AfterSchool KidzMath^{TM} Correlated to the Common Core Standards for Mathematics

The following references are examples from the AfterSchool KidzMath program from Developmental Studies Center that align to the Common Core Standards for Mathematics for K-6. This correlation is intended to illustrate the program's approach to these standards. (TM = Teacher's Manual)

Kindergarten		
Grade-Level Expectations	**Application in *AfterSchool KidzMath***	**Examples**
Counting & Cardinality		
Know number names and the count sequence		
1. Count to 100 by ones and by tens.	Students count by 1's 5's and 10's.	*AfterSchool KidzMath* Games: Primary *Leader's Guide* "Handy Handfuls", p. 15 "Marble Mania", p. 117 *AfterSchool KidzMath* Story Guides: Primary *Under the Lemon Moon* Activity 1, "How Many Lemons?" p. 4 *Ten, Nine, Eight* Activity 1, "Write Your Own Ten, Nine, Eight," p. 4 *My Rows and Piles of Coins* Activity 1, "Penny Piles," p. 4 Activity 2, "Secret Money Box," p. 7 Activity 3, "How Many?" p. 10 *100th Day Worries* Activity 1, "100-Move Challenge," p. 4 Activity 2, "100s Mix," p. 6 Activity 3, "How Many 'Kisses' in 100 Seconds?" p. 10

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Kindergarten		
Grade-Level Expectations	**Application in *AfterSchool KidzMath***	**Examples**
2. Count forward beginning from a given number within the known sequence (instead of having to begin at 1).	Students count forward by 2's, 5's, 10's, and 20's, and learn different strategies for counting and starting at numbers besides 1.	*AfterSchool KidzMath* Games: Primary *Leader's Guide* "Marble Mania," p. 117 *AfterSchool KidzMath* Story Guides: Primary *100th Day Worries* Activity 2, "100s Mix," p. 6 Activity 3, "How Many 'Kisses' in 100 Seconds?" p. 10 *My Rows and Piles of Coins* Activity 1, "Penny Piles," p. 4 Activity 2, "Secret Money Box," p. 7 Activity 3, "How Many?" p. 10
3. Write numbers from 0 to 20. Represent a number of objects with a written numeral 0-20 (with 0 representing a count of no objects).	Students count and write numbers up to 20.	*AfterSchool KidzMath* Story Guides: Primary *Math Counts: Numbers* Activity 3, "Numbers About Me," p. 9 *Ten, Nine, Eight* Activity 1, "Write Your Own Ten, Nine, Eight," p. 4

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Kindergarten		
Grade-Level Expectations	**Application in *AfterSchool KidzMath***	**Examples**
Count to tell the number of objects		
4. Understand the relationship between numbers and quantities; connect counting to cardinality. a. When counting objects, say the number names in the standard order, pairing each object with one and only one number name and each number name with one and only one object. b. Understand that the last number name said tells the number of objects counted. The number of objects is the same regardless of their arrangement or the order in which they were counted. c. Understand that each successive number name refers to a quantity that is one larger.	Students play counting games and do activities that teach them how to count single objects and groups of objects, and how to find the total number of objects in a group.	*AfterSchool KidzMath* Games: Primary *Leader's Guide* "Dot Dazzle," p. 3 "Star Struck," p. 9 "Handy Handfuls," p. 15 *AfterSchool KidzMath* Story Guides: Primary *My Rows and Piles of Coins* Activity 1, "Penny Piles," p. 4 Activity 2, "Secret Money Box," p. 7 Activity 3, "How Many?" p. 10 *Under the Lemon Moon* Activity 1, "How Many Lemons?" p. 4 *100th Day Worries* Activity 1, "100-Move Challenge," p.4 Activity 2, "100s Mix," p. 6 *Ten, Nine, Eight* Activity 1, "Write Your Own Ten, Nine, Eight," p. 4 *Math Counts: Numbers* Activity 3, "Numbers About Me," p. 9

AfterSchool KidzMath^{TM} Correlated to the Common Core Standards for Mathematics

Kindergarten		
Grade-Level Expectations	**Application in *AfterSchool KidzMath***	**Examples**
5. Count to answer "how many?" questions about as many as 20 things arranged in a line, a rectangular array, or a circle, or as many as 10 things in a scattered configuration; given a number from 1–20, count out that many objects.	Students are able to count and determine the amount of objects they have up to 100.	*AfterSchool KidzMath* Games: Primary *Leader's Guide* "Dot Dazzle", p. 6 "Star Struck!" p. 12 *AfterSchool KidzMath* Story Guides: Primary *Math Counts: Numbers* Activity 2: "Using Numbers Everywhere," p. 7 *Under the Lemon Moon* Activity 1: "How Many Lemons?" p. 4 Activity 2: "How Many Seeds?" p. 6
Compare numbers		
6. Identify whether the number of objects in one group is greater than, less than, or equal to the number of objects in another group, e.g., by using matching and counting strategies.	This concept is not formally introduced until Grade 1.	N/A
7. Compare two numbers between 1 and 10 presented as written numerals.	This concept is not formally introduced until Grade 1.	N/A

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Kindergarten		
Grade-Level Expectations	**Application in *AfterSchool KidzMath***	**Examples**
Operations and Algebraic Thinking		
Understand addition as putting together and adding to, and understand subtraction as taking apart and taking from		
1. Represent addition and subtraction with objects, fingers, mental images, drawings[1], sounds (e.g., claps), acting out situations, verbal explanations, expressions, or equations.	Students use manipulatives, visual representations, and verbal explanations to help them understand addition and subtraction.	*AfterSchool KidzMath* Games: Primary *Leader's Guide* "Free the Fish," p. 61 "Blast Off!" p. 67 "Funny Bug," p. 79 "The Leader Says," p. 103 "Marble Mania," p. 117 *AfterSchool KidzMath* Story Guides *Ten, Nine, Eight* Activity 2, "Backwards Basketball," p. 7 Activity 3, "Exactly Five," p. 9 *Under the Lemon Moon* Activity 2, "How Many Seeds?" p. 6 *My Rows and Piles of Coins* Activity 3, "How Many?" p. 10 *100th Day Worries* Activity 2: "100s Mix," p. 6
2. Solve addition and subtraction word problems, and add and subtract within 10, e.g., by using objects or drawings to represent the problem.		

AfterSchool KidzMath^{TM} Correlated to the Common Core Standards for Mathematics

Kindergarten		
Grade-Level Expectations	**Application in *AfterSchool KidzMath***	**Examples**
3. Decompose numbers less than or equal to 10 into pairs in more than one way, e.g., by using objects or drawings, and record each decomposition by a drawing or equation (e.g., 5 = 2 + 3 and 5 = 4 + 1).	Students explore different number pairs that total 5.	*AfterSchool KidzMath* Games: Primary *Leader's Guide* "Free the Fish," p. 61
4. For any number from 1 to 9, find the number that makes 10 when added to the given number, e.g., by using objects or drawings, and record the answer with a drawing or equation.	Students find numbers that add up to 5 and explore different number pairs that total 5.	*AfterSchool KidzMath* Games: Primary *Leader's Guide* "Free the Fish," p. 61
5. Fluently add and subtract within 5.	The games in kindergarten focus on adding numbers up to 12. Students are formally introduced to subtraction games in first grade.	*AfterSchool KidzMath* Games: Primary *Leader's Guide* "Free the Fish," p. 61 "Blast Off!" p. 67 "Funny Bug," p. 79 "The Leader Says," p. 103 "Marble Mania," p. 117 *AfterSchool KidzMath* Story Guides *Ten, Nine, Eight* Activity 2, "Backwards Basketball," p. 7 Activity 3, "Exactly Five," p. 9 *Under the Lemon Moon* Activity 2, "How Many Seeds?" p. 6 *My Rows and Piles of Coins* Activity 3, "How Many?" p. 10 *100th Day Worries* Activity 2: "100s Mix," p. 6

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Kindergarten		
Grade-Level Expectations	**Application in *AfterSchool KidzMath***	**Examples**
Number and Operations in Base Ten		
Work with numbers 11-19 to gain foundations for place value		
1. Compose and decompose numbers from 11 to 19 into ten ones and some further ones, e.g., by using objects or drawings, and record each composition or decomposition by a drawing or equation (such as 18 = 10 + 8); understand that these numbers are composed of ten ones and one, two, three, four, five, six, seven, eight, or nine ones.	N/A	N/A
Measurement & Data		
Describe and compare measurable attributes		
1. Describe measurable attributes of objects, such as length or weight. Describe several measurable attributes of a single object.	Students measure and compare length using non-standard units such as their feet, hand spans, and paper clips-and they compare and order objects according to size.	*AfterSchool KidzMath* Story Guides: Primary *Inch By Inch* Activity 1: "Same As an Inchworm," p. 4 Activity 2: "Giant Caterpillars," p. 7 Activity 3: "You Too Can Draw a Toucan," p. 10 *How Big is a Foot?* Activity 1: "Act It Out!" p. 5 Activity 2: "Is It Longer?" p. 7 Activity 3: "My Foot! How Many?" p. 10
2. Directly compare two objects with a measurable attribute in common, to see which object has "more of"/"less of" the attribute, and describe the difference. *For example, directly compare the heights of two children and describe one child as taller/shorter.*	Students determine the length of an object using nonstandard units and compare the lengths of two or more objects by determining which is longer or shorter.	*AfterSchool KidzMath* Story Guides: Primary *Inch By Inch* Activity 1: "Same As an Inchworm," p. 4 Activity 2: "Giant Caterpillars," p. 7 *How Big is a Foot?* Activity 2: "Is It Longer?" p. 7

AfterSchool KidzMath^{TM} Correlated to the Common Core Standards for Mathematics

Kindergarten		
Grade-Level Expectations	**Application in *AfterSchool KidzMath***	**Examples**
Classify objects and count the number of objects in each category		
3. Classify objects into given categories; count the numbers of objects in each category and sort the categories by count.	N/A	N/A
Geometry		
Identify and describe shapes (squares, circles, triangles, rectangles, hexagons, cubes, cones, cylinders, and spheres)		
1. Describe objects in the environment using names of shapes, and describe the relative positions of these objects using terms such as *above*, *below*, *beside*, *in front of*, *behind*, and *next to*.	Students manipulate shapes and relate them to objects they see in their own lives.	*AfterSchool KidzMath* Story Guides: Primary *Grandfather Tang's Story* Activity 1, "Animal Tangram Puzzles," p. 5 Activity 3, "Tangram Creations Book," p. 18 *Seven Blind Mice* Activity 3, "Draw It from My Point of Vew!"
2. Correctly name shapes regardless of their orientations or overall size.	Students explore, recognize, and describe shapes and their attributes.	*AfterSchool KidzMath* Story Guides: Primary *Grandfather Tang's Story* Activity 1, "Animal Tangram Puzzles," p. 5 Activity 2, "Copycat," p. 15 Activity 3, "Tangram Creations Book," p. 18 *Seven Blind Mice* Activity 1, "Shape In a Bag," p. 4 Activity 2, "Guess My Shape," p. 7
3. Identify shapes as two-dimensional (lying in a plane, "flat") or three-dimensional ("solid")	Students practice drawing two- and three-dimensional objects from different points of view.	*AfterSchool KidzMath* Story Guides: Primary *Seven Blind Mice* Activity 3, "Draw It from My Point of View!" p. 10
Analyze, compare, create, and compose shapes		

AfterSchool KidzMath^{TM} Correlated to the Common Core Standards for Mathematics

Kindergarten		
Grade-Level Expectations	**Application in *AfterSchool KidzMath***	**Examples**
4. Analyze and compare two- and three-dimensional shapes, in different sizes and orientations, using informal language to describe their similarities, differences, parts (e.g., number of sides and vertices/"corners") and other attributes (e.g., having sides of equal length).	Students manipulate shapes and discuss their attributes to compare two- and three- dimensional shapes.	*AfterSchool KidzMath* Story Guides: Primary *Grandfather Tang's Story* Activity 1, "Animal Tangram Puzzles," p. 5 Activity 2, "Copycat," p. 15 Activity 3, "Tangram Creations Book," p. 18 *Seven Blind Mice* Activity 1, "Shape in a Bag," p. 4 Activity 2, "Guess My Shape," p. 7 Activity 3, "Draw It from My Point of View," p. 10
5. Model shapes in the world by building shapes from components (e.g., sticks and clay balls) and drawing shapes.	Students create their own tangram pictures and practice copying and recreating each other's designs, and once students create their pictures, they are compiled into a group book.	*Grandfather Tang's Story* Activity 1, "Animal Tangram Puzzles," p. 5 Activity 2, "Copycat," p. 15 Activity 3, "Tangram Creations Book," p. 18 *Seven Blind Mice* Activity 3, "Draw It from My Point of View," p. 10
6. Compose simple shapes to form larger shapes. *For example, "Can you join these two triangles with full sides touching to make a rectangle?"*	Students manipulate tangram pieces to make shapes with other shapes.	*Grandfather Tang's Story* Activity 2, "Copycat," p. 15

The following references are examples from the AfterSchool KidzMath program from Developmental Studies Center that align to the Common Core Standards for Mathematics for K-6. This correlation is intended to illustrate the program's approach to these standards. (TM = Teacher's Manual)

AfterSchool KidzMath[TM] Correlated to the Common Core Standards for Mathematics

Grade 1		
Grade-Level Expectations	**Application in *AfterSchool KidzMath***	**Examples**
Operations & Algebraic Thinking		
Represent and solve problems involving addition and subtraction		
8. Use addition and subtraction within 20 to solve word problems involving situations of adding to, taking from, putting together, taking apart, and comparing, with unknowns in all positions, e.g., by using objects, drawings, and equations with a symbol for the unknown number to represent the problem.	Students explore addition and subtraction facts to 20 and learn addition and subtraction facts to 10. They use numbers facts, objects, and drawings to solve problems involving addition and subtraction, and they develop and use mental math strategies.	*AfterSchool KidzMath* Games: Primary *Leader's Guide* "Free the Fish," p. 61 "Concentrate on Ten," p. 73 "Funny Bug," p. 79 "Hop Out," p. 85 "Creature Catch," p. 91 "Best Out of Three," p. 97 "The Leader Says," p. 103 "Zero Zone," p. 111 "Countdown," p. 123
9. Solve word problems that call for addition of three whole numbers whose sum is less than or equal to 20, e.g., by using objects, drawings, and equations with a symbol for the unknown number to represent the problem.	Students play games that allow them to solve addition problems using two or more whole numbers.	*AfterSchool KidzMath* Games: Primary *Leader's Guide* "Hop Out," p. 85 "Best Out of Three," p. 97
Understand and apply properties of operations and the relationship between addition and subtraction		
10. Apply properties of operations as strategies to add and subtract.[2] *Examples: If 8 + 3 = 11 is known, then 3 + 8 = 11 is also known. (Commutative property of addition.) To add 2 + 6 + 4, the second two numbers can be added to make a ten, so 2 + 6 + 4 = 2 + 10 = 12. (Associative property of addition.)*	N/A	N/A
11. Understand subtraction as an unknown-addend problem. *For example, subtract 10 – 8 by finding the number that makes 10 when added to 8*	N/A	N/A
Adding and Subtracting Within 20		

AfterSchool KidzMath^{TM} Correlated to the Common Core Standards for Mathematics

<table>
<tr><td colspan="3" align="center">Grade 1</td></tr>
<tr><td align="center">Grade-Level Expectations</td><td align="center">Application in AfterSchool KidzMath</td><td align="center">Examples</td></tr>
<tr>
<td>12. Relate counting to addition and subtraction (e.g., by counting on 2 to add 2).</td>
<td>Students make connections between counting and solving addition and subtraction problems.</td>
<td>AfterSchool KidzMath Games: Primary Leader's Guide
"Stack Back," p. 21

AfterSchool KidzMath Story Guides: Primary Ten, Nine, Eight:
Activity 2, "Backward Baseball," p. 7
Activity 3, "Exactly Five," p. 9

Under the Lemon Moon:
Activity 2, "How Many Seeds?" p. 6</td>
</tr>
<tr>
<td>13. Add and subtract within 20, demonstrating fluency for addition and subtraction within 10. Use strategies such as counting on; making ten (e.g., $8 + 6 = 8 + 2 + 4 = 10 + 4 = 14$); decomposing a number leading to a ten (e.g., $13 - 4 = 13 - 3 - 1 = 10 - 1 = 9$); using the relationship between addition and subtraction (e.g., knowing that $8 + 4 = 12$, one knows $12 - 8 = 4$); and creating equivalent but easier or known sums (e.g., adding $6 + 7$ by creating the known equivalent $6 + 6 + 1 = 12 + 1 = 13$).</td>
<td>Students explore addition and subtraction facts to 20 and learn addition and subtraction facts to 10. They use numbers facts, objects, and drawings to solve problems involving addition and subtraction, and they develop and use mental math strategies.</td>
<td>AfterSchool KidzMath Games: Primary Leader's Guide
"Free the Fish," p. 61
"Concentrate on Ten," p. 73
"Funny Bug," p. 79
"Hop Out," p. 85
"Creature Catch," p. 91
"Best Out of Three," p. 97
"The Leader Says," p. 103
"Zero Zone," p. 111
"Countdown," p. 123</td>
</tr>
<tr><td colspan="3" align="center">Work With Addition and Subtraction Equations</td></tr>
<tr>
<td>14. Understand the meaning of the equal sign, and determine if equations involving addition and subtraction are true or false. For example, which of the following equations are true and which are false? $6 = 6$, $7 = 8 - 1$, $5 + 2 = 2 + 5$, $4 + 1 = 5 + 2$.</td>
<td>Students learn the meaning of the equal sign after playing games where they must determine which number is greater than, less than, or equal to another number.</td>
<td>AfterSchool KidzMath Games: Primary Leader's Guide
"Beat the Dice", p, 35
"Rollingo," p. 41
"Musical Chairs With Numbers," p. 47</td>
</tr>
<tr>
<td>15. Determine the unknown whole number in an addition or subtraction equation relating three whole numbers. For example, determine the unknown number that makes the equation true in each of the equations $8 + ? = 11$, $5 = \_ - 3$, $6 + 6 = \_$.</td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr><td colspan="3" align="center">Number & Operations in Base Ten</td></tr>
</table>

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Grade 1		
Grade-Level Expectations	**Application in *AfterSchool KidzMath***	**Examples**
Extend the Counting Sequence		
6. Count to 120, starting at any number less than 120. In this range, read and write numerals and represent a number of objects with a written numeral.	Students have multiple opportunities to practice counting and writing numbers to 100 by ones, fives, and tens.	*AfterSchool KidzMath* Games: Primary *Leader's Guide* "Handy Handfuls", p. 15 "Marble Mania", p. 117 *AfterSchool KidzMath* Story Guides: Primary *My Rows and Piles of Coins:* Activity 1, "Penny Piles," p. 4 Activity 2, " Secret Money Box," p. 7 Activity 3, "How Many?" p. 10 *Math Counts: Numbers* Activity 2, "Using Numbers Everywhere," p. 7 Activity 3, "Numbers About Me," p. 9
Understand Place Value		

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Grade 1		
Grade-Level Expectations	**Application in *AfterSchool KidzMath***	**Examples**

7. Understand that the two digits of a two-digit number represent amounts of tens and ones. Understand the following as special cases:
 	
   a. 10 can be thought of as a bundle of ten ones — called a "ten."
   b. The numbers from 11 to 19 are composed of a ten and one, two, three, four, five, six, seven, eight, or nine ones.
   c. The numbers 10, 20, 30, 40, 50, 60, 70, 80, 90 refer to one, two, three, four, five, six, seven, eight, or nine tens (and 0 ones).
	Students practice counting by 1's and 10's to learn place value.	*AfterSchool KidzMath* Story Guides: Primary
		My Rows and Piles of Coins:
		Activity 1, "Penny Piles," p. 4
		Activity 2, " Secret Money Box," p. 7
		Activity 3, "How Many?" p. 10
		
		100th Day Worries:
		Activity 3, "How Many 'Kisses' in 100 Seconds?" p. 10

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Grade 1		
Grade-Level Expectations	**Application in *AfterSchool KidzMath***	**Examples**
8. Compare two two-digit numbers based on meanings of the tens and ones digits, recording the results of comparisons with the symbols >, =, and <.	Students compare two numbers and decide if one is greater than, less than, or equal to the other.	*AfterSchool KidzMath* Games: Primary *Leader's Guide* "Beat the Dice," p. 35 "Rollingo," p. 41 "Musical Chairs With Numbers," p. 47 "Guess My Number," p. 53
Use Place Value Understanding and Properties of Operations to Add and Subtraction		

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Grade 1		
Grade-Level Expectations	**Application in *AfterSchool KidzMath***	**Examples**
9. Add within 100, including adding a two-digit number and a one-digit number, and adding a two-digit number and a multiple of 10, using concrete models or drawings and strategies based on place value, properties of operations, and/or the relationship between addition and subtraction; relate the strategy to a written method and explain the reasoning used. Understand that in adding two-digit numbers, one adds tens and tens, ones and ones; and sometimes it is necessary to compose a ten.	Students learn multiple strategies to help them solve addition problems, and are given many opportunities to practice adding single and two-digit numbers.	*AfterSchool KidzMath* Games: Primary *Leader's Guide* "Free the Fish," p. 61 "Blast Off!" p. 67 "Funny Bug," p. 79 "The Leader Says," p. 103 "Marble Mania," p. 117 *AfterSchool KidzMath* Story Guides: Primary *My Rows and Piles of Coins:* Activity 1, "Penny Piles," p. 4 Activity 2, " Secret Money Box," p. 7 Activity 3, "How Many?" p. 10 *Under the Lemon Moon:* Activity 2, "How Many Seeds?" p. 6 *100th Day Worries:* Activity 3, "How Many 'Kisses' in 100 Seconds?" p. 10
10. Given a two-digit number, mentally find 10 more or 10 less than the number, without having to count; explain the reasoning used.	Students learn how to mentally add or subtract by 10 and are able to provide explanation for solving the problem.	*AfterSchool KidzMath* Games: Primary *Leader's Guide* "Marble Mania," p. 117 "Countdown," p. 124 *AfterSchool KidzMath* Story Guides: Primary *My Rows and Piles of Coins:* Activity 1, "Penny Piles," p. 4 Activity 2, " Secret Money Box," p. 7 Activity 3, "How Many?" p. 10 *100th Day Worries:* Activity 3, "How Many Kisses in 100 Seconds?" p. 10

AfterSchool KidzMath^{TM} Correlated to the Common Core Standards for Mathematics

Grade 1		
Grade-Level Expectations	**Application in *AfterSchool KidzMath***	**Examples**
11. Subtract multiples of 10 in the range 10-90 from multiples of 10 in the range 10-90 (positive or zero differences), using concrete models or drawings and strategies based on place value, properties of operations, and/or the relationship between addition and subtraction; relate the strategy to a written method and explain the reasoning used.	Students learn how to mentally subtract by 10 and are able to provide explanation for solving the problem.	*AfterSchool KidzMath* Games: Primary *Leader's Guide* "Countdown," p. 124
Measurement & Data		
Measure Lengths Indirectly and by Iterating Length Units		
1. Order three objects by length; compare the lengths of two objects indirectly by using a third object.	Students measure and compare length using non-standard units such as their feet, hand spans, and paper clips-and they compare and order objects according to size.	*AfterSchool KidzMath* Story Guides: Primary *How Big is a Foot?* Activity 2, "Is It Longer?" p. 7 *Inch by Inch* Activity 2, " Giant Caterpillars," p. 7

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Grade 1		
Grade-Level Expectations	**Application in *AfterSchool KidzMath***	**Examples**
2. Express the length of an object as a whole number of length units, by laying multiple copies of a shorter object (the length unit) end to end; understand that the length measurement of an object is the number of same-size length units that span it with no gaps or overlaps. *Limit to contexts where the object being measured is spanned by a whole number of length units with no gaps or overlaps.*	Students measure and compare length using non-standard units such as their feet, hand spans, and paper clips-and they compare and order objects according to size.	*AfterSchool KidzMath* Story Guides: Primary *How Big is a Foot?* Activity 3, "My Foot! How Many?" p. 10 *Inch By Inch* Activity 2, " Giant Caterpillars," p. 7 Activity 3, "You Two Can Draw a Toucan," p. 10
Tell and Write Time		
3. Tell and write time in hours and half-hours using analog and digital clocks.	N/A	N/A
Represent and Interpret Data		
4. Organize, represent, and interpret data with up to three categories; ask and answer questions about the total number of data points, how many in each category, and how many more or less are in one category than in another.	Students organize and interpret data after tasting three different types of cookies and then graphing which ones they liked the best.	*AfterSchool KidzMath* Story Guides: Primary *The Doorbell Rang* Activity 3, "Cookie Taste Test," p. 10
Geometry		
Reason With Shapes and Their Attributes		
1. Distinguish between defining attributes (e.g., triangles are closed and three-sided) versus non-defining attributes (e.g., color, orientation, overall size) ; build and draw shapes to possess defining attributes.	Students learn the differences between familiar shapes and use tangram pieces to help them identify and count edges, angles, and vertices of each shape.	*AfterSchool KidzMath* Story Guides: Primary *Grandfather Tang's Story* Activity 1, "Animal Tangram Puzzles," p. 5 Activity 2, "Copycat," p. 15 Activity 3, "Tangram Creations Book," p. 18 *Seven Blind Mice* Activity 1, "Shape in a Bag," p. 4 Activity 2, "Guess My Shape," p. 7

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Grade 1		
Grade-Level Expectations	**Application in *AfterSchool KidzMath***	**Examples**
2. Compose two-dimensional shapes (rectangles, squares, trapezoids, triangles, half-circles, and quarter-circles) or three-dimensional shapes (cubes, right rectangular prisms, right circular cones, and right circular cylinders) to create a composite shape, and compose new shapes from the composite shape.	Students identify, name, and draw two- and three-dimensional figures (squares, triangles, parallelograms, etc.) and define and recognize their physical attributes.	*AfterSchool KidzMath* Story Guides: Primary Activity 2, "Guess My Shape," p. 7 Activity 3, "Draw It from My Point of View!" p. 10
3. Partition circles and rectangles into two and four equal shares, describe the shares using the words *halves*, *fourths*, and *quarters*, and use the phrases *half of*, *fourth of*, and *quarter of*. Describe the whole as two of, or four of the shares. Understand for these examples that decomposing into more equal shares creates smaller shares.	This concept is introduced in grade three.	N/A

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Grade 2		
Grade-Level Expectations	**Application in *AfterSchool KidzMath***	**Examples**
Operations & Algebraic Thinking		
Represent and Solve Problems Involving Addition and Subtraction		
16. Use addition and subtraction within 100 to solve one- and two-step word problems involving situations of adding to, taking from, putting together, taking apart, and comparing, with unknowns in all positions, e.g., by using drawings and equations with a symbol for the unknown number to represent the problem.	Students use objects, number sentences, drawings, and the calculator to solve word problems involving multi-digit addition and subtraction.	*AfterSchool KidzMath* Games: Primary *Leader's Guide* "Funny Bug," p. 79 "Hop Out," p. 85 "Creature Catch," p. 91 "Best Out of Three," p. 97 "The Leader Says," p. 103 "Zero Zone," p. 111 "Marble Mania," p. 117 "Countdown," p. 123 *AfterSchool KidzMath* Story Guides: Primary *My Rows and Piles of Coins:* Activity 1, "Penny Piles," p. 4 Activity 2, " Secret Money Box," p. 7 Activity 3, "How Many?" p. 10 *Under the Lemon Moon:* Activity 2, "How Many Seeds?" p. 6 *100th Day Worries:* Activity 3, "How Many 'Kisses' in 100 Seconds?" p. 10

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Grade 2		
Grade-Level Expectations	**Application in *AfterSchool KidzMath* **	**Examples**
Add and Subtract Within 20		
17. Fluently add and subtract within 20 using mental strategies. By end of Grade 2, know from memory all sums of two one-digit numbers.	Students develop and use strategies such as estimation, mental calculation, and the ability to see if a solution makes sense.	*AfterSchool KidzMath* Games: Primary *Leader's Guide* "Concentrate of Ten," p. 74 "Funny Bug," p. 79 "Hop Out," p. 86 "Creature Catch," p. 91 "Best Out of Three," p. 97 "The Leader Says," p. 103 "Zero Zone," p. 111 "Marble Mania," p. 117 "Countdown," p. 123 *AfterSchool KidzMath* Story Guides: Primary *My Rows and Piles of Coins:* Activity 1, "Penny Piles," p. 4 Activity 2, " Secret Money Box," p. 7 Activity 3, "How Many?" p. 10 *100th Day Worries* Activity 2, "100s Mix," p. 6
Work with Equal Groups of Objects to Gain Foundations for Multipication		
18. Determine whether a group of objects (up to 20) has an odd or even number of members, e.g., by pairing objects or counting them by 2s; write an equation to express an even number as a sum of two equal addends.	Students practice counting objects by 1's, 2's, 5's, and 10's.	*AfterSchool KidzMath* Story Guides: Primary *100th Day Worries* Activity 3, "How Many 'Kisses' in 100 Seconds?" p. 10
19. Use addition to find the total number of objects arranged in rectangular arrays with up to 5 rows and up to 5 columns; write an equation to express the total as a sum of equal addends.	N/A	N/A
Number & Operations in Base Ten		

AfterSchool KidzMath^{*TM*} Correlated to the Common Core Standards for Mathematics

Grade 2		
Grade-Level Expectations	**Application in *AfterSchool KidzMath***	**Examples**
Understand Place Value		

1. Understand that the three digits of a three-digit number represent amounts of hundreds, tens, and ones; e.g., 706 equals 7 hundreds, 0 tens, and 6 ones. Understand the following as special cases:
 	
  a. 100 can be thought of as a bundle of ten tens — called a "hundred."
  b. The numbers 100, 200, 300, 400, 500, 600, 700, 800, 900 refer to one, two, three, four, five, six, seven, eight, or nine hundreds (and 0 tens and 0 ones).
	Students are introduced to the concept of place-value, and learn the values of the 1's and 10's place.	*AfterSchool KidzMath* Story Guides: Primary
		My Rows and Piles of Coins:
		Activity 1, "Penny Piles," p. 4
		Activity 2, " Secret Money Box," p. 7
		Activity 3, "How Many?" p. 10

2. Count within 1000; skip-count by 5s, 10s, and 100s.	Students learn to count by 5's, 10's, and 20's.	*AfterSchool KidzMath* Games: Primary *Leader's Guide* "Hand Off," p. 27 "Marble Mania," p. 117 *AfterSchool KidzMath* Story Guides: Primary *My Rows and Piles of Coins:* Activity 1, "Penny Piles," p. 4 Activity 2, " Secret Money Box," p. 7 Activity 3, "How Many?" p. 10 *100th Day Worries* Activity 2, "100s Mix," p. 6
3. Read and write numbers to 1000 using base-ten numerals, number names, and expanded form.	N/A	N/A

AfterSchool KidzMath[TM] Correlated to the Common Core Standards for Mathematics

Grade 2		
Grade-Level Expectations	**Application in *AfterSchool KidzMath***	**Examples**
4. Compare two three-digit numbers based on meanings of the hundreds, tens, and ones digits, using >, =, and < symbols to record the results of comparisons.	Students learn to compare two numbers and decide if one is greater than, less than, or equal to the other.	*AfterSchool KidzMath* Games: Primary *Leader's Guide* "Beat the Dice," p. 35 "Rollingo," p. 41 "Musical Chairs With Numbers," p. 47 "Guess My Number," p. 53
Use Place Value Understanding and Properties of Operation to Add and Subtract		
5. Fluently add and subtract within 100 using strategies based on place value, properties of operations, and/or the relationship between addition and subtraction.	Students add and subtract, and discuss the strategies they used to find the answer.	*AfterSchool KidzMath* Games: Primary *Leader's Guide* "Beat the Dice," p. 36 "Rollingo," p. 41 "Concentrate on Ten," p. 73 "Funny Bug," p. 79 "Hop Out," p. 85 "Creature Catch," p. 92 "Best Out of Three," p. 98 "The Leader Says," p. 104 "Zero Zone," p. 112 "Countdown," p. 123 *AfterSchool KidzMath* Story Guides: Primary *My Rows and Piles of Coins:* Activity 1, "Penny Piles," p. 4 Activity 2, " Secret Money Box," p. 7 Activity 3, "How Many?" p. 10
6. Add up to four two-digit numbers using strategies based on place value and properties of operations.	N/A	N/A

AfterSchool KidzMath^{TM} Correlated to the Common Core Standards for Mathematics

Grade 2		
Grade-Level Expectations	**Application in *AfterSchool KidzMath***	**Examples**
7. Add and subtract within 1000, using concrete models or drawings and strategies based on place value, properties of operations, and/or the relationship between addition and subtraction; relate the strategy to a written method. Understand that in adding or subtracting three-digit numbers, one adds or subtracts hundreds and hundreds, tens and tens, ones and ones; and sometimes it is necessary to compose or decompose tens or hundreds.	N/A	N/A
8. Mentally add 10 or 100 to a given number 100–900, and mentally subtract 10 or 100 from a given number 100–900.	Students learn how to mentally add and subtract numbers by 10's and 100's.	*AfterSchool KidzMath* Games: Primary *Leader's Guide* "Marble Mania," p. 117 *AfterSchool KidzMath* Story Guides: Primary *My Rows and Piles of Coins:* Activity 1, "Penny Piles," p. 4 Activity 2, " Secret Money Box," p. 7 Activity 3, "How Many?" p. 10 *100th Day Worries:* Activity 2, "100s Mix," p. 6 Activity 3, "How Many 'Kisses' in 100 Seconds?" p. 10

AfterSchool KidzMath[TM] Correlated to the Common Core Standards for Mathematics

<table>
<tr><td colspan="3" align="center">Grade 2</td></tr>
<tr><td align="center">Grade-Level Expectations</td><td align="center">Application in <i>AfterSchool KidzMath</i></td><td align="center">Examples</td></tr>
<tr>
<td>9. Explain why addition and subtraction strategies work, using place value and the properties of operations.</td>
<td>Students learn how to provide reasoning and explanation for solving addition and subtraction strategies.</td>
<td><i>AfterSchool KidzMath</i> Games: Primary
<i>Leader's Guide</i>
"Free the Fish," p. 61
"Funny Bug," p. 79
"The Leader Says," p. 103
"Marble Mania," p. 117

<i>AfterSchool KidzMath</i> Story Guides: Primary
<i>My Rows and Piles of Coins:</i>
Activity 1, "Penny Piles," p. 4
Activity 2, " Secret Money Box," p. 7
Activity 3, "How Many?" p. 10

<i>100th Day Worries:</i>
Activity 2, "100s Mix," p. 6
Activity 3, "How Many 'Kisses' in 100 Seconds?" p. 10</td>
</tr>
<tr><td colspan="3" align="center">Measurement & Data</td></tr>
<tr><td colspan="3" align="center"><i>Measure and Estimate Lengths in Standard Units</i></td></tr>
<tr>
<td>1. Measure the length of an object by selecting and using appropriate tools such as rulers, yardsticks, meter sticks, and measuring tapes.</td>
<td>Students measure and compare length using non-standard units such as their feet, hand spans, and paper clips-and they compare and order objects according to size.</td>
<td><i>AfterSchool KidzMath</i> Story Guides: Primary
<i>Inch By Inch</i>
Activity 1: "Same As an Inchworm," p. 4
Activity 2: "Giant Caterpillars," p. 7
Activity 3: "You Too Can Draw a Toucan," p. 10

<i>How Big is a Foot?</i>
Activity 1: "Act It Out!" p. 5
Activity 2: "Is It Longer?" p. 7
Activity 3: "My Foot! How Many?" p. 10</td>
</tr>
<tr>
<td>2. Measure the length of an object twice, using length units of different lengths for the two measurements; describe how the two measurements relate to the size of the unit chosen.</td>
<td>Students use non-standard units of measurement that are different sizes to compare the length of different objects.</td>
<td>Read Aloud:
<i>How Big is a Foot?</i>
Activity 3, "My Foot! How Many?" p. 10</td>
</tr>
</table>

AfterSchool KidzMath^{TM} Correlated to the Common Core Standards for Mathematics

Grade 2		
Grade-Level Expectations	**Application in *AfterSchool KidzMath***	**Examples**
3. Estimate lengths using units of inches, feet, centimeters, and meters.	N/A	N/A
4. Measure to determine how much longer one object is than another, expressing the length difference in terms of a standard length unit.	Students measure and compare length using non-standard units such as their feet, hand spans, and paper clips-and they compare and order objects according to size.	*AfterSchool KidzMath* Story Guides: Primary *How Big is a Foot?* Activity 2, "Is It Longer?" p. 7 *Inch by Inch* Activity 2, " Giant Caterpillars," p. 7
Relate Addition and Subtraction to Length		
5. Use addition and subtraction within 100 to solve word problems involving lengths that are given in the same units, e.g., by using drawings (such as drawings of rulers) and equations with a symbol for the unknown number to represent the problem.	N/A	N/A
6. Represent whole numbers as lengths from 0 on a number line diagram with equally spaced points corresponding to the numbers 0, 1, 2, ..., and represent whole-number sums and differences within 100 on a number line diagram.	N/A	N/A
Work with Time and Money		
7. Tell and write time from analog and digital clocks to the nearest five minutes, using a.m. and p.m.	N/A	N/A

AfterSchool KidzMath™ Correlated to the Common Core Standards for Mathematics

Grade 2		
Grade-Level Expectations	**Application in *AfterSchool KidzMath***	**Examples**
8. Solve word problems involving dollar bills, quarters, dimes, nickels, and pennies, using $ and ¢ symbols appropriately. Example: If you have 2 dimes and 3 pennies, how many cents do you have?	N/A	N/A
Represent and Interpret Data		
9. Generate measurement data by measuring lengths of several objects to the nearest whole unit, or by making repeated measurements of the same object. Show the measurements by making a line plot, where the horizontal scale is marked off in whole-number units.	N/A	N/A
10. Draw a picture graph and a bar graph (with single-unit scale) to represent a data set with up to four categories. Solve simple put-together, take-apart, and compare problems using information presented in a bar graph.	Students organize and interpret data after tasting three different types of cookies and then graphing which ones they liked the best.	*AfterSchool KidzMath* Story Guides: Primary *The Doorbell Rang* Activity 3, "Cookie Taste Test," p. 10
Geometry		

AfterSchool KidzMath[TM] Correlated to the Common Core Standards for Mathematics

Grade 2		
Grade-Level Expectations	**Application in *AfterSchool KidzMath***	**Examples**
Reason with shapes and their attributes		
1. Recognize and draw shapes having specified attributes, such as a given number of angles or a given number of equal faces.[1] Identify triangles, quadrilaterals, pentagons, hexagons, and cubes.	Students play a guessing game by feeling, identifying, and learning the names of shapes hidden in a paper bag. They also use colorful tangram pieces to identify and count edges, angles, and vertices.	*AfterSchool KidzMath* Story Guides: Primary *Grandfather Tang's Story* Activity 1, "Animal Tangram Puzzles," p. 5 Activity 2, "Copycat," p. 15 *Seven Blind Mice* Activity 1, "Shape In a Bag," p. 4 Activity 2, "Guess My Shape," p. 7 Activity 3, "Draw it from My Point of View!" p. 10
2. Partition a rectangle into rows and columns of same-size squares and count to find the total number of them.	N/A	N/A
3. Partition circles and rectangles into two, three, or four equal shares, describe the shares using the words halves, thirds, half of, a third of, etc., and describe the whole as two halves, three thirds, four fourths. Recognize that equal shares of identical wholes need not have the same shape.	This concept is formally introduced in grades 3.	N/A

AfterSchool KidzMath^TM Correlated to the Common Core Standards for Mathematics

The following references are examples from the AfterSchool KidzMath program from Developmental Studies Center that align to the Common Core Standards for Mathematics for K-6. This correlation is intended to illustrate the program's approach to these standards. (TM = Teacher's Manual)

<table>
<tr><td colspan="3" align="center">Grade 3</td></tr>
<tr><td align="center">Grade-Level Expectations</td><td align="center">Application in AfterSchool KidzMath</td><td align="center">Examples</td></tr>
<tr><td colspan="3" align="center">Operations & Algebraic Thinking</td></tr>
<tr><td colspan="3" align="center">Represent a Solve Problems Involving Multiplication and Division</td></tr>
<tr>
<td>20. Interpret products of whole numbers, e.g., interpret 5 × 7 as the total number of objects in 5 groups of 7 objects each. For example, describe a context in which a total number of objects can be expressed as 5 × 7.</td>
<td>Students use multiplication games and activities to interpret products of whole numbers.</td>
<td>AfterSchool KidzMath Games: Intermediate Leader's Guide
"Rectango," p. 47
"Multiplication Basketball," p. 59
"Multiplication Bowling," p. 65
"Multiplication Uncovered," p. 71
"Multiplication Baseball," p. 77
"Multiple Moves," p. 83

AfterSchool KidzMath Story Guides: Intermediate
The King's Chessboard
Activity 1, "Silly Story Telling," p. 4

First Day in Grapes
Activity 1, "Calendar Magic," p. 4
Activity 3, "Birthday Calculator," p. 15</td>
</tr>
<tr>
<td>21. Interpret whole-number quotients of whole numbers, e.g., interpret 56 ÷ 8 as the number of objects in each share when 56 objects are partitioned equally into 8 shares, or as a number of shares when 56 objects are partitioned into equal shares of 8 objects each. For example, describe a context in which a number of shares or a number of groups can be expressed as 56 ÷ 8.</td>
<td>Students play division games to interpret whole-number quotients of whole numbers.</td>
<td>AfterSchool KidzMath Games: Intermediate Leader's Guide
"Ant Hill Picnic," p. 41
"Lonely Acres," p. 53
"The Leader Says Divide," p. 107
"Disappearing Pyramid," p. 131

AfterSchool KidzMath Story Guides: Intermediate
The King's Chessboard
Activity 2, "Cooking Rice," p. 7
Activity 3, "Grow That Pattern!" p. 10</td>
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AfterSchool KidzMath^{TM} Correlated to the Common Core Standards for Mathematics

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<tr>
<td>22. Use multiplication and division within 100 to solve word problems in situations involving equal groups, arrays, and measurement quantities, e.g., by using drawings and equations with a symbol for the unknown number to represent the problem.</td>
<td>In AfterSchool KidzMath, students use multiplication and division games to solve word problems.</td>
<td>AfterSchool KidzMath Games: Intermediate
Leader's Guide
"Rectango," p. 47
"Multiplication Basketball," p. 59
"Multiplication Bowling," p. 65
"Multiplication Uncovered," p. 71
"Multiplication Baseball," p. 77
"Multiple Moves," p. 83
"Ant Hill Picnic," p. 41
"Lonely Acres," p. 53
"The Leader Says Divide," p. 107
"Disappearing Pyramid," p. 131

AfterSchool KidzMath Story Guides: Intermediate
Once Upon a Dime
Activity 2, "Farm Fact Trivia," p. 7

The King's Chessboard
Activity 2, "Cooking Rice," p. 7
Activity 3, "Grow That Pattern!" p. 10

First Day in Grapes
Activity 3, "Birthday Calculator," p. 15</td>
</tr>
<tr>
<td>23. Determine the unknown whole number in a multiplication or division equation relating three whole numbers. For example, determine the unknown number that makes the equation true in each of the equations 8 × ? = 48, 5 = _ ÷ 3, 6 × 6 = ?</td>
<td>Students are able to solve multiplication and division problems relating three whole numbers.</td>
<td>AfterSchool KidzMath Games: Intermediate
Leader's Guide
"Target," p. 125
"Disappearing Pyramid," p. 131
"Stadium Tour USA," p. 137</td>
</tr>
<tr><td colspan="3" align="center">Understand Properties of Multiplication and the Relationship Between Multiplication and Division</td></tr>
</table>

AfterSchool KidzMath^{TM} Correlated to the Common Core Standards for Mathematics

Grade 3		
Grade-Level Expectations	**Application in *AfterSchool KidzMath***	**Examples**
24. Apply properties of operations as strategies to multiply and divide.[2] *Examples: If 6 × 4 = 24 is known, then 4 × 6 = 24 is also known. (Commutative property of multiplication.) 3 × 5 × 2 can be found by 3 × 5 = 15, then 15 × 2 = 30, or by 5 × 2 = 10, then 3 × 10 = 30. (Associative property of multiplication.) Knowing that 8 × 5 = 40 and 8 × 2 = 16, one can find 8 × 7 as 8 × (5 + 2) = (8 × 5) + (8 × 2) = 40 + 16 = 56. (Distributive property.)*	N/A	N/A
25. Understand division as an unknown-factor problem. *For example, find 32 ÷ 8 by finding the number that makes 32 when multiplied by 8.*	Students discuss ways they found the correct answer in division problems.	*AfterSchool KidzMath* Games: Intermediate *Leader's Guide* "The Leader Says Divide," p. 107 *AfterSchool KidzMath* Story Guides: Intermediate *The King's Chessboard* Activity 2, "Cooking Rice," p. 7 Activity 3, "Grow That Pattern!" p. 10
Multiply and Divide Within 100		

AfterSchool KidzMath^{TM} Correlated to the Common Core Standards for Mathematics

Grade 3		
Grade-Level Expectations	**Application in *AfterSchool KidzMath***	**Examples**
26. Fluently multiply and divide within 100, using strategies such as the relationship between multiplication and division (e.g., knowing that 8 × 5 = 40, one knows 40 ÷ 5 = 8) or properties of operations. By the end of Grade 3, know from memory all products of two one-digit numbers.	Students play many games that allow them to practice multiplication and division skills. The games encourage students to use mental math strategies to solve multiplication and division problems up to 100.	*AfterSchool KidzMath* Games: Intermediate *Leader's Guide* "Rectango," p. 47 "Multiplication Basketball," p. 59 "Multiplication Bowling," p. 65 "Multiplication Uncovered," p. 71 "Multiplication Baseball," p. 77 "Multiple Moves," p. 83 "Ant Hill Picnic," p. 41 "Lonely Acres," p. 53 "The Leader Says Divide," p. 107 "Disappearing Pyramid," p. 131 *AfterSchool KidzMath* Story Guides: Intermediate *The King's Chessboard* Activity 2, "Cooking Rice," p. 7 Activity 3, "Grow That Pattern!" p. 10 *Once Upon a Dime* Activity 2, "Farm Fact Trivia," p. 7 *First Day in Grapes* Activity 1, "Calendar Magic," p. 4 Activity 3, "Birthday Calculator," p. 15
Solve Problems Involving the Four Operations, and Identify and Explain Patterns in Arithmetic		
27. Solve two-step word problems using the four operations. Represent these problems using equations with a letter standing for the unknown quantity. Assess the reasonableness of answers using mental computation and estimation strategies including rounding.	N/A	N/A

AfterSchool KidzMath^{TM} Correlated to the Common Core Standards for Mathematics

Grade 3		
Grade-Level Expectations	**Application in *AfterSchool KidzMath***	**Examples**
28. Identify arithmetic patterns (including patterns in the addition table or multiplication table), and explain them using properties of operations. *For example, observe that 4 times a number is always even, and explain why 4 times a number can be decomposed into two equal addends.*	Students use multiplication tables to solve multiplication problems. Using these tables allows students to recognize number patterns in multiplication.	*AfterSchool KidzMath* Games: Intermediate *Leader's Guide* "Multiplication Uncovered," p. 71 *AfterSchool KidzMath* Story Guides: Intermediate *First Day in Grapes* Activity 1, "Calendar Magic," p. 4
Number & Operations in Base Ten		
Use place value understanding and properties of operations to perform multi-digit arithmetic		
12. Use place value understanding to round whole numbers to the nearest 10 or 100.	In *AfterSchool KidzMath* students recognize place value and can use this information to determine how to round numbers to the nearest 10 or 100.	*AfterSchool KidzMath* Games: Intermediate *Leader's Guide* "Number Detective," p. 33 *AfterSchool KidzMath* Story Guides: Intermediate *Can You Count to a Googol?* Activity 1, "Big Number Run," p. 5 Activity 2, "Make an Abacus," p. 9 Activity 3, "Use an Abacus," p. 14
13. Fluently add and subtract within 1000 using strategies and algorithms based on place value, properties of operations, and/or the relationship between addition and subtraction.	Students add and subtract within 1000 using a variety of strategies.	*AfterSchool KidzMath* Games: Intermediate *Leader's Guide* "Save $10.00," p. 3 "Spinning for Dollars," p. 9 "Flick," p. 15 "Bounce Back", p. 21 *AfterSchool KidzMath* Story Guides: Intermediate *Once Upon a Dime* Activity 1, "Coin Rubbing Farm," p. 4 Activity 2, "Farm Fact Trivia," p. 7

AfterSchool KidzMath^{TM} Correlated to the Common Core Standards for Mathematics

Grade 3		
Grade-Level Expectations	**Application in *AfterSchool KidzMath***	**Examples**
14. Multiply one-digit whole numbers by multiples of 10 in the range 10–90 (e.g., 9 × 80, 5 × 60) using strategies based on place value and properties of operations.	Students multiply one-digit numbers by 25 and 50 in the context of money.	*AfterSchool KidzMath* Games: Intermediate *Leader's Guide* "Spinning for Dollars," p. 9 *AfterSchool KidzMath* Story Guides: Intermediate First Day in Grapes Activity 1, "Calendar Magic," p. 4
Number & Operations-Fractions		
Develop understanding of fractions as numbers		
1. Understand a fraction 1/*b* as the quantity formed by 1 part when *a* whole is partitioned into *b* equal parts; understand a fraction *a/b* as the quantity formed by a parts of size 1/*b*.	Students create fractions with a group of objects. They learn that fractions show part of a whole or part of a group by telling the number of equal parts in the whole and the number of parts being described.	*AfterSchool KidzMath* Games: Intermediate *Leader's Guide* "Flip Your Lid," p. 153 *AfterSchool KidzMath* Story Guides: Intermediate *Shota and the Star Quilt* Activity 2, "Fraction Quilt Stars," p. 9

AfterSchool KidzMath^{TM} Correlated to the Common Core Standards for Mathematics

Grade 3		
Grade-Level Expectations	**Application in *AfterSchool KidzMath***	**Examples**

2. Understand a fraction as a number on the number line; represent fractions on a number line diagram.
 	
    a. Represent a fraction 1/*b* on a number line diagram by defining the interval from 0 to 1 as the whole and partitioning it into *b* equal parts. Recognize that each part has size 1/*b* and that the endpoint of the part based at 0 locates the number 1/*b* on the number line.
    b. Represent a fraction *a/b* on a number line diagram by marking off a lengths 1/*b* from 0. Recognize that the resulting interval has size *a/b* and that its endpoint locates the number *a/b* on the number line.
	N/A	N/A

AfterSchool KidzMath^{TM} Correlated to the Common Core Standards for Mathematics

Grade 3		
Grade-Level Expectations	**Application in *AfterSchool KidzMath***	**Examples**
3. Explain equivalence of fractions in special cases, and compare fractions by reasoning about their size. a. Understand two fractions as equivalent (equal) if they are the same size, or the same point on a number line. b. Recognize and generate simple equivalent fractions, e.g., 1/2 = 2/4, 4/6 = 2/3). Explain why the fractions are equivalent, e.g., by using a visual fraction model. c. Express whole numbers as fractions, and recognize fractions that are equivalent to whole numbers. *Examples: Express 3 in the form 3 = 3/1; recognize that 6/1 = 6; locate 4/4 and 1 at the same point of a number line diagram.* d. Compare two fractions with the same numerator or the same denominator by reasoning about their size. Recognize that comparisons are valid only when the two fractions refer to the same whole. Record the results of comparisons with the symbols >, =, or <, and justify the conclusions, e.g., by using a visual fraction model.	Students understand and identify equivalent fractions and equivalent forms of fractions.	*AfterSchool KidzMath* Games: Intermediate *Leader's Guide* "Flip Your Lid," p. 153 "Wacky Cakes," p. 157 *AfterSchool KidzMath* Story Guides: Intermediate *Shota and the Star Quilt* Activity 2, "Fraction Quilt Stars," p. 9
Measurement & Data		
Solve problems involving measurement and estimation of intervals of time, liquid volumes, and masses of objects		

AfterSchool KidzMath[TM] Correlated to the Common Core Standards for Mathematics

	Grade 3		
	Grade-Level Expectations	**Application in *AfterSchool KidzMath***	**Examples**
7.	Tell and write time to the nearest minute and measure time intervals in minutes. Solve word problems involving addition and subtraction of time intervals in minutes, e.g., by representing the problem on a number line diagram.	N/A	N/A
8.	Measure and estimate liquid volumes and masses of objects using standard units of grams (g), kilograms (kg), and liters (l).[1] Add, subtract, multiply, or divide to solve one-step word problems involving masses or volumes that are given in the same units, e.g., by using drawings (such as a beaker with a measurement scale) to represent the problem.	N/A	N/A
	Represent and Interpret Data		
9.	Draw a scaled picture graph and a scaled bar graph to represent a data set with several categories. Solve one- and two-step "how many more" and "how many less" problems using information presented in scaled bar graphs. *For example, draw a bar graph in which each square in the bar graph might represent 5 pets.*	N/A	N/A
10.	Generate measurement data by measuring lengths using rulers marked with halves and fourths of an inch. Show the data by making a line plot, where the horizontal scale is marked off in appropriate units— whole numbers, halves, or quarters.	Students measure in inches to make a quilt, make meter tapes and measure the distances paper airplanes fly across the room. They make rulers by folding a twelve-inch paper strip into twelve equal parts and marking the inches, and measure and design their own furniture for a catalog they're putting together.	*AfterSchool KidzMath* Story Guides: Intermediate *Shota and the Star Quilt* Activity 1, "Paper Quilt Stars," p. 4 Activity 3, "Quilt Square Connection," p. 14 *Fly High! The Story of Bessie Coleman,* Activity 1, "Tapes and Planes," p. 5 Activity 2, "Airplane #1," p. 9 Activity 3, "Airplane #2," p. 15 *My Very Own Room/Mi propio cuartito* Activity 1, "My Very Own Ruler," p. 4 Activity 2, "Catalog Pages," p. 8 Activity 3, "Design Your Own Room," p. 13

AfterSchool KidzMath^{TM} Correlated to the Common Core Standards for Mathematics

Grade 3		
Grade-Level Expectations	**Application in *AfterSchool KidzMath***	**Examples**
Geometric measurement: understand concepts of area and relate area to multiplication and to addition		
11. Recognize area as an attribute of plane figures and understand concepts of area measurement. a. A square with side length 1 unit, called "a unit square," is said to have "one square unit" of area, and can be used to measure area. b. A plane figure which can be covered without gaps or overlaps by *n* unit squares is said to have an area of *n* square units.	Students explore perimeter and area by designing rooms and furniture.	*AfterSchool KidzMath* Story Guides: Intermediate *My Very Own Room* Activity 2, "Catalog Pages," p. 8 Activity 3, "Design Your Own Room," p. 13
12. Measure areas by counting unit squares (square cm, square m, square in, square ft, and improvised units).	Students explore perimeter and area by designing rooms and furniture.	*AfterSchool KidzMath* Story Guides: Intermediate *My Very Own Room* Activity 2, "Catalog Pages," p. 8 Activity 3, "Design Your Own Room," p. 13

AfterSchool KidzMath^{TM} Correlated to the Common Core Standards for Mathematics

Grade 3		
Grade-Level Expectations	**Application in *AfterSchool KidzMath***	**Examples**

13. Relate area to the operations of multiplication and addition.
 	
   a. Find the area of a rectangle with whole-number side lengths by tiling it, and show that the area is the same as would be found by multiplying the side lengths.
   b. Multiply side lengths to find areas of rectangles with whole-number side lengths in the context of solving real world and mathematical problems, and represent whole-number products as rectangular areas in mathematical reasoning.
   c. Use tiling to show in a concrete case that the area of a rectangle with whole-number side lengths a and $b + c$ is the sum of $a \times b$ and $a \times c$. Use area models to represent the distributive property in mathematical reasoning.
   d. Recognize area as additive. Find areas of rectilinear figures by decomposing them into non-overlapping rectangles and adding the areas of the non-overlapping parts, applying this technique to solve real world problems.
	Students explore perimeter and area by designing rooms and furniture.	*AfterSchool KidzMath* Story Guides: Intermediate
		My Very Own Room
		Activity 2, "Catalog Pages," p. 8
		Activity 3, "Design Your Own Room," p. 13

Geometric measurement: recognize perimeter as an attribute of plane figures and distinguish between linear and area measures		
14. Solve real world and mathematical problems involving perimeters of polygons, including finding the perimeter given the side lengths, finding an unknown side length, and exhibiting rectangles with the same perimeter and different areas or with the same area and different perimeters.	Students develop precise ways of describing two- and three- dimensional shapes, and explore perimeter and area. They also apply geometric ideas to the real world.	*AfterSchool KidzMath* Story Guides: Intermediate *My Very Own Room* Activity 2, "Catalog Pages," p. 8 Activity 3, "Design Your Own Room," p. 13
Geometry		

AfterSchool KidzMath^{TM} Correlated to the Common Core Standards for Mathematics

Grade 3		
Grade-Level Expectations	**Application in *AfterSchool KidzMath***	**Examples**
Reason with shapes and their attributes		
1. Understand that shapes in different categories (e.g., rhombuses, rectangles, and others) may share attributes (e.g., having four sides), and that the shared attributes can define a larger category (e.g., quadrilaterals). Recognize rhombuses, rectangles, and squares as examples of quadrilaterals, and draw examples of quadrilaterals that do not belong to any of these subcategories.	Students analyze the attributes of geometric figures and analyze transformations of these. Using tangram pieces, partners explore, recognize, and analyze shapes and their attributes, and practice flipping, sliding, and rotating geometric shapes.	*AfterSchool KidzMath* Story Guides: Intermediate *The Warlord's Puzzle* Activity 1, "Piece it Together," p. 4 Activity 2, "Outline Mystery Puzzles," p. 7 Activity 3, "Shape Throw," p. 11
2. Partition shapes into parts with equal areas. Express the area of each part as a unit fraction of the whole. *For example, partition a shape into 4 parts with equal area, and describe the area of each part as 1/4 of the area of the shape.*	In *AfterSchool KidzMath*, students find equivalent fractions and are able to identify the part and the whole of an object.	*AfterSchool KidzMath* Games: Intermediate *Leader's Guide* "Wacky Cakes," p. 157 *AfterSchool KidzMath* Story Guides: Intermediate *Shota and the Star Quilt* Activity 2, "Fraction Quilt Stars," p. 9

AfterSchool KidzMath^{TM} Correlated to the Common Core Standards for Mathematics

The following references are examples from the AfterSchool KidzMath program from Developmental Studies Center that align to the Common Core Standards for Mathematics for K-6. This correlation is intended to illustrate the program's approach to these standards. (TM = Teacher's Manual)

Grade 4		
Grade-Level Expectations	**Application in *AfterSchool KidzMath***	**Examples**
Operations & Algebraic Thinking		
Use the four operations with whole numbers to solve problems		
29. Interpret a multiplication equation as a comparison, e.g., interpret 35 = 5 × 7 as a statement that 35 is 5 times as many as 7 and 7 times as many as 5. Represent verbal statements of multiplicative comparisons as multiplication equations.		*AfterSchool KidzMath* Games: Intermediate *Leader's Guide* "Rectango", p. 47
30. Multiply or divide to solve word problems involving multiplicative comparison, e.g., by using drawings and equations with a symbol for the unknown number to represent the problem, distinguishing multiplicative comparison from additive comparison.	Students solve word problems involving multiplication and division. They use drawings and equations to represent the problem and show their solution to the problem .	*AfterSchool KidzMath* Story Guides: Intermediate *Once Upon a Dime* Activity 2, " Farm Fact Trivia," p. 7 *First Day in Grapes* Activity 3, "Birthday Calculator," p. 15
31. Solve multistep word problems posed with whole numbers and having whole-number answers using the four operations, including problems in which remainders must be interpreted. Represent these problems using equations with a letter standing for the unknown quantity. Assess the reasonableness of answers using mental computation and estimation strategies including rounding.	Students use addition, subtraction, multiplication, and division to solve multistep equations.	*AfterSchool KidzMath* Games: Intermediate *Leader's Guide* "Target," p. 125 "Disappearing Pyramid," p. 131 "Stadium Tour USA," p. 137 "Equapardy," p. 143 *AfterSchool KidzMath* Story Guides: Intermediate *First Day in Grapes* Activity 3, "Birthday Calculator," p. 15
Gain familiarity with factors and multiples		
32. Find all factor pairs for a whole number in the range 1–100. Recognize that a whole number is a multiple of each of its factors. Determine whether a given whole number in the range 1–100 is a multiple of a given one-digit number. Determine whether a given whole number in the range 1–100 is prime or composite.	Students practice finding factor pairs for whole numbers from 1-100.	*AfterSchool KidzMath* Games: Intermediate *Leader's Guide* "Forehead Factors," p. 101 "Spin Spot," p. 119

AfterSchool KidzMath^{TM} Correlated to the Common Core Standards for Mathematics

Grade 4		
Grade-Level Expectations	**Application in *AfterSchool KidzMath***	**Examples**
Generate and analyze patterns		
33. Generate a number or shape pattern that follows a given rule. Identify apparent features of the pattern that were not explicit in the rule itself. *For example, given the rule "Add 3" and the starting number 1, generate terms in the resulting sequence and observe that the terms appear to alternate between odd and even numbers. Explain informally why the numbers will continue to alternate in this way.*	Students begin to recognize number patterns by following number rules. Students build an understanding of attributes such as, *odd/even, multiples,* and *digits.*	*AfterSchool KidzMath* Games: Intermediate *Leader's Guide* "What's My Rule?" P. 27 "Number Detective," p. 33
Number & Operations in Base Ten		
Generalize place value understanding for multi-digit whole numbers		
15. Recognize that in a multi-digit whole number, a digit in one place represents ten times what it represents in the place to its right. *For example, recognize that 700 ÷ 70 = 10 by applying concepts of place value and division.*	Students practice using mental math by adding and subtracting multiples of 10 and 100. They also learn how to use digit and place value concepts in numbers.	*AfterSchool KidzMath* Games: Intermediate *Leader's Guide* "Flick," p. 15 "Bounce Back," p. 21 "What's My Rule?" P. 27 "Number Detective," p. 33 *AfterSchool KidzMath* Story Guides: Intermediate *Can You Count to a Googol?* Activity 1, "Big Number Run," p. 5 Activity 2, "Make an Abacus," p. 9 Activity 3, "Use an Abacus," p. 14

AfterSchool KidzMath^{TM} Correlated to the Common Core Standards for Mathematics

Grade 4		
Grade-Level Expectations	**Application in *AfterSchool KidzMath***	**Examples**
16. Read and write multi-digit whole numbers using base-ten numerals, number names, and expanded form. Compare two multi-digit numbers based on meanings of the digits in each place, using >, =, and < symbols to record the results of comparisons.	Students use two- and three- digit numbers and practice subtracting multiples of 10 and multiples of 100. Understanding place value allows students to compare multi-digit numbers, by telling if the numbers are greater than, less than, or equal to a specific number.	*AfterSchool KidzMath* Games: Intermediate *Leader's Guide* "Flick," p. 15 "Bounce Back," p. 21 "What's My Rule?" P. 27 "Number Detective," p. 33 *AfterSchool KidzMath* Story Guides: Intermediate *Can You Count to a Googol?* Activity 1, "Big Number Run," p. 5 Activity 2, "Make an Abacus," p. 9 Activity 3, "Use an Abacus," p. 14
17. Use place value understanding to round multi-digit whole numbers to any place.	N/A	N/A
Use place value understanding and properties of operations to perform multi-digit arithmetic		
18. Fluently add and subtract multi-digit whole numbers using the standard algorithm.	Students are encouraged to use mental math when adding and subtracting multi-digit numbers.	*AfterSchool KidzMath* Games: Intermediate *Leader's Guide* "Save $10.00," p. 3 "Spinning for Dollars," p. 9 "Flick," p. 15 "Bounce Back," p. 21 *AfterSchool KidzMath* Story Guides: Intermediate *Can You Count to a Googol?* Activity 1, "Coin Rubbing Farm" *Marvelous Math* Activity 2, "30-Second Olympics," p. 10

AfterSchool KidzMath^{TM} Correlated to the Common Core Standards for Mathematics

Grade 4		
Grade-Level Expectations	**Application in *AfterSchool KidzMath***	**Examples**
19. Multiply a whole number of up to four digits by a one-digit whole number, and multiply two two-digit numbers, using strategies based on place value and the properties of operations. Illustrate and explain the calculation by using equations, rectangular arrays, and/or area models.	Students practice multiplying multi-digit numbers by single-digit numbers.	*AfterSchool KidzMath* Games: Intermediate *Leader's Guide* "Rectango," p. 47 "Multiplication Basketball," p. 59 "Multiplication Bowling," p. 65 "Multiplication Uncovered," p. 71 "Multiplication Baseball," p. 77 "Multiple Moves," p. 83
20. Find whole-number quotients and remainders with up to four-digit dividends and one-digit divisors, using strategies based on place value, the properties of operations, and/or the relationship between multiplication and division. Illustrate and explain the calculation by using equations, rectangular arrays, and/or area models.	Students practice dividing multi-digit numbers by single-digit numbers.	*AfterSchool KidzMath* Games: Intermediate *Leader's Guide* "Ant Hill Picnic," p. 41 "Lonely Aces," p. 53 "The Leader Says Divide," p. 107
Number & Operations-Fractions		
Extend understanding of fraction equivalence and ordering		
1. Explain why a fraction a/b is equivalent to a fraction $(n \times a)/(n \times b)$ by using visual fraction models, with attention to how the number and size of the parts differ even though the two fractions themselves are the same size. Use this principle to recognize and generate equivalent fractions.	Students use visual models to show the part and whole of a fraction and recognize different fractions that represent the same quantity (equivalent fractions).	*AfterSchool KidzMath* Games: Intermediate *Leader's Guide* "Flip Your Lid," p. 151 "Wacky Cakes," p. 157 *AfterSchool KidzMath* Story Guides: Intermediate *Shota and the Star Quilt* Activity 2, "Fraction Quilt Stars," p. 9

AfterSchool KidzMath^{TM} Correlated to the Common Core Standards for Mathematics

Grade 4		
Grade-Level Expectations	**Application in *AfterSchool KidzMath***	**Examples**
2. Compare two fractions with different numerators and different denominators, e.g., by creating common denominators or numerators, or by comparing to a benchmark fraction such as 1/2. Recognize that comparisons are valid only when the two fractions refer to the same whole. Record the results of comparisons with symbols >, =, or <, and justify the conclusions, e.g., by using a visual fraction model.	Students compare equivalent and in- equivalent fractions.	*AfterSchool KidzMath* Games: Intermediate *Leader's Guide* "Match Pass," p. 175 "Three Hexagons," p. 181 *AfterSchool KidzMath* Story Guides: Intermediate *Shota and the Star Quilt* Activity 2, "Fraction Quilt Stars," p. 9
Build fractions from unit fractions by applying and extending previous understandings of operations on whole numbers		

AfterSchool KidzMath[TM] Correlated to the Common Core Standards for Mathematics

Grade 4		
Grade-Level Expectations	**Application in *AfterSchool KidzMath***	**Examples**

3.
 	
    Understand a fraction a/b with $a > 1$ as a sum of fractions $1/b$.
    a. Understand addition and subtraction of fractions as joining and separating parts referring to the same whole.
    b. Decompose a fraction into a sum of fractions with the same denominator in more than one way, recording each decomposition by an equation. Justify decompositions, e.g., by using a visual fraction model. *Examples: 3/8 = 1/8 + 1/8 + 1/8 ; 3/8 = 1/8 + 2/8 ; 2 1/8 = 1 + 1 + 1/8 = 8/8 + 8/8 + 1/8.*
    c. Add and subtract mixed numbers with like denominators, e.g., by replacing each mixed number with an equivalent fraction, and/or by using properties of operations and the relationship between addition and subtraction.
    d. Solve word problems involving addition and subtraction of fractions referring to the same whole and having like denominators, e.g., by using visual fraction models and equations to represent the problem.
	Students use visual tools to help them add fractions. These tools allow them to recognize different fractions that represent the same quantity and ways that fractions can be combined to make a whole.	*AfterSchool KidzMath* Games: Intermediate *Leader's Guide*
		"Wacky Cakes," p. 157

AfterSchool KidzMath[TM] Correlated to the Common Core Standards for Mathematics

Grade 4		
Grade-Level Expectations	**Application in *AfterSchool KidzMath***	**Examples**

4. Apply and extend previous understandings of multiplication to multiply a fraction by a whole number.
   a. Understand a fraction *a/b* as a multiple of 1/*b*. *For example, use a visual fraction model to represent 5/4 as the product 5 × (1/4), recording the conclusion by the equation 5/4 = 5 × (1/4).*
   b. Understand a multiple of a/b as a multiple of 1/b, and use this understanding to multiply a fraction by a whole number. *For example, use a visual fraction model to express 3 × (2/5) as 6 × (1/5), recognizing this product as 6/5. (In general, n × (a/b) = (n × a)/b.)*
   c. Solve word problems involving multiplication of a fraction by a whole number, e.g., by using visual fraction models and equations to represent the problem. *For example, if each person at a party will eat 3/8 of a pound of roast beef, and there will be 5 people at the party, how many pounds of roast beef will be needed? Between what two whole numbers does your answer lie?*
	N/A	N/A

Understand decimal notation for fractions, and compare decimal fractions		
5. Express a fraction with denominator 10 as an equivalent fraction with denominator 100, and use this technique to add two fractions with respective denominators 10 and 100.[2] *For example, express 3/10 as 30/100, and add 3/10 + 4/100 = 34/100.*	N/A	N/A

AfterSchool KidzMath^{TM} Correlated to the Common Core Standards for Mathematics

Grade 4		
Grade-Level Expectations	**Application in *AfterSchool KidzMath***	**Examples**
6. Use decimal notation for fractions with denominators 10 or 100. *For example, rewrite 0.62 as 62/100; describe a length as 0.62 meters; locate 0.62 on a number line diagram.*	Students use a tenths and hundredths grid to help them understand the meaning and value of decimal numbers.	"Fill 'Em Up," p. 163
7. Compare two decimals to hundredths by reasoning about their size. Recognize that comparisons are valid only when the two decimals refer to the same whole. Record the results of comparisons with the symbols >, =, or <, and justify the conclusions, e.g., by using a visual model.	N/A	N/A
Measurement & Data		
Solve problems involving measurement and conversion of measurements from a larger unit to a smaller unit		
1. Know relative sizes of measurement units within one system of units including km, m, cm; kg, g; lb, oz.; l, ml; hr, min, sec. Within a single system of measurement, express measurements in a larger unit in terms of a smaller unit. Record measurement equivalents in a two-column table. *For example, know that 1 ft is 12 times as long as 1 in. Express the length of a 4 ft snake as 48 in. Generate a conversion table for feet and inches listing the number pairs (1, 12), (2, 24), (3, 36), ...*	Students learn different units of measurements within the metric system and learn how to convert meters to centimeters and centimeters to meters. .	*AfterSchool KidzMath* Story Guides: Intermediate *Shota and the Star Quilt* Activity 1, "Paper Quilt Squares," p. 4 Activity 3, "Quilt Square Connection," p. 14 *Fly High! The Story of Bessie Coleman* Activity 1, "Tapes and Planes," p. 5 Activity 2, "Airplane #1," p. 9 Activity 3, "Airplane #2, " p. 15 *My Very Own Room/Mi propio cuartito* Activity 1, "My Very Own Ruler," p. 4 Activity 3, "Design Your Own Room," p. 13

AfterSchool KidzMath^{TM} Correlated to the Common Core Standards for Mathematics

Grade 4		
Grade-Level Expectations	**Application in *AfterSchool KidzMath***	**Examples**
2. Use the four operations to solve word problems involving distances, intervals of time, liquid volumes, masses of objects, and money, including problems involving simple fractions or decimals, and problems that require expressing measurements given in a larger unit in terms of a smaller unit. Represent measurement quantities using diagrams such as number line diagrams that feature a measurement scale.	N/A	N/A
3. Apply the area and perimeter formulas for rectangles in real world and mathematical problems. *For example, find the width of a rectangular room given the area of the flooring and the length, by viewing the area formula as a multiplication equation with an unknown factor.*	Students explore perimeter and area of rectangles and squares by designing their own rooms and furniture.	*My Very Own Room* Activity 2, "Catalog Pages," p. 8 Activity 3, "Design Your Own Room," p. 13
Represent and interpret data		
4. Make a line plot to display a data set of measurements in fractions of a unit (1/2, 1/4, 1/8). Solve problems involving addition and subtraction of fractions by using information presented in line plots. *For example, from a line plot find and interpret the difference in length between the longest and shortest specimens in an insect collection.*	N/A	N/A
Geometric measurement: understand concepts of angle and measure angles		

AfterSchool KidzMath^TM Correlated to the Common Core Standards for Mathematics

Grade 4		
Grade-Level Expectations	**Application in *AfterSchool KidzMath***	**Examples**

5. Recognize angles as geometric shapes that are formed wherever two rays share a common endpoint, and understand concepts of angle measurement:
    a. An angle is measured with reference to a circle with its center at the common endpoint of the rays, by considering the fraction of the circular arc between the points where the two rays intersect the circle. An angle that turns through 1/360 of a circle is called a "one-degree angle," and can be used to measure angles.
    b. An angle that turns through *n* one-degree angles is said to have an angle measure of *n* degrees.
	N/A	N/A

6. Measure angles in whole-number degrees using a protractor. Sketch angles of specified measure.	N/A	N/A
7. Recognize angle measure as additive. When an angle is decomposed into non-overlapping parts, the angle measure of the whole is the sum of the angle measures of the parts. Solve addition and subtraction problems to find unknown angles on a diagram in real world and mathematical problems, e.g., by using an equation with a symbol for the unknown angle measure.	N/A	N/A
Geometry		
Draw and identify lines and angles, and classify shapes by properties of their lines and angles		
1. Draw points, lines, line segments, rays, angles (right, acute, obtuse), and perpendicular and parallel lines. Identify these in two-dimensional figures.	N/A	N/A

AfterSchool KidzMath^{TM} Correlated to the Common Core Standards for Mathematics

Grade 4		
Grade-Level Expectations	**Application in *AfterSchool KidzMath***	**Examples**
2. Classify two-dimensional figures based on the presence or absence of parallel or perpendicular lines, or the presence or absence of angles of a specified size. Recognize right triangles as a category, and identify right triangles.	Students analyze the attributes of geometric figures and analyze transformations of these figures after reading the story. Using tangram pieces, partners explore, recognize, and analyze shapes and their attributes, and practice flipping, sliding, and rotating geometric shapes (oval, parallelogram, pentagon, rectangle, trapezoid, etc.).	*AfterSchool KidzMath* Story Guides: Intermediate *The Warlord's Puzzle* Activity 3, "Shape Throw," p. 11
3. Recognize a line of symmetry for a two-dimensional figure as a line across the figure such that the figure can be folded along the line into matching parts. Identify line-symmetric figures and draw lines of symmetry.	N/A	N/A

AfterSchool KidzMath^{TM} Correlated to the Common Core Standards for Mathematics

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Grade 5		
Grade-Level Expectations	**Application in *AfterSchool KidzMath***	**Examples**
Operations & Algebraic Thinking		
Write and interpret numerical expressions		
34. Use parentheses, brackets, or braces in numerical expressions, and evaluate expressions with these symbols.	N/A	N/A
35. Write simple expressions that record calculations with numbers, and interpret numerical expressions without evaluating them. *For example, express the calculation "add 8 and 7, then multiply by 2" as 2 × (8 + 7). Recognize that 3 × (18932 + 921) is three times as large as 18932 + 921, without having to calculate the indicated sum or product.*	N/A	N/A
Analyze patterns and relationships		
36. Generate two numerical patterns using two given rules. Identify apparent relationships between corresponding terms. Form ordered pairs consisting of corresponding terms from the two patterns, and graph the ordered pairs on a coordinate plane. *For example, given the rule "Add 3" and the starting number 0, and given the rule "Add 6" and the starting number 0, generate terms in the resulting sequences, and observe that the terms in one sequence are twice the corresponding terms in the other sequence. Explain informally why this is so.*	Students follow the rules to create numerical patters. Students build an understanding of attributes such as *odd/even, multiples,* and *digits.*	*AfterSchool KidzMath* Games: Intermediate *Leader's Guide* "What's My Rule," p. 27
Number & Operations in Base Ten		
Understand the place value system		

AfterSchool KidzMath[TM] Correlated to the Common Core Standards for Mathematics

Grade 5		
Grade-Level Expectations	**Application in *AfterSchool KidzMath***	**Examples**
21. Recognize that in a multi-digit number, a digit in one place represents 10 times as much as it represents in the place to its right and 1/10 of what it represents in the place to its left.	Students learn digit and place value concepts. Students use visual models to understand the meaning and value of decimal numbers.	*AfterSchool KidzMath* Games: Intermediate *Leader's Guide* "Number Detective," p. 33 "Fill 'Em Up," p. 163 *AfterSchool KidzMath* Story Guides: Intermediate *Can You Count to a Googol?* Activity 1, "Big Number Run," p. 5 Activity 2, "Make an Abacus," p. 9 Activity 3, "Use an Abacus," p. 14
22. Explain patterns in the number of zeros of the product when multiplying a number by powers of 10, and explain patterns in the placement of the decimal point when a decimal is multiplied or divided by a power of 10. Use whole-number exponents to denote powers of 10.	N/A	N/A

23. Read, write, and compare decimals to thousandths.
  a. Read and write decimals to thousandths using base-ten numerals, number names, and expanded form, e.g., 347.392 = 3 × 100 + 4 × 10 + 7 × 1 + 3 × (1/10) + 9 × (1/100) + 2 × (1/1000).
  b. Compare two decimals to thousandths based on meanings of the digits in each place, using >, =, and < symbols to record the results of comparisons.
	Students use visual models to understand the meaning and value of decimals.	*AfterSchool KidzMath* Games: Intermediate *Leader's Guide* "Fill 'Em Up, p. 163"

24. Use place value understanding to round decimals to any place.	N/A	N/A
Perform operations with multi-digit whole numbers and with decimals to hundredths		

AfterSchool KidzMath^{TM} Correlated to the Common Core Standards for Mathematics

	Grade 5		
	Grade-Level Expectations	**Application in *AfterSchool KidzMath***	**Examples**
25.	Fluently multiply multi-digit whole numbers using the standard algorithm.	Students practice and master solving multi-digit multiplication problems.	*AfterSchool KidzMath* Games: Intermediate *Leader's Guide* "Rectango," p. 47 "Multiplication Basketball," p. 59 "Multiplication Bowling," p. 65 "Multiplication Uncovered," p. 71 "Multiplication Baseball," p. 77 "Multiple Moves," p. 83 *AfterSchool KidzMath* Story Guides: Intermediate *First Day in Grapes* Activity 1, "Calendar Magic," p. 4
26.	Find whole-number quotients of whole numbers with up to four-digit dividends and two-digit divisors, using strategies based on place value, the properties of operations, and/or the relationship between multiplication and division. Illustrate and explain the calculation by using equations, rectangular arrays, and/or area models.	Through practice students master solving multi-digit division problems and begin to see the relationship between multiplication and division and are able to explain calculations using equations and visual models.	"The Leader Says Divide," p. 107 "Disappearing Pyramid," p. 131 "Stadium Tour USA," p. 137 "Equapardy," p. 143 *AfterSchool KidzMath* Story Guides: Intermediate Activity 2, "Farm Fact Trivia," p. 7
27.	Add, subtract, multiply, and divide decimals to hundredths, using concrete models or drawings and strategies based on place value, properties of operations, and/or the relationship between addition and subtraction; relate the strategy to a written method and explain the reasoning used.	Students use a tenths and hundredths grid as a visual model to represent and add decimals.	*AfterSchool KidzMath* Games: Intermediate *Leader's Guide* "Fill 'Em Up," p. 163
	Numbers & Operations-Fractions		
	Use equivalent fractions as a strategy to add and subtract fractions		
1.	Add and subtract fractions with unlike denominators (including mixed numbers) by replacing given fractions with equivalent fractions in such a way as to produce an equivalent sum or difference of fractions with like denominators. *For example, 2/3 + 5/4 = 8/12 + 15/12 = 23/12. (In general, a/b + c/d = (ad + bc)/bd.)*	Students find equivalent fractions and add fractions.	*AfterSchool KidzMath* Games: Intermediate *Leader's Guide* "Match Pass," p. 175

AfterSchool KidzMath^{TM} Correlated to the Common Core Standards for Mathematics

Grade 5		
Grade-Level Expectations	**Application in *AfterSchool KidzMath***	**Examples**
2. Solve word problems involving addition and subtraction of fractions referring to the same whole, including cases of unlike denominators, e.g., by using visual fraction models or equations to represent the problem. Use benchmark fractions and number sense of fractions to estimate mentally and assess the reasonableness of answers. *For example, recognize an incorrect result 2/5 + 1/2 = 3/7, by observing that 3/7 < 1/2.*	Students add equivalent fractions while keeping score.	*AfterSchool KidzMath* Games: Intermediate *Leader's Guide* "Match Pass," p. 175
Apply and extend previous understandings of multiplication and division to multiply and divide fractions		
3. Interpret a fraction as division of the numerator by the denominator ($a/b = a \div b$). Solve word problems involving division of whole numbers leading to answers in the form of fractions or mixed numbers, e.g., by using visual fraction models or equations to represent the problem. *For example, interpret 3/4 as the result of dividing 3 by 4, noting that 3/4 multiplied by 4 equals 3, and that when 3 wholes are shared equally among 4 people each person has a share of size 3/4. If 9 people want to share a 50-pound sack of rice equally by weight, how many pounds of rice should each person get? Between what two whole numbers does your answer lie?*	N/A	N/A

AfterSchool KidzMath^{TM} Correlated to the Common Core Standards for Mathematics

Grade 5		
Grade-Level Expectations	**Application in *AfterSchool KidzMath***	**Examples**

4. Apply and extend previous understandings of multiplication to multiply a fraction or whole number by a fraction.
  • Interpret the product $(a/b) \times q$ as a parts of a partition of q into b equal parts; equivalently, as the result of a sequence of operations $a \times q \div b$. *For example, use a visual fraction model to show $(2/3) \times 4 = 8/3$, and create a story context for this equation. Do the same with $(2/3) \times (4/5) = 8/15$. (In general, $(a/b) \times (c/d) = ac/bd$.)*
  • Find the area of a rectangle with fractional side lengths by tiling it with unit squares of the appropriate unit fraction side lengths, and show that the area is the same as would be found by multiplying the side lengths. Multiply fractional side lengths to find areas of rectangles, and represent fraction products as rectangular areas.
	N/A	N/A

5. Interpret multiplication as scaling (resizing), by:
  • Comparing the size of a product to the size of one factor on the basis of the size of the other factor, without performing the indicated multiplication.
  • Explaining why multiplying a given number by a fraction greater than 1 results in a product greater than the given number (recognizing multiplication by whole numbers greater than 1 as a familiar case); explaining why multiplying a given number by a fraction less than 1 results in a product smaller than the given number; and relating the principle of fraction equivalence $a/b = (n \times a)/(n \times b)$ to the effect of multiplying a/b by 1.
	N/A	N/A

AfterSchool KidzMath[TM] Correlated to the Common Core Standards for Mathematics

	Grade 5		
Grade-Level Expectations		**Application in *AfterSchool KidzMath***	**Examples**
6. Solve real world problems involving multiplication of fractions and mixed numbers, e.g., by using visual fraction models or equations to represent the problem.		N/A	N/A
7. Apply and extend previous understandings of division to divide unit fractions by whole numbers and whole numbers by unit fractions. • Interpret division of a unit fraction by a non-zero whole number, and compute such quotients. *For example, create a story context for (1/3) ÷ 4, and use a visual fraction model to show the quotient. Use the relationship between multiplication and division to explain that (1/3) ÷ 4 = 1/12 because (1/12) × 4 = 1/3.* • Interpret division of a whole number by a unit fraction, and compute such quotients. *For example, create a story context for 4 ÷ (1/5), and use a visual fraction model to show the quotient. Use the relationship between multiplication and division to explain that 4 ÷ (1/5) = 20 because 20 × (1/5) = 4.* • Solve real world problems involving division of unit fractions by non-zero whole numbers and division of whole numbers by unit fractions, e.g., by using visual fraction models and equations to represent the problem. *For example, how much chocolate will each person get if 3 people share 1/2 lb of chocolate equally? How many 1/3-cup servings are in 2 cups of raisins?*		N/A	N/A
Measurement & Data			

AfterSchool KidzMath^{TM} Correlated to the Common Core Standards for Mathematics

Grade 5		
Grade-Level Expectations	**Application in *AfterSchool KidzMath***	**Examples**
Convert like measurement units within a given measurement system		
1. Convert among different-sized standard measurement units within a given measurement system (e.g., convert 5 cm to 0.05 m), and use these conversions in solving multi-step, real world problems.	Students measure using meters and centimeters and make conversions between both units of measurement.	*AfterSchool KidzMath* Story Guides: Intermediate *Fly High! The Story of Bessie Coleman* Activity 3, "Airplane #2," p. 15
Represent and interpret data		
2. Make a line plot to display a data set of measurements in fractions of a unit (1/2, 1/4, 1/8). Use operations on fractions for this grade to solve problems involving information presented in line plots. *For example, given different measurements of liquid in identical beakers, find the amount of liquid each beaker would contain if the total amount in all the beakers were redistributed equally.*	N/A	N/A
Geometric measurement: understand concepts of volume and relate volume to multiplication and to addition		
3. Recognize volume as an attribute of solid figures and understand concepts of volume measurement. A cube with side length 1 unit, called a "unit cube," is said to have "one cubic unit" of volume, and can be used to measure volume. A solid figure which can be packed without gaps or overlaps using *n* unit cubes is said to have a volume of *n* cubic units.	N/A	N/A
4. Measure volumes by counting unit cubes, using cubic cm, cubic in, cubic ft, and improvised units.	N/A	N/A

AfterSchool KidzMath™ Correlated to the Common Core Standards for Mathematics

Grade 5		
Grade-Level Expectations	**Application in *AfterSchool KidzMath***	**Examples**

5. Relate volume to the operations of multiplication and addition and solve real world and mathematical problems involving volume.
 	
    a. Find the volume of a right rectangular prism with whole-number side lengths by packing it with unit cubes, and show that the volume is the same as would be found by multiplying the edge lengths, equivalently by multiplying the height by the area of the base. Represent threefold whole-number products as volumes, e.g., to represent the associative property of multiplication.
 	
    b. Apply the formulas $V = l \times w \times h$ and $V = b \times h$ for rectangular prisms to find volumes of right rectangular prisms with whole-number edge lengths in the context of solving real world and mathematical problems.
 	
    c. Recognize volume as additive. Find volumes of solid figures composed of two non-overlapping right rectangular prisms by adding the volumes of the non-overlapping parts, applying this technique to solve real world problems.
	N/A	N/A

Geometry		
Graph points on the coordinate plane to solve real-world and mathematical problems		

AfterSchool KidzMath^{TM} Correlated to the Common Core Standards for Mathematics

Grade 5		
Grade-Level Expectations	**Application in *AfterSchool KidzMath***	**Examples**
1. Use a pair of perpendicular number lines, called axes, to define a coordinate system, with the intersection of the lines (the origin) arranged to coincide with the 0 on each line and a given point in the plane located by using an ordered pair of numbers, called its coordinates. Understand that the first number indicates how far to travel from the origin in the direction of one axis, and the second number indicates how far to travel in the direction of the second axis, with the convention that the names of the two axes and the coordinates correspond (e.g., *x*-axis and *x*-coordinate, *y*-axis and *y*-coordinate).	N/A	N/A
2. Represent real world and mathematical problems by graphing points in the first quadrant of the coordinate plane, and interpret coordinate values of points in the context of the situation.	N/A	N/A
Classify two-dimensional figures into categories based on their properties		
3. Understand that attributes belonging to a category of two-dimensional figures also belong to all subcategories of that category. For example, all rectangles have four right angles and squares are rectangles, so all squares have four right angles.	Students analyze the attributes of geometric figures and analyze transformations of shapes using tangram pieces, partners explore, recognize, and analyze shapes and their attributes, and practice flipping, sliding, and rotating geometric shapes.	*AfterSchool KidzMath* Games: Intermediate *Leader's Guide* "Three Hexagons," p. 180 *AfterSchool KidzMath* Story Guides: Intermediate *The Warlord's Puzzle* Activity 1, "Piece it Together," p. 4 Activity 3, "Shape Throw," p. 11

AfterSchool KidzMath^{TM} Correlated to the Common Core Standards for Mathematics

Grade 5		
Grade-Level Expectations	**Application in *AfterSchool KidzMath***	**Examples**
4. Classify two-dimensional figures in a hierarchy based on properties.	Students explore two-dimensional shapes and are able to classify them based on their attributes.	*AfterSchool KidzMath* Games: Intermediate *Leader's Guide* "Three Hexagons," p. 180 *AfterSchool KidzMath* Story Guides: Intermediate *The Warlord's Puzzle* Activity 1, "Piece it Together," p. 4 Activity 3, "Shape Throw," p. 11

AfterSchool KidzMath^{TM} Correlated to the Common Core Standards for Mathematics

The following references are examples from the AfterSchool KidzMath program from Developmental Studies Center that align to the Common Core Standards for Mathematics for K-6. This correlation is intended to illustrate the program's approach to these standards. (TM = Teacher's Manual)

Grade 6		
Grade-Level Expectations	**Application in *AfterSchool KidzMath***	**Examples**
Ratios & Proportional Relationships		
Understand ratio concepts and use ratio reasoning to solve problems		
37. Understand the concept of a ratio and use ratio language to describe a ratio relationship between two quantities. *For example, "The ratio of wings to beaks in the bird house at the zoo was 2:1, because for every 2 wings there was 1 beak." "For every vote candidate A received, candidate C received nearly three votes."*	N/A	N/A
38. Understand the concept of a unit rate a/b associated with a ratio a:b with b ≠ 0, and use rate language in the context of a ratio relationship. *For example, "This recipe has a ratio of 3 cups of flour to 4 cups of sugar, so there is 3/4 cup of flour for each cup of sugar." "We paid $75 for 15 hamburgers, which is a rate of $5 per hamburger."*	N/A	N/A

AfterSchool KidzMath^{TM} Correlated to the Common Core Standards for Mathematics

Grade 6		
Grade-Level Expectations	**Application in *AfterSchool KidzMath***	**Examples**

39. Use ratio and rate reasoning to solve real-world and mathematical problems, e.g., by reasoning about tables of equivalent ratios, tape diagrams, double number line diagrams, or equations.
    • Make tables of equivalent ratios relating quantities with whole-number measurements, find missing values in the tables, and plot the pairs of values on the coordinate plane. Use tables to compare ratios.
    • Solve unit rate problems including those involving unit pricing and constant speed. *For example, if it took 7 hours to mow 4 lawns, then at that rate, how many lawns could be mowed in 35 hours? At what rate were lawns being mowed?*
    • Find a percent of a quantity as a rate per 100 (e.g., 30% of a quantity means 30/100 times the quantity); solve problems involving finding the whole, given a part and the percent.
    • Use ratio reasoning to convert measurement units; manipulate and transform units appropriately when multiplying or dividing quantities.
	N/A	N/A

The Number System		
Apply and extend previous understandings of multiplication and division to divide fractions by fractions		

AfterSchool KidzMath[TM] Correlated to the Common Core Standards for Mathematics

Grade 6		
Grade-Level Expectations	**Application in *AfterSchool KidzMath***	**Examples**
1. Interpret and compute quotients of fractions, and solve word problems involving division of fractions by fractions, e.g., by using visual fraction models and equations to represent the problem. *For example, create a story context for (2/3) ÷ (3/4) and use a visual fraction model to show the quotient; use the relationship between multiplication and division to explain that (2/3) ÷ (3/4) = 8/9 because 3/4 of 8/9 is 2/3. (In general, (a/b) ÷ (c/d) = ad/bc.) How much chocolate will each person get if 3 people share 1/2 lb of chocolate equally? How many 3/4-cup servings are in 2/3 of a cup of yogurt? How wide is a rectangular strip of land with length 3/4 mi and area 1/2 square mi?*	N/A	N/A
Compute fluently with multi-digit numbers and find common factors and multiples		
2. Fluently divide multi-digit numbers using the standard algorithm.	The games in *AfterSchool KidzMath* give students several opportunities to practice and master solving multi-digit division problems. They begin to see the relationship between multiplication and division and are able to explain calculations using equations and visual models.	The Leader Says Divide, p. 107 Disappearing Pyramid, p. 131 Stadium Tour USA, p. 137 Equapardy, p. 143
3. Fluently add, subtract, multiply, and divide multi-digit decimals using the standard algorithm for each operation.	Students use a tenths and hundredths grid as a visual model to represent and add decimals in *AfterSchool KidzMath*.	Fill 'Em Up, p. 163
4. Find the greatest common factor of two whole numbers less than or equal to 100 and the least common multiple of two whole numbers less than or equal to 12. Use the distributive property to express a sum of two whole numbers 1–100 with a common factor as a multiple of a sum of two whole numbers with no common factor. *For example, express 36 + 8 as 4 (9 + 2).*	Students explore factors and multiples in multiplication and division. The games in *AfterSchool KidzMath* allow students to easily find factors and multiples of numbers.	Three Tac Toe, p. 89 Forehead Factors, p. 101 Spin Spot, p. 119
Apply and extend previous understandings of numbers to the system of rational numbers		

AfterSchool KidzMath^{TM} Correlated to the Common Core Standards for Mathematics

Grade 6		
Grade-Level Expectations	**Application in *AfterSchool KidzMath***	**Examples**
5. Understand that positive and negative numbers are used together to describe quantities having opposite directions or values (e.g., temperature above/below zero, elevation above/below sea level, credits/debits, positive/negative electric charge); use positive and negative numbers to represent quantities in real-world contexts, explaining the meaning of 0 in each situation.	N/A	N/A

6. Understand a rational number as a point on the number line. Extend number line diagrams and coordinate axes familiar from previous grades to represent points on the line and in the plane with negative number coordinates.
  a. Recognize opposite signs of numbers as indicating locations on opposite sides of 0 on the number line; recognize that the opposite of the opposite of a number is the number itself, e.g., –(–3) = 3, and that 0 is its own opposite.
  b. Understand signs of numbers in ordered pairs as indicating locations in quadrants of the coordinate plane; recognize that when two ordered pairs differ only by signs, the locations of the points are related by reflections across one or both axes.
  c. Find and position integers and other rational numbers on a horizontal or vertical number line diagram; find and position pairs of integers and other rational numbers on a coordinate plane.
	N/A	N/A

AfterSchool KidzMath[TM] **Correlated to the Common Core Standards for Mathematics**

Grade 6		
Grade-Level Expectations	**Application in *AfterSchool KidzMath***	**Examples**

7. Understand ordering and absolute value of rational numbers.
  a. Interpret statements of inequality as statements about the relative position of two numbers on a number line diagram. *For example, interpret –3 > –7 as a statement that –3 is located to the right of –7 on a number line oriented from left to right.*
  b. Write, interpret, and explain statements of order for rational numbers in real-world contexts. *For example, write –3 ^{o}C > –7 ^{o}C to express the fact that –3 ^{o}C is warmer than –7 ^{o}C.*
  c. Understand the absolute value of a rational number as its distance from 0 on the number line; interpret absolute value as magnitude for a positive or negative quantity in a real-world situation. *For example, for an account balance of –30 dollars, write |–30| = 30 to describe the size of the debt in dollars.*
  d. Distinguish comparisons of absolute value from statements about order. *For example, recognize that an account balance less than –30 dollars represents a debt greater than 30 dollars.*
	N/A	N/A

8. Solve real-world and mathematical problems by graphing points in all four quadrants of the coordinate plane. Include use of coordinates and absolute value to find distances between points with the same first coordinate or the same second coordinate.	N/A	N/A
Expressions & Equations		
Apply and extend previous understandings of arithmetic to algebraic expressions		

AfterSchool KidzMath^{TM} Correlated to the Common Core Standards for Mathematics

Grade 6		
Grade-Level Expectations	**Application in *AfterSchool KidzMath***	**Examples**
28. Write and evaluate numerical expressions involving whole-number exponents.	N/A	N/A
29. Write, read, and evaluate expressions in which letters stand for numbers. a. Write expressions that record operations with numbers and with letters standing for numbers. *For example, express the calculation "Subtract y from 5" as 5 – y.* b. Identify parts of an expression using mathematical terms (sum, term, product, factor, quotient, coefficient); view one or more parts of an expression as a single entity. *For example, describe the expression 2 (8 + 7) as a product of two factors; view (8 + 7) as both a single entity and a sum of two terms.* c. Evaluate expressions at specific values of their variables. Include expressions that arise from formulas used in real-world problems. Perform arithmetic operations, including those involving whole-number exponents, in the conventional order when there are no parentheses to specify a particular order (Order of Operations). *For example, use the formulas $V = s^3$ and $A = 6 s^2$ to find the volume and surface area of a cube with sides of length s = 1/2.*	N/A	N/A

AfterSchool KidzMath^{TM} Correlated to the Common Core Standards for Mathematics

Grade 6		
Grade-Level Expectations	**Application in *AfterSchool KidzMath***	**Examples**
30. Apply the properties of operations to generate equivalent expressions. For example, apply the distributive property to the expression 3 (2 + x) to produce the equivalent expression 6 + 3x; apply the distributive property to the expression 24x + 18y to produce the equivalent expression 6 (4x + 3y); apply properties of operations to y + y + y to produce the equivalent expression 3y.	N/A	N/A
31. Identify when two expressions are equivalent (i.e., when the two expressions name the same number regardless of which value is substituted into them). For example, the expressions y + y + y and 3y are equivalent because they name the same number regardless of which number y stands for.	N/A	N/A
Reason about and solve one-variable equations and inequalities		
32. Understand solving an equation or inequality as a process of answering a question: which values from a specified set, if any, make the equation or inequality true? Use substitution to determine whether a given number in a specified set makes an equation or inequality true.	N/A	N/A
33. Use variables to represent numbers and write expressions when solving a real-world or mathematical problem; understand that a variable can represent an unknown number, or, depending on the purpose at hand, any number in a specified set.	N/A	N/A
34. Solve real-world and mathematical problems by writing and solving equations of the form $x + p = q$ and $px = q$ for cases in which p, q and x are all nonnegative rational numbers.	N/A	N/A

AfterSchool KidzMath^{TM} Correlated to the Common Core Standards for Mathematics

Grade 6		
Grade-Level Expectations	**Application in *AfterSchool KidzMath***	**Examples**
35. Write an inequality of the form $x > c$ or $x < c$ to represent a constraint or condition in a real-world or mathematical problem. Recognize that inequalities of the form $x > c$ or $x < c$ have infinitely many solutions; represent solutions of such inequalities on number line diagrams.	N/A	N/A
Represent and analyze quantitative relationships between dependent and independent variables		
36. Use variables to represent two quantities in a real-world problem that change in relationship to one another; write an equation to express one quantity, thought of as the dependent variable, in terms of the other quantity, thought of as the independent variable. Analyze the relationship between the dependent and independent variables using graphs and tables, and relate these to the equation. For example, in a problem involving motion at constant speed, list and graph ordered pairs of distances and times, and write the equation d = 65t to represent the relationship between distance and time.	*N/A*	N/A
Geometry		
Solve real-world and mathematical problems involving area, surface area, and volume		
1. Find the area of right triangles, other triangles, special quadrilaterals, and polygons by composing into rectangles or decomposing into triangles and other shapes; apply these techniques in the context of solving real-world and mathematical problems.	*N/A*	N/A

AfterSchool KidzMath^{TM} Correlated to the Common Core Standards for Mathematics

Grade 6		
Grade-Level Expectations	**Application in *AfterSchool KidzMath***	**Examples**
2. Find the volume of a right rectangular prism with fractional edge lengths by packing it with unit cubes of the appropriate unit fraction edge lengths, and show that the volume is the same as would be found by multiplying the edge lengths of the prism. Apply the formulas $V = l\ w\ h$ and $V = b\ h$ to find volumes of right rectangular prisms with fractional edge lengths in the context of solving real-world and mathematical problems.	*N/A*	N/A
3. Draw polygons in the coordinate plane given coordinates for the vertices; use coordinates to find the length of a side joining points with the same first coordinate or the same second coordinate. Apply these techniques in the context of solving real-world and mathematical problems.	*N/A*	N/A
4. Represent three-dimensional figures using nets made up of rectangles and triangles, and use the nets to find the surface area of these figures. Apply these techniques in the context of solving real-world and mathematical problems.	*N/A*	N/A
Statistics & Probability		
Develop understanding of statistical variability		
1. Recognize a statistical question as one that anticipates variability in the data related to the question and accounts for it in the answers. *For example, "How old am I?" is not a statistical question, but "How old are the students in my school?" is a statistical question because one anticipates variability in students' ages.*	*N/A*	N/A
2. Understand that a set of data collected to answer a statistical question has a distribution which can be described by its center, spread, and overall shape.	*N/A*	N/A

AfterSchool KidzMath[TM] Correlated to the Common Core Standards for Mathematics

	Grade 6		
Grade-Level Expectations	**Application in *AfterSchool KidzMath***		**Examples**
3. Recognize that a measure of center for a numerical data set summarizes all of its values with a single number, while a measure of variation describes how its values vary with a single number.	*N/A*		N/A
	Summarize and describe distributions		
4. Display numerical data in plots on a number line, including dot plots, histograms, and box plots.	*N/A*		N/A

5. Summarize numerical data sets in relation to their context, such as by:
   a. Reporting the number of observations.
   b. Describing the nature of the attribute under investigation, including how it was measured and its units of measurement.
   c. Giving quantitative measures of center (median and/or mean) and variability (interquartile range and/or mean absolute deviation), as well as describing any overall pattern and any striking deviations from the overall pattern with reference to the context in which the data were gathered.
   d. Relating the choice of measures of center and variability to the shape of the data distribution and the context in which the data were gathered.
	N/A		N/A