

PLT Correlations: SCIENCE GRADE 5 (revised 12/09)

Grade 5 : Embedded Inquiry

| Learning Expectations | PLT Correlations |
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| <p>GLE 0507.Inq.1 Explore different scientific phenomena by asking questions, making logical predictions, planning investigations, and recording data.</p> | <p>2. Get in Touch With Trees (p.20) - Students compare different trees and tree parts using their sense of touch.</p> <p>16. Pass The Plants, Please (p.77) - In Part A, students sort plant-derived foods into plant-part categories. In Part B, they create daily bar graphs for the plant-part items in their lunch.</p> <p>20. Environmental Exchange Box (p.92) - By exchanging boxes with classes in other regions, students compare the other regions to their own.</p> <p>23. The Fallen Log (p.105) - Students inventory the living things in and on rotting logs.</p> <p>24. Nature's Recyclers (p.108) - Students devise an experiment to investigate the eating habits of pill bugs or earthworms.</p> <p>28. Air Plants (p.120) - Students observe oxygen production in a submerged aquatic plant to infer the roles of light and carbon dioxide in photosynthesis.</p> <p>36. Pollution Search (p.153) - In Part A, students look for and record evidences of pollution in and around the school.</p> <p>37. Reduce, Reuse, Recycle (p.159) - Students plan and conduct a service learning project, and in doing so find ways to cut down on the waste they produce and improve how waste is managed in their community.</p> <p>41. How Plants Grow (p.179) - In the Variation, students grow, measure, and compare plants growing with versus without light, water, soil, or space.</p> <p>42. Sunlight and Shades of Green (p.182) - Students test what happens when they block sunlight from the leaves of a tree or shrub, and then they will interpret their findings. As an Enrichment, they test leaves for the presence of starch.</p> <p>51. Make Your Own Paper (p.224) - As an Enrichment, students investigate how different materials affect the characteristics of the paper created.</p> <p>54. I'd Like To Visit a Place Where ... (p.236) - By working on a service learning project to improve a local park, students learn about the community's system for managing open spaces.</p> <p>61. The Closer You Look (p.263) - Students carefully examine tree features and parts.</p> <p>64. Looking at Leaves (p.273) - Students explore leaf attributes such as color, shape, size, and bilateral symmetry through careful observation and various "leaf art" activities.</p> <p>65. Bursting Buds (p.277) - Students observe tree buds throughout the year.</p> <p>67. How Big Is Your Tree? (p.284) - Students use string or "hand-spans" to measure the distance around a tree trunk or join arms to reach around larger trunks.</p> |

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| | <p>68. Name That Tree (p.288) - Students learn more about trees through examining various identifying features. Afterward, they play an active game that tests their knowledge of different types of trees.</p> <p>73. Waste Watchers (p.314) - Students conduct an Energy Audit of the energy they use in their own homes and create an action plan to reduce energy use.</p> <p>77. Trees In Trouble (p.332) - Students examine trees for signs of damage or poor health and conduct experiments to determine the conditions the effects of crowding, acid, and fertilizer on seedling height and radish diameter.</p> <p>78. Signs of Fall (p.299) - In Part A, students observe and record “signs of fall” in a wooded area. In Part B, they use a “paper chromatography” process to separate the pigments in leaves.</p> <p>96. Improve Your Place (p.418) - Students plan and carry out a service learning project that focuses on making positive environmental changes in their community.</p> |
| <p>GLE 0507.Inq.2 Select and use appropriate tools and simple equipment to conduct an investigation.</p> <p>GLE 0507.Inq.3 Organize data into appropriate tables, graphs, drawings, or diagrams.</p> <p>GLE 0507.Inq.4 Identify and interpret simple patterns of evidence to communicate the findings of multiple investigations.</p> <p>GLE 0507.Inq.5 Recognize that people may interpret the same results in different ways.</p> <p>GLE 0507.Inq.6 Compare the results of an investigation with what scientists already accept about this question.</p> | |

Grade 5 : Embedded Technology & Engineering

| Learning Expectations | Checks for Understanding | PLT Correlations |
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| <p>GLE 0507.T/E.1 Describe how tools, technology, and inventions help to answer questions and solve problems.</p> <p>GLE 0507.T/E.2 Recognize that new tools, technology, and inventions are always being developed.</p> <p>GLE 0507.T/E.3 Identify appropriate materials, tools, and machines that can extend or enhance the ability to solve a specified problem.</p> <p>GLE 0507.T/E.4 Recognize the connection between scientific advances, new knowledge, and the availability of new tools and technologies.</p> | <p>0507.T/E.1 Explain how different inventions and technologies impact people and other living organisms.</p> <p>0507.T/E.2 Design a tool or a process that addresses an identified problem caused by human activity.</p> <p>0507.T/E.3 Determine criteria to evaluate the effectiveness of a solution to a specified problem.</p> <p>0507.T/E.4 Evaluate an invention that solves a problem and determine ways to improve the design.</p> | |

Grade 5 : Standard 1 - Cells

| Learning Expectations | Checks for Understanding | PLT Correlations |
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| <p>GLE 0507.1.1 Distinguish between the basic structures and functions of plant and animal cells.</p> | <p>0507.1.1 Label drawings of plant and animal cells.</p> <p>0507.1.2 Compare and contrast the basic structures and functions of plant and animal cells.</p> | |

Grade 5 : Standard 2 - Interdependence

| Learning Expectations | Checks for Understanding | PLT Correlations |
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| <p>GLE 0507.2.1 Investigate different nutritional relationships among organisms in an ecosystem.</p> | <p>0507.2.1 Evaluate producer/consumer, predator/prey, and parasite/host relationships.</p> | <p>20. Environmental Exchange Box (p.92) – Exchange info on nutritional relationships. 24. Nature's Recyclers (p.108)</p> |
| <p>GLE 0507.2.2 Explain how organisms interact through symbiotic, commensal, and parasitic relationships.</p> | <p>0507.2.2 Classify interspecific relationships within an ecosystem as mutualism, commensalism, or parasitism.</p> <p>0507.2.3 Create a simple model illustrating the interspecific relationships within an ecosystem.</p> <p>0507.2.4 Analyze basic information from a body of text to identify key issues or assumptions about the relationships among organisms in an ecosystem.</p> | <p>7. Habitat Pen Pals (p.37) 8. The Forest of S.T. Shrew (p.40) 11. Can It Be Real? (p.54) 23. The Fallen Log (p.105) 26. Dynamic Duos (p.113)</p> |
| <p>GLE 0507.2.3 Establish the connections between human activities and natural disasters and their impact on the environment.</p> | <p>0507.2.5 Create a poster to illustrate how human activities and natural disasters affect the environment.</p> | <p>12. Invasive Species (p.59) 17. People of The Forest (p.82) 31. Plant a Tree (p.132) 36. Pollution Search (p.153) 37. Reduce, Reuse, Recycle (p.159) 40. Then and Now (p.174) 51. Make Your Own Paper (p.224) 54. I'd Like To Visit a Place Where ... (p.236) 56. We Can Work It Out (p.241) 57. Democracy In Action (p.245) 60. Publicize It! (p.256) 73. Waste Watchers (p.314) 81. Living With Fire (p.350) 86. Our Changing World (p.375) 88. Life On The Edge (p.382) 89. Trees For Many Reasons (p.387) 96. Improve Your Place (p.418)</p> |

Grade 5 : Standard 3 - Flow of Matter and Energy

| Learning Expectations | Checks for Understanding | PLT Correlations |
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| GLE 0507.3.1 Demonstrate how all living things rely on the process of photosynthesis to obtain energy. | <p>0507.3.1 Identify the cell structures that enable plants to conduct photosynthesis.</p> <p>0507.3.2 Design a graphic organizer that illustrates the difference between plants and animals in the movement of food energy through an ecosystem.</p> | <p>16. Pass The Plants, Please (p.77)</p> <p>28. Air Plants (p.120)</p> <p>30. Three Cheers for Trees (p.130)</p> <p>41. How Plants Grow (p179)</p> <p>42. Sunlight and Shades of Green (p.182)</p> <p>62. To Be a Tree (p.265)</p> <p>63. Tree Factory (p.269)</p> |

Grade 5 : Standard 4 - Heredity

| Learning Expectations | Checks for Understanding | PLT Correlations |
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| GLE 0507.4.1 Describe how genetic information is passed from parents to offspring during reproduction. | 0507.4.1 Explain how genetic information is transmitted from parents to offspring. | |
| GLE 0507.4.2 Recognize that some characteristics are inherited while others result from interactions with the environment. | <p>0507.4.2 Create a chart that compares hereditary and environmental traits.</p> <p>0507.4.3 Distinguish between a scar and a birthmark in terms of their origins.</p> | <p>67. How Big Is Your Tree? (p.284)</p> <p>77. Trees In Trouble (p.332)</p> <p>78. Signs of Fall (p.299)</p> |

Grade 5 : Standard 5 - Biodiversity and Change

| Learning Expectations | Checks for Understanding | PLT Correlations |
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| GLE 0507.5.1 Investigate physical characteristics associated with different groups of animals. | <p>0507.5.1 Classify animals according to their physical characteristics.</p> <p>0507.5.2 Design a model to illustrate how an animal's physical characteristics enable it to survive in a particular environment.</p> | <p>2. Get in Touch With Trees (p.20)</p> <p>5. Poet-Tree (p.31)</p> <p>61. The Closer You Look (p.263)</p> <p>64. Looking at Leaves (p.273)</p> <p>65. Bursting Buds (p.277)</p> <p>68. Name That Tree (p.288)</p> |

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| <p>GLE 0507.5.2 Analyze fossils to demonstrate the connection between organisms and environments that existed in the past and those that currently exist.</p> | <p>0507.5.3 Identify the processes associated with fossil formation.</p> <p>0507.5.4 Use fossil evidence to describe an environment from the past.</p> <p>0507.5.5 Use fossils to match a previously existing organism with one that exists today.</p> | |
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Standard 6 Omitted

Grade 5 : Standard 7 – The Earth

| Learning Expectations | Checks for Understanding | PLT Correlations |
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| <p>GLE 0507.7.1 Compare geologic events responsible for the earth’s major geological features.</p> | <p>0507.7.1 Create a model to illustrate geologic events responsible for changes in the earth’s crust.</p> <p>0507.7.2 Prepare a chart to compare how volcanoes, earthquakes, faulting, and plate movements affect the earth’s surface features.</p> | |

Grade 5 : Standard 8 - The Atmosphere

| Learning Expectations | Checks for Understanding | PLT Correlations |
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| <p>GLE 0507.8.1 Analyze and predict how major landforms and bodies of water affect atmospheric conditions.</p> | <p>0507.8.1 Compare the climates of coastal and inland areas at similar latitudes to demonstrate the ocean’s impact on weather and climate.</p> | |

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| | <p>0507.8.2 Use land maps to demonstrate how mountain ranges affect weather and climate.</p> <p>0507.8.3 Use weather maps of the United States to graph temperature and precipitation for inland and coastal regions.</p> <p>0507.8.4 Use local environmental information to analyze how weather and climate are affected by landforms and bodies of water.</p> | |
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| Grade 5 : Standard 9 - Matter | | |
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| Learning Expectations | Checks for Understanding | PLT Correlations |
| GLE 0507.9.1 Observe and measure the simple chemical properties of common substances. | 0507.9.1 Compare the simple chemical properties of common substances. | |
| GLE 0507.9.2 Design and conduct an experiment to demonstrate how various types of matter freeze, melt, or evaporate. | 0507.9.2 Investigate how different types of materials freeze, melt, evaporate, or dissipate. | |
| GLE 0507.9.3 Investigate factors that affect the rate at which various materials freeze, melt, or evaporate. | 0507.9.3 Use data from a simple investigation to determine how temperature change affects the rate of evaporation and condensation. | |