds Like Succession</p>

<b>Physical Science</b> <b>Properties and Changes of Properties in Matter</b>	
1. Identify the elements most often found in living organisms (e.g., C, N, H, O, P, S, Ca, Fe) (PS-M-A9)	
<b>Life Science</b> <b>Structure and Function in Living Systems</b>	
2. Compare the basic structures and functions of different types of cells (LS-M-A1)	
3. Illustrate and demonstrate osmosis and diffusion in cells (LS-M-A1)	
4. Compare functions of plant and animal cell structures (i.e., organelles) (LS-M-A2)	
5. Compare complete and incomplete metamorphosis in insects (e.g., butterflies, mealworms, grasshoppers) (LS-M-A3)	
6. Compare the life cycles of a variety of organisms, including non-flowering and flowering plants, reptiles, birds, amphibians, and mammals (LS-M-A3)	7: Habitat Pen Pals 11: Can It Be Real? 12: Invasive Species 22: Trees as Habitats 23: The Fallen Log 24: Nature’s Recyclers 43: Have Seeds, Will Travel 45: Web of Life 49: Tropical Treehouse 66: How Big is Your Tree? 79: Tree Lifecycle 88: Life on the Edge
7. Construct a word equation that illustrates the processes of photosynthesis and respiration (LS-M-A4)	28: Air Plants 41: How Plants Grow 42: Sunlight and Shades of Green 63: Tree Factory 78: Signs of Fall
8. Distinguish between <i>aerobic</i> respiration and <i>anaerobic</i> respiration (LS-M-A4)	
9. Relate structural features of organs to their functions in major systems (LS-M-A5)	28: Air Plants 41: How Plants Grow 42: Sunlight and Shades of Green 63: Tree Factory 78: Signs of Fall
10. Describe the way major organ systems in the human body interact to sustain life (LS-M-A5)	
11. Describe the growth and development of humans from infancy to old age (LS-M-A6)	
12. Explain how external factors and genetics can influence the quality and length of human life (e.g., nutrition, smoking, drug use, exercise) (LS-M-A6)	
13. Identify and describe common communicable and noncommunicable diseases and the methods by which they are transmitted, treated, and prevented (LS-M-A7)	

<b>Reproduction and Heredity</b>	
14. Differentiate between sexual and asexual reproduction (LS-M-B1)	
15. Contrast the processes of mitosis and meiosis in relation to growth, repair, reproduction, and heredity (LS-M-B1)	
16. Explain why chromosomes in body cells exist in pairs (LS-M-B2)	
17. Explain the relationship of genes to chromosomes and genotypes to phenotypes (LS-M-B2)	
18. Recognize genetic errors caused by changes in chromosomes (LS-M-B2)	
19. Apply the basic laws of Mendelian genetics to solve simple monohybrid crosses, using a Punnett square (LS-M-B3)	
20. Explain the differences among the inheritance of dominant, recessive, and incomplete dominant traits (LS-M-B3)	
21. Use a Punnett square to demonstrate how sex-linked traits are inherited (LS-M-B3)	
22. Give examples of the importance of selective breeding (e.g., domestic animals, livestock, horticulture) (LS-M-B3)	
<b>Populations and Ecosystems</b>	
23. Classify organisms based on structural characteristics, using a dichotomous key (LS-M-C1)	
24. Analyze food webs to determine energy transfer among organisms (LS-M-C2)	9: Plant Diversity 22: Trees as Habitats 23: The Fallen Log 24: Nature's Recyclers 43: Web of Life
25. Locate and describe the major biomes of the world (LS-M-C3)	10: Charting Diversity 29: Rain Reasons 45: Web of Life 49: Tropical Treehouse
26. Describe and compare the levels of organization of living things within an ecosystem (LS-M-C3)	9: Planet Diversity 12: Invasive Species 21: Adopt a Tree 22: Trees as Habitats 23: The Fallen Log 24: Nature's Recyclers 27: Every Tree for Itself 45: Web of Life 47: Are Vacant Lots Vacant? 48: Field, Forest, and Stream 71: Watch on the Wetlands 80: Nothing Succeeds Like Succession 88: Life on the Edge
27. Identify the various relationships among plants and animals (e.g., mutualistic, parasitic, producer/consumer) (LS-M-C4)	9: Planet Diversity 12: Invasive Species 23: The Fallen Log 24: Nature's Recyclers 26: Dynamic Duos 45: Web of Life 47: Are Vacant Lots Vacant? 48: Field, Forest, and Stream 80: Nothing Succeeds Like Succession 88: Life on the Edge

<p>28. Differentiate between ecosystem components of habitat and niche (LS-M-C4)</p>	<p>9: Planet Diversity  12: Invasive Species  21: Adopt a Tree  22: Trees as Habitats  23: The Fallen Log  45: Web of Life  47: Are Vacant Lots Vacant?  48: Field, Forest, and Stream  80: Nothing Succeeds Like Succession  88: Life on the Edge</p>
<p>29. Predict the impact changes in a species' population have on an ecosystem (LS-M-C4)</p>	<p>9: Planet Diversity  12: Invasive Species  22: Trees as Habitats  23: The Fallen Log  24: Nature's Recyclers  27: Every Tree for Itself  45: Web of Life  47: Are Vacant Lots Vacant?  48: Field, Forest, and Stream  80: Nothing Succeeds Like Succession  88: Life on the Edge</p>
<p><b>Adaptations of Organisms</b></p>	
<p>30. Differentiate between structural and behavioral adaptations in a variety of organisms (LS-M-D1)</p>	<p>10: Charting Diversity  11: Can It Be Real?  26: Dynamic Duos  43: Have Seeds, Will Travel  45: Web of Life  88: Life on the Edge</p>
<p>31. Describe and evaluate the impact of introducing nonnative species into an ecosystem (LS-M-D1)</p>	<p>12: Invasive Species</p>
<p>32. Describe changes that can occur in various ecosystems and relate the changes to the ability of an organism to survive (LS-M-D2)</p>	<p>9: Planet Diversity  12: Invasive Species  23: The Fallen Log  24: Nature's Recyclers  35: Loving It Too Much  45: Web of Life  47: Are Vacant Lots Vacant?  48: Field, Forest, and Stream  77: Trees in Trouble  80: Nothing Succeeds Like Succession  88: Life on the Edge</p>
<p>33. Illustrate how variations in individual organisms within a population determine the success of the population (LS-M-D2)</p>	<p>12: Invasive Species  23: The Fallen Log  24: Nature's Recyclers  45: Web of Life  47: Are Vacant Lots Vacant?  77: Trees in Trouble  80: Nothing Succeeds Like Succession  88: Life on the Edge</p>

<p>34. Explain how environmental factors impact survival of a population (LS-M-D2)</p>	<p>9: Planet Diversity  12: Invasive Species  23: The Fallen Log  24: Nature’s Recyclers  35: Loving It Too Much  45: Web of Life  47: Are Vacant Lots Vacant?  48: Field, Forest, and Stream  77: Trees in Trouble  80: Nothing Succeeds Like Succession  88: Life on the Edge</p>
<p><b>Science and the Environment</b></p>	
<p>35. Identify resources humans derive from ecosystems (SE-M-A1)</p>	<p>14: Renewable or Not  15: A Few of My Favorite Things  49: Tropical Treehouse  50: 400-Acre Wood  51: Make Your Own Paper  52: A Look at Aluminum  82: Resource Go Round  89: Trees for Many Reasons  92: A Look at Lifestyle</p>
<p>36. Distinguish the essential roles played by biotic and abiotic components in various ecosystems (SE-M-A1)</p>	<p>9: Planet Diversity  22: Trees as Habitats  23: The Fallen Log  24: Nature’s Recyclers  27: Every Tree for Itself  29: Rain Reasons  47: Are Vacant Lots Vacant?  48: Field, Forest, and Stream  71: Watch on the Wetlands  77: Trees in Trouble</p>
<p>37. Identify and describe the effects of limiting factors on a given population (SE-M-A2)</p>	<p>9: Planet Diversity  12: Invasive Species  14: Renewable or Not  27: Every Tree for Itself  29: Rain Reasons  41: How Plants Grow  42: Sunlight and Shades of Green  48: Field, Forest and Stream  49: Tropical Treehouse  50: 400-Acre Wood  69: Forest for the Trees  71: Watch on the Wetlands  77: Trees in Trouble  80: Nothing Success Like Succession  88: Life on the Edge</p>

<p>38. Evaluate the carrying capacity of an ecosystem (SE-M-A2)</p>	<p>9: Planet Diversity  14: Renewable or Not  27: Every Tree for Itself  48: Field, Forest and Stream  49: Tropical Treehouse  50: 400-Acre Wood  71: Watch on the Wetlands  77: Trees in Trouble  80: Nothing Success Like Succession  88: Life on the Edge</p>
<p>39. Analyze the consequences of human activities on ecosystems (SE-M-A4)</p>	<p>9: Planet Diversity  12: Invasive Species  14: Renewable or Not  15: A Few of My Favorite Things  17: People of the Forest  21: Adopt a Tree  32: A Forest of Many Uses  35: Loving It Too Much  38: Every Drop Counts  39: Energy Sleuths  44: Water Wonders  45: Web of Life  47: Are Vacant Lots Vacant?  49: Tropical Treehouse  50: 400-acre Wood  70: Soil Stories  71: Watch on the Wetlands  77: Trees in Trouble  80: Nothing Succeeds Like Succession  84: Global Climate  86: Our Changing World  88: Life on the Edge</p>
<p>40. Construct or draw food webs for various ecosystems (SE-M-A5)</p>	<p>22: Trees as Habitats  23: The Fallen Log  24: Nature’s Recyclers  45: Web of Life  48: Field, Forest and Stream</p>
<p>41. Describe the nitrogen cycle and explain why it is important for the survival of organisms (SE-M-A7)</p>	
<p>42. Describe how photosynthesis and respiration relate to the carbon cycle (SE-M-A7)</p>	<p>28: Air Plants  41: How Plants Grow  42: Sunlight and Shades of Green  63: Tree Factory  77: Trees in Trouble  78: Signs of Fall  84: The Global Climate</p>

<p>43. Identify and analyze the environmental impact of humans' use of technology (e.g., energy production, agriculture, transportation, human habitation) (SE-M-A8)</p>	<p>12: Invasive Species  14: Renewable or Not  15: A Few of My Favorite Things  32: A Forest of Many Uses  35: Loving It Too Much  38: Every Drop Counts  39: Energy Sleuths  50: 400-acre Wood  70: Soil Stories  71: Watch on the Wetlands  77: Trees in Trouble  84: Global Climate  86: Our Changing World  88: Life on the Edge</p>
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**Grade 7 Grade Level Expectations correlated to Project Learning Tree  
PreK-8 Guide  
Social Studies**

<b>Grade Level Expectation</b>	<b>PLT activity</b>
<b>Geography  The World in Spatial Terms</b>	
<p>1. Analyze various types of maps, charts, graphs, and diagrams related to U.S. history (G-1A-M2)</p>	
<b>Places and Regions</b>	
<p>2. Explain how physical features and climate affected migration, settlement patterns, and land use in the United States through 1877 (G-1B-M1)</p>	<p>75: Tipi Talk</p>
<p>3. Identify and describe significant physical features that have influenced U.S. historical events (e.g., Ohio River Valley in the American Revolution) (G-1B-M2)</p>	<p>75: Tipi Talk</p>
<p>4. Explain ways in which goals, cultures, interests, inventions, and technological advances have affected perceptions and uses of places or regions in the United States (G-1B-M4)</p>	<p>15: A Few of My Favorite Things  75: Tipi Talk  90: Native Ways  91: In the Good Old Days  92: A Look at Lifestyles  95: Did You Notice?</p>
<b>Physical and Human Systems</b>	
<p>5. Explain patterns of rural/urban migration and the positive and negative consequences of urban development in the United States (G-1C-M3)</p>	<p>75: Tipi Talk  90: Native Ways  91: In the Good Old Days  92: A Look at Lifestyles  95: Did You Notice?</p>
<p>6. Identify selected racial, ethnic, and religious groups that settled in the United States and explain the political, cultural, and economic reasons for immigration (G-1C-M4)</p>	
<p>7. Compare the interdependence of Great Britain and the American colonies to the global economy today (G-1C-M6)</p>	<p>14: Renewable or Not  82: Resource Go Round</p>
<p>8. Explain how cooperation and conflict affected the changing political boundaries of the United States to 1877 (e.g., Missouri Compromise) (G-1C-M7)</p>	

<b>Environment and Society</b>	
9. Explain how the different physical environments in the American North and South led to different economic activities (G-1D-M2)	14: Renewable or Not 92: A Look at Lifestyles 82: Resource Go Round
<b>Civics Structure and Purposes of Government</b>	
10. Explain and evaluate the major purposes of government (C-1A-M1)	58: There Ought to Be A Law
11. Explain the meaning of the term <i>federalism</i> (C-1A-M2)	
12. Distinguish between various forms of government (e.g., monarchy, totalitarian) and describe their characteristics and organization (C-1A-M2)	
13. Explain how separation of powers limits government and describe the U.S. government system of checks and balances (C-1A-M3)	
14. Identify the powers of the U.S. federal government and the powers it shares with state governments according to the U.S. Constitution (C-1A-M3)	58: There Ought to Be A Law
15. Identify the structure and powers of the three branches of the federal government, the limits of those powers, and key positions within each branch (C-1A-M5)	
16. Identify qualifications and terms of office for elected officials at the national level (C-1A-M6)	
17. Identify current government leaders at the national level (C-1A-M6)	
18. Describe the powers/responsibilities and limits of power for government officials at the national level (C-1A-M6)	
19. Explain how a bill becomes law at the federal level (C-1A-M7)	58: There Ought to Be A Law
20. Examine a given law or court ruling and evaluate it based on given criteria (e.g., Dred Scott decision) (C-1A-M7)	58: There Ought to Be A Law
21. Evaluate a type of tax in an historical context (e.g., Stamp Act, Tea Tax) (C-1A-M10)	
<b>Foundations of the American Political System</b>	
22. Identify problems the United States faced after the American Revolution that led to the writing of the U.S. Constitution (C-1B-M1)	
23. Compare and contrast the Articles of Confederation with the U.S. Constitution (C-1B-M1)	
24. Identify the roles of the Continental Congress and the Great Compromise in forming the American constitutional government and the federal union (C-1B-M1)	
25. Identify the arguments of the Federalists and Anti-Federalists (C-1B-M1)	
26. Explain how historical English documents, such as the Magna Carta and the English Bill of Rights, influenced American democracy (C-1B-M1)	
27. Explain how ancient governments influenced American democracy and culture (C-1B-M1)	

28. Describe historical experiences and factors that defined, influenced, and helped shape American political culture (C-1B-M2)	
29. Define and explain the ideas expressed in the Mayflower Compact and the Declaration of Independence (C-1B-M3)	
30. Explain the principles of government embodied in the U.S. Constitution (C-1B-M3)	
31. Analyze methods used to institute change or resolve social conflict in U.S. history (e.g., War of 1812, states' rights theory) (C-1B-M4)	
32. Explain how changes are made in a democratic society (C-1B-M5)	
33. Describe the role of political parties in the American political system (C-1B-M6)	
<b>International Relationships</b>	
34. Describe political divisions of the world (nation-states) (C-1C-M1)	14: Renewable or Not
35. Explain various processes/strategies nations use to interact (C-1C-M1)	14: Renewable or Not
36. Explain how U.S. foreign policy is formed and carried out (C-1C-M2)	14: Renewable or Not
37. Identify types of foreign policy issues with reference to current and historical examples (e.g., Middle East conflicts) (C-1C-M3)	
<b>Roles of the Citizen</b>	
38. Identify the qualifications or requirements for U.S. citizenship, including naturalization (C-1D-M1)	
39. Explain the importance of various rights and responsibilities of citizenship to the individual or to society at large (e.g., Bill of Rights) (C-1D-M2)	19: Viewpoints on the Line 33: Forest Consequences 55: Planning the Ideal Community 56: We Can Work It Out 57: Democracy in Action 58: There Out to Be a Law 96: Improve Your Place
40. Explain issues involving rights and responsibilities of individuals in American society (e.g., rights of individuals with disabilities, responsibility to pay taxes) (C-1D-M3)	19: Viewpoints on the Line 33: Forest Consequences 55: Planning the Ideal Community 56: We Can Work It Out 57: Democracy in Action 58: There Out to Be a Law 96: Improve Your Place
<b>Economics</b>	
<b>Fundamental Economic Concepts</b>	
41. Use economic concepts (e.g., supply and demand, interdependence) to explain Mercantilism and describe its role in British colonization and the conflict between the thirteen American colonies and Great Britain (E-1A-M9)	
<b>Individuals, Households, Businesses, and Governments</b>	
42. Identify U.S. exports and imports that contributed to the U.S. economic interdependence with Europe and other parts of the world during the eighteenth and nineteenth centuries (E-1B-M6)	

<b>History Historical Thinking Skills</b>	
43. Construct a timeline of key events and key figures in U.S. history from 1763 to 1877 (H-1A-M1)	
44. Interpret a timeline to identify cause-and-effect relationships among events in U.S. history (H-1A-M1)	
45. Explain the point of view of key historical figures and groups in U.S. history (H-1A-M2)	
46. Explain the causes, effects, or impact of a given historical event in U.S. history (H-1A-M3)	
47. Explain how a given historical figure influenced or changed the course of U.S. history (H-1A-M3)	
48. Compare and contrast two primary sources related to the same event in U.S. history (H-1A-M4)	
49. Propose and defend an alternative course of action to a given issue or problem in U.S. history (H-1A-M5)	
50. Conduct historical research using a variety of resources, and evaluate those resources for reliability and bias, to answer historical questions related to U.S. history (H-1A-M6)	
<b>United States History</b>	
51. Explain the causes, course, and consequences of the American Revolutionary War (H-1B-M6)	
52. Compare and contrast the strategies and motivations of the Patriots, Loyalists, and British during the American Revolution (H-1B-M6)	
53. Explain the role of key figures in the American Revolution (H-1B-M6)	
54. Explain how the American Revolution affected the politics, society, and economy of the new nation (H-1B-M7)	
55. Describe the issues involved in the creation and ratification of the U.S. Constitution (H-1B-M8)	
56. Explain the significance of the Bill of Rights and its specific guarantees (H-1B-M8)	
57. Describe major events and issues involving early presidencies (H-1B-M8)	
58. Explain Napoleon's reasons for selling the Louisiana territory to the United States and the impact of that acquisition (H-1B-M9)	
59. Explain President Madison's reason for declaring war in 1812, the sectional divisions over the war, and the consequences of the Native American alliance with the British (H-1B-M9)	
60. Describe provisions of the Monroe Doctrine and its influence on U.S. foreign relations (H-1B-M9)	
61. Explain westward movement of the United States, the changes it created, and its effects on relations with Native Americans (H-1B-M9)	
62. Explain Manifest Destiny and its economic, political, social, and religious roots (H-1B-M9)	
63. Describe diplomatic and political developments that led to the resolution of conflicts with Britain, Spain, and Russia from 1815 to 1850 (H-1B-M9)	

64. Identify the causes, course, and consequences of the Texas War for Independence and the Mexican-American War (H-1B-M9)	
65. Describe Jacksonian Democracy, the influence of Jackson on the U.S. political system, and Jackson's Indian Removal Policy (H-1B-M10)	
66. Identify major technological developments related to land, water, and transportation and explain how they transformed the economy, created international markets, and affected the environment (H-1B-M10)	
67. Analyze national policies on a protective tariff, a national bank, federally funded improvements (e.g., roads, canals, railroads), and educational and prison reforms (H-1B-M10)	
68. Compare ways of life in northern and southern states and identify factors that caused rapid urbanization and the growth of slavery (H-1B-M10)	
69. Identify the causes and explain the effects of new waves of immigration prior to the Civil War (H-1B-M10)	
70. Explain the importance of the Second Great Awakening, the ideas of its principal leaders, and how it affected public education, temperance, women's suffrage, and abolition (H-1B-M11)	
71. Describe fundamental beliefs of abolitionists and compare positions of those who favored gradual versus immediate emancipation (H-1B-M11)	
72. Identify the major antebellum reform movements, their leaders, and the movements' effects on the United States (H-1B-M11)	
73. Describe the economic, social, and cultural differences between the North and South, including the advantages and disadvantages each had at the outbreak of the Civil War (H-1B-M12)	
74. Explain the impact of the compromises on the issue of slavery and the Dred Scott decision on increasing tensions between the North and South (H-1B-M12)	
75. Explain the immediate and long-term causes of the secession of the Southern states and the outbreak of the Civil War (H-1B-M12)	
76. Describe the course of the Civil War, including major turning points and the war's immediate and long-term impact on the North and the South (H-1B-M12)	
77. Explain the purpose, significance, and results of Lincoln's Emancipation Proclamation (H-1B-M12)	
78. Describe provisions of the Thirteenth Amendment and Lincoln's reasons for advancing it, as well as the purpose and significance of the Fourteenth and Fifteenth Amendments (H-1B-M12)	
79. Describe, compare, and evaluate various reconstruction plans of the post-Civil War South (H-1B-M13)	
80. Explain the growing conflict between Andrew Johnson and Congress, and the reasons for and consequences of his impeachment and trial (H-1B-M13)	

81. Describe the successes and failures of Reconstruction, as well as its impact on the South (H-1B-M13)	
82. Explain how the presidential election of 1876 led to the Compromise of 1877 and brought about an end to Reconstruction in the South (H-1B-M13)	

**Grade 7 Grade Level Expectations correlated to Project Learning Tree  
PreK-8 Guide  
Mathematics**

<b>Grade Level Expectation</b>	<b>PLT activity</b>
<b>Number and Number Relations</b>	
1. Recognize and compute equivalent representations of fractions, decimals, and percents (i.e., halves, thirds, fourths, fifths, eighths, tenths, hundredths) (N-1-M)	16: Pass the Plants, Please 28: Air Plants 84: The Global Climate
2. Compare positive fractions, decimals, percents, and integers using symbols (i.e., $<$ , $\leq$ , $=$ , $\geq$ , $>$ ) and position on a number line (N-2-M)	28: Air Plants 84: The Global Climate
3. Solve order of operations problems involving grouping symbols and multiple operations (N-4-M)	
4. Model and apply the distributive property in real-life applications (N-4-M)	12: Invasive Species 35: Loving It Too Much 38: Every Drop Counts 50: 400-acre Wood 73: Waste Watchers 84: The Global Climate 85: In the Driver's Seat
5. Multiply and divide positive fractions and decimals (N-5-M)	12: Invasive Species 35: Loving It Too Much 38: Every Drop Counts 50: 400-acre Wood 73: Waste Watchers 84: The Global Climate 85: In the Driver's Seat
6. Set up and solve simple percent problems using various strategies, including mental math (N-5-M) (N-6-M) (N-8-M)	
7. Select and discuss appropriate operations and solve single- and multi-step, real-life problems involving positive fractions, percents, mixed numbers, decimals, and positive and negative integers (N-5-M) (N-3-M) (N-4-M)	
8. Determine the reasonableness of answers involving positive fractions and decimals by comparing them to estimates (N-6-M) (N-7-M)	12: Invasive Species 35: Loving It Too Much 38: Every Drop Counts 50: 400-acre Wood 73: Waste Watchers 84: The Global Climate 85: In the Driver's Seat

9. Determine when an estimate is sufficient and when an exact answer is needed in real-life problems using decimals and percents (N-7-M) (N-5-M)	12: Invasive Species 35: Loving It Too Much 38: Every Drop Counts 50: 400-acre Wood 73: Waste Watchers 84: The Global Climate 85: In the Driver's Seat
10. Determine and apply rates and ratios (N-8-M)	38: Every Drop Counts 53: On the Move 66: Germinating Giants 67: How Big is Your Tree? 73: Waste Watchers 84: The Global Climate 85: In the Driver's Seat
11. Use proportions involving whole numbers to solve real-life problems (N-8-M)	38: Every Drop Counts 66: Germinating Giants 67: How Big is Your Tree? 73: Waste Watchers 84: The Global Climate 85: In the Driver's Seat
<b>Algebra</b>	
12. Evaluate algebraic expressions containing exponents (especially 2 and 3) and square roots, using substitution (A-1-M)	
13. Determine the square root of perfect squares and mentally approximate other square roots by identifying the two whole numbers between which they fall (A-1-M)	
14. Write a real-life meaning of a simple algebraic equation or inequality, and vice versa (A-1-M) (A-5-M)	
15. Match algebraic inequalities with equivalent verbal statements and vice versa (A-1-M)	
16. Solve one- and two-step equations and inequalities (with one variable) in multiple ways (A-2-M)	
17. Graph solutions sets of one-step equations and inequalities as points, or open and closed rays on a number line (e.g., $x = 5$ , $x < 5$ , $x \leq 5$ , $x > 5$ , $x \geq 5$ ) (A-2-M)	
18. Describe linear, multiplicative, or changing growth relationships (e.g., 1, 3, 6, 10, 15, 21, ...) verbally and algebraically (A-3-M) (A-4-M) (P-1-M)	12: Invasive Species 35: Loving It Too Much 38: Every Drop Counts 73: Waste Watchers 84: The Global Climate 85: In the Driver's Seat
19. Use <i>function machines</i> to determine and describe the rule that generates outputs from given inputs (A-4-M) (P-3-M)	
<b>Measurement</b>	
20. Determine the perimeter and area of composite plane figures by subdivision and area addition (M-1-M) (G-7-M)	50: 400-acre Wood
21. Compare and order measurements within and between the U.S. and metric systems in terms of common reference points (e.g., weight/mass and area) (M-4-M) (G-1-M)	
22. Convert between units of area in U.S. and metric units within the <b>same</b> system (M-5-M)	

23. Demonstrate an intuitive sense of comparisons between degrees Fahrenheit and Celsius in real-life situations using common reference points (M-5-M)	
<b>Geometry</b>	
24. Identify and draw angles (using protractors), circles, diameters, radii, altitudes, and 2-dimensional figures with given specifications (G-2-M)	67: How Big is Your Tree?
25. Draw the results of reflections and translations of geometric shapes on a coordinate grid (G-3-M)	
26. Recognize $\pi$ as the ratio between the circumference and diameter of any circle (i.e., $\pi = C/d$ or $\pi = C/2r$ ) (G-5-M)	67: How Big is Your Tree?
27. Model and explain the relationship between perimeter and area (how scale change in a linear dimension affects perimeter and area) and between circumference and area of a circle (G-5-M)	
28. Determine the radius, diameter, circumference, and area of a circle and apply these measures in real-life problems (G-5-M) (G-7-M) (M-6-M)	21: Adopt a Tree 67: How Big is Your Tree?
29. Plot points on a coordinate grid in all 4 quadrants and locate the coordinates of a missing vertex in a parallelogram (G-6-M) (A-5-M)	
30. Apply the knowledge that the measures of the interior angles in a triangle add up to 180 degrees (G-7-M)	
<b>Data Analysis, Probability, and Discrete Math</b>	
31. Analyze and interpret circle graphs, and determine when a circle graph is the most appropriate type of graph to use (D-2-M)	
32. Describe data in terms of patterns, clustered data, gaps, and outliers (D-2-M)	12: Invasive Species 22: Trees as Habitats 29: Rain Reasons 35: Loving It Too Much 37: Reduce, Recycle, Reuse 38: Every Drop Counts 41: How Plants Grow 77: Trees in Trouble 84: The Global Climate 85: In the Driver's Seat
33. Analyze discrete and continuous data in real-life applications (D-2-M) (D-6-M)	12: Invasive Species 22: Trees as Habitats 29: Rain Reasons 35: Loving It Too Much 37: Reduce, Recycle, Reuse 38: Every Drop Counts 41: How Plants Grow 77: Trees in Trouble 84: The Global Climate 85: In the Driver's Seat
34. Create and use Venn diagrams with three overlapping categories to solve counting logic problems (D-3-M)	
35. Use informal thinking procedures of elementary logic involving <i>if/then</i> statements (D-3-M)	
36. Apply the fundamental counting principle in real-life situations (D-4-M)	

37. Determine probability from experiments and from data displayed in tables and graphs (D-5-M)	12: Invasive Species 22: Trees as Habitats 29: Rain Reasons 35: Loving It Too Much 37: Reduce, Recycle, Reuse 38: Every Drop Counts 41: How Plants Grow 77: Trees in Trouble 84: The Global Climate 85: In the Driver's Seat
38. Compare theoretical and experimental probability in real-life situations (D-5-M)	12: Invasive Species 22: Trees as Habitats 29: Rain Reasons 35: Loving It Too Much 37: Reduce, Recycle, Reuse 38: Every Drop Counts 41: How Plants Grow 77: Trees in Trouble 84: The Global Climate 85: In the Driver's Seat
<b>Patterns, Relations, and Functions</b>	
39. Analyze and describe simple exponential number patterns (e.g., 3, 9, 27 or $3^1$ , $3^2$ , $3^3$ ) (P-1-M)	12: Invasive Species
40. Analyze and verbally describe real-life additive and multiplicative patterns involving fractions and integers (P-1-M) (P-4-M)	
41. Illustrate patterns of change in length(s) of sides and corresponding changes in areas of polygons (P-3-M)	

Grade 7 Grade Level Expectations correlated to Project Learning Tree  
PreK-8 Guide  
English Language Arts

Grade Level Expectation	PLT activity
<b>Reading and Responding Standard 1:</b>	
1. Develop vocabulary using a variety of strategies, including: use of connotative and denotative meanings; use of Greek, Latin, and Anglo-Saxon base words, roots, affixes, and word parts (ELA-1-M1)	
2. Explain story elements, including: the revelation of character motivation through thoughts, words, and actions; plot sequence (e.g., exposition, rising action, climax, falling action, resolution); 3. conflicts (e.g., man vs. man, nature, society, self) and their effect on plot; effects of first- and third-person points of view; theme development (ELA-1-M2)	89: Trees for Many Reasons 90: The Native Way 91: In the Good Old Days
4. Interpret literary devices, including: symbolism, puns, and analogies (ELA-1-M2)	4: Sounds Around 5: Poet-Tree 18: Tale of the Sun 89: Trees for Many Reasons 90: The Native Way 91: In the Good Old Days

<p>5. Draw conclusions and make inferences in oral and written responses about ideas and information in grade-appropriate texts, including: instructional materials, essays, and dramas (ELA-1-M3)</p>	<p>18: Tale of the Sun  19: Viewpoints on the Line  33: Forest Consequences  39: Energy Sleuths  40: Then and Now  56: We Can Work It Out  86: Our Changing World  89: Trees for Many Reasons  90: Native Ways  91: In the Good Old Days</p>
<p>6. Interpret ideas and information in a variety of texts, including periodical articles, editorials, and lyrics, and make connections to real-life situations and other texts (ELA-1-M4)</p>	<p>33: Forest Consequences  39: Energy Sleuths  59: Power of Print  84: Our Changing World  89: Trees for Many Reasons  90: Native Ways  91: In the Good Old Days</p>
<p><b>Standard 6:</b></p>	
<p>7. Identify universal themes (e.g., search for identity, love, friendship, family, courage, adversity) and cultural viewpoints found in national, world, and multicultural literature in oral and written responses (ELA-6-M1)</p>	<p>4: Sounds Around  18: Tale of the Sun  89: Trees for Many Reasons  90: Native Ways  91: In the Good Old Days</p>
<p>8. Compare and contrast elements (e.g., plot, setting, character, theme) in multiple genres in oral and written responses (ELA-6-M2)</p>	<p>4: Sounds Around  18: Tale of the Sun  89: Trees for Many Reasons  90: Native Ways  91: In the Good Old Days</p>
<p>9. Use knowledge of the distinctive characteristics to classify and interpret elements of various genres, including: fiction (e.g., science fiction/fantasy); nonfiction (e.g., essays, letters); poetry (e.g., lyric, narrative); drama (e.g., short plays) (ELA-6-M3)</p>	<p>4: Sounds Around  5: Poet-Tree  18: Tale of the Sun  89: Trees for Many Reasons  90: Native Ways  91: In the Good Old Days</p>
<p><b>Standard 7:</b></p>	
<p>10. Demonstrate understanding of information in grade-appropriate texts using a variety of strategies, including: sequencing events and steps in a process; summarizing and paraphrasing information; identifying stated or implied main ideas and explaining how details support ideas; comparing and contrasting literary elements and ideas; making inferences and drawing conclusions; predicting the outcome of a story or situation; identifying literary devices (ELA-7-M1)</p>	<p>11: Can It Be Real?  12: Invasive Species  17: People of the Forest  29: Rain Reasons  33: Forest Consequences  39: Energy Sleuths  49: Tropical Treehouse  50: 400-acre Wood  51: Make Your Own Paper  52: A Look at Aluminum  69: Forest for the Trees  71: Watch on Wetlands  72: Air We Breathe  84: The Global Climate  90: The Native Way  91: In the Good Old Days  92: A Look at Lifestyles  93: Paper Civilizations  94: By the Rivers of Babylon</p>

<p>11. Explain the relationship between life experiences and texts to generate solutions to problems (ELA-7-M2)</p>	<p>4: Sounds Around  12: Invasive Species  29: Rain Reasons  33: Forest Consequences  39: Energy Sleuths  50: 400-acre Wood  52: A Look at Aluminum  59: Power of Print  69: Forest for the Trees  71: Watch on Wetlands  72: Air We Breathe  84: The Global Climate  89: Trees for Many Reasons  92: A Look at Lifestyles</p>
<p>12. Use technical information and other available resources (e.g., Web sites, interviews) to solve problems (ELA-7-M2)</p>	<p>12: Invasive Species  29: Rain Reasons  39: Energy Sleuths  40: Then and Now  49: Tropical Treehouse  52: A Look at Aluminum  53: On the Move  71: Watch on Wetlands  84: The Global Climate  90: The Native Way  91: In the Good Old Days  94: By the Rivers of Babylon  95: Did You Notice?</p>
<p>13. Explain the effects of an author’s stated purpose for writing (ELA-7-M3)</p>	<p>5: Poet-Tree  18: Tale of the Sun  59: Power of Print  89: Trees for Many Reasons  90: The Native Way  91: In the Good Old Days</p>
<p>14. Identify an author’s bias (objectivity) for, against, or neutral toward an issue (ELA-7-M3)</p>	<p>5: Poet-Tree  18: Tale of the Sun  59: Power of Print  89: Trees for Many Reasons  90: The Native Way  91: In the Good Old Days</p>

<p>15. Analyze grade-appropriate print and nonprint texts using various reasoning skills, for example: identifying cause-effect relationships; raising questions; reasoning inductively and deductively; generating a theory or hypothesis; skimming/scanning (ELA-7-M4)</p>	<p>4: Sounds Around  5: Poet-Tree  12: Invasive Species  17: People of the Forest  18: Tale of the Sun  29: Rain Reasons  33: Forest Consequences  39: Energy Sleuths  49: Tropical Treehouse  50: 400-acre Wood  52: A Look at Aluminum  69: Forest for the Trees  71: Watch on Wetlands  72: Air We Breathe  84: The Global Climate  89: Trees for Many Reasons  90: The Native Way  91: In the Good Old Days  92: A Look at Lifestyles  93: Paper Civilizations  94: By the Rivers of Babylon</p>
<p><b>Writing Standard 2:</b></p>	
<p>16. Write multiparagraph compositions on student- or teacher-selected topics organized with the following: established central idea; organizational patterns (e.g., comparison/contrast, order of importance, chronological order) appropriate to the topic; elaboration (e.g., fact, examples, and/or specific details); transitional words and phrases that unify ideas and points; overall structure including an introduction, a body/middle, and a concluding paragraph that summarizes important ideas and details (ELA-2-M1)</p>	<p>12: Invasive Species</p>
<p>17. Organize individual paragraphs with topic sentences, relevant elaboration, and concluding sentences (ELA-2-M1)</p>	<p>12: Invasive Species  15: A Few of My Favorite Things  45: Web of Life  57: Democracy in Action</p>
<p>18. Develop grade-appropriate compositions on student- or teacher-selected topics that include the following: word choices (diction) appropriate to the identified audience and/or purpose; vocabulary selected to clarify meaning, create images, and set a tone; information/ideas selected to engage the interest of the reader; clear voice (individual personality); variety in sentence structure (ELA-2-M2)</p>	<p>12: Invasive Species  15: A Few of My Favorite Things  45: Web of Life  57: Democracy in Action</p>
<p>19. Develop grade-appropriate compositions by identifying and applying writing processes, such as the following: selecting topic and form; prewriting (e.g., brainstorming, researching, raising questions, generating graphic organizers); drafting; conferencing (e.g., peer and teacher); revising based on feedback and use of various tools (e.g., LEAP21 Writer’s Checklist, rubrics); proofreading/editing; publishing using technology (ELA-2-M3)</p>	<p>12: Invasive Species  15: A Few of My Favorite Things  45: Web of Life  57: Democracy in Action</p>

20. Develop grade-appropriate paragraphs and multiparagraph compositions using the various modes of writing (e.g., description, narration, exposition, persuasion), emphasizing narration and exposition (ELA-2-M4)	12: Invasive Species 15: A Few of My Favorite Things 45: Web of Life 57: Democracy in Action 59: Power of Print
21. Use various modes to write compositions, including; essays based on opinion; fictional narratives (ELA-2-M4)	17: People of the Forest 18: Tale of the Sun 26: Dynamic Duos 57: Democracy in Action 59: The Power of Print 60: Publicize It! 73: Waste Watchers 88: Life on the Edge 96: Improve Your Place
22. Develop writing using a variety of literary devices, including analogies, symbolism, and puns (ELA-2-M5)	5: Poet-Tree 18: Tale of the Sun 26: Dynamic Duos
23. Write for various purposes, including: letters of complaint supported with complete and accurate information and reasons; evaluations of media, such as television, radio, and the arts; text-supported interpretations of elements of grade-appropriate stories, poems, plays, and novels; applications, such as memberships and library cards (ELA-2-M6)	59: Power of Print 60: Publicize It! 96: Improve Your Place
<b>Writing/Proofreading Standard 3:</b>	
24. Use standard English punctuation, including: commas to set off direct quotations, nouns of direct address, and after introductory words or phrases; semicolons or colons to separate independent clauses (ELA-3-M2)	
25. Write paragraphs and compositions following standard English structure and usage, including: varied sentence structures, including complex sentences; antecedents that agree with pronouns in number, person, and gender; sentences without double negatives (ELA-3-M3)	
26. Apply knowledge of parts of speech in writing, including: infinitives and participles; superlative and comparative degrees of adjectives; adverbs (ELA-3-M4)	
27. Spell high-frequency, commonly confused, frequently misspelled words and derivatives (e.g., roots, affixes) correctly (ELA-3-M5)	
28. Use a variety of resources (e.g., glossaries, dictionaries, thesauruses, spell check) to find correct spellings (ELA-3-M5)	
<b>Speaking and Listening Standard 4:</b>	
29. Adjust diction and enunciation to suit the purpose for speaking (ELA-4-M1)	17: People of the Forest 19: Viewpoints on the Line
30. Use standard English grammar, diction, syntax, and pronunciation when speaking (ELA-4-M1)	
31. Follow procedures (e.g., read, question, write a response, form groups) from detailed oral instructions (ELA-4-M2)	16: Pass the Plants Please 51: Make Your Own Paper

32. State oral directions/procedures for tasks (ELA-4-M2)	31: Plant a Tree
33. Adjust volume and inflection to suit the audience and purpose of presentations (ELA-4-M3)	
34. Organize oral presentations with a thesis, an introduction, a body developed with relevant details, and a conclusion (ELA-4-M3)	
35. Evaluate and determine bias and credibility of various media presentations (e.g., TV and radio advertising) (ELA-4-M4)	59: Power of Print 60: Publicize It
36. Deliver formal and informal persuasive presentations (ELA-4-M4)	19: Viewpoints on the Line 33: Forest Consequences 55: Planning the Ideal Community 56: We Can Work It Out 88: Life on the Edge 96: Improve Your Place
37. Deliver grade-appropriate research-based presentations (ELA-4-M4)	17: People of the Forest 53: On the Move 55: Planning the Ideal Community 56: Democracy in Action 82: Resource Go Round 96: Improve Your Place
38. Evaluate a variety of media for impressions/effect on listeners, faulty reasoning, propaganda techniques, and delivery (ELA-4-M5)	59: Power of Print 83: A Peek at Packaging
39. Participate in group and panel discussions, including: explaining the effectiveness and dynamics of group process; applying agreed-upon rules for formal and informal discussions; assuming a variety of roles (e.g., facilitator, recorder, leader, listener) (ELA-4-M6)	19: Viewpoints on the Line 32: A Forest of Many Uses 33: Forest Consequences 50: 400-acre Wood 55: Planning the Ideal Community 56: We Can Work It Out
<b>Information Resources</b> <b>Standard 5:</b>	
40. Locate and select information using organizational features of grade-appropriate resources, including: complex reference sources (e.g., almanacs, atlases, newspapers, magazines, brochures, map legends, prefaces, appendices); electronic storage devices (e.g., CD-ROMs, diskettes, software, drives); frequently accessed and bookmarked Web addresses; features of electronic texts (e.g., hyperlinks, cross-referencing, Web resources, including online sources and remote sites) (ELA-5-M1)	12: Invasive Species 15: A Few of My Favorite Things 17: People of the Forest 19: Viewpoints on the Line 29: Rain Reasons 33: Forest Consequences 39: Energy Sleuths 45: Web of Life 53: On the Move 55: Planning the Ideal Community 56: We Can Work It Out 57: Democracy in Action 82: Resource Go Round 86: Our Changing World 88: Life on the Edge 96: Improve Your Place

<p>41. Locate and integrate information from a variety of grade-appropriate resources, including: multiple printed texts (e.g., encyclopedias, atlases, library catalogs, specialized dictionaries, almanacs, technical encyclopedias); electronic sources (e.g., Web sites, databases) ; other media sources (e.g., audio and video tapes, films, documentaries, television, radio) (ELA-5-M2)</p>	<p>12: Invasive Species  15: A Few of My Favorite Things  17: People of the Forest  19: Viewpoints on the Line  29: Rain Reasons  33: Forest Consequences  39: Energy Sleuths  45: Web of Life  53: On the Move  55: Planning the Ideal Community  56: We Can Work It Out  57: Democracy in Action  82: Resource Go Round  86: Our Changing World  88: Life on the Edge  96: Improve Your Place</p>
<p>42. Explain the usefulness and accuracy of sources by determining their validity (e.g., authority, accuracy, objectivity, publication date, coverage) (ELA-5-M2)</p>	<p>12: Invasive Species  15: A Few of My Favorite Things  17: People of the Forest  19: Viewpoints on the Line  29: Rain Reasons  33: Forest Consequences  39: Energy Sleuths  45: Web of Life  53: On the Move  55: Planning the Ideal Community  56: We Can Work It Out  57: Democracy in Action  82: Resource Go Round  86: Our Changing World  88: Life on the Edge  96: Improve Your Place</p>
<p>43. Gather and select information using data-gathering strategies/tools, including: surveying; interviewing; paraphrasing (ELA-5-M3)</p>	<p>12: Invasive Species  15: A Few of My Favorite Things  17: People of the Forest  19: Viewpoints on the Line  29: Rain Reasons  33: Forest Consequences  39: Energy Sleuths  40: Then and Now  45: Web of Life  53: On the Move  55: Planning the Ideal Community  56: We Can Work It Out  57: Democracy in Action  82: Resource Go Round  86: Our Changing World  88: Life on the Edge  96: Improve Your Place</p>

<p>44. Generate grade-appropriate research reports that include information presented in a variety of forms, including: visual representations of data/information; graphic organizers (e.g., outlines, timelines, charts, webs); works cited lists and/or bibliographies (ELA-5-M3)</p>	<p>12: Invasive Species  15: A Few of My Favorite Things  17: People of the Forest  19: Viewpoints on the Line  29: Rain Reasons  33: Forest Consequences  39: Energy Sleuths  45: Web of Life  53: On the Move  55: Planning the Ideal Community  56: We Can Work It Out  57: Democracy in Action  82: Resource Go Round  86: Our Changing World  88: Life on the Edge  96: Improve Your Place</p>
<p>45. Use word processing and/or other technology to draft, revise, and publish a variety of works, including reports and research documents (ELA-5-M4)</p>	<p>12: Invasive Species  15: A Few of My Favorite Things  17: People of the Forest  19: Viewpoints on the Line  29: Rain Reasons  33: Forest Consequences  39: Energy Sleuths  45: Web of Life  53: On the Move  55: Planning the Ideal Community  56: We Can Work It Out  57: Democracy in Action  82: Resource Go Round  86: Our Changing World  88: Life on the Edge  96: Improve Your Place</p>
<p>46. Give credit for borrowed information following acceptable use policy, including: integrating quotations and citations; using end notes; creating bibliographies and/or works cited lists (ELA-5-M5)</p>	<p>12: Invasive Species  15: A Few of My Favorite Things  17: People of the Forest  19: Viewpoints on the Line  29: Rain Reasons  33: Forest Consequences  39: Energy Sleuths  45: Web of Life  53: On the Move  55: Planning the Ideal Community  56: We Can Work It Out  57: Democracy in Action  82: Resource Go Round  86: Our Changing World  88: Life on the Edge  96: Improve Your Place</p>

47. Interpret information from a variety of graphic organizers including timelines, charts, schedules, tables, diagrams, and maps in grade-appropriate sources (ELA-5-M6)

- 4: Sounds Around
- 29: Rain Reasons
- 38: Every Drop Counts
- 40: Then and Now
- 45: Web of Life
- 49: Tropical Treehouse
- 52: A Look at Aluminum
- 53: On the Move
- 54: I'd Like to Visit a Place Where...
- 59: Power of Print
- 82: Resource Go Round
- 83: A Peek at Packaging
- 85: In the Driver's Seat
- 86: Our Changing World
- 95: Did You Notice?