

## PLT Correlations: SCIENCE GRADE 3 (revised 12/09)

### Grade 3 : Embedded Inquiry

<b>Learning Expectations</b>	<b>PLT Correlations</b>
<p><b>GLE 0307.Inq.1</b> Explore different scientific phenomena by asking questions, making logical predictions, planning investigations, and recording data.</p>	<p><b>1. The Shape of Things</b> (p.17) - In Part B, students take a walk and look for their assigned shapes.</p> <p><b>3. Peppermint Beetle</b> (p.23) - Students experience scent-marking and consider its benefit to animals.</p> <p><b>9. Planet Diversity</b> (p.45) - Students describe, in minute detail, all the life they find in a small plot of land.</p> <p><b>15. A Few of My Favorite Things</b> (p.75) - Students identify the materials and energy used to make a favorite object. As <b>Enrichments</b>, they trace solid waste in their community, set up a Swap Shop, or use “trash” to create new products.</p> <p><b>20. Environmental Exchange Box</b> (p.92) - By exchanging boxes with classes in other regions, students compare the other regions to their own.</p> <p><b>22. Trees as Habitats</b> (p.102) - Students inventory the plants and animals that live in, on, and around trees and discover how plants and animals depend on trees in many ways.</p> <p><b>23. The Fallen Log</b> (p.105) - Students inventory the living things in and on rotting logs.</p> <p><b>24. Nature's Recyclers</b> (p.108) - Students devise an experiment to investigate the eating habits of pill bugs or earthworms.</p> <p><b>25. Birds and Worms</b> (p.111) - Students pretend to be birds in search of colored worms or bugs. As an Enrichment, they compare results for different “backgrounds”.</p> <p><b>27. Every Tree For Itself</b> (p.117) - Students record and compare results of a simulation for rounds conducted according to different scenarios.</p> <p><b>37. Reduce, Reuse, Recycle</b> (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><b>46. Schoolyard Safari</b> (p.197) - Students go on a safari to explore a nearby habitat – the school yard – while looking for signs of animals living there.</p> <p><b>47. Are Vacant Lots Vacant?</b> (p.200) - Students stake out a “plot” and inventory the plant and animal life within the plot. In the <b>Variation</b>, students use hand lenses to closely observe plants and tiny animals along a 3-foot piece of string or within the area defined by a coat hanger stretched into a circle.</p> <p><b>48. Field, Forest and Stream</b> (p.203) - Students work in teams to investigate and record observations of both living and non-living components of three different study sites. In the <b>Variation</b>, students work in pairs to place “most” and “least” markers within a designated study site to locate extremes of light, moisture, temperature, wind, plant life, and animal life.</p>

	<p><b>51. Make Your Own Paper</b> (p.224) - As an <b>Enrichment</b>, students investigate how different materials affect the characteristics of the paper created.</p> <p><b>55. Planning the Ideal Community</b> (p.239) - Students survey the area around their school to look for the components of the human community in which they live.</p> <p><b>61. The Closer You Look</b> (p.263) - Students carefully examine tree features and parts.</p> <p><b>64. Looking at Leaves</b> (p.273) - Students explore leaf attributes such as color, shape, size, and bilateral symmetry through careful observation and various “leaf art” activities.</p> <p><b>65. Bursting Buds</b> (p.277) - Students observe tree buds throughout the year.</p> <p><b>67. How Big Is Your Tree?</b> (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> <p><b>70. Soil Stories</b> (p.297) - In Part A, students use a “Soil Shake” test to separate the components of soil by their particle size. In Part B, students use a “Percolation Test” to test how well soils in different outdoor locations drain water.</p> <p><b>73. Waste Watchers</b> (p.314) - Students conduct an <b>Energy Audit</b> of the energy they use in their own homes and create an action plan to reduce energy use.</p> <p><b>76. Tree Cookies</b> (p.327) - Students examine a “tree cookie” to estimate its age when it was cut and to interpret the “clues” rings give as to environmental events the tree experienced.</p> <p><b>77. Trees In Trouble</b> (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><b>78. Signs of Fall</b> (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><b>96. Improve Your Place</b> (p.418) - Students plan and carry out a service learning project that focuses on making positive environmental changes in their community.</p>	
<p><b>GLE 0307.Inq.2</b> Select and use appropriate tools and simple equipment to conduct an investigation.</p> <p><b>GLE 0307.Inq.3</b> Organize data into appropriate tables, graphs, drawings, or diagrams.</p> <p><b>GLE 0307.Inq.4</b> Identify and interpret simple patterns of evidence to communicate the findings of multiple investigations.</p> <p><b>GLE 0307.Inq.5</b> Recognize that people may interpret the same results in different ways.</p> <p><b>GLE 0307.Inq.6</b> Compare the results of an investigation with what scientists already accept about this question.</p>		

## Grade 3 : Embedded Technology & Engineering

Learning Expectations	Checks for Understanding	PLT Correlations
<p><b>GLE 0307.T/E.1</b> Describe how tools, technology, and inventions help to answer questions and solve problems.</p> <p><b>GLE 0307.T/E.2</b> Recognize that new tools, technology, and inventions are always being developed.</p> <p><b>GLE 0307.T/E.3</b> Identify appropriate materials, tools, and machines that can extend or enhance the ability to solve a specified problem.</p> <p><b>GLE 0307.T/E.4</b> Recognize the connection between scientific advances, new knowledge, and the availability of new tools and technologies.</p>	<p><b>0307.T/E.1</b> Explain how different inventions and technologies impact people and other living organisms.</p> <p><b>0307.T/E.2</b> Design a tool or a process that addresses an identified problem caused by human activity.</p> <p><b>0307.T/E.3</b> Determine criteria to evaluate the effectiveness of a solution to a specified problem.</p> <p><b>0307.T/E.4</b> Evaluate an invention that solves a problem and determine ways to improve the design.</p>	
<p><b>GLE 0307.T/E.5</b> Apply a creative design strategy to solve a particular problem generated by societal needs and wants.</p>		<p><b>37. Reduce, Reuse, Recycle</b> (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>

## Grade 3 : Standard 1 - Cells

Learning Expectations	Checks for Understanding	PLT Correlations
<p><b>GLE 0307.1.1</b> Use magnifiers to make observations of specific plant and body parts and describe their functions.</p>	<p><b>0307.1.1</b> Use a magnifier to investigate and describe the function of root hairs, stem cross sections, and leaf veins.</p> <p><b>0307.1.2</b> Use a magnifier to investigate and describe the function of skin pores, hair follicles, finger nails, veins, and cuticles, etc.</p>	<p><b>64. Looking at Leaves</b> (p.273)</p>

## Grade 3 : Standard 2 - Interdependence

Learning Expectations	Checks for Understanding	PLT Correlations
<b>GLE 0307.2.1</b> Categorize things as living or non-living.	<b>0307.2.1</b> Use a T-Chart to compare and contrast the characteristics of living and nonliving things.	<b>5. Poet-Tree (p.31)</b> <b>23. The Fallen Log (p.105)</b> <b>24. Nature's Recyclers (p.108)</b>
<b>GLE 0307.2.2</b> Explain how organisms with similar needs compete with one another for resources.	<b>0307.2.2</b> Label a drawing of an environment to illustrate interrelationships among plants and animals.  <b>0307.2.3</b> Construct a diagram to demonstrate how plants, animals, and the environment interact to provide basic life requirements.	<b>23. The Fallen Log (p.105)</b> <b>27. Every Tree For Itself (p.117)</b> <b>46. Schoolyard Safari (p.197)</b> <b>55. Planning the Ideal Community (p.239)</b> <b>77. Trees In Trouble (p.332)</b> <b>79. Tree Lifecycle(p.341)</b>

## Grade 3 : Standard 3 - Flow of Matter and Energy

Learning Expectations	Checks for Understanding	PLT Correlations
<b>GLE 0307.3.1</b> Describe how animals use food to obtain energy and materials for growth and repair.	<b>0307.3.1</b> Label a diagram to illustrate the food relationships that exist between plant and animals.  <b>0307.3.2</b> Create a chart to show how plants and animals satisfy their energy requirements.  <b>0307.3.3</b> Identify structures used by different plants and animals to meet their basic energy requirements.  <b>0307.3.4</b> Use a piece of text to obtain basic information about how plants and animals obtain food.	<b>23. The Fallen Log (p.105)</b> <b>24. Nature's Recyclers (p.108)</b> <b>25. Birds and Worms (p.111)</b> <b>45. Web of Life (p.194)</b>

## Grade 3 : Standard 4 - Heredity

Learning Expectations	Checks for Understanding	PLT Correlations
<p><b>GLE 0307.4.1</b> Identify the different life stages through which plants and animals pass.</p> <p><b>GLE 0307.4.2</b> Recognize common human characteristics that are transmitted from parents to offspring.</p>	<p><b>0307.4.1</b> Sequence diagrams that illustrate various stages in the development of an organism.</p> <p><b>0307.4.2</b> Create a timeline to depict the changes that occur during an organism’s life cycle.</p> <p><b>0307.4.3</b> Differentiate among the stages in the life cycle of a butterfly, mealworm, frog, and plant.</p> <p><b>0307.4.4</b> Draw conclusions about the similarities and differences between parents and their offspring</p> <p><b>0307.4.5</b> Make a list of human characteristics that are transmitted from parents to their offspring.</p>	<p><b>67. How Big Is Your Tree?</b> (p.284)</p> <p><b>76. Tree Cookies</b> (p.327)</p> <p><b>79. Tree Lifecycle</b>(p.341)</p>

## Grade 3 : Standard 5 - Biodiversity and Change

Learning Expectations	Checks for Understanding	PLT Correlations
<p><b>GLE 0307.5.1</b> Explore the relationship between an organism’s characteristics and its ability to survive in a particular environment.</p>	<p><b>0307.5.1</b> Create representations of animals that have characteristics necessary to survive in a particular environment.</p> <p><b>0307.5.2</b> Investigate the connection between an organism’s characteristics and its ability to survive in a specific environment.</p> <p><b>0307.5.3</b> Describe how environmental factors change over place and time.</p> <p><b>0307.5.4</b> Determine how changes in an environmental variable can affect plants and animals of an area.</p> <p><b>0307.5.5</b> Construct a diorama that shows plants and animals in an appropriate environment.</p>	<p><b>3. Peppermint Beetle</b> (p.23)  <b>4. Sounds Around</b> (p.26)  <b>6. Picture This</b> (p.34)  <b>18. Tale of The Sun</b> (p.86)  <b>20. Environmental Exchange Box</b> (p.92)  <b>22. Trees as Habitats</b> (p.102)  <b>47. Are Vacant Lots Vacant?</b> (p.200)  <b>48. Field, Forest and Stream</b> (p.203)  <b>61. The Closer You Look</b> (p.263)  <b>64. Looking at Leaves</b> (p.273)  <b>65. Bursting Buds</b>(p.277)  <b>78. Signs of Fall</b> (p.299)  <b>80. Nothing Succeeds Like Succession</b> (p.345)</p>
<p><b>GLE 0307.5.2</b> Classify organisms as thriving, threatened, endangered, or extinct.</p>	<p><b>0307.5.6</b> Identify evidence used to determine the previous existence of an organism.</p> <p><b>0307.5.7</b> Use a data chart or informational text to classify organisms as thriving, threatened, endangered, or extinct.</p>	<p><b>7. Habitat Pen Pals</b> (p.37)  <b>8. The Forest of S.T. Shrew</b> (p.40)  <b>9. Planet Diversity</b> (p.45)  <b>10. Charting Diversity</b> (p.50)  <b>12. Invasive Species</b> (p.59)  <b>22. Trees as Habitats</b> (p.102)  <b>49. Tropical Treehouse</b> (p.207)  <b>88. Life On The Edge</b> (p.382)</p>

## Standard 6 Omitted

## Grade 3 : Standard 7 – The Earth

Learning Expectations	Checks for Understanding	PLT Correlations
<p><b>GLE 0307.7.1</b> Use information and illustrations to identify the earth’s major landforms and water bodies.</p> <p><b>GLE 0307.7.2</b> Recognize that rocks can be composed of one or more minerals.</p>	<p><b>0307.7.1</b> Use a Venn diagram to compare and contrast two different landforms or bodies of water.</p> <p><b>0307.7.2</b> Analyze the physical characteristics of different kinds of rocks.</p>	
<p><b>GLE 0307.7.3</b> Distinguish between natural and manmade objects.</p>	<p><b>0307.7.3</b> Use a magnifier to observe, describe, and compare materials to determine if they are natural or manmade.</p> <p><b>0307.7.4</b> Design and evaluate a method for reusing or recycling classroom materials.</p>	<p><b>1. The Shape of Things</b> (p.17)  <b>13. We All Need Trees</b> (p.65)</p>
<p><b>GLE 0307.7.4</b> Design a simple investigation to demonstrate how earth materials can be conserved or recycled.</p>	<p><b>0307.7.5</b> Create a web that demonstrates the link between basic human needs and the earth’s resources.</p>	<p><b>15. A Few of My Favorite Things</b> (p.75)  <b>31. Plant a Tree</b> (p.132)  <b>32. A Forest of Many Uses</b> (p.135)  <b>34. Who Works in This Forest?</b> (p.144)  <b>37. Reduce, Reuse, Recycle</b> (p.159)  <b>51. Make Your Own Paper</b> (p.224)  <b>69. Forest For The Trees</b> (p.291)  <b>73. Waste Watchers</b> (p.314)  <b>96. Improve Your Place</b> (p.418)</p>

## Grade 3 : Standard 8 - The Atmosphere

Learning Expectations	Checks for Understanding	PLT Correlations
<p><b>GLE 0307.8.1</b> Recognize that that there are a variety of atmospheric conditions that can be measured.</p>	<p><b>0307.8.1</b> Select appropriate tools used for collecting weather data that correspond to the atmospheric condition being measured.</p>	

<p><b>GLE 0307.8.2</b> Use tools such as the barometer, thermometer, anemometer, and rain gauge to measure atmospheric conditions.</p>		<p><b>48. Field, Forest and Stream</b> (p.203)</p>
<p><b>GLE 0307.8.3</b> Identify cloud types associated with particular atmospheric conditions.</p> <p><b>GLE 0307.8.4</b> Predict the weather based on cloud observations.</p>	<p><b>0307.8.2</b> Identify major cloud types and associate them with particular weather conditions.</p>	

## Grade 3 : Standard 9 - Matter

<b>Learning Expectations</b>	<b>Checks for Understanding</b>	<b>PLT Correlations</b>
<p><b>GLE 0307.9.1</b> Design a simple experiment to determine how the physical properties of matter can change over time and under different conditions.</p>	<p><b>0307.9.1</b> Use physical properties to compare and contrast substances.</p> <p><b>0307.9.3</b> Make predictions and conduct experiments about conditions needed to change the physical properties of particular substances.</p>	
<p><b>GLE 0307.9.2</b> Investigate different types of mixtures.</p>	<p><b>0307.9.2</b> Compare and contrast events that demonstrate evaporation, crystallization, and melting.</p> <p><b>0307.9.4</b> Classify combinations of materials according to whether they have retained or lost their individual properties.</p>	
<p><b>GLE 0307.9.3</b> Describe different methods to separate mixtures.</p>	<p><b>0307.9.5</b> Investigate different ways to separate mixtures such as filtration, evaporation, settling, or using a sieve.</p>	<p><b>70. Soil Stories</b> (p.297)</p>

## Grade 3 : Standard 10 - Energy

Learning Expectations	Checks for Understanding	PLT Correlations
<p><b>GLE 0307.10.1</b> Investigate phenomena that produce heat.</p>	<p><b>0307.10.1</b> Associate the sun’s energy with the melting of an ice cube placed in a window.</p>	<p><b>81. Living With Fire</b> (p.350)</p>
<p><b>GLE 0307.10.2</b> Design and conduct an experiment to investigate the ability of different materials to conduct heat.</p>	<p><b>0307.10.2</b> Investigate various materials to explore heat conduction.</p>	

## Grade 3 : Standard 11 - Motion

Learning Expectations	Checks for Understanding	PLT Correlations
<p><b>GLE 0307.11.1</b> Explore how the direction of a moving object is affected by unbalanced forces.</p> <p><b>GLE 0307.11.2</b> Recognize the relationship between the mass of an object and the force needed to move it.</p>	<p><b>0307.11.1</b> Plan an investigation to illustrate how changing the mass affects a balanced system.</p>	<p><b>4. Sounds Around</b> (p.26)</p>
<p><b>GLE 0307.11.3</b> Investigate how the pitch and volume of a sound can be changed.</p>	<p><b>0307.11.2</b> Use a variety of materials to produce sounds of different pitch and volume.</p> <p><b>0307.11.3</b> Classify a variety of taped sounds according to their pitch and volume.</p>	

## Grade 3 : Standard 12 – Forces in Nature

Learning Expectations	Checks for Understanding	PLT Correlations
<p><b>GLE 0307.12.1</b> Explore how magnets attract objects made of certain metals.</p>	<p><b>0307.12.1</b> Experiment with magnets to determine how distance affects magnetic attraction.</p> <p><b>0307.12.2</b> Determine that only certain types of objects are attracted to magnets.</p>	<p><b>37. Reduce, Reuse, Recycle</b> (p.159)</p>