

**EVERY DAY COUNTS[®] AND
EVERY DAY COUNTS[®]
ALGEBRA READINESS**

correlated to

**Utah Mathematics
Core Curriculum
Grades 4-6**



YOUR UTAH GREAT SOURCE REPRESENTATIVE

TERRY JOHNSON
800-289-4490, option 4
Terry_Johnson@hmco.com



Every Day Counts Calendar Math © 2005
correlated to
Utah Mathematics Core Curriculum
Fourth Grade

I n t e n d e d L e a r n i n g O u t c o m e s

By the end of fourth grade students will be able to:

Intended Learning Outcomes, Fourth Grade	Every Day Counts Calendar Math, Grade 4
<p>1. Demonstrate a positive learning attitude toward mathematics.</p> <ul style="list-style-type: none"> a. Display a sense of curiosity about numbers and patterns. b. Pose mathematical questions about objects, events, and processes. c. Demonstrate persistence in completing tasks. d. Apply prior knowledge and processes to construct new knowledge. e. Maintain an open and questioning mind toward new ideas and alternative points of view. 	<p>Teacher's Guide: 18-29, 31-45, 48-59, 62-73, 76-89, 92-103, 106-117, 120-131, 134-139</p>
<p>2. Become mathematical problem solvers.</p> <ul style="list-style-type: none"> a. Determine the approach, materials, and strategies to be used in setting up a problem. b. Model problem situations in a variety of ways. c. Develop understanding of new mathematical concepts and vocabulary by answering questions such as: What made you think that? Did anyone think of this in a different way? Where have we seen a problem like this before? d. Construct and use concrete, pictorial, symbolic, and graphical models to represent problem situations. e. Know when to select and how to use grade-appropriate mathematical tools and methods as a natural and routine part of the problem-solving process. f. Build new mathematical knowledge through problem solving. g. Solve problems in both mathematical and everyday contexts. h. Recognize that there may be multiple ways to solve a problem. 	<p>Teacher's Guide: 18-29, 31-45, 48-59, 62-73, 76-89, 92-103, 106-117, 120-131, 134-139</p>

Intended Learning Outcomes, Fourth Grade	Every Day Counts Calendar Math, Grade 4
<p>3. Reason mathematically.</p> <ul style="list-style-type: none"> a. Draw logical conclusions and make generalizations. b. Determine the approach, materials, and strategies to be used in solving problems. c. Use models, known facts, and relationships to explain reasoning. d. Make precise calculations and check the validity of the results in the context of the problem. e. Analyze mathematical situations by recognizing and using patterns and relationships. f. Justify answers and solution processes. 	<p>Teacher's Guide: 18-29, 31-45, 48-59, 62-73, 76-89, 92-103, 106-117, 120-131, 134-139</p>
<p>4. Communicate mathematically.</p> <ul style="list-style-type: none"> a. Represent mathematical ideas with objects, pictures, and symbols. b. Express mathematical ideas to peers, teachers, and others through oral and written language. c. Engage in mathematical discussions through brainstorming, asking questions, and sharing strategies for solving problems. d. Explain mathematical work and justify reasoning and conclusions. 	<p>Teacher's Guide: 18-29, 31-45, 48-59, 62-73, 76-89, 92-103, 106-117, 120-131, 134-139</p>
<p>5. Make mathematical connections.</p> <ul style="list-style-type: none"> a. Use one mathematical idea to extend understanding of another. b. Recognize the role of mathematics in the classroom, school, and community. c. Explore problems and describe and confirm results using various representations. 	<p>Teacher's Guide: 18-29, 31-45, 48-59, 62-73, 76-89, 92-103, 106-117, 120-131, 134-139</p>
<p>6. Represent mathematical situations.</p> <ul style="list-style-type: none"> a. Create and use representations to organize and communicate mathematical ideas. b. Represent mathematical concepts using concrete, pictorial, and symbolic model 	<p>Teacher's Guide: 18-29, 31-45, 48-59, 62-73, 76-89, 92-103, 106-117, 120-131, 134-139</p>

Core Standards of the Course

Standard I

Students will acquire number sense and perform operations with whole numbers, simple fractions, and decimals.

Objective 1

Represent whole numbers and decimals in a variety of ways.

Intended Learning Outcomes, Fourth Grade	Every Day Counts Calendar Math, Grade 4
a. Model, read, and write numerals from tenths to 100,000.	Teacher's Guide: 21-23, 26-28, 34-36, 42, 50-52, 57-59, 63-67, 72, 79-80, 87-88, 94-95, 99-100, 101-103, 108-109, 113, 122-124, 128-130, 136-137
b. Write a <i>whole number</i> up to 99,999 in <i>expanded form</i> (e.g., 76,539 is 7 ten-thousands, 6 one-thousands, 5 hundreds, 3 tens, 9 ones or $70,000 + 6,000 + 500 + 30 + 9$).	Teacher's Guide: 34-36, 50-52, 79-80, 108-109, 147
c. Identify the place and the value of a given digit in a five-digit numeral, including decimals to tenths.	Teacher's Guide: 21-23, 26-28, 34-36, 42, 50-52, 57-59, 63-67, 72, 79-80, 87-88, 94-95, 99-100, 101-103, 108-109, 113, 122-124, 128-130, 136-137, 144, 154
d. Demonstrate multiple ways to represent numbers by using models and symbolic representations (e.g., 36 is the same as the square of six, three dozen, or 9×4).	Teacher's Guide: 21-28, 34-36, 40-42, 50-52, 56-59, 63-67, 72, 79-80, 87-88, 94-95, 99-100, 101-103, 108-109, 112, 113, 122-124, 128-130, 136-137
e. Identify <i>square numbers</i> using models.	Teacher's Guide: 24, 112, 125

Objective 2

Identify relationships among whole numbers and decimals.

Intended Learning Outcomes, Fourth Grade	Every Day Counts Calendar Math, Grade 4
a. Identify the number that is 100 more, 100 less, 1,000 more, or 1,000 less than any <i>whole number</i> up to 10,000.	Teacher's Guide: 51, 79, 123
b. Compare the relative size of numbers (e.g., 100 is small compared to a million, but large compared to 5).	Teacher's Guide: 26-28, 45, 52, 94, 109, 122
c. Compare whole numbers up to five digits using the symbols $<$, $>$, and $=$.	Teacher's Guide: 26-28, 45, 52, 94, 109, 122

Intended Learning Outcomes, Fourth Grade	Every Day Counts Calendar Math, Grade 4
d. Identify a whole number that is between two given whole numbers.	Teacher's Guide: 26-28, 52, 94, 109, 122
e. Order and compare whole numbers and decimals to tenths on a number line.	Teacher's Guide: 26-28, 45, 52, 94, 109, 122

Objective 3

Model and illustrate meanings of the four operations and describe how they relate.

Intended Learning Outcomes, Fourth Grade	Every Day Counts Calendar Math, Grade 4
a. Use models to represent multiplication of a one- or two-digit <i>factor</i> by a two-digit factor (up to 30) using a variety of methods (e.g., rectangular <i>arrays</i> , manipulatives, pictures) and connect the representation to an <i>algorithm</i> .	Teacher's Guide: 40-41, 56-57, 62-66, 72-73, 84-86, 92-94, 97-98, 111-112, 122-124, 136-139
b. Recognize that division by zero is not possible (e.g., $6 \div 0$ is undefined)	Not covered.
c. Select and write a multiplication or division sentence to solve a problem related to the students' environment and write a story problem that relates to a given equation.	Teacher's Guide: 18-20, 23-26, 38-41, 54-57, 62-67, 70-71, 72-73, 84-86, 92-94, 97-98, 111-112, 122-124, 136-139
d. Represent division of a two-digit <i>dividend</i> by a one-digit <i>divisor</i> , including whole number remainders, using various methods (e.g., rectangular arrays, manipulatives, pictures) and connect the representation to an algorithm.	Teacher's Guide: 18-20, 23-26, 38-41, 54-57, 66-67, 70-71, 85-86, 92-94, 97-98, 136-139
e. Demonstrate that multiplication and division are inverse operations (e.g., $3 \times 4 = 12$; thus, $12 \div 4 = 3$ and $12 \div 3 = 4$).	Teacher's Guide: 24-25, 39-41, 55-57, 70-71, 84
f. Describe the effect of place value when multiplying whole numbers by 10 and 100.	Teacher's Guide: 34-36, 50-52, 79-80, 108-109

Objective 4

Use fractions to communicate parts of the whole.

Intended Learning Outcomes, Fourth Grade	Every Day Counts Calendar Math, Grade 4
a. Divide regions and sets of objects into equal parts using a variety of models and illustrations.	Teacher's Guide: 36-37, 38-40, 52-56, 66-67, 68-70, 81-84, 101-103, 109-110, 126-128, 145, 155, 160
b. Name and write a fraction to represent a portion of a unit whole for halves, thirds, fourths, fifths, sixths, eighths, and tenths.	Teacher's Guide: 36-37, 38-40, 52-56, 66-67, 68-70, 81-84, 101-103, 109-110, 126-128, 145, 155, 160
c. Relate fractions to decimals that represent tenths.	Teacher's Guide: 42, 66-67
d. Determine which of two fractions is greater using models or illustrations.	Teacher's Guide: 54-56
e. Find equivalent fractions for one-half, one-third, and one-fourth using manipulatives and pictorial representations.	Teacher's Guide: 36-37, 52-54, 66-70, 82-84, 126-128, TR24

Objective 5

Solve whole number problems using addition, subtraction, multiplication, and division in vertical and horizontal notation.

Intended Learning Outcomes, Fourth Grade	Every Day Counts Calendar Math, Grade 4
a. Determine when it is appropriate to use estimation, mental math strategies, paper and pencil, or a calculator.	Teacher's Guide: 21-23, 34-37, 50-53, 63-67, 72, 79-82, 94-95, 108-111, 113, 122-123, 136-137
b. Find the <i>sum</i> and <i>difference</i> of four-digit numbers and describe the process used.	Teacher's Guide: 21-23, 34-36, 50-52, 57-59, 62, 63-66, 72-73, 79-80, 92-95, 108-109, 122-124, 136-137, 147
c. Multiply two- and three-digit <i>factors</i> by a one-digit factor and describe the process used.	Teacher's Guide: 40-41, 56-57, 62-66, 72-73, 84-86, 92-94, 97-98, 111-112, 122-124, 136-139, 142, 147, 152, 157
d. Divide a two-digit <i>whole number dividend</i> by a one-digit <i>divisor</i> , with a <i>remainder</i> of zero, and describe the process used.	Teacher's Guide: 18-20, 23-26, 38-41, 54-57, 66-67, 70-71, 82-83, 85-86, 92-94, 97-98, 136-139

Standard II

Students will use patterns and relations to represent and analyze mathematical situations.

Objective 1

Recognize, describe, and use patterns and identify the attributes.

Intended Learning Outcomes, Fourth Grade	Every Day Counts Calendar Math, Grade 4
a. Represent and analyze <i>repeating</i> and <i>growing patterns</i> using objects, pictures, numbers, and tables.	Teacher's Guide: 18-20, 32-34, 48-50, 62-63, 76-78, 92-94, 106-108, 120-122, 134-136, 142, 147, 152, 157
b. Recognize and extend multiples and other number patterns using a variety of methods.	Teacher's Guide: 18-20, 23-26, 32-34, 40-41, 43-44, 48-52, 56-57, 62-63, 70-71, 76-78, 79-80, 84-86, 92-94, 97-98, 106-108, 111-112, 120-122, 128-130, 134-136, 137-139, 142, 147, 152, 157

Objective 2

Recognize, represent, and solve mathematical situations using patterns and symbols.

Intended Learning Outcomes, Fourth Grade	Every Day Counts Calendar Math, Grade 4
a. Solve equations involving equivalent <i>expressions</i> (e.g., $6 \times 2 = 3 \times 4$ or $6 \times 2 = 9 + 9$).	Teacher's Guide: 41
b. Use the $<$, $>$, $=$ symbols to compare two expressions involving addition, subtraction, multiplication, and division (e.g., $5 \times 4 \diamond 9 \div 3$).	Not covered.
c. Recognize that a given variable maintains the same value throughout an equation or expression (e.g., $+ = 8$; $= 4$).	Not covered.
d. Demonstrate that changing the order of <i>factors</i> does not change the <i>product</i> (e.g., $2 \times 3 = 6$, $3 \times 2 = 6$) and that the grouping of three or more factors does not change the product (e.g., $(2 \times 3) \times 1 = 6$; $2 \times (3 \times 1) = 6$).	Teacher's Guide: 41, 57, 98
e. Demonstrate the distribution of multiplication over addition using a rectangular <i>array</i> (e.g., $8 \times 14 = 8$ rows of 10 plus 8 rows of 4).	Teacher's Guide: 62, 85, 112

Standard III

Students will use spatial reasoning to recognize, describe, and identify geometric shapes.

Objective 1

Describe, identify, and analyze characteristics and properties of geometric shapes.

Intended Learning Outcomes, Fourth Grade	Every Day Counts Calendar Math, Grade 4
a. Identify and draw <i>parallel lines</i> and <i>intersecting lines</i> .	Teacher's Guide: 18-20, 48-50, 144
b. Identify and draw lines of symmetry on a variety of <i>polygons</i> .	Teacher's Guide: 32-34, 48-50, 106-108, 149, TR23
c. Identify and describe <i>quadrilaterals</i> (i.e., rectangles, squares, <i>rhombuses</i> , <i>trapezoids</i> , kites).	Teacher's Guide: 18-20, 32-34, 48-50, 76-78, 106-108, 124-126, 134-136, 144, 149, 150, 159, TR23
d. Identify <i>right</i> , <i>obtuse</i> , and <i>acute</i> angles.	Teacher's Guide: 18-20, 48-50, 62-63, 92-94, 134-136, 154, TR23, TR24
e. Compare two polygons to determine whether they are <i>congruent</i> or <i>similar</i> .	Teacher's Guide: 18-20, 48-50
f. Identify and describe <i>cylinders</i> and <i>rectangular prisms</i> .	Teacher's Guide: 76-78, 109-111, 144, 154, 159

Objective 2

Specify locations and describe spatial relationships using grids and maps.

Intended Learning Outcomes, Fourth Grade	Every Day Counts Calendar Math, Grade 4
a. Locate positions on a map of Utah using <i>coordinates</i> or <i>regions</i> .	Not covered.
b. Give the coordinates or regions of a position on a map of Utah.	Not covered.

Objective 3

Visualize and identify geometric shapes after applying transformations.

Intended Learning Outcomes, Fourth Grade	Every Day Counts Calendar Math, Grade 4
a. Identify a <i>slide (translation)</i> or a <i>flip (reflection)</i> of a geometric shape using manipulatives.	Teacher's Guide: 32-34, 48-50, 76-78

Intended Learning Outcomes, Fourth Grade	Every Day Counts Calendar Math, Grade 4
b. Relate <i>cubes, cylinders, cones,</i> and <i>rectangular prisms</i> to the <i>two-dimensional</i> shapes (<i>nets</i>) from which they were created.	Teacher's Guide: 76-78, 109-111

S t a n d a r d I V

Students will understand and apply measurement tools and techniques.

O b j e c t i v e 1

Identify and describe measurable attributes of objects and units of measurement.

Intended Learning Outcomes, Fourth Grade	Every Day Counts Calendar Math, Grade 4
a. Describe the relationship among <i>metric</i> units of length (i.e., millimeter, centimeter, meter), between metric units of volume (i.e., milliliter, liter), and between metric units of weight (i.e., gram, kilogram).	Teacher's Guide: 66-67, 109-110
b. Identify a mile as a measure of distance and its relationship to other <i>customary</i> units of length.	Teacher's Guide: 36-37, 52-54, 81-82
c. Describe the relationship among customary units of <i>capacity</i> (i.e., cup, pint, quart, gallon).	Teacher's Guide: 36-37, 52-54, 81-82
d. Estimate length, capacity, and weight using metric and customary units.	Teacher's Guide: 36-37, 52-54, 66-67, 81-82, 109-110

O b j e c t i v e 2

Determine measurements using appropriate tools and formulas.

Intended Learning Outcomes, Fourth Grade	Every Day Counts Calendar Math, Grade 4
a. Measure the length of objects to the nearest centimeter, meter, quarter- inch, foot, and yard.	Teacher's Guide: 36-37, 66-67, 115-117
b. Measure <i>capacity</i> using milliliters, liters, cups, pints, quarts, and gallons and measure weight using grams, kilograms, and pounds.	Teacher's Guide: 52-54, 109-110
c. Read, tell, and write time to the nearest minute, identifying a.m. and p.m.	Teacher's Guide: 43-44, 59, 72-73, 100-101, 113-115, 130-131

Intended Learning Outcomes, Fourth Grade	Every Day Counts Calendar Math, Grade 4
d. Read and record the temperature to the nearest degree, in Fahrenheit, using a thermometer.	Teacher's Guide: 44-45
e. Determine the value of a combination of coins and bills that total \$20.00 or less.	Teacher's Guide: 21-23, 34-36, 42, 50-52, 57-59, 63-66, 68-70, 72, 79-80, 87-88, 94-95, 99-100, 108-109, 113, 122-124, 136-137
f. Count back change for a single-item purchase and determine the amount of change to be received from a multiple-item purchase.	Teacher's Guide: 21-23, 34-36, 42, 50-52, 57-59, 63-66, 68-70, 72, 79-80, 87-88, 94-95, 99-100, 108-109, 113, 122-124, 136-137
g. Determine possible <i>perimeters</i> , in whole units, for a rectangle with a fixed <i>area</i> and determine possible areas when given a rectangle with a fixed perimeter.	Teacher's Guide: 94-95, 124-126

Standard V

Students will collect and organize data to make predictions and apply basic concepts of probability.

Objective 1

Collect, organize, and display data to make predictions and answer questions.

Intended Learning Outcomes, Fourth Grade	Every Day Counts Calendar Math, Grade 4
a. Identify a question that can be answered by collecting data.	Teacher's Guide: 28-29, 44-45, 88-89, 101-103, 115-117, 139
b. Collect, read, and interpret data from tables, graphs, charts, surveys, and observations.	Teacher's Guide: 28-29, 33, 44-45, 88-89, 101-103, 115-117, 139
c. Represent data using tables, line plots, line graphs, and bar graphs.	Teacher's Guide: 28-29, 33, 44-45, 88-89, 101-103, 115-117, 139
d. Identify and distinguish between <i>clusters</i> and <i>outliers</i> of a data set.	Not covered.

Objective 2

Use basic concepts of probability.

Intended Learning Outcomes, Fourth Grade	Every Day Counts Calendar Math, Grade 4
a. Describe the results of investigations involving random outcomes as simple ratios (e.g., 4 out of 9, $\frac{4}{9}$).	Teacher's Guide: 28-29, 50-52, 101-103
b. Predict outcomes of simple experiments, including with and without replacement, and test the predictions.	Teacher's Guide: 28-29, 50-52, 101-103

Every Day Counts Calendar Math © 2005

correlated to

Utah Mathematics Core Curriculum

Fifth Grade

Intended Learning Outcomes

By the end of fifth grade students will be able to:

Intended Learning Outcomes, Fifth Grade	Every Day Counts Calendar Math, Grade 5
<p>1. Demonstrate a positive learning attitude toward mathematics.</p> <ul style="list-style-type: none"> a. Display a sense of curiosity about numbers and patterns. b. Pose mathematical questions about objects, events, and processes. c. Demonstrate persistence in completing tasks. d. Apply prior knowledge and processes to construct new knowledge. e. Maintain an open and questioning mind toward new ideas and alternative points of view. 	<p>Teacher's Guide: 18-31, 34-45, 48-59, 62-71, 74-83, 86-99, 102-113, 116-125, 128-133</p>
<p>2. Become mathematical problem solvers.</p> <ul style="list-style-type: none"> a. Determine the approach, materials, and strategies to be used in setting up a problem. b. Model problem situations in a variety of ways. c. Develop understanding of new mathematical concepts and vocabulary by answering questions such as: What made you think that? Did anyone think of this in a different way? Where have we seen a problem like this before? d. Construct and use concrete, pictorial, symbolic, and graphical models to represent problem situations. e. Know when to select and how to use grade-appropriate mathematical tools and methods as a natural and routine part of the problem-solving process. f. Build new mathematical knowledge through problem solving. g. Solve problems in both mathematical and everyday contexts. h. Recognize that there may be multiple ways to solve a problem. i. Persevere in developing alternative problem-solving strategies if initially selected approaches do not work. 	<p>Teacher's Guide: 18-31, 34-45, 48-59, 62-71, 74-83, 86-99, 102-113, 116-125, 128-133</p>

Intended Learning Outcomes, Fifth Grade	Every Day Counts Calendar Math, Grade 5
<p>3. Reason mathematically.</p> <ul style="list-style-type: none"> a. Draw logical conclusions and make generalizations. b. Determine the approach, materials, and strategies to be used in solving problems. c. Use models, known facts, and relationships to explain reasoning. d. Make precise calculations and check the validity of the results in the context of the problem. e. Make conjectures based on observation and information and test mathematical conjectures and arguments. f. Follow and construct logical arguments and judge their validity. g. Analyze mathematical situations by recognizing and using patterns and relationships. h. Justify answers and solution processes. 	<p>Teacher's Guide: 18-31, 34-45, 48-59, 62-71, 74-83, 86-99, 102-113, 116-125, 128-133</p>
<p>4. Communicate mathematically.</p> <ul style="list-style-type: none"> a. Represent mathematical ideas with objects, pictures, and symbols. b. Express mathematical ideas to peers, teachers, and others through oral and written language. c. Engage in mathematical discussions through brainstorming, asking questions, and sharing strategies for solving problems. d. Explain mathematical work and justify reasoning and conclusions. e. Analyze, evaluate, and explain mathematical arguments and conclusions presented by others. 	<p>Teacher's Guide: 18-31, 34-45, 48-59, 62-71, 74-83, 86-99, 102-113, 116-125, 128-133</p>
<p>5. Make mathematical connections.</p> <ul style="list-style-type: none"> a. Use one mathematical idea to extend understanding of another. b. Recognize the role of mathematics in the classroom, school, and community. c. Explore problems and describe and confirm results using various representations. d. Recognize the connections between mathematics and other content areas and apply mathematical thinking and problem solving in those areas. 	<p>Teacher's Guide: 18-31, 34-45, 48-59, 62-71, 74-83, 86-99, 102-113, 116-125, 128-133</p>
<p>6. Represent mathematical situations.</p> <ul style="list-style-type: none"> a. Create and use representations to organize and communicate mathematical ideas. b. Represent mathematical concepts using concrete, pictorial, and symbolic model 	<p>Teacher's Guide: 18-31, 34-45, 48-59, 62-71, 74-83, 86-99, 102-113, 116-125, 128-133</p>

Core Standards of the Course

Standard I

Students will acquire number sense and perform operations with whole numbers, simple fractions, and decimals.

Objective 1

Represent whole numbers and decimals in a variety of ways.

Intended Learning Outcomes, Fifth Grade	Every Day Counts Calendar Math, Grade 5
a. Model, read, and write numerals from hundredths to one millions.	Teacher's Guide: 22-24, 25-28, 38, 44-45, 50-51, 56, 62, 70-71, 81, 110, 121, 133
b. Write a <i>whole number</i> up to 999,999 in <i>expanded form</i> (e.g., $876,539 = 8$ hundred-thousands, 7 ten-thousands, 6 thousands, 5 hundreds, 3 tens, 9 ones or $8 \times 100,000 + 7 \times 10,000 + 6 \times 1,000 + 5 \times 100 + 3 \times 10 + 9$).	Teacher's Guide: 24, 38, 62, 131-132
c. Demonstrate multiple ways to represent whole numbers by using models and symbolic representations (e.g., $108 = 2 \times 50 + 8$; $108 = 102 + 8$).	Teacher's Guide: 24, 25, 41-44, 54-55, 62, 63-64, 66-68, 90-91, 130-132
d. Classify whole numbers from 2 to 20 as <i>prime</i> or <i>composite</i> and 0 and 1 as neither prime nor composite, using models.	Teacher's Guide: 41-43, 54-55, 63-64, 74, 76-78, 104, 130-132, 138, 144, 149, 153, TR29
e. Represent repeated factors using <i>exponents</i> up to three (e.g., $8 = 2 \times 2 \times 2 = 2^3$).	Teacher's Guide: 62, 78, 130-132, 138, 153, TR30

Objective 2

Identify relationships among whole numbers, fractions, decimals, and percents.

Intended Learning Outcomes, Fifth Grade	Every Day Counts Calendar Math, Grade 5
a. Order and compare <i>whole numbers</i> , fractions (including mixed numbers), and decimals using a variety of methods and symbols.	Teacher's Guide: 25-28, 41, 44-45, 51-53, 70-71, 81, 98-99, 110, 121, 133
b. Rewrite mixed numbers and improper fractions from one form to the other.	Teacher's Guide: 39, 41, 53, 56, 93, 99, 110, 118, 121, 133
c. Find the least common denominator for two fractions.	Teacher's Guide: 40-41, 53, 70, 86

Intended Learning Outcomes, Fifth Grade	Every Day Counts Calendar Math, Grade 5
d. Represent commonly used fractions as decimals and percents in various ways (e.g., objects, pictures, calculators).	Teacher's Guide: 25-28, 39-41, 44-45, 51-53, 56, 62, 64-65, 70-71, 81, 86, 92-94, 96, 98-99, 110, 112, 121, 133, 138, 143, 153

Objective 3

Model and illustrate meanings of operations and describe how they relate.

Intended Learning Outcomes, Fifth Grade	Every Day Counts Calendar Math, Grade 5
a. Identify the <i>dividend</i> , <i>divisor</i> , and <i>quotient</i> regardless of the division symbol used.	Teacher's Guide: 38, 43, 62, 124
b. Determine whether a whole number is divisible by 2, 3, 5, 9, and/or 10, using the <i>rules of divisibility</i> .	Teacher's Guide: 41-44, 62, 66-68, 76-78, 95-96, 105, 130-132, 144
c. Represent remainders as <i>whole numbers</i> , decimals, or fractions and describe the meaning of remainders as they apply to problems from the students' environment (e.g., If there are 53 people, how many vans are needed if each van holds 8 people?).	Teacher's Guide: 35, 44, 66, 80, 96, 110
d. Model addition, subtraction, and multiplication of fractions and decimals in a variety of ways (e.g., using objects and a number line).	Teacher's Guide: 39-41, 51-53, 56, 57-59, 64-65, 70-71, 81, 86, 92-94, 98-99, 104-106, 119, 121, 124
e. Model strategies for whole number multiplication (e.g., partial product, lattice) or division (e.g., partial quotient).	Teacher's Guide: 24, 35, 37-38, 41-44, 48-51, 54-55, 62, 66-68, 76-78, 82-83, 90-91, 104-106, 130-132
f. Select or write the number sentences that can be used to solve a two-step problem.	Teacher's Guide: 49, 55, 91, 117
g. Describe the effect of place value when multiplying and dividing whole numbers and decimals by 10, 100, and 1,000.	Teacher's Guide: 38, 51, 59

Objective 4

Use fractions to communicate parts of the whole.

Intended Learning Outcomes, Fifth Grade	Every Day Counts Calendar Math, Grade 5
a. Divide regions, sets of objects, and line segments into equal parts using a variety of models and illustrations.	Teacher's Guide: 39-41, 44-45, 51-53, 56, 65, 71, 79-80, 81, 95, 104-106, 133
b. Name and write a fraction to represent a portion of a unit whole for halves, thirds, fourths, fifths, sixths, eighths, tenths, and twelfths.	Teacher's Guide: 39-41, 44-45, 51-53, 56, 71, 79-80, 81, 92-99, 104-106, 110, 113, 121, 133, 153
c. Represent the simplest form of a fraction in various ways (e.g., objects, pictorial representations, symbols).	Teacher's Guide: 39-41, 45, 51-53, 56, 64-65, 79-80, 81, 91, 93, 96, 97, 98, 110, 121, 141, 146, 151
d. Represent mixed numbers and improper fractions in various ways (e.g., rulers, objects, number lines, symbols).	Teacher's Guide: 41, 53, 65, 70-71, 86, 92-99, 110, 118, 121, 133, TR29
e. Rename <i>whole numbers</i> as fractions with different denominators (e.g., $5 = 5/1$, $3 = 6/2$, $1 = 7/7$).	Teacher's Guide: 41, 65, 92, 99
f. Model and calculate equivalent forms of a fraction and describe the process used.	Teacher's Guide: 39-41, 45, 51-53, 56, 64-65, 79-80, 81, 91, 93, 96, 97, 98, 110, 121, 141, 146, 151

Objective 5

Solve problems using the four operations with whole numbers, decimals, and fractions.

Intended Learning Outcomes, Fifth Grade	Every Day Counts Calendar Math, Grade 5
a. Determine when it is appropriate to use estimation, mental math strategies, paper and pencil, or a calculator.	Teacher's Guide: 21-24, 37-38, 50-51, 57-59, 86, 122-125, 133
b. Use estimation strategies to determine whether results obtained using a calculator are reasonable.	Teacher's Guide: 21-24, 37-38, 50-51, 133
c. Multiply up to a three-digit <i>whole number</i> by a one- or two-digit whole number.	Teacher's Guide: 24, 35, 37-38, 42-44, 48-49, 51, 54-55, 64, 66-68, 76-78, 82-83, 90-91, 117, 130-132
d. Divide up to a three-digit whole number <i>dividend</i> by a one-digit <i>divisor</i> .	Teacher's Guide: 35, 37-38, 41-44, 54-55, 62, 80, 124

Intended Learning Outcomes, Fifth Grade	Every Day Counts Calendar Math, Grade 5
e. Add and subtract decimals with digits to the hundredths place (e.g., $35.42 + 7.2$; $75.2 - 13.45$).	Teacher's Guide: 57-59, 62, 70-71, 98-99, 111-112, 118-120, 137
f. Add, subtract, and multiply fractions.	Teacher's Guide: 39-41, 44-45, 51-53, 56, 64-65, 70-71, 79-80, 81, 86, 92-98, 104-106, 121, 133, 136
g. Simplify <i>expressions</i> , without <i>exponents</i> , using the <i>order of operations</i> .	Teacher's Guide: 49, 62, 83, 91, 117

Objective 6

Model and illustrate integers.

Intended Learning Outcomes, Fifth Grade	Every Day Counts Calendar Math, Grade 5
a. Identify, read, and locate <i>integers</i> on a number line.	Teacher's Guide: 124
b. Describe situations where integers are used in the students' environment.	Teacher's Guide: 124

Standard II

Students will use patterns and relations to represent and analyze mathematical situations using algebraic symbols.

Objective 1

Recognize, analyze, and use patterns and describe their attributes.

Intended Learning Outcomes, Fifth Grade	Every Day Counts Calendar Math, Grade 5
a. Analyze and make predictions about patterns involving <i>whole numbers</i> , decimals, and fractions using a variety of tools including organized lists, tables, objects, and variables.	Teacher's Guide: 18-21, 24, 35-37, 48-49, 63-64, 75-76, 82-83, 89, 91, 103, 117, 128-129, 136, 141, 146, 149, 151
b. Extend patterns and describe a rule for predicting the next element.	Teacher's Guide: 18-21, 24, 34-37, 48-49, 63-64, 75-76, 82-83, 89, 91, 103, 117, 128-129, 136, 141, 146, 149, 151

Objective 2

Represent, solve, and analyze mathematical situations using algebraic symbols.

Intended Learning Outcomes, Fifth Grade	Every Day Counts Calendar Math, Grade 5
a. Recognize a variety of symbols for multiplication and division including \times , \bullet , and $*$ as symbols for multiplication and \div , $_$, and a fraction bar ($/$ or $-$) as division symbols.	Teacher's Guide: 20, 21, 40, 49, 62, 67, 68, 71, 82, 91, 95, 99, 121, 130-131, 133, 137, TR1, TR4-TR9
b. Recognize that a variable (\diamond , n , x) represents an unknown quantity.	Teacher's Guide: 20, 37, 48-49, 83, 91, 117-118
c. Solve one-step equations involving <i>whole numbers</i> and a single variable (e.g., $n \div 7=3$).	Teacher's Guide: 20, 48, 104-106, 117-118, 128
d. Recognize that the answer to a multiplication problem involving a factor of zero is equal to zero (e.g., $0 \times 45 = 0$).	Teacher's Guide: 62
e. Use expressions or one-step equations to represent real-world situations.	Teacher's Guide: 20, 37, 48-49, 83, 91, 117-118
f. Use the <i>associative</i> , <i>commutative</i> , and <i>distributive properties</i> to compute with whole numbers.	Teacher's Guide: 42, 62, 91

Standard III

Students will use spatial reasoning to recognize, describe, and identify geometric shapes and principles.

Objective 1

Describe, identify, and analyze characteristics and properties of geometric shapes.

Intended Learning Outcomes, Fifth Grade	Every Day Counts Calendar Math, Grade 5
a. Identify and draw <i>perpendicular lines</i> .	Teacher's Guide: 102-104, TR30
b. Draw, label, and describe <i>rays</i> and describe an angle as two rays sharing a common endpoint.	Teacher's Guide: 102-104, 106-109, TR30
c. Label an angle as <i>acute</i> , <i>obtuse</i> , <i>right</i> , or <i>straight</i> .	Teacher's Guide: 18-21, 34-37, 74-76, 106-109, 116-118, 138, 139, 143, 153, TR29

Intended Learning Outcomes, Fifth Grade	Every Day Counts Calendar Math, Grade 5
d. Identify and describe <i>equilateral, isosceles, scalene, right, acute, and obtuse</i> triangles.	Teacher's Guide: 34-37, 143, TR29
e. Identify the <i>vertex</i> of an angle or the <i>vertices</i> of a polygon.	Teacher's Guide: 36, 89, 108, 139, 149, TR30
f. Compare <i>corresponding angles</i> of two triangles and determine whether the triangles are <i>similar</i> .	Not covered.
g. Identify and describe <i>pyramids</i> and <i>prisms</i> .	Teacher's Guide: 87-90, 139, 148, 154, TR30

Objective 2

Specify locations and describe spatial relationships using coordinate geometry.

Intended Learning Outcomes, Fifth Grade	Every Day Counts Calendar Math, Grade 5
a. Locate points defined by ordered pairs in the first <i>quadrant</i> .	Teacher's Guide: 83, 118, 122-125
b. Write an ordered pair for a point in the first quadrant.	Teacher's Guide: 83, 118, 122-125
c. Specify possible paths between locations on a <i>coordinate grid</i> and compare distances of the various paths.	Teacher's Guide: 122-125

Objective 3

Visualize and identify geometric shapes after applying transformations.

Intended Learning Outcomes, Fifth Grade	Every Day Counts Calendar Math, Grade 5
a. Identify a <i>slide (translation)</i> or a <i>flip (reflection)</i> of a shape across a line.	Teacher's Guide: 117
b. Demonstrate the effect of a <i>turn (rotation)</i> on a figure using manipulatives.	Teacher's Guide: 18-21, 48-49, 109, 116-118, 143
c. Relate <i>pyramids</i> and <i>prisms</i> to the <i>two-dimensional shapes (nets)</i> from which they were created.	Teacher's Guide: 88

Standard IV

Students will understand and apply measurement tools and techniques.

Objective 1

Identify and describe measurable attributes of objects and units of measurement.

Intended Learning Outcomes, Fifth Grade	Every Day Counts Calendar Math, Grade 5
a. Describe the relationship among <i>metric</i> units of length (i.e., millimeter, centimeter, meter, kilometer).	Teacher's Guide: 57-59, 118-120, 124, 136, 142
b. Describe the relationship among <i>customary</i> units of weight (i.e., ounce, pound).	Teacher's Guide: 79-80, 92-98, 137, 147, 151, 153
c. Identify the correct units of measurement for <i>volume</i> , <i>area</i> , and <i>perimeter</i> in both metric and customary systems.	Teacher's Guide: 55, 82-83, 91
d. Estimate length, volume, weight, and area using metric and customary units.	Teacher's Guide: 55, 57-59, 79-80, 82-83, 91, 92-98, 118-120, 124
e. Convert units of measurement within the metric system and convert units of measurement within the customary system.	Teacher's Guide: 57-59, 79-80, 92-98, 118-120, 124, 136, 137, 142, 147, 151, 153

Objective 2

Determine measurements using appropriate tools and formulas.

Intended Learning Outcomes, Fifth Grade	Every Day Counts Calendar Math, Grade 5
a. Measure length to the nearest $\frac{1}{8}$ of an inch and to the nearest centimeter.	Teacher's Guide: 57-59, 79-80, 92-94
b. Measure <i>volume</i> and weight using <i>metric</i> and <i>customary</i> units.	Teacher's Guide: 94-98, 118-120
c. Measure angles using a protractor.	Teacher's Guide: 106-109
d. Calculate <i>elapsed time</i> within a.m. or p.m. time periods.	Teacher's Guide: 69-70, 86, 137, 146, 152
e. Read and record the temperature to the nearest degree (above and below zero) when using a thermometer with a Celsius or Fahrenheit scale.	Not covered.

Intended Learning Outcomes, Fifth Grade	Every Day Counts Calendar Math, Grade 5
f. Calculate the <i>perimeter</i> of rectangles and triangles.	Teacher's Guide: 55, 91
g. Calculate the <i>area</i> of squares and rectangles using a formula.	Teacher's Guide: 55, 82-83, 91

Standard V

Students will collect, analyze, and draw conclusions from data and apply basic concepts of probability.

Objective 1

Formulate and answer questions using statistical methods to compare data.

Intended Learning Outcomes, Fifth Grade	Every Day Counts Calendar Math, Grade 5
a. Formulate a question that can be answered by collecting data.	Teacher's Guide: 29-31, 57-59, 112-113, 122-125
b. Collect, compare, and display data using an appropriate format (i.e., <i>line plots</i> , bar graphs, <i>pictographs</i> , circle graphs, line graphs).	Teacher's Guide: 28-31, 53, 59, 82-83, 112-113, 118, 122-125, 139, 142, 144
c. Identify <i>minimum</i> and <i>maximum</i> values for a set of data.	Teacher's Guide: 57-59, 137, 142, 152
d. Identify or calculate the <i>mean</i> , <i>mode</i> , and <i>range</i> .	Teacher's Guide: 57-59, 137, 142, 152, TR29
e. Propose and justify inferences based on data.	Teacher's Guide: 29-31, 57-59, 112-113, 122-125

Objective 2

Apply basic concepts of probability.

Intended Learning Outcomes, Fifth Grade	Every Day Counts Calendar Math, Grade 5
a. Describe the results of investigations involving random outcomes using a variety of notations (e.g., 4 out of 9, 4/9, 4:9).	Teacher's Guide: 28-31, 94, 112-113, 138, 153
b. Recognize that outcomes of experiments and samples are fractions between 0 and 1.	Teacher's Guide: 28-31, 94, 112-113, 138, 153
c. Predict the probability of an outcome in a simple experiment.	Teacher's Guide: 28-31, 94, 112-113, 138, 153

Every Day Counts Algebra Readiness © 2006

correlated to

Utah Mathematics Core Curriculum

Sixth Grade

Intended Learning Outcomes

By the end of sixth grade students will be able to:

Intended Learning Outcomes, Sixth Grade	Every Day Counts Algebra Readiness
<p>1. Demonstrate a positive learning attitude toward mathematics.</p> <ul style="list-style-type: none"> a. Display a sense of curiosity about numbers and patterns. b. Pose mathematical questions about objects, events, and processes. c. Demonstrate persistence in completing tasks. d. Apply prior knowledge and processes to construct new knowledge. e. Maintain an open and questioning mind toward new ideas and alternative points of view. 	<p>Teacher's Guide: 24-37, 40-47, 50-65, 68-83, 86-103, 106-125, 128-147, 150-169, 172-189</p>
<p>2. Become mathematical problem solvers.</p> <ul style="list-style-type: none"> a. Determine the approach, materials, and strategies to be used in setting up a problem. b. Model problem situations in a variety of ways. c. Develop understanding of new mathematical concepts and vocabulary by answering questions such as: What made you think that? Did anyone think of this in a different way? Where have we seen a problem like this before? d. Construct and use concrete, pictorial, symbolic, and graphical models to represent problem situations. e. Know when to select and how to use grade-appropriate mathematical tools and methods as a natural and routine part of the problem-solving process. f. Build new mathematical knowledge through problem solving. g. Solve problems in both mathematical and everyday contexts. h. Recognize that there may be multiple ways to solve a problem. i. Persevere in developing alternative problem-solving strategies if initially selected approaches do not work. 	<p>Teacher's Guide: 24-37, 40-47, 50-65, 68-83, 86-103, 106-125, 128-147, 150-169, 172-189</p>

Intended Learning Outcomes, Sixth Grade	Every Day Counts Algebra Readiness
<p>3. Reason mathematically.</p> <ul style="list-style-type: none"> a. Draw logical conclusions and make generalizations. b. Determine the approach, materials, and strategies to be used in solving problems. c. Use models, known facts, and relationships to explain reasoning. d. Make precise calculations and check the validity of the results in the context of the problem. e. Make conjectures based on observation and information and test mathematical conjectures and arguments. f. Follow and construct logical arguments and judge their validity. g. Analyze mathematical situations by recognizing and using patterns and relationships. h. Justify answers and solution processes. 	<p>Teacher's Guide: 24-37, 40-47, 50-65, 68-83, 86-103, 106-125, 128-147, 150-169, 172-189</p>
<p>4. Communicate mathematically.</p> <ul style="list-style-type: none"> a. Represent mathematical ideas with objects, pictures, and symbols. b. Express mathematical ideas to peers, teachers, and others through oral and written language. c. Engage in mathematical discussions through brainstorming, asking questions, and sharing strategies for solving problems. d. Explain mathematical work and justify reasoning and conclusions. e. Analyze, evaluate, and explain mathematical arguments and conclusions presented by others. 	<p>Teacher's Guide: 24-37, 40-47, 50-65, 68-83, 86-103, 106-125, 128-147, 150-169, 172-189</p>
<p>5. Make mathematical connections.</p> <ul style="list-style-type: none"> a. Use one mathematical idea to extend understanding of another. b. Recognize the role of mathematics in the classroom, school, and community. c. Explore problems and describe and confirm results using various representations. d. Recognize the connections between mathematics and other content areas and apply mathematical thinking and problem solving in those areas. 	<p>Teacher's Guide: 24-37, 40-47, 50-65, 68-83, 86-103, 106-125, 128-147, 150-169, 172-189</p>
<p>6. Represent mathematical situations.</p> <ul style="list-style-type: none"> a. Create and use representations to organize and communicate mathematical ideas. b. Represent mathematical concepts using concrete, pictorial, and symbolic model 	<p>Teacher's Guide: 24-37, 40-47, 50-65, 68-83, 86-103, 106-125, 128-147, 150-169, 172-189</p>

Core Standards of the Course

Standard I

Students will acquire number sense and perform operations with rational numbers.

Objective 1

Represent whole numbers and decimals in a variety of ways.

Intended Learning Outcomes, Sixth Grade	Every Day Counts Algebra Readiness
a. Change <i>whole numbers</i> with <i>exponents</i> to <i>standard form</i> (e.g., $2^4 = 16$) and recognize that $10^0 = 1$.	Teacher's Guide: 54, 71, 96, 140-141, 192, 198, 207, TR22
b. Read and write <i>numerals</i> from thousandths to one billion.	Teacher's Guide: 36, 47, 65, 80, 99, 121
c. Write a whole number to 999,999 in <i>expanded form</i> using <i>exponents</i> (e.g., $876,539 = 8 \times 10^5 + 7 \times 10^4 + 6 \times 10^3 + 5 \times 10^2 + 3 \times 10^1 + 9 \times 10^0$).	Teacher's Guide: 36, 47, 65, 80, 99, 121
d. Express numbers in <i>scientific notation</i> using positive powers of ten.	Teacher's Guide: 140-141
e. Classify whole numbers to 100 as <i>prime</i> , <i>composite</i> , or neither.	Teacher's Guide: 24-28, 40-42, TR21
f. Determine the <i>prime factorization</i> for a whole number up to 50.	Teacher's Guide: 52-54, 71-72, 192, 197, 198, 207, TR22

Objective 2

Identify relationships among whole numbers, fractions (rational numbers), decimals, and percents.

Intended Learning Outcomes, Sixth Grade	Every Day Counts Algebra Readiness
a. Find the <i>greatest common factor</i> and <i>least common multiple</i> for two numbers using a variety of methods (e.g., list of multiples, prime factorization).	Teacher's Guide: 41, 192, 197, 207, TR21
b. Compare and order <i>rational numbers</i> , including mixed fractions, using a variety of methods and symbols.	Teacher's Guide: 28-30, 42-43, 55-57, 72-73, 91-92, 109, 198
c. Locate positive rational numbers on a number line.	Teacher's Guide: 29, 43, 55, 80, 91, 99, 109, 121

Intended Learning Outcomes, Sixth Grade	Every Day Counts Algebra Readiness
d. Convert common fractions, decimals, and percents from one form to another (e.g., $\frac{3}{4} = 0.75 = 75\%$).	Teacher's Guide: 28-30, 35-37, 42-43, 47, 55-57, 72-73, 80-81, 91-92, 98-101, 109, 120-122, 166-169, 194, 198, 199, 209, TR21

Objective 3

Model and illustrate meanings of operations and describe how they relate.

Intended Learning Outcomes, Sixth Grade	Every Day Counts Algebra Readiness
a. Represent division of a multi-digit <i>dividend</i> by two-digit <i>divisors</i> , including decimals, using models, pictures, and symbols.	Teacher's Guide: 36, 47, 62, 88-91, 93, 169, 179
b. Model addition, subtraction, multiplication, and division of fractions and decimals in a variety of ways (e.g., objects, a number line).	Teacher's Guide: 28-30, 55-57, 72-73, 91-92, 93-94, 100, 109, 125, 166-169
c. Apply <i>rules of divisibility</i> .	Teacher's Guide: 26, 88-91, TR22
d. Select or write a number sentence that can be used to solve a multi-step problem and write a word problem when given a two-step expression or equation.	Teacher's Guide: 32, 33-35, 37, 44, 45-46, 62, 63-64, 65, 76-78, 79-80, 81, 96, 97, 116, 117, 139, 153, 164, 166, 181, 189, 200, 208

Objective 4

Use fractions and percents to communicate parts of the whole.

Intended Learning Outcomes, Sixth Grade	Every Day Counts Algebra Readiness
a. Divide regions, sets of objects, and <i>line segments</i> into equal parts using a variety of models and illustrations.	Teacher's Guide: 29, 43, 55, 57-59, 62, 73, 74, 92, 93-94, 109, 160-161, 175
b. Name and write a fraction to represent a portion of a unit whole for halves, thirds, fourths, fifths, sixths, eighths, tenths, twelfths, and sixteenths.	Teacher's Guide: 29, 43, 55, 57-59, 62, 73, 74, 92, 93-94, 109, 160-161, 175
c. Write a fraction or ratio in simplest form.	Teacher's Guide: 29-30, 36, 42-43, 55, 73, 91, 94, 109, 110-114, 125, 145, 169, 186-189
d. Name equivalent forms for fractions (halves, thirds, fourths, fifths, tenths), ratios, percents, and decimals, including repeating or terminating decimals.	Teacher's Guide: 28-30, 35-37, 42-43, 47, 55-57, 72-73, 80-81, 91-92, 98-101, 109, 110-114, 120-122, 125, 145, 169, 166-169, 186-189, 194, 198, 199, 209, TR21

Intended Learning Outcomes, Sixth Grade	Every Day Counts Algebra Readiness
e. Relate percents less than 1% or greater than 100% to equivalent fractions, decimals, <i>whole numbers</i> , and mixed numbers.	Teacher's Guide: 55, 92, 100

Objective 5

Solve problems using the four operations with whole numbers, decimals, and fractions.

Intended Learning Outcomes, Sixth Grade	Every Day Counts Algebra Readiness
a. Determine when it is appropriate to use estimation, mental math strategies, paper and pencil, or a calculator.	Teacher's Guide: 29-30, 35-37, 42-43, 47, 55-57, 63-65, 72-73, 78-81, 91-92, 98-101, 109, 117-122, 146-147, 166-169, 177-180
b. Use estimation strategies to determine whether results obtained using a calculator are reasonable.	Teacher's Guide: 100-101, 110-114, 135-136, 181-182
c. Multiply up to a three-digit <i>factor</i> by a one- or two-digit factor including decimals.	Teacher's Guide: 26-28, 32, 35-37, 41-44, 47, 52-54, 60-62, 64-65, 71-72, 80-81, 91, 98-101, 109, 110-114, 117-120, 131, 137-139, 140-141, 165
d. Divide up to a four-digit <i>dividend</i> by a one- or two-digit <i>divisor</i> including decimals.	Teacher's Guide: 36, 47, 62, 88-91, 93, 169, 179
e. Add and subtract decimals to the thousandths place (e.g., $34.567 + 3.45$; $65.3 - 5.987$).	Teacher's Guide: 28-30, 55-57, 72-73, 91-92, 100, 109
f. Add, subtract, multiply, and divide fractions and mixed numbers.	Teacher's Guide: 28-30, 55-57, 72-73, 91-92, 93-94, 109, 143-145, 166-169, 198
g. Solve problems using ratios and proportions.	Teacher's Guide: 110-114, 144-145, 177-180
h. Simplify <i>expressions</i> , with <i>exponents</i> , using the <i>order of operations</i> .	Teacher's Guide: 33-35, 37, 43-44, 45-46, 60-62, 63-65, 77, 79-81, 96-97, 108, 117-120, 138-139, 140-141, 153, 164-166, 181-182, 193, 208

Objective 6

Model, illustrate, and perform the operations of addition and subtraction of integers.

Intended Learning Outcomes, Sixth Grade	Every Day Counts Algebra Readiness
a. Recognize that the sum of an <i>integer</i> and its opposite is zero.	Teacher's Guide: 131-135, 154-158, 208, TR22

Intended Learning Outcomes, Sixth Grade	Every Day Counts Algebra Readiness
b. Model addition and subtraction of integers using manipulatives and a number line.	Teacher's Guide: 131-135, 154-158, 193, 198, 208
c. Add and subtract integers.	Teacher's Guide: 131-135, 154-158, 193, 198, 208

Standard I I

Students will use patterns, relations, and functions to represent and analyze mathematical situations using algebraic symbols.

Objective 1

Recognize, analyze, and use multiple representations of patterns and functions and describe their attributes.

Intended Learning Outcomes, Sixth Grade	Every Day Counts Algebra Readiness
a. Analyze patterns on graphs and tables and write a generalization to predict how the patterns will continue.	Teacher's Guide: 24-26, 30-35, 40-41, 43-44, 45-46, 50-52, 60-62, 63-64, 68-70, 75-80, 86-88, 94-101, 106-108, 117-120, 128-131, 137-139, 162-163, 177-180, 192, 193, 195, 199, 201, 207
b. Create tables and graphs to represent given patterns and algebraic <i>expressions</i> .	Teacher's Guide: 30-35, 43-44, 45-46, 60-62, 63-64, 78-80, 94-101, 117-120, 128-131, 162-163, 164-166, 195
c. Write an algebraic expression from a graph or a table of values.	Teacher's Guide: 33-35, 43-44, 45-46, 60-62, 63-64, 78-80, 94-98, 117-120, 128-131, 164-166, 193, 201
d. Draw a graph from a table of values or to represent an equation.	Teacher's Guide: 33-35, 45-46, 63-64, 78-80, 96-98, 117-120, 164-166, 195

Objective 2

Represent, solve, and analyze mathematical situations using algebraic symbols.

Intended Learning Outcomes, Sixth Grade	Every Day Counts Algebra Readiness
a. Recognize that a number in front of a variable indicates multiplication (e.g., $3y$ means 3 times the quantity y).	Teacher's Guide: 33-35, 43-44, 45-46, 63-64, 78-80, 131, 164-166
b. Solve two-step equations involving <i>whole numbers</i> and a single variable (e.g., $3x + 4 = 19$).	Teacher's Guide: 33-35, 45-46, 79

Intended Learning Outcomes, Sixth Grade	Every Day Counts Algebra Readiness
c. Recognize that “ \approx ” indicates a relationship in which the quantities on each side are approximately of equal value (e.g., $\pi \approx 3.14$).	Teacher’s Guide: 110-113
d. Recognize that an <i>exponent</i> can be represented in the following ways: 4^3 or 4^3 .	Teacher’s Guide: 54, 71, 96, 140-141, TR22
e. Evaluate <i>expressions</i> and formulas, substituting given values for the variables (e.g., $2x + 4$; $x = 2$; therefore, $2(2) + 4 = 8$).	Teacher’s Guide: 33-35, 43-44, 45-46, 60-62, 63-64, 78-80, 94-98, 117-120, 128-131, 164-166, 193, 208, TR21
f. Recognize that if the <i>product</i> is zero, then one or more <i>factors</i> equal zero (i.e., if $a * b = 0$ then either $a = 0$ or $b = 0$ or a and $b = 0$).	Teacher’s Guide: 46

Standard III

Students will use spatial and logical reasoning to recognize, describe, and identify geometric shapes and principles.

Objective 1

Identify and analyze characteristics and properties of geometric shapes.

Intended Learning Outcomes, Sixth Grade	Every Day Counts Algebra Readiness
a. Identify the <i>midpoint</i> of a line <i>segment</i> .	Teacher’s Guide: 87
b. Identify <i>concave</i> and <i>convex polygons</i> .	Teacher’s Guide: 50-52, 68-70, 106-108, 128-131, 194, 203, 207
c. Identify the center, <i>radius</i> , <i>diameter</i> , and <i>circumference</i> of a circle.	Teacher’s Guide: 58, 110-114, 135-136, TR22
d. Identify the number of <i>faces</i> , <i>edges</i> , and <i>vertices</i> of <i>prisms</i> and <i>pyramids</i> .	Teacher’s Guide: 150-154, 186-189, 209, TR22

Objective 2

Specify locations and describe spatial relationships using coordinate geometry.

Intended Learning Outcomes, Sixth Grade	Every Day Counts Algebra Readiness
a. Graph points defined by ordered pairs in all four <i>quadrants</i> .	Teacher’s Guide: 35, 45-46, 63-64, 78-79, 97-98, 117-118, 164-166, 182-185, 195, TR21

Intended Learning Outcomes, Sixth Grade	Every Day Counts Algebra Readiness
b. Write the ordered pair for a point in any quadrant.	Teacher's Guide: 35, 45-46, 63-64, 78-79, 97-98, 117-118, 164-166, 182-185

Objective 3

Visualize and identify geometric shapes after applying transformations.

Intended Learning Outcomes, Sixth Grade	Every Day Counts Algebra Readiness
a. <i>Turn (rotate)</i> a shape around a point and identify the location of the new vertices.	Teacher's Guide: 57-59, 74, 106-108, 131, 194, 203, 209
b. <i>Slide (translate)</i> a polygon either horizontally or vertically on a coordinate grid and identify the location of the new vertices.	Not covered
c. <i>Flip (reflect)</i> a shape across either the x- or y-axis and identify the location of the new vertices.	Teacher's Guide: 86-88, 131

Standard IV

Students will understand and apply measurement tools and techniques.

Objective 1

Identify and describe measurable attributes of objects and units of measurement.

Intended Learning Outcomes, Sixth Grade	Every Day Counts Algebra Readiness
a. Compare a meter to a yard, a liter to a quart, and a kilometer to a mile.	Teacher's Guide: 146, 166
b. Identify π as the ratio of the <i>circumference</i> to <i>diameter</i> of a circle.	Teacher's Guide: 110-114, 135-136, TR22
c. Explain how the size of the unit used in measuring affects the precision.	Teacher's Guide: 110
d. Estimate length, volume, weight, and area using <i>metric</i> and <i>customary</i> units.	Teacher's Guide: 30-33, 43-44, 60-62, 95, 114-116, 117-120, 125, 135-136, 137-139, 146-147, 172-174, 186-189, 193, 197, 199, 202, 203, 204, 208

Objective 2

Determine measurements using appropriate tools and formulas.

Intended Learning Outcomes, Sixth Grade	Every Day Counts Algebra Readiness
a. Measure length to the nearest one-sixteenth of an inch and to the nearest millimeter.	Teacher's Guide: 124-125, 146-147
b. Estimate and measure an angle to the nearest degree.	Teacher's Guide: 51, 57-59, 69, 74, 93-94, 128-131
c. Calculate the <i>circumference</i> of a circle using a given formula.	Teacher's Guide: 110-114, 203
d. Calculate <i>elapsed time</i> across a.m. and p.m. time periods.	Not covered.
e. Calculate the <i>areas</i> of triangles, rectangles, and <i>parallelograms</i> using given formulas.	Teacher's Guide: 30-33, 43-44, 60-62, 95, 114-116, 135-136, 137-139, 202
f. Calculate the <i>surface area</i> and <i>volume</i> of right, rectangular prisms using given formulas.	Teacher's Guide: 117-120, 172-174, 186-189, 193, 204, 208

Standard V

Students will collect, analyze, and draw conclusions from data and apply basic concepts of probability.

Objective 1

Design investigations to reach conclusions using statistical methods to make inferences based on data.

Intended Learning Outcomes, Sixth Grade	Every Day Counts Algebra Readiness
a. Design investigations to answer questions by collecting and organizing data in a variety of ways (e.g., bar graphs, line graphs, frequency tables, stem and leaf plots).	Teacher's Guide: 81-83, 101-103, 142-145, 182-185
b. Collect, compare, and display data using an appropriate format (i.e., bar graphs, line graphs, <i>line plots</i> , circle graphs, scatter plots).	Teacher's Guide: 81-83, 101-103, 142-145, 182-185, 195, 205, 210
c. Compare two similar sets of data on the same graph and compare two graphs representing the same set of data.	Teacher's Guide: 122-124, 142-145

Intended Learning Outcomes, Sixth Grade	Every Day Counts Algebra Readiness
d. Recognize that changing the scale influences the appearance of a display of data.	Teacher's Guide: 182-185
e. Develop and evaluate inferences and predictions based on data.	Teacher's Guide: 81-83, 101-103, 142-145, 182-185

Objective 2
Apply basic concepts of probability.

Intended Learning Outcomes, Sixth Grade	Every Day Counts Algebra Readiness
a. Write the results of a probability experiment as a fraction, ratio, or percent between zero and one.	Teacher's Guide: 159-161, 175-177, 205, 207, TR22
b. Compare experimental results with anticipated results (e.g., experimental: 7 out of 10 tails; whereas, anticipated 5 out of 10 tails).	Teacher's Guide: 159-161, 175-177
c. Compare individual, small group, and large group results for a probability experiment.	Teacher's Guide: 159-161, 175-177



TOLL FREE: 800-289-4490

VISIT OUR WEB SITE: WWW.GREATSOURCE.COM
