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correlated to

Arkansas

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Framework

Grades 6 & 7

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correlated to
Arkansas Mathematics Curriculum Framework
Grade 6

N u m b e r a n d O p e r a t i o n s

S t a n d a r d 1 : N u m b e r S e n s e

Students shall understand numbers, ways of representing numbers, relationships among numbers and number systems.

| Student Learning Expectations, Grade 6 | Every Day Counts Algebra Readiness, Grade 6 Teacher's Guide |
|---|--|
| <p>Rational Numbers NO.1.6.1 Demonstrate conceptual understanding to find a specific <i>percent</i> of a number, using models, real life examples, or explanations</p> | <p>August/September: 28-29 October: 42-43 November: 55-57 December: 72-73 January: 91-92, 98-101 February: 109 March: 146 April: 166-169</p> |
| <p>NO.1.6.2 Find decimal and <i>percent equivalents</i> for proper fractions and explain why they represent the same value</p> | <p>August/September: 28-29, 30 October: 42-43 November: 55-57 December: 72-73 February: 109 March: 145</p> |
| <p>NO.1.6.3 Round and compare decimals to a given <i>place value</i> including thousandths</p> | <p>August/September: 36 February: 109, 112 May/June: 179</p> |

| Student Learning Expectations, Grade 6 | Every Day Counts Algebra Readiness, Grade 6 Teacher's Guide |
|--|---|
| NO.1.6.4 Convert, compare and order fractions (mixed numbers and improper fractions) decimals and <i>percents</i> and find their approximate locations on a number line | Convert, compare and order fractions, decimals and percents: August/September: 28-29 October: 42-43 November: 55 December: 72-73 January: 91-92 Number line specifically reviewed (whole numbers): December: 82-83 March: 131-135 April: 154-158 |
| NO.1.6.5 Recognize and identify perfect squares and their square roots | August/September: 25 October: 40 January: 94-96 |

Standard 2: Properties of Number Operations

Students shall understand meanings of operations and how they relate to one another.

| Student Learning Expectations, Grade 6 | Every Day Counts Algebra Readiness, Grade 6 Teacher's Guide |
|--|---|
| Number Theory NO.2.6.1 Use <i>divisibility rules</i> to determine if a number is a <i>factor</i> of another number (4, 6, 9) | August/September: 24-28 October: 40-42 December: 71 January: 88-91 |
| NO.2.6.2 Apply the <i>distributive property</i> of multiplication over addition to simplify computations with <i>whole numbers</i> | October: 43-44 January: 96-97 (opportunity exists) |
| NO.2.6.3 Apply the addition, subtraction, multiplication and division properties of equality to one-step <i>equations</i> with <i>whole numbers</i> | August/September: 33-34 January: 96-97 (opportunity exists) February: 117-118 (opportunity exists) |

| Student Learning Expectations, Grade 6 | Every Day Counts Algebra Readiness, Grade 6 Teacher's Guide |
|---|--|
| NO.2.6.4 Apply rules (conventions) for <i>order of operations</i> to <i>whole numbers</i> with and without parentheses | October: 44 January: 96-97 |
| Understand Operations NO.2.6.5 Model multiplication and division of fractions (including mixed numbers) and decimals using pictures and physical objects Ex. weight, money and measuring cups | November: 55-57 December: 72-73 January: 91-92 February: 100, 109 |

S t a n d a r d 3 : N u m e r i c a l O p e r a t i o n s a n d E s t i m a t i o n

Students shall compute fluently and make reasonable estimates.

| Student Learning Expectations, Grade 6 | Every Day Counts Algebra Readiness, Grade 6 Teacher's Guide |
|--|--|
| Computational Fluency NO.3.6.1 Apply, with and without appropriate <i>technology</i> , <i>algorithms</i> with <i>computational fluency</i> to perform <i>whole number operations</i> (+, -, x, /) | August/September: 30-33 October: 43-44 November: 60-62 January: 96-96 February: 117-118 March: 137-139 April: 164-166 |
| NO.3.6.2 Develop and analyze <i>algorithms</i> for computing with fractions (including mixed numbers) and decimals and demonstrate, with and without <i>technology</i> , <i>computational fluency</i> in their use and justify the solution | August/September: 28-30 November: 55-57 December: 72-73, 75-76 January: 91-92, 100 February: 109 |
| NO.3.6.3 Solve, with and without appropriate <i>technology</i> , multi-step problems using a variety of methods and tools (i.e., objects, mental computation, paper and pencil) | February: 120-121 December: 82-83 |

| Student Learning Expectations, Grade 6 | Every Day Counts Algebra Readiness, Grade 6 Teacher's Guide |
|--|--|
| <p>Estimation NO.3.6.4 <i>Estimate</i> reasonable solutions to problem situations involving fractions and decimals Ex. $7/8 + 12/13 \approx 2$ $4.23 \times 5.8 \approx 24$</p> | <p>August/September: 36, 37 January: 101 February: 120-121</p> |
| <p>Application of Computation NO.3.6.5 Find and use <i>factorization (tree diagram)</i> including <i>prime factorization</i> of composite numbers (expanded and exponential notation) to determine the greatest common factor (<i>GCF</i>) and least common multiple (<i>LCM</i>)</p> | <p>August/September: 26, 27 October: 41 November: 52-55 December: 71-72 Exponential Notation: January: 96-98 March: 140-141</p> |
| <p>NO.3.6.6 Use proportional reasoning and <i>ratios</i> to represent problem situations and determine the reasonableness of solutions with and without appropriate <i>technology</i> (Ex. <i>unit rates</i>)</p> | <p>March: 145 May/June: 189</p> |
| <p>NO.3.6.7 Determine the <i>percent</i> of a number and solve related problems in real world situations Ex. tip, sales tax, discounts, etc.</p> | <p>February: 120-121, 100 April: 166-169 Note: In Progress Check A, pages 197-200, there are problems that directly address this benchmark.</p> |

Strand: Algebra

Standard 4: Patterns, Relations and Functions

Students shall recognize, describe and develop patterns, relations and functions.

| Student Learning Expectations, Grade 6 | Every Day Counts Algebra Readiness, Grade 6 Teacher's Guide |
|---|--|
| Patterns, Relations and Functions A.4.6.1 Solve problems by finding the next term or missing term in a <i>pattern</i> or <i>function</i> table using real world situations | August/September: 24-26, 32 October: 40-41 November: 50-52 February: 106-108 March: 128-131 |
| A.4.6.2 Interpret and write an <i>algebraic</i> rule for a one operation <i>function table</i> Ex. $y=x+3$ | August/September: 30-34 January: 96, 97 |

Standard 5: Algebraic Representations

Students shall represent and analyze mathematical situations and structures using algebraic symbols.

| Student Learning Expectations, Grade 6 | Every Day Counts Algebra Readiness, Grade 6 Teacher's Guide |
|---|---|
| Expressions, Equations and Inequalities A.5.6.1 Model, write and solve one-step <i>equations</i> by informal methods using manipulatives and appropriate <i>technology</i> | August/September: 33 November: 60-62 February: 108, 119 March: 137-139 May/June: 181-182 |

| Student Learning Expectations, Grade 6 | Every Day Counts Algebra Readiness, Grade 6 Teacher's Guide |
|--|--|
| <p>A.5.6.2 Write simple <i>algebraic expressions</i> using appropriate operations (+, -, x, /) with one <i>variable</i></p> | <p>August/September: 33-35 October: 43-46 November: 60-62 December: 77 (two variables) February: 108, 119 March: 137-139, 141 May/June: 181</p> |
| <p>A.5.6.3 Evaluate <i>algebraic expressions</i> with one <i>variable</i> using appropriate properties and operations (+, -, x, /)</p> | <p>August/September: 33-35 October: 43-46 November: 60-62 December: 77 (two variables) February: 109, 119 March: 137-138 May/June: 181</p> |

Standard 6 : Algebraic Models

Students shall develop and apply mathematical models to represent and understand quantitative relationships

| Student Learning Expectations, Grade 6 | Every Day Counts Algebra Readiness, Grade 6 Teacher's Guide |
|--|--|
| <p>Algebraic Models and Relationships A.6.6.1 Complete, with and without appropriate <i>technology</i>, and interpret tables and <i>line graphs</i> that represent the relationship between two <i>variables</i> in <i>quadrant I</i> Ex. time and distance</p> | <p>November: 60-64 February: 122-124 April: 164-166</p> |

Standard 7: Analysis of Change

Students shall analyze change in various contexts.

| Student Learning Expectations, Grade 6 | Every Day Counts Algebra Readiness, Grade 6 Teacher's Guide |
|--|---|
| <p>Analyze Change A.7.6.1 Identify and compare situations with constant or varying <i>rates</i> of change Ex. a student's rate of growth each year is a varying rate, hourly wages is a constant rate</p> | <p>Each month, August/September through February describes a Daily Depositor in which the class computes interest earned using percents. The interest rate can be considered constant; however, different rates are used each month allowing for a comparison or exploration of a varying rate and its effect on the system. August/September: 35-37 October: 47 November: 64-65 December: 80-81 January: 98-101 February: 120-122</p> |

Strand: Geometry

Standard 8: Geometric Properties

Students shall analyze characteristics and properties of 2 and 3 dimensional geometric shapes and develop mathematical arguments about geometric relationships.

| Student Learning Expectations, Grade 6 | Every Day Counts Algebra Readiness, Grade 6 Teacher's Guide |
|--|--|
| <p>Characteristics of Geometric Shape G.8.6.1 Identify <i>three-dimensional</i> geometric figures using models (<i>rectangular prisms, cylinders, cones, pyramids</i> and <i>spheres</i>)</p> | <p>April: 150-154 May/June: 172-174</p> |
| <p>G.8.6.2 Investigate with manipulatives or grid paper what happens to the <i>perimeter</i> and <i>area</i> of a <i>two-dimensional</i> shape when the dimensions are changed Ex. length of sides are doubled</p> | <p>August/September: 30-33 October: 44 March: 137-139 May/June: 186-189</p> |
| <p>G.8.6.3 Identify, describe, draw, and classify triangles as <i>equilateral, isosceles, scalene, right, acute, obtuse</i>, and <i>equiangular</i></p> | <p>November: 50-52 February: 106-108, 114-116 March: 128-131</p> |

| Student Learning Expectations, Grade 6 | Every Day Counts Algebra Readiness, Grade 6 Teacher's Guide |
|---|--|
| G.8.6.4 Draw, label and determine relationships among the <i>radius</i> , <i>diameter</i> , <i>center</i> and <i>circumference</i> (e.g. <i>radius</i> is half the <i>diameter</i>) of a circle | November: 58 February: 110-114 March: 133-136 |
| G.8.6.5 Identify <i>similar figures</i> and explore their properties | November: 50-51 December: 68-70 February: 106-108 March: 129-131, 137-139 |

Standard 9: Transformation of Shapes
 Students shall apply transformations and the use of symmetry to analyze mathematical situations.

| Student Learning Expectations, Grade 6 | Every Day Counts Algebra Readiness, Grade 6 Teacher's Guide |
|--|--|
| Symmetry and Transformations G.9.6.1 Identify and describe <i>line</i> and <i>rotational symmetry</i> in <i>two-dimensional</i> shapes, <i>patterns</i> and designs | January: 86-89 February: 106-108 March: 131 |
| G.9.6.2 Describe positions and orientations of shapes under <i>transformation</i> (<i>translation</i> , <i>reflection</i> , and <i>rotation</i>) recognizing the size and shape do not change | January: 86-87 (opportunity exists) February: 106-108 March: 129 (opportunity exists) |

Standard 10: Coordinate Geometry

Students shall specify locations and describe spatial relationships using coordinate geometry and other representational systems.

| Student Learning Expectations, Grade 6 | Every Day Counts Algebra Readiness, Grade 6 Teacher's Guide |
|---|---|
| Coordinate Geometry G.10.6.1 Use <i>ordered pairs</i> to plot points in <i>Quadrant I</i> | January: 96-97 (opportunity exists) February: 117-118 (opportunity exists), 122-124 April: 164-166 May/June: 182-185 |
| G.10.6.2 Plot points that form the <i>vertices</i> of a geometric figure and draw, identify and classify the figure. | December: 77 |

Standard 11: Visualization and Geometric Models

Students shall use visualization, spatial reasoning and geometric modeling

| Student Learning Expectations, Grade 6 | Every Day Counts Algebra Readiness, Grade 6 Teacher's Guide |
|---|--|
| Spatial Visualization and Models G.11.6.1 Identify <i>two-dimensional patterns (nets)</i> for <i>three-dimensional</i> solids, such as <i>prisms, pyramids, cylinders, and cones</i> | April: 150-154 May/June: 172-174, 186-189 |

Strand: Measurement

Standard 12: Physical Attributes

Students shall use attributes of measurement to describe and compare mathematical and real-world objects.

| Student Learning Expectations, Grade 6 | Every Day Counts Algebra Readiness, Grade 6 Teacher's Guide |
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| Attributes and Tools M.12.6.1 Identify and select appropriate units and tools from both systems to measure Ex. angles with degrees, distance with feet/meters | November: 57-59 December: 74 (opportunity exists) January: 93-94 (opportunity exists) March: 146-147 (opportunity exists) |

| Student Learning Expectations, Grade 6 | Every Day Counts Algebra Readiness, Grade 6 Teacher's Guide |
|--|---|
| <p>M.12.6.2 Make conversions within the same measurement system in real world problems Ex. hours to minutes to seconds, meters to centimeters, feet to inches, liters to milliliters, quarts to gallons, etc</p> | <p>February: 125 March: 146-147 (opportunity exists) April: 164, 166-169</p> |
| <p>M.12.6.3 Compare and contrast the differences among linear units, square units, and cubic units</p> | <p>August/September: 30-33 (opportunity exists) October: 43-44 (opportunity exists) November: 60-62 (opportunity exists) January: 95 May/June: 186-189</p> |

Standard 13: Systems of Measurement

Students shall identify and use units, systems and processes of measurement.

| Student Learning Expectations, Grade 6 | Every Day Counts Algebra Readiness, Grade 6 Teacher's Guide |
|---|---|
| <p>Attributes and Tools M.13.6.1 Solve real world problems involving one <i>elapsed time</i>, counting forward and backward (calendar and clock)</p> | <p>Each month, August/September through February describes a Daily Depositor in which the class computes interest earned using percents. Each day calculates as if an entire year has passed. August/September: 35-37 October: 47 November: 64-65 December: 80-81 January: 98-101 February: 120-122</p> |
| <p>M.13.6.2 Determine which unit of measure or measurement tool matches the context for a problem situation</p> | <p>February: 125 March: 146 April: 166-169</p> |
| <p>M.13.6.3 Draw and measure distance to the nearest mm and 1/8 inch accurately</p> | <p>February: 110-114, 125 March: 146</p> |

| Student Learning Expectations, Grade 6 | Every Day Counts Algebra Readiness, Grade 6 Teacher's Guide |
|--|--|
| M.13.6.4 Establish and apply formulas to find <i>area</i> and <i>perimeter</i> of triangles, rectangles, and parallelograms | August/September: 30-33 October: 43-44 November: 60-62 January: 95 February: 114-116 March: 137-139 |
| Applications M.13.6.5 Find the distance between two points on a number line | December: 82-83 (opportunity exists) March: 131-133 April: 154-158 |
| M.13.6.6 Use estimation to check the reasonableness of measurements obtained from use of various instruments (including angle measures) | December: 82-83 (opportunity exists) February: 110-114 (opportunity exists) |

Strand: Data Analysis and Probability

Standard 14: Data Representation

Students shall formulate questions that can be addressed with data and collect, organize and display relevant data to answer them.

| Student Learning Expectations, Grade 6 | Every Day Counts Algebra Readiness, Grade 6 Teacher's Guide |
|--|--|
| Collect, Organize and Display Data DAP.14.6.1 Formulate questions, design studies, and collect data about a characteristic shared by two populations or different characteristics within one population | January: 101-103 |
| DAP.14.6.2 Collect data and select appropriate graphical representations to display the data including <i>Venn diagrams</i> | December: 81-83 January: 101-103 February: 117 March: 142-145 |

| Student Learning Expectations, Grade 6 | Every Day Counts Algebra Readiness, Grade 6 Teacher's Guide |
|--|---|
| DAP.14.6.3 Construct and interpret graphs, using correct scale, including <i>line graphs</i> and <i>double-bar graphs</i> | January: 103 (opportunity exists) February: 117, 122-124 May/June: 182-185 |

Standard 15: Data Analysis
 Students shall select and use appropriate statistical methods to analyze data.

| Student Learning Expectations, Grade 6 | Every Day Counts Algebra Readiness, Grade 6 Teacher's Guide |
|---|--|
| Data Analysis DAP.15.6.1 Interpret graphs such as <i>double line graphs</i> and <i>circle graphs</i> | February: 122-124 March: 142-145 |
| DAP.15.6.2 Compare and interpret information provided by measures of <i>central tendencies (mean, median and mode)</i> and <i>measures of spread (range)</i> | December: 82-83 January: 101-103 |

Standard 16: Inferences and Predictability
 Students shall develop and evaluate inferences and predictions that are based on data

| Student Learning Expectations, Grade 6 | Every Day Counts Algebra Readiness, Grade 6 Teacher's Guide |
|--|--|
| Inferences and Predictions DAP.16.6.1 Use observations about differences in data to make justifiable inferences | December: 83 January: 101 (opportunity exists) March: 145 (opportunity exists) April: 161 May/June: 184-186 |

Standard 17: Probability

Students shall understand and apply basic concepts of probability.

| Student Learning Expectations, Grade 6 | Every Day Counts Algebra Readiness, Grade 6 Teacher's Guide |
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| Probability DAP.17.6.1 Distinguish between <i>theoretical</i> and <i>experimental</i> <i>probability</i> | April: 159-161 May/June: 175-177 |



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Grade7

N u m b e r a n d O p e r a t i o n s

S t a n d a r d 1 : N u m b e r S e n s e

Students shall understand numbers, ways of representing numbers, relationships among numbers and number systems.

| Student Learning Expectations, Grade 7 | Every Day Counts Algebra Readiness, Grade 7 Teacher's Guide |
|--|---|
| <p>Rational Numbers NO.1.7.1 Relate, with and without models and <i>pictures</i>, concepts of <i>ratio</i>, <i>proportion</i>, and <i>percent</i>, including <i>percents</i> less than 1 and greater than 100</p> | <p>May/June: 177-180 (opportunity exists to expand coverage to include percents less than 1 and greater than 100)</p> |
| <p>NO.1.7.2 Demonstrate, with and without appropriate <i>technology</i>, an understanding of <i>place value</i> using powers of 10 and write numbers greater than one in <i>scientific notation</i></p> | <p>March: 140-141 (place values and powers of ten are taught here; there is opportunity to teach scientific notation)</p> |
| <p>NO.1.7.4 Find decimal and <i>percent equivalents</i> for mixed numbers and explain why they represent the same value</p> | <p>Opportunity exists for each reference below; decimal and percent equivalents are actively explored; mixed numbers are not directly addressed.</p> <p>August/September: 30</p> <p>October: 42-43</p> <p>November: 55-57</p> <p>December: 72-73</p> <p>January: 91-92</p> <p>February: 109</p> |

| Student Learning Expectations, Grade 7 | Every Day Counts Algebra Readiness, Grade 7 Teacher's Guide |
|--|---|
| NO.1.7.5 Compare and represent <i>integers</i> , fractions, decimals and mixed numbers and find their approximate location on a number line | Mixed numbers are not directly addressed on pages where the number line is taught. However, opportunity to meet this benchmark exists on the following: March: 131-135 April: 154-158 |
| NO.1.7.6 Recognize subsets of the <i>real number system</i> (<i>natural, whole, integers, rational and irrational numbers</i>) | March: 131-134 (opportunity exists) April: 154-158 (opportunity exists) |

Standard 2: Properties of Number Operations

Students shall understand meanings of operations and how they relate to one another.

| Student Learning Expectations, Grade 7 | Every Day Counts Algebra Readiness, Grade 7 Teacher's Guide |
|--|---|
| Number Theory NO.2.7.1 Apply the <i>distributive property</i> of multiplication over addition or subtraction to simplify computations with <i>integers</i> , fractions and decimals | October: 43-44 (whole number represented) |
| NO.2.7.2 Apply the addition, subtraction, multiplication and division properties of equality to one-step <i>equations</i> with <i>integers</i> , fractions, and decimals | April: 154-158 (opportunity exists), 164-166 |
| NO.2.7.3 Apply rules (conventions) for <i>order of operations</i> to <i>integers</i> and positive <i>rational numbers</i> including parentheses, brackets or exponents | October: 44 (brackets and exponents are not addressed) April: 164-166 (brackets and exponents are not addressed) |
| Understand Operations NO.2.7.4 Model and develop addition, subtraction, multiplication and division of <i>integers</i> | March: 131-135 April: 154-158, 164-166 |

Standard 3: Numerical Operations and Estimation

Students shall compute fluently and make reasonable estimates.

| Student Learning Expectations, Grade 7 | Every Day Counts Algebra Readiness, Grade 7 Teacher's Guide |
|---|---|
| <p>Computational Fluency NO.3.7.1 Compute, with and without appropriate <i>technology</i>, with <i>integers</i> and positive <i>rational numbers</i> using real world situations to solve problems</p> | <p>November: 63-64 December: 81-83 January: 101-103 February: 122-124 March: 142-145</p> |
| <p>NO.3.7.2 Solve with and without appropriate <i>technology</i>, multi-step problems using a variety of methods and tools (i.e., objects, mental computation, paper and pencil)</p> | <p>December: 82-83 (graph and analyze data) February: 120-121</p> |
| <p>Estimation NO.3.7.3 Determine when an <i>estimate</i> is sufficient and use <i>estimation</i> to decide whether answers are reasonable in problems including fractions and decimals</p> | <p>August/September: 36-37 (opportunity exists) January: 100-101 February: 120-121</p> |
| <p>Application of Computation NO.3.7.4 Apply <i>factorization</i>, <i>LCM</i>, and <i>GCF</i> to solve problems using more than two numbers and explain the solution</p> | <p>August/September: 26-27 October: 41-42 November: 52-54 January: 88-91</p> |
| <p>NO.3.7.5 Represent and solve problem situations that can be modeled by and solved using concepts of <i>absolute value</i>, exponents and <i>square roots</i> (for <i>perfect squares</i>) with and without appropriate <i>technology</i></p> | <p>December: 71-72 (opportunity exists) January: 97 (opportunity exists)</p> |

| Student Learning Expectations, Grade 7 | Every Day Counts Algebra Readiness, Grade 7 Teacher's Guide |
|--|--|
| NO.3.7.6 Solve, with and without <i>technology</i> , real world <i>percent</i> problems Ex. I=PRT | August/September: 35-37 October: 47 November: 64-65 December: 80-81 January: 98-101 February: 120-122 |

S t r a n d : A l g e b r a

S t a n d a r d 4 : P a t t e r n s , R e l a t i o n s a n d F u n c t i o n s

Students shall recognize, describe and develop patterns, relations and functions.

| Student Learning Expectations, Grade 7 | Every Day Counts Algebra Readiness, Grade 7 Teacher's Guide |
|--|--|
| Patterns, Relations and Functions A.4.7.1 Create and complete a <i>function</i> table (<i>input/output</i>) using a given rule with two <i>operations</i> | October: 45 January: 96-97 |
| A.4.7.2 Identify and extend <i>patterns</i> in real world situations | March: 134 Also, opportunity exists to apply pattern studies to real-world situations in each page reference below: August/September: 24, 30-33 October: 44 November: 60-62 February: 114-116 March: 137-139 |
| A.4.7.3 Interpret and write a rule for a two operation <i>function table</i> Ex. multiply by 2, add 1 | October: 45 November: 60-62 |

Standard 5: Algebraic Representations

Students shall represent and analyze mathematical situations and structures using algebraic symbols.

| Student Learning Expectations, Grade 7 | Every Day Counts Algebra Readiness, Grade 7 Teacher's Guide |
|--|---|
| <p>Expressions, Equations, and Inequalities A.5.7.1 Solve and graph one-step <i>linear equations</i> and <i>inequalities</i> using a variety of methods (i.e., hands-on, <i>inverse operations</i>, symbolic) with real world application with and without <i>technology</i></p> | <p>October: 45-46 December: 79-80 April: 164-166</p> |
| <p>A.5.7.2 Solve simple <i>linear equations</i> using <i>integers</i> and graph on a <i>coordinate plane</i> Ex. use a T chart</p> | <p>December: 79-80 April: 164-166</p> |
| <p>A.5.7.3 Translate phrases and sentences into <i>algebraic expressions</i> and <i>equations</i> including parentheses and positive and <i>rational numbers</i> and simplify <i>algebraic expressions</i> by combining like terms</p> | <p>May/June: 181-182</p> |
| <p>A.5.7.4 Write and evaluate <i>algebraic expressions</i> using positive <i>rational numbers</i></p> | <p>August/September: 33-35 October: 43-44, 45-56 November: 60-62, 63-64 December: 77 February: 108, 119 March: 138</p> |

Standard 6: Algebraic Models

Students shall develop and apply mathematical models to represent and understand quantitative relationships.

| Student Learning Expectations, Grade 7 | Every Day Counts Algebra Readiness, Grade 7 Teacher's Guide |
|--|---|
| <p>Algebraic Models and Relationships A.6.7.1 Use tables and graphs to represent <i>linear equations</i> by plotting, with and without appropriate <i>technology</i>, points in a <i>coordinate plane</i></p> | <p>October: 45-46 December: 79-80 April: 164-166</p> |
| <p>A.6.7.2 Represent, with and without appropriate <i>technology</i>, <i>linear equations</i> by plotting and graphing points in the <i>coordinate plane</i> using all four <i>quadrants</i> given data in a table from a real world situation,</p> | <p>April: 164-166</p> |
| <p>A.6.7.3 Create and complete a <i>function table (input/output)</i> using a given rule with two operations in real world situations</p> | <p>Opportunity exists to create a function table as students study interest during each month's Daily Deposit section. Pages references are listed below:</p> <p>August/September: 35-37 October: 47 November: 64-65 December: 80-81 January: 98-101 February: 120-122</p> |

Standard 7: Analysis of Change

Students shall analyze change in various contexts.

| Student Learning Expectations, Grade 7 | Every Day Counts Algebra Readiness, Grade 7 Teacher's Guide |
|--|---|
| <p>A.7.7.1 Use, with and without appropriate <i>technology</i>, tables and graphs to compare and identify situations with constant or varying <i>rates</i> of change</p> | <p>Opportunity exists to create graphs as students complete the month's Daily Deposit and Daily Data sections. Pages references are listed below:</p> <p>August/September: 35-37</p> <p>October: 47</p> <p>November: 64-65</p> <p>December: 80-81, 81-83</p> <p>January: 98-101, 101-103</p> <p>February: 120-122, 122-124</p> <p>March: 142-145</p> |

Strand: Geometry

Standard 8: Geometric Properties

Students shall analyze characteristics and properties of 2 and 3 dimensional geometric shapes and develop mathematical arguments about geometric relationships.

| Student Learning Expectations, Grade 7 | Every Day Counts Algebra Readiness, Grade 7 Teacher's Guide |
|---|--|
| <p>Characteristics of Geometric Shapes G.8.7.1 Identify, draw, classify and compare geometric figures using models and real world examples</p> | <p>November: 50-52</p> <p>December: 68-70</p> <p>January: 86-88</p> <p>February: 106-108, 114-116</p> <p>March: 128-131</p> |
| <p>G.8.7.2 Investigate geometric properties and their relationships in one-, two-, and three-dimensional models, including convex and concave <i>polygons</i></p> | <p>November: 50-52</p> <p>December: 68-70</p> <p>January: 86-88</p> <p>February: 106-108</p> <p>May/June: 186-189</p> |

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| G.8.7.3 Recognize the pairs of angles formed and the relationship between the angles including two <i>intersecting lines</i> and <i>parallel lines</i> cut by a <i>transversal</i> (<i>vertical, supplementary, complementary, corresponding, alternate interior, alternate exterior angles</i> and <i>linear pair</i>) | December: 70 January: 87 (opportunity exists) |
| G.8.7.4 Use paper or physical models to determine the sum of the measures of <i>interior angles</i> of triangles and <i>quadrilaterals</i> | November: 51 March: 128 |
| G.8.7.5 <i>Model</i> and develop the concept that <i>pi</i> (π) is the <i>ratio</i> of the <i>circumference</i> to the <i>diameter</i> of any circle | February: 110-114 |
| G.8.7.6 Develop the properties of <i>similar figures</i> (<i>ratio</i> of sides and <i>congruent angles</i>) | December: 68-70 (opportunity exists) |

Standard 9: Transformation of Shapes

Students shall apply transformations and the use of symmetry to analyze mathematical situations.

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| Symmetry and Transformation G.9.7.1 Examine the congruence, similarity, and <i>line</i> or <i>rotational symmetry</i> of objects using <i>transformations</i> | February: 106-108 |

Standard 10: Coordinate Geometry

Students shall specify locations and describe spatial relationships using coordinate geometry and other representational systems.

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| Coordinate Geometry G.10.7.1 Plot points in the <i>coordinate plane</i> | April: 164-166 |
| G.10.7.2 Plot points that form the <i>vertices</i> of a geometric figure and draw, identify and classify the figure. | December: 77 |

Standard 11: Visualization and Geometric Models

Students shall use visualization, spatial reasoning and geometric modeling

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| Spatial Visualization and Models G.11.7.1 Build <i>three-dimensional</i> solids from <i>two-dimensional patterns (nets)</i> | May/June: 172-174 (opportunity exists), 186-189 |
| G.11.7.2 Construct a building out of <i>cubes</i> from a set of views (front, top, side) | April: 151 (opportunity may exist) May/June: 186-189 (opportunity may exist) |

Strand: Measurement

Standard 12: Physical Attributes

Students shall use attributes of measurement to describe and compare mathematical and real-world objects.

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| Attributes and Tools M.12.7.1 Understand, select and use the appropriate units and tools (metric and customary) to measure length, weight, <i>mass</i> and <i>volume</i> to the required degree of accuracy for real world problems | March: 146-147 April: 166-169 |

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| M.12.7.2 Understand relationships among units within the same system | March: 146-147 April: 166-169 |
| M.12.7.3 Find different <i>areas</i> for a given <i>perimeter</i> and find a different <i>perimeter</i> for a given <i>area</i> | August/September: 30-33 October: 44 |

Standard 13: Systems of Measurement

Students shall identify and use units, systems and processes of measurement.

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| Attributes and Tools M.13.7.1 Solve real world problems involving two or more <i>elapsed times</i> , counting forward and backward (calendar and clock) | Each month, August/September through February describes a Daily Depositor in which the class computes interest earned using percents. Each day calculates as if an entire year has passed. August/September: 35-37 October: 47 November: 64-65 December: 80-81 January: 98-101 February: 120-122 |
| M.13.7.2 Draw and measure distance to the nearest mm and 1/16 inch accurately | February: 125 (opportunity exists) March: 146-147 |
| M.13.7.3 Develop and use <i>strategies</i> to solve problems involving <i>area</i> of a <i>trapezoid</i> and <i>circumference</i> and <i>area</i> of a circle | November: 60-62 (opportunity exists) February: 110-114 March: 135-136 |
| Applications M.13.7.4 Derive and use formulas for <i>surface area</i> and <i>volume</i> of <i>prisms</i> and <i>cylinders</i> and justify them using geometric models and common materials | May/June: 172-174 |

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| M.13.7.5 Apply properties (scale <i>factors</i> , <i>ratio</i> , and <i>proportion</i>) of <i>congruent</i> or <i>similar</i> triangles to solve problems involving missing lengths and angle measures | March: 128-131 |
| M.13.7.6 Find the distance between two points on a number line and locate the midpoint | December: 82-83 March: 131-135 (opportunity exists) April: 154-158 (opportunity exists) |
| M.13.7.7 Estimate and compute the <i>area</i> of more complex or irregular <i>two-dimensional</i> shapes by dividing them into more basic shapes | November: 62 (opportunity exists) |

Strand: Data Analysis and Probability

Standard 14: Data Representation

Students shall formulate questions that can be addressed with data and collect, organize and display relevant data to answer them.

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| Collect, Organize, and Display Data DAP.14.7.2 Explain which types of display are appropriate for various data sets (<i>line graph</i> for change over time, <i>circle graph</i> for part-to-whole comparison, <i>scatter plot</i> for trends) | March: 142-145 May/June: 182-185 |
| DAP.14.7.3 Construct and interpret <i>circle graphs</i> , <i>box-and-whisker plots</i> , <i>histograms</i> , <i>scatter plots</i> and <i>double line graphs</i> with and without appropriate <i>technology</i> | February: 122-124 March: 142-145 May/June: 182-185 |

Standard 15: Data Analysis

Students shall select and use appropriate statistical methods to analyze data.

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| Data Analysis DAP.15.7.1 Analyze data displays, including ways that they can be misleading | December: 82-83 (opportunity exists) January: 101-103 March: 142-145 |
| DAP.15.7.2 Analyze, with and without appropriate <i>technology</i> , a set of data by using and comparing measures of <i>central tendencies (mean, median, mode)</i> and <i>measures of spread (range, quartile, interquartile range)</i> | December: 82-83 January: 101-103 (opportunity exists) |

Standard 16: Inferences and Predictions

Students shall develop and evaluate inferences and predictions that are based on data.

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| Inferences and Predictions DAP.16.7.1 Make, with and without appropriate <i>technology</i> , <i>conjectures</i> of possible relationships in a <i>scatter plot</i> and approximate the <i>line of best fit (trend line)</i> | May/June: 182-185 |

Standard 17: Probability

Students shall understand and apply basic concepts of probability.

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| Probability DAP.17.7.1 Understand that <i>probability</i> can take any value between 0 and 1 (events that are not going to occur have <i>probability</i> 0, events certain to occur have <i>probability</i> 1) | April: 159-161 (opportunity exists) May/June: 175-177 (opportunity exists) |
| DAP.17.7.2 Design, with and without appropriate <i>technology</i> , an experiment to test a <i>theoretical probability</i> and explain how the results may vary Ex. Suggested materials for simulations are: two-color counters, a number <i>cube</i> , and spinners | April: 159-161 (opportunity exists) May/June: 175-177 (opportunity exists) |



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