

# Mathematics for Elementary School

## Grade 3, One-Year Instructional Plan

1 <sup>st</sup> Trimester			
Month	Unit	# of periods	Instructional contents
April (15)	<b>[Volume 1]</b> <b>1. Multiplication</b> p. 2-10	<b>7</b>	<ul style="list-style-type: none"> <li><input type="radio"/> Multiplication calculations of <math>a \times 0</math>, <math>0 \times a</math>, <math>0 \times 0</math></li> <li><input checked="" type="radio"/> Relationship of multiplier and multiplicand, commutative property (law) of multiplication</li> <li><input type="radio"/> Multiplication calculation: hundreds or tens multiplied by a 1-digit number</li> </ul>
	<b>2. Bar Graphs and Tables</b> p. 11-20	<b>8</b>	<ul style="list-style-type: none"> <li><input checked="" type="radio"/> Classifying and organizing data</li> <li><input checked="" type="radio"/> How to interpret and draw a bar graph, and its usefulness [bar graph]</li> <li><input type="radio"/> How to read and make a simple two-dimensional table</li> </ul>
	☆ <b>Review 1</b> p. 21	<b>(1)</b>	<ul style="list-style-type: none"> <li><input type="radio"/> Reviewing previously learned content</li> </ul>
May (15)	<b>3. Addition and Subtraction</b> p. 22-23	<b>2</b>	<ul style="list-style-type: none"> <li><input type="radio"/> Mental calculation of addition and subtraction of two 2-digit numbers.</li> </ul>
	☆ <b>Magic Squares</b> p. 24	<b>(1)</b>	<ul style="list-style-type: none"> <li><input type="radio"/> How to make sums of combinations of three numbers become equal to a number</li> </ul>
	<b>4. Division</b> p. 25-33	<b>10</b>	<ul style="list-style-type: none"> <li><input checked="" type="radio"/> Meaning of division (partitive division and quotitive division) [+ , division, dividend, divisor]</li> <li><input checked="" type="radio"/> How to find answers for division calculations involving 1-digit divisors and quotients</li> <li><input type="radio"/> Division calculations of <math>a \div a</math>, <math>a \div 1</math>, <math>0 \div a</math></li> <li><input type="radio"/> Division calculation: hundreds or tens divided by a 1-digit number</li> </ul>
June (20)	<b>5. Length</b> p. 34-38	<b>5</b>	<ul style="list-style-type: none"> <li><input type="radio"/> Function of a tape measure and its use and usefulness</li> <li><input checked="" type="radio"/> Unit of length: kilometer [km]</li> <li><input type="radio"/> Meaning of direct distance and traveling distance</li> </ul>
	<b>6. Division with Remainders</b> p. 39-44	<b>6</b>	<ul style="list-style-type: none"> <li><input checked="" type="radio"/> Division calculations with remainders involving 1-digit divisors and quotients</li> <li><input checked="" type="radio"/> Relationship between the size of the divisor and the size of the quotient</li> <li><input checked="" type="radio"/> A method for checking answers</li> <li><input type="radio"/> Division algorithm for simple division calculations</li> </ul>
	<b>7. Circles and Spheres</b> p. 45-52	<b>6</b>	<ul style="list-style-type: none"> <li><input checked="" type="radio"/> Concept of circles and their characteristics [circle, center, radius, diameter]</li> <li><input checked="" type="radio"/> Function and use of a pair of compasses</li> <li><input type="radio"/> Concept of spheres [sphere]</li> </ul>
July (10)	<b>8. Time and Elapsed Time</b> p. 53-57	<b>5</b>	<ul style="list-style-type: none"> <li><input checked="" type="radio"/> Concept of second [second]</li> <li><input type="radio"/> How to find time and elapsed time</li> </ul>
	☆ <b>Review 2</b> p.58	<b>(1)</b>	<ul style="list-style-type: none"> <li><input type="radio"/> Retaining and reinforcing the content students learned in the first trimester</li> </ul>
<b>Standard # of periods in 1<sup>st</sup> trimester: 60 periods</b>		<b>49 periods</b> (Adjustable periods (☆): 3 periods) (Optional periods: 8 periods)	<b>Total of 11 periods (3 + 8)</b>

2 <sup>nd</sup> Trimester			
Month	Unit	# of periods	Instructional contents
Sept. (20)	<b>9. Large Numbers</b> p. 59-68	<b>10</b>	<ul style="list-style-type: none"> <li>⊙ Principles and structures of place values up to the 10000000 (one thousand <i>man</i>), and how to read and write them [<i>man's</i> place, number line]</li> <li>○ Math sentences to express the relative relationship of two numbers using greater than, less than, and equal to symbols [equality sign, inequality sign]</li> <li>○ Size of numbers that are 10 times as many as, 100 times as many as, and 1/10 of a given number</li> <li>○ Addition and subtraction calculation of 4-digit numbers</li> </ul>
	☆ <b>Review 3</b> p.69	<b>(1)</b>	○ Reviewing previously learned content
	☆ <b>Combined Length</b> p.70	<b>(1)</b>	○ How to find sum of two overlapping lengths using diagrams
	<b>10. Multiplication Algorithm (1)</b> p.71-79	<b>11</b>	<ul style="list-style-type: none"> <li>⊙ System/process of the multiplication algorithm</li> <li>⊙ Multiplication calculations of 2 to 3 –digit numbers multiplied by a 1-digit number</li> <li>○ Associative property (law) of multiplication</li> </ul>
Oct. (20)	<b>[Volume 2] 11. Triangles</b> p. 2-11	<b>8</b>	<ul style="list-style-type: none"> <li>⊙ Concepts and characteristics of isosceles and equilateral triangles [isosceles triangle, equilateral triangle]</li> <li>○ How to draw isosceles and equilateral triangles</li> <li>○ Concept of angles</li> </ul>
	☆ <b>Review 4</b> p.12	<b>(1)</b>	○ Reviewing previously learned contents
	<b>12. Division Algorithm</b> p. 13-25	<b>12</b>	<ul style="list-style-type: none"> <li>⊙ System/process of the division algorithm</li> <li>⊙ Division calculations of 2 to 3 –digit numbers divided by a 1-digit number</li> <li>○ Meaning of division [using division to find how many times as much as -- (finding the value of ratio)]</li> </ul>
Nov. (20)	☆ <b>What Calculation Should We Use?</b> p.26-27	<b>(1)</b>	⊙ Decision making on use of calculation operations, multiplication or division
	☆ <b>Put Numbers in the Blanks</b> p.28	<b>(1)</b>	⊙ Combinations of numbers 1 to 9 to establish 3-digit + 3-digit addition calculations
	<b>13. Decimal Numbers</b> p. 29-36	<b>8</b>	<ul style="list-style-type: none"> <li>⊙ Meaning of decimal numbers and how to express them [decimal number, decimal point, first decimal place, whole number]</li> <li>○ Addition and subtraction calculation of decimal numbers</li> </ul>
	<b>14. Weight</b> p. 37-45	<b>8</b>	<ul style="list-style-type: none"> <li>⊙ Concept of weight</li> <li>○ How to measure using scales [kg, g]</li> </ul>
Dec. (10)	☆ <b>Review 5</b> p.46	<b>(1)</b>	○ Retaining and reinforcing the content students learned in the second trimester
<b>Standard # of periods in 2<sup>nd</sup> trimester: 70 periods</b>		<b>57 periods</b> (Adjustable periods (☆): 6 periods) (Optional periods: 7 periods) <span style="float: right;">Total of 13 periods (6 + 7)</span>	

3 <sup>rd</sup> Trimester			
Month	Unit	# of periods	Instructional contents
Jan. (15)	<b>15. Multiplication Algorithm (2)</b> p. 47-55	<b>10</b>	<input type="radio"/> Multiplication calculations of 1 to 2-digit numbers multiplied by tens and hundreds <input checked="" type="radio"/> Multiplication calculation of 2 to 3-digit numbers multiplied by 2-digit numbers <input type="radio"/> Using properties to think about better ways to do multiplication calculations
	☆ <b>The Race</b> p. 56	<b>(1)</b>	<input type="radio"/> Paying attention to the number of objects and the number of spaces in between them and finding the total length of a straight line or a circle.
	<b>16. Fractions</b> p. 57-64	<b>8</b>	<input checked="" type="radio"/> Meaning of fractions and how to express them [fractions, denominator, numerator, $\frac{1}{10}$ 's place] <input type="radio"/> Simple addition and subtraction of fractions
Feb. (20)	<b>17. Math Sentences with □</b> p. 65-68	<b>5</b>	<input type="radio"/> Using a □ as an unknown quantity, using it to express an addition or a subtraction math sentence, and finding the quantity needed to fill the □
	<b>The Abacus</b> p. 69-73	<b>5</b>	<input type="radio"/> How to set or clear beads on the abacus <input type="radio"/> Basic addition and subtraction calculations using the abacus
	☆ <b>Recycle</b> p. 74-75	<b>(2)</b>	<input type="radio"/> Application of comprehensive knowledge and skills gained from previous learning <input type="radio"/> Mathematical thinking in everyday phenomena (recycling)
	☆ <b>3<sup>rd</sup> Grade Review</b> p. 76-78	<b>(5)</b>	<input type="radio"/> Review of all the content learned in the 3 <sup>rd</sup> grade
March (10)			
<b>Standard # of periods in 3<sup>rd</sup> trimester: 45 periods</b>		<b>28 periods</b> (Adjustable periods (☆): 8 periods) (Optional periods: 9 periods)	<b>Total of 17 periods (8 + 9)</b>

<b>Standard # of periods in a year: 175 periods</b>	<b>134 periods*</b> (Adjustable periods (☆): 17 periods) (Optional periods: 24 periods)	<b>Total of 41 periods (17 + 24)</b>
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Note:

- One period is 45 minutes.
- The numbers indicated in the ( ) in the month column show the number of available periods in the month.
- The ☆ symbol in the unit column indicates the periods teachers can adjust by considering students' state of learning.
- The © symbol in the instructional contents column indicates important content. The [ ] contains terms and symbols students learn in the unit.