

## PLT Correlations to Second Grade DCPS Science Standards

December 2008

Note: All PLT Activities are from the PLT *PreK-8 Environmental Education Activity Guide* except where noted. The numbers in the second and third columns refer to PLT activity numbers, found sequentially in the PreK-8 Guide. The Power Standards/Indicators found in the Pacing Guides are bolded.

| <b>SCIENTIFIC THINKING AND INQUIRY<br/>Broad Concepts/Standards and<br/>Standards/Indicators</b>   | <b>PLT Activities</b>   | <b>Instructional Strategies/Integration<br/>Opportunities</b>  |
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| <p><b>2.1. Broad Concept:</b> Scientific progress is made by asking relevant questions and conducting careful investigations. As a basis for understanding this concept, and to address the content in this grade, students should develop their own questions and perform investigations.</p> |   |  |
| <p><b>2.1.1. Describe objects as accurately as possible and compare observations with those made and reported by others.</b></p> <p><b>2.1.10. Make simple line and bar graphs (e.g., track daily changes in outdoor air temperature).</b></p>   | <p>1 The Shape of Things (Part B)</p> <p>41 How Plants Grow (Variation)</p> <p>46 Schoolyard Safari</p> <p>70 Soil Stories (Part A)</p> | <p>(1) See the second Enrichment for a graphing opportunity. In addition, you could have students do a graph instead of the spreadsheet or graphic organizer described in Part B.</p> <p>(41) During/after students measure their plants, have them create a line graph depicting the height at different times.</p> |
| <p><b>2.1.2. Make new observations when there is disagreement among observers or among successive observations.</b></p>  | <p>41 How Plants Grow</p> <p>46 Schoolyard Safari</p> <p>48 Field, Forest, and Stream (Variation)</p>                                   | <p>New observations can be done for any of the activities if there is disagreement.</p>  |

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| <p><b>2.1.3. Demonstrate the ability to work with a team, but still reach and communicate one’s own conclusions about findings.</b></p>                  | <p>46 Schoolyard Safari</p>   | <p>(46) Students work in small groups to record data on a provided survey sheet and then share their experiences and compare their findings with the other groups.</p>  |
| <p><b>2.1.4. Use tools, such as thermometers, magnifiers, rulers, or balances, to investigate, observe, measure, design, and build things.</b></p>       | <p>31 Plant a Tree<br/>41 How Plants Grow (Variation)<br/>46 Schoolyard Safari<br/>70 Soil Stories (Part A)</p>     | <p>(46) Integrates use of hand lenses for investigation and technology (digital and video cameras) to record observations.</p>  |
| <p><b>2.1.5. Measure objects in standard units and include units in reports of measurements with simple calculations (e.g., 3 cm + 3 cm = 6 cm).</b></p> | <p>31 Plant a Tree<br/>41 How Plants Grow (Variation)<br/>67 How Big is Your Tree?<br/>70 Soil Stories (Part A)</p> | <p>(31) Have students measure height of tree, amount of mulch added, amount of water given, etc. at different times. You may have them graph the height of the tree and do calculations of tree growth in different months.<br/>(41) As students record measurements of their plants, have them add measurements together over periods of time to determine total (in mm, cm, or in.)</p> |
| <p><b>2.1.6. Draw pictures and write brief, coherent descriptions that correctly portray key features of an object.</b></p>                              | <p>20 Environmental Exchange Box<br/>21 Adopt a Tree (Part A)<br/>24 Nature’s Recyclers</p>                         | <p>(21) Use Adopt a Tree Activities on student page.<br/><br/>(65) Twig diagram is provided for use with students. Students will observe twig and bud(s) on a nearby tree over time and draw and write notes on what they</p>   |

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|  | 61 The Closer You Look<br>65 Bursting Buds  | observe.  |
| <b>2.1.7. Recognize and explain that people are more likely to believe ideas when they are supported by observations.</b>  | 21 Adopt a Tree (Part B)  | (21) Includes student page with activities for students to do and record the results of in their notebooks over time.   |
| <b>2.1.8. Explain that some events can be predicted with near certainty, such as a sunrise and sunset, and some cannot, such as storms.</b>  | N/A   |   |
| <b>2.1.9. Explain that sometimes a person can make general discoveries about a group of objects or organisms, such as insects, plants, or rocks, by studying just a few of them, even though the group may vary in details. Understand that this is not inconsistent with the existence of biological variation.</b> | 2 Get in Touch with Trees<br>8 The Forest of S.T. Shrew<br>21 Adopt a Tree (Part B) | (2) Students describe and compare/contrast objects and trees investigated with writing, drawing, and Venn Diagrams.<br>(8) Assessment opportunity provides questions for students to respond to with writing or drawings. |

| <b>SCIENCE AND TECHNOLOGY<br/>Broad Concepts/Standards and<br/>Standards/Indicators</b>  | <b>PLT Activities</b>                    | <b>Instructional Strategies/Integration<br/>Opportunities</b>   |
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| <b>2.2. Broad Concept:</b> Although each of these human enterprises of science and technology has a character and history of its own, each is dependent on and reinforces the other. |  |   |
| <b>2.2.1. Give examples of how our lives would be different without such technologies as automobiles, computers, and electric motors.</b>  | 51 Make Your Own Paper<br>53 On the Move | (51) Video at <a href="http://www.plt.org">www.plt.org</a> under Curriculum and then PreK-8 helps teach students about the papermaking process. |

| <b>EARTH SCIENCE<br/>Broad Concepts/Standards and<br/>Standards/Indicators</b> | <b>PLT Activities</b> | <b>Instructional Strategies/Integration<br/>Opportunities</b> |
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| <b>2.3. Broad Concept:</b> Weather can be observed, measured, and described.   |                       |   |
| <b>2.3.1. – 2.3.7.</b>   | N/A                   |   |

| <b>EARTH SCIENCE<br/>Broad Concepts/Standards and<br/>Standards/Indicators</b>   | <b>PLT Activities</b>   | <b>Instructional Strategies/Integration<br/>Opportunities</b>   |
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| <b>2.4. Broad Concept:</b> The Earth’s resources can be conserved.   |   |   |
| <b>2.4.1. Recognize and explain how certain materials — such as recycled paper, cans, and certain types of plastic containers — can be used again.</b> | 37 Reduce, Reuse, Recycle   | (37, 52, 83) Not specified for 2 <sup>nd</sup> grade but easily adapted and strong correlation to standard. |
| <b>2.4.2. Explain how discarded products contribute to the problem of waste disposal and how recycling and reuse can help solve this problem.</b>      | 51 Make Your Own Paper<br>52 A Look at Aluminum<br>83 A Peek at Packaging |   |

| <b>PHYSICAL SCIENCE<br/>Broad Concepts/Standards and<br/>Standards/Indicators</b>                    | <b>PLT Activities</b> | <b>Instructional Strategies/Integration<br/>Opportunities</b> |
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| <b>2.5. Broad Concept:</b> Materials come in different states, including solids, liquids, and gases. |                       |   |
| <b>2.5.1. Recognize that solids have a definite shape;</b>   | N/A                   |   |

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| <p>liquids and gases take the shape of their containers.</p> <p><b>2.5.2. Recognize that materials can be manipulated to change some of their properties (e.g., cooling or heating).</b></p>   |                  |   |
| <p><b>2.5.3. Investigate and explain that water, like many other substances, can be a liquid, a solid, or a gas, and it can transform from one state to another.</b></p> <p><b>2.5.4. Explain how water can be transformed from one state to another by adding or taking away heat energy.</b></p>   | 44 Water Wonders | (44) Activity is not specified for 2 <sup>nd</sup> graders but is easily adapted for them and supports standards. Students learn of the different states of water as they pretend to be a water molecule in a water cycle game. |
| <p><b>2.5.5. Describe when water is frozen into ice and the ice is allowed to melt, the amount of water is the same as it was at the beginning.</b></p> <p><b>2.5.6. Investigate and explain how water left in an open container seems to disappear into the air (evaporation), but water in a small, closed container does not disappear.</b></p> | N/A              |   |

| <b>LIFE SCIENCE<br/>Broad Concepts/Standards and<br/>Standards/Indicators</b>   | <b>PLT Activities</b> | <b>Instructional Strategies/Integration<br/>Opportunities</b> |
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| <b>2.6. Broad Concept:</b> Plants and animals have structures that serve different functions in growth, survival, and reproduction. |                       |   |
| <b>2.6.1. Observe and identify the visible, external</b>  | 6 Picture This!       | (25) Use first Enrichment provided to                         |

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| <p><b>features of plants and animals and describe how these features help them live in different environments.</b></p>       | <p>21 Adopt a Tree</p> <p>25 Birds and Worms</p> <p>41 How Plants Grow (Variation)</p> <p>43 Have Seeds, Will Travel</p> <p>62 To Be a Tree</p> | <p>deepen students’ understanding of how “bugs” of different colors are camouflaged in different environments.</p> <p>(43) Use second Enrichment provided to assess students’ understanding of how seeds use different dispersal strategies. Ask students how their depicted dispersal strategy helps the seed survive and grow into a plant (e.g., has sticky or rough coat to help it hitch a ride on an animal away from the shade of the parent plant).</p> |
| <p><b>2.6.2. Observe and cite examples of how some animals and plants change their appearance as the seasons change.</b></p> | <p>78 Signs of Fall (Part A)</p>  | <p>(78) Student page is provided for students to use as they investigate changes in their environment in the fall.</p>  |

| <p><b>LIFE SCIENCE</b><br/><b>Broad Concepts/Standards and Standards/Indicators</b></p>                               | <p><b>PLT Activities</b></p>  | <p><b>Instructional Strategies/Integration Opportunities</b></p>  |
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| <p><b>2.7. Broad Concept:</b> Living things depend on one another and their environment for survival.</p>             |   |   |
| <p><b>2.7.1. Observe and describe how animals may use plants, or even other animals, for shelter and nesting.</b></p> | <p>8 The Forest of S.T. Shrew</p> <p>21 Adopt a Tree</p> <p>22 Trees as Habitats (Part A)</p> <p>46 Schoolyard Safari</p> | <p>(22) In addition to conducting read-aloud with <i>Goodnight Owl!</i> and hike around schoolyard to observe how animals and plants are using trees, you might also use other suggested Reading Connections (<i>Cactus Hotel, A Tree For Me, etc.</i>)</p> |

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|  | 47 Are Vacant Lots Vacant? (Variation)   |  |
| <b>2.7.2. Explain that food for almost all kinds of animals can be traced through a food web back to green plants.</b>   | 16 Pass the Plants, Please (Part A)  | You may choose to also adapt from Activity 45 Web of Life (specified for grades 4-8).  |
| <b>2.7.3. Observe and explain that plants and animals both need to take in water, animals need to take in food, and green plants need light.</b>   | 22 Trees as Habitats (Part A)<br>27 Every Tree for Itself<br>31 Plant a Tree<br>41 How Plants Grow (Variation) | Activity 88 Life on the Edge has a variation of activity 27 for animals. 88 is specified for grades 4-8 but can be adapted for grade 2.  |
| <b>2.7.4. Recognize and explain that materials in nature, such as grass, twigs, sticks, and leaves, can be recycled and used again, sometimes in different forms, as birds do in making their nests.</b> | 22 Trees as Habitats<br>24 Nature’s Recyclers<br>51 Make Your Own Paper<br>79 Tree Lifecycle                   |  |
| <b>2.7.5. Observe and describe how the local environment (water, dry land) supports a wide variety of plants and animals, some unique to the Chesapeake Bay.</b>   | 20 Environmental Exchange Box<br>46 Schoolyard Safari  | (20) PLT will help match you with a class from another part of the country with whom your students can exchange pictures, drawings, stories, articles, etc. of each local environment. |
| <b>2.7.6. Cite examples of how animals and plants sometimes cause changes in their surroundings.</b>   | 24 Nature’s Recyclers  |  |

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| <p><b>While some of these changes are easy to see, some are very small and hard to recognize, even though they can be very important.</b></p>   | <p>31 Plant a Tree<br/>46 Schoolyard Safari<br/>74 People, Places, Things<br/>79 Tree Lifecycle</p> |  |
| <p>2.7.7. Recognize that there is a vast world of living things, called <i>microorganisms</i>, too small to see with the unaided eye.</p> <p>2.7.8. Recognize that most microorganisms do not cause disease and many are beneficial (e.g., yeasts, bacteria of the soil).</p> | <p>N/A</p>  |  |

| <p><b>LIFE SCIENCE</b><br/><b>Broad Concepts/Standards and Standards/Indicators</b></p>   | <p><b>PLT Activities</b></p>   | <p><b>Instructional Strategies/Integration Opportunities</b></p>   |
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| <p><b>2.8. Broad Concept:</b> Many different types of plants and animals inhabit the Earth.</p>   |  |  |
| <p><b>2.8.1. Recognize and explain that living things are found almost everywhere in the world in habitats such as the oceans, rivers, rain forests, mountain ranges, arctic tundra, farms, cities, and other environments. Recognize that some habitats are extreme, such as the very deepest parts of the oceans or inside hot springs.</b></p> | <p>6 Picture This! (Part B)<br/>8 The Forest of S.T. Shrew<br/>20 Environmental Exchange Box<br/>46 Schoolyard Safari<br/>47 Are Vacant Lots Vacant?</p> | <p>These activities, together, cover a range of habitats—from rainforests to vacant lots. You may choose to use Activity 20 and work with PLT to identify a partner school in a region with particular habitats that you would like to introduce your students to.</p> |

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|  | (Variation)<br>49 Tropical Treehouse<br>(Variation)                   |   |
| <b>2.8.2. Recognize that the numbers and types of living things can vary greatly from place to place.</b>  | 20 Environmental Exchange Box   |   |
| <b>2.8.3. Give examples of the many kinds of organisms that lived in the past that are now extinct (have died out), and explain how these organisms were similar to, and others very different from, organisms that are alive today.</b> | N/A   |   |
| 2.8.4. Describe that plants and animals in our city have habitats that are essential to their survival. For instance, the schoolyard is a habitat that provides the basic needs for a variety of plants and animals.                     | 31 Plant a Tree<br>46 Schoolyard Safari<br>47 Are Vacant Lots Vacant? | All three activities have service learning components (two are optional) that can be done to improve the local schoolyard/community to provide better habitat for local plants and animals. |

| <b>LIFE SCIENCE<br/>Broad Concepts/Standards and<br/>Standards/Indicators</b> | <b>PLT Activities</b> | <b>Instructional Strategies/Integration<br/>Opportunities</b> |
|---|-----------------------|---|
| <b>2.9. Broad Concept:</b> Humans have predictable life cycles.               |                       |   |
| <b>2.9.1. – 2.9.4.</b>  | N/A                   |   |