

# PLT Correlations: MATH GRADE 5 (revised 5/2010)

## Content Standard 1: Mathematical Processes

Learning Expectations	PLT Correlations
<p>GLE 0506.1.1 Use mathematical language, symbols, and definitions while developing mathematical reasoning.</p> <p>GLE 0506.1.2 Apply and adapt a variety of appropriate strategies to problem solving, including estimation, and reasonableness of the solution.</p> <p>GLE 0506.1.3 Develop independent reasoning to communicate mathematical ideas and derive algorithms and/or formulas.</p> <p>GLE 0506.1.4 Move flexibly between concrete and abstract representations of mathematical ideas in order to solve problems, model mathematical ideas, and communicate solution strategies.</p>	
<p>GLE 0506.1.5 Use mathematical ideas and processes in different settings to formulate patterns, analyze graphs, set up and solve problems and interpret solutions.</p>	<p><b>12 Invasive Species (p. 59)</b> - As an <b>Enrichment</b>, students solve a math problem involving projected population growth in a nutria population.</p> <p><b>16 Pass the Plants, Please (p.77)</b> - 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><b>36 Pollution Search (p. 153)</b> – In Part A, students identify and categorize forms of pollution and create a data collection chart.</p> <p><b>37 Reduce, Reuse, Recycle (p.159)</b> - Students create tables, charts, and graphs of volumes, weights, quantities, and types of solid waste collected.</p> <p><b>41 How Plants Grow (p. 179)</b> - In the Variation, students grow, measure, and compare plants growing with versus without light, water, soil, or space.</p> <p><b>73. Waste Watchers (p.314)</b> - Students learn how to read an electric meter and apply this skill to measure their energy use over a one-week period. They examine the data for all students in the class in terms of the range and average.</p>

	<p><b>77 Trees, in Trouble (p.332)</b> Students measure and graph the effects of crowding, acid, and fertilizer on seedling height and radish diameter.</p>
<p>GLE 0506.1.6 Read and interpret the language of mathematics and use written/oral communication to express mathematical ideas precisely.</p>	
<p>GLE 0506.1.7 Recognize the historical development of mathematics, mathematics in context, and the connections between mathematics and the real world.</p>	<p><b>12 Invasive Species (p. 59)</b> - As an <b>Enrichment</b>, students solve a math problem involving projected population growth in a nutria population.</p> <p><b>16 Pass the Plants, Please (p.77)</b> - 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><b>36 Pollution Search (p. 153)</b> – In Part A, students identify and categorize forms of pollution and create a data collection chart.</p> <p><b>37 Reduce, Reuse, Recycle (p.159)</b> - Students create tables, charts, and graphs of volumes, weights, quantities, and types of solid waste collected.</p> <p><b>41 How Plants Grow (p. 179)</b> - In the Variation, students grow, measure, and compare plants growing with versus without light, water, soil, or space.</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>73. Waste Watchers (p.314)</b> - Students learn how to read an electric meter and apply this skill to measure their energy use over a one-week period. They examine the data for all students in the class in terms of the range and average.</p> <p><b>77 Trees, in Trouble (p.332)</b> Students measure and graph the effects of crowding, acid, and fertilizer on seedling height and radish diameter.</p>
<p>GLE 0506.1.8 Use technologies/manipulatives appropriately to develop understanding of mathematical algorithms, to facilitate problem solving, and to create accurate and reliable models of mathematical concepts.</p>	

## Content Standard 2: Number and Operations

Learning Expectations	PLT Correlations
<p>GLE 0506.2.1 Extend the understanding of place value through millions and millionths in various contexts and representations.</p> <p>GLE 0506.2.2 Write natural numbers (to 50) as a product of prime factors and understand that this is unique (apart from order).</p> <p>GLE 0506.2.3 Develop fluency with division of whole numbers. Understand the relationship of divisor, dividend, and quotient in terms of multiplication and division.</p> <p>GLE 0506.2.4 Develop fluency with addition and subtraction of proper and improper fractions and mixed numbers; explain and model the algorithm.</p>	
<p>GLE 0506.2.5 Develop fluency in solving multi-step problems using whole numbers, fractions, mixed numbers, and decimals.</p>	

## Content Standard 3: Algebra

Learning Expectations	PLT Correlations
<p>GLE 0506.3.1 Understand and use order of operations.</p> <p>GLE 0506.3.2 Develop and apply the concept of variable.</p> <p>GLE 0506.3.3 Understand and apply the substitution property.</p> <p>GLE 0506.3.4 Solve single-step linear equations and inequalities.</p>	

## Content Standard 4: Geometry and Measurement

Learning Expectations	PLT Correlations
<p>GLE 0506.4.1 Use basic formulas and visualization to find the area of geometric figures.</p> <p>GLE 0506.4.2 Describe polyhedral solids and analyze their properties, including volume and surface area.</p> <p>GLE 0506.4.3 Describe length/distance relationships using the first quadrant of the coordinate system.</p>	
<p>GLE 0506.4.4 Solve problems that require attention to both approximation and precision of measurement.</p>	

## Content Standard 5: Data, Probability and Statistics

Learning Expectations	PLT Correlations
<p>GLE 0506.5.1 Make, record, display and interpret data and graphs that include whole numbers, decimals, and fractions.</p>	<p><b>16 Pass the Plants, Please (p.77)</b> - 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><b>36 Pollution Search (p. 153)</b> – In Part A, students identify and categorize forms of pollution and create a data collection chart.</p> <p><b>37 Reduce, Reuse, Recycle (p.159)</b> - Students create tables, charts, and graphs of volumes, weights, quantities, and types of solid waste collected.</p> <p><b>41 How Plants Grow (p. 179)</b> - In the Variation, students grow, measure, and compare plants growing with versus without light, water, soil, or space.</p> <p><b>73. Waste Watchers (p.314)</b> - Students learn how to read an electric meter and apply this skill to measure their energy use over a one-week period. They examine the data for all students in the class in terms of the range and average.</p>

	<b>77 Trees, in Trouble (p.332)</b> Students measure and graph the effects of crowding, acid, and fertilizer on seedling height and radish diameter.
GLE 0506.5.2 Describe the shape and important features of a set of data using the measures of central tendency.	