

## Grade 3 Math Scope and Sequence

	<b>FARMINGDALE UNION FREE SCHOOL DISTRICT</b>				
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	<b>Grade 3 Math Scope and Sequence</b>				
<b>Textbook:</b>	<b>Harcourt Math NY Edition</b>				
	<b>Grade 3</b>				
<b>DATE</b>	<b>LESSON OBJECTIVE</b>	<b>CONTENT STRAND</b>	<b>TEACHER EDITION</b>	<b>VOCABULARY</b>	<b>ADDITIONAL ACTIVITIES</b>
	<b>Unit 1: Algebra</b>				
	<b>Chapter 1: Fact Families</b>				
	<b>1.1</b> How do we identify & write related addition & subtraction facts?	2N15	pp. 2-3	Fact Families, Inverse Operations	Alternative Teaching Strategy p.2B
	<b>1.2</b> How do we solve number sentences for missing addends?	4A1	pp. 4-5		Advanced Learners p.4B
	<b>1.3</b> How do we use the properties of addition?	3N6 3N9	pp. 6-7	Grouping Property of Addition, Identity Property of Addition, Order Property of Addition	Alternative Teaching Strategy p.6B
	<b>1.4</b> How do we add 2 digit numbers with and without regrouping?	2N16	pp. 8-9		Esol/EsI p.8B
	<b>1.5</b> How do we subtract 2 digit numbers with and without regrouping?	2N16	pp. 10-11		Science Connection p.10B
	<b>1.6</b> How do we use the problem solving skill <i>choose the operation</i> ?	3N24	pp. 12-13		SS Connection p.12B
	<b>Chapter 2: Place Value and Number Sense</b>				
	<b>2.1</b> How do we identify odd & even numbers and use a hundreds chart to skip count?	3N16 3N17	pp. 20-21	even, odd	Esol/EsI p.20B

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	<b>2.2</b> How do we find the value of a digit by using its place value position?	3N2	pp. 22-23	digits, expanded form, standard form, word form	Special Needs p.22B
	<b>2.3</b> How do we identify place-value relationships in 4-digit numbers?	3N2	pp. 24-27		Early finishers p. 24B
	<b>2.4</b> How do we solve problems by using the problem solving strategy, <i>use logical reasoning</i> ?	3N5	pp.28-29		Alternate Teaching Strategy p.28B
	<b>2.5</b> How do we describe, extend, create, and predict number patterns from numbers & models?	3A2	pp. 30-31	pattern	Technology p.30B
	<b>Chapter 3: Compare, Order and Round Numbers</b>				
	<b>3.1</b> How do we use benchmarks to understand the relative magnitude of numbers?	3N25	pp.40-41	benchmark numbers	Alternate Teaching Strategy p.40B
	<b>3.2</b> How do we use models, place value, & number lines to compare numbers?	3N3	pp. 42-45	compare, equal to, greater than, less than	Esol/EsI p.42B
	<b>3.3</b> How do we use models, number lines, & place value to order numbers?	3N3	pp. 46-47		Early finishers p. 46B
	<b>3.4</b> How do we use the problem solving skill <i>use a bar graph</i> to solve problems?	3N3	pp. 48-49		Science Connection p.48B
	<b>3.5</b> How do we use rounding rules to round numbers to the nearest 10 & 100?	3N26	pp. 50-51	rounding	Advanced Learners p.50B
	<b>Review</b>		pp. 14-17 pp. 34-37 pp. 54-57		
	<b>Getting Ready for the NYS Mathematics Test</b>		pp.60-61		
	<b>Unit 2: Addition, Subtraction, Money and Time</b>				
	<b>Chapter 4: Addition</b>				
	<b>4.1</b> How do we estimate sums of 2-, 3-and 4-digit numbers using rounding and front-end estimation?	3N25 3N27 4N26	pp. 68-69	estimate, front-end estimation, sum	Alternative Teaching Strategy p. 68B
	<b>4.2</b> How do we explore adding 3-digit numbers with and without regrouping?	3N18	pp. 70-71		Advanced Learners p. 70B
	<b>4.3</b> How do we add 3-and 4-Digit numbers with and without regrouping?	3N18 3N27 4N14	pp. 72-73		Early Finishers p. 72B

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	4.4 How do we solve problems using the strategy <i>predict and test</i> ?	3N25	pp. 74-75		ESOL/ESL p. 74B Early Finishers p. 74B
	4.6 How do we write expressions and number sentences that represent situations and to select operation symbols to make number sentences true?	3N17 4A1	pp. 80-81	expression, not equal to ( $\neq$ )	Alternative Teaching Strategy p. 80B Vocabulary Strategy p. 80B
	<b>Chapter 5: Subtraction</b>				
	5.1 How do we estimate differences of 2-to 4-digit numbers?	3N25 3N27 4N26	pp. 88-89	estimate, front-end estimation, rounding	Alternative Teaching Strategy p. 88B ESOL/ESL p. 88B Early Finishers p. 88B
	5.2 How do we explore subtracting 3-digit numbers with regrouping?	3N18	pp. 90-91	regroup	Advanced Learners p. 90B Early Finishers p. 90B
	5.3 How do we subtract 3-digit numbers with and without regrouping, including numbers with zeros in the minuend?	3N18 3N27	pp. 92-95	minuend	
	5.4 How do we subtract 3- and 4-digit numbers with and without regrouping?	3N18 3N27	pp. 96-97		Alternative Teaching Strategy p. 96B
	5.6 How do we identify whether an estimate or an exact answer is needed to solve a problem?	3N26	pp. 102-103		Alternative Teaching Strategy p. 102B Social Studies Connection p. 102B
	<b>Chapter 6: Use Money</b>				

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	<b>6.1</b> How do we count sets of bills and coins to make equivalent sets of money?	3M7 4N11	pp. 110-113	decimal point, dollar sign, equivalent	Alternative Teaching Strategy p. 110B Advanced Learners p. 110B
	<b>6.2</b> How do we use the problem solving strategy to <i>make a table</i> to solve a problem?	3M7 4S3	pp. 114-115		Alternative Teaching Strategy p. 114B Reading Strategy p. 114B Health Connection p. 114B
	<b>6.3</b> How do we compare money amounts?	3M7 4A2	pp. 116-117		Math Connection p. 116B
	<b>6.4</b> How do we use the strategy <i>counting on</i> to make change?	3M7 4M8 4S3	pp. 118-119		<b>Writing in Mathematics p. 118B</b>
	<b>6.5</b> How do we add and subtract money amounts?	3N18 3N27 4A2	pp. 120-121		<b>Writing in Mathematics p. 120B</b> <b>Advanced Learners p. 120B</b>
	<b>Chapter 7: Understand Time</b>				
	<b>7.1</b> How do we tell time to the nearest minute in various ways?	3M9	pp. 128-131	clockwise, counterclockwise, half hour, hour, minute, quarter hour	Career Connection p. 128B
	<b>7.2</b> How do we write and identify times as A.M. or P.M.?	3M8	pp. 132-133	A.M., midnight, noon, P.M.	Early Finishers p. 132B
	<b>7.3</b> How do we use a clock to measure elapsed time?	4M9	pp. 134-135	elapsed time	Advanced Learners p. 134B
	<b>7.6</b> How do we use a time line to determine a sequence of events?	3A1 3N11	pp. 142-143	time line	Alternative Teaching Strategy p. 142B
	<b>Review</b>		pp. 82-85 pp. 104-107 pp. 122-125 pp. 144-147		

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DATE	LESSON OBJECTIVE	CONTENT STRAND	TEACHER EDITION	VOCABULARY	ADDITIONAL ACTIVITIES
	<b>Getting Ready for the NYS Mathematics Test</b>		pp. 150-151		
	<b>Unit Test</b>				
	<b>Unit 3: Multiplication Concepts and Facts</b>				
	<b>Chapter Eight: Understand Multiplication</b>				
	<b>8.1</b> How do we connect multiplication to repeated addition?	3N21	pp. 158-159	multiply	ESOL/ESL p. 158B
	<b>8.2</b> How do we multiply with 2 and 5?	3N19	pp.160-161	factors, product	Advanced Learners p.160B
	<b>8.3</b> How do we use arrays and the Commutative Property to explore the concept of multiplication?	3N6	pp. 162-163	array, Commutative Property of Multiplication	Special Needs p.162B
	<b>8.4</b> How do we multiply with 3 and use the Commutative Property?	3N6 3N20	pp. 164-167		Early Finishers p.164B
	<b>8.5</b> How do we identify which information is needed and if there is enough information to solve a problem?	3N24	pp. 168-169		Advanced Learners p.168B
	<b>Chapter Nine: Multiplication Facts Through 5</b>				
	<b>9.1</b> How do we use the Identity Property and the Zero Property for Multiplication?	3N7 3N8	pp. 176-177		ESOL/ESL p. 176B
	<b>9.2</b> How do we multiply by 4 and use a multiplication table?	3N19	pp.178-179	multiple	Special Needs p.178B
	<b>9.3</b> How do we use the problem solving strategy <i>find a pattern</i> to solve problems?	3A2 3N24	pp. 180-181		Alternative Teaching Strategy p. 180B
	<b>9.4.</b> How do we practice multiplication facts 0-5?	3N20	pp.182-183		Alternative Teaching Strategy p. 182B
	<b>9.5</b> How do we use an array and a multiplication table to find missing factors?	3N20	pp. 186-187		Alternative Teaching Strategy p. 186B
	<b>Chapter 10: Multiplication Facts and Strategies</b>				

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DATE	LESSON OBJECTIVE	CONTENT STRAND	TEACHER EDITION	VOCABULARY	ADDITIONAL ACTIVITIES
	10.1 How do we multiply with 6?	3N20	pp. 194-195		Special Needs p.194B
	10.2 How do we multiply with 8?	3N20	pp. 196-197		Special Needs p.196B
	10.3 How do we use the problem solving skill <i>use a pictograph</i> to solve problems?	3S7	pp. 198-199		Sciene Connection p.198B
	10.4. How do we multiply with 7?	3N20	pp. 200-201		Early Finishers p.200B
	10.5 How do we review multiplication strategies and apply them to 0-8 basic facts?	3N20	pp. 202-205		Advanced Learners p.202B
	<b>Chapter 11: Multiplication Facts and Patterns</b>				
	11.1 How do we multiply with 9 and 10?	3N20	pp. 212-215		Early Finishers p.212B
	11.2 How do we recognize a rule in a linear pattern and extend the pattern?	3N21	pp. 216-217		ESOL/ESL p. 216B
	11.4 How do we use multiplication properties to find products?	3N7 3N8	pp. 220-221	Distributive Property, Identity Property, Zero Property	Special Needs p.220B
	11.5 How do we solve multistep problems using basic multiplication facts, addition, and subtraction?	3N24	pp. 222-223	multistep problem	Early Finishers p.222B
	<b>Review</b>		pp. 170-173 pp.188-191 pp. 206-209 pp. 224-227		
	<b>Getting Ready for the NYS Mathematics Test</b>				
	<b>Unit Test</b>				
	<b>Unit 4: Division Concepts and Facts</b>				
	<b>Chapter 12: Understand Division</b>				
	12.1 How do we model the meaning of division?	3N23	pp.238-239	divide	Alternate Teaching Strategy p.238B

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	12.2 How do we relate division to subtracting equal groups?	3N23	pp. 240-241		Social Studies Connection pg. 240B
	12.3 How do we relate division to multiplication and use a variable for an unknown number?	3N23	pp. 242-245	dividend, divisor, inverse operations, quotient, variable	Alternate Teaching Strategy p.242B
	12.4 How do we use multiplication and division fact families?	3N23	pp. 246-249	fact family	Advanced Learners p.246B
	12.5 How do we solve problems using the strategy <i>write a number sentence</i> ?	3N22	pp. 250-251		Reading Strategy p.250B
	<b>Chapter 13: Division Facts Through 5</b>				
	13.1 How do we divide by 2 and 5?	3N22	pp. 258-259		Advanced Learners p.258B
	13.2 How do we divide by 3 and 4?	3N22	pp. 260-261		Alternate Teaching Strategy p.260B
	<b>Chapter 14: Division Facts Through 10</b>	3N24			
	14.1 How do we divide by 6, 7, and 8?		pp. 274-277		Science Connection p. 274B
	14.2 How do we divide by 9 and 10?	3N22	pp.278-279		Writing in Math p. 278B
	<b>Chapter 14: Division Facts Through 10</b>				
	14.1 How do we divide by 6, 7, and 8?	3N22.1	pp.274-277		Science Connection..274B
	14.2 How do we divide by 9 and 10?	3N22.1	pp.278-279		Writing in Math p. 278B
	14.3 How do we practice division facts through 10 by using various strategies?	3N22	pp. 280-283		Alternate Teaching Strategy p.280B
	14.4 How do we use multiplication and division to find the cost of multiple items or the cost of one item?	3N24	pp. 284-285		Advanced Learners p.284B
	14.5 How do we use the problem solving strategy <i>work backward</i> to solve problems?	3N24	pp. 286-287		ESOL/ESL p. 286B

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	<b>Review</b>		pp. 252-255 pp. 268-271 pp. 288-291		
	<b>Getting Ready for the NYS Mathematics Test</b>		pp. 294-295		
	<b>Unit Test</b>				
	<b>Unit 5 : Data and Measurement</b>				
	<b>Chapter 16: Analyze and Graph Data</b>				
	<b>16.1</b> How do we use the problem solving strategy <i>make a graph</i> to solve problems ?	3S4	pp. 322-323	graph, pictograph	Alternate Teaching Strategy p.322B
	<b>16.2</b> How do we read and interpret bar graphs?	3S6,3S7	pp324-325	bar graph,horizontal bar graph,scale,vertical bar graph	Advanced Learners p.324B
	<b>16.3</b> How do we make a bar graph?	3S5	pp326-327		Early Finishers p.326B
	<b>Chapter 17: Customary Units</b>				
	<b>17.1</b> How do we estimate and measure length to the nearest inch and half inch?	3M10	pp. 338-341	inch	Language Arts Connection p.338B
	<b>17.2</b> How do we choose the appropriate unit and estimate length or distance?	3M1	pp. 342-343	foot, mile, yard,	Science Connection p. 342B
	<b>17.3</b> How do we estimate and measure capacity?	3M4 3M6	pp. 344-345	capacity, cup, gallon, pint, quart	Early Finishers p.344B
	<b>17.4</b> How do we estimate and measure weight?	3M3	pp. 346-347	ounce, pound	Advanced Learners p.346B
	<b>17.5</b> How do we change units of measure?	3M10	pp. 348-349		Early Finishers p.348B
	<b>17.6</b> How do we determine whether an estimate or a measured amount is needed to solve a problem?	3N26	pp. 350-351		Reading Strategy p. 350B
	<b>Chapter 18: Metric Units and Temperature</b>				
	<b>18.1</b> How do we estimate and measure length?		pp. 358-361	centimeter, decimeter, kilometer, meter	ESOL/ESL p. 358B

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	<b>Review</b>		pp. 316-319 pp. 332-335 pp. 352-355 pp.370-373		
	<b>Getting Ready for the NYS Mathematics Test</b>		pp. 376-377		
	<b>Unit Test</b>				
	<b>Unit 6: Geometry</b>				
	<b>19.5</b> How do we identify, describe, and classify quadrilaterals?	3G1	pp.396-399	parallelogram, rhombus, trapezoid	Art Connection p. 396B
	<b>19.6</b> How do we use the problem solving strategy, <i>draw a figure</i> to solve problems?	3G1	pp.400-401	Venn diagram	Science Connection p. 400B
	<b>Chapter 20: Congruence and Symmetry</b>	3N24			
	<b>20.1</b> How do we identify and describe congruent figures?	<b>3G2</b>	pp.408-409	congruent	<b>ESOL/ESL p. 408B</b>
	<b>20.2</b> How do we identify and draw lines of symmetry in plane figures?	<b>3G5</b>	pp.410-411	line of symmetry, symmetry	Early Finishers p. 410B
	<b>20.3</b> How do we identify and draw similar figures?	<b>3G2</b>	pp.412-413	similar	<b>Alternate Teaching Strategy p.412B</b>
	<b>20.4</b> How do we identify and draw slides, flips, and turns?	2G5	pp.414-415	flip, slide, turn	Alternate Teaching Strategy p.414B
	<b>20.5</b> How do we use the problem solving strategy, <i>make a model</i> to solve problems?	3N24	pp.416-417		Early Finishers p. 416B
	<b>21.1</b> How do we describe properties of solid figures and name the faces that make up solid figures?	3G3,3G4	pp.422-427	edge, face, vertex	Writing in Math p. 424B
	<b>21.2</b> How do we identify solid figures within complex solid figures?	3G3	pp.428-429		Early Finishers p. 428B
	<b>21.3</b> How do we combine plane figures to form tessellations?	3G3	pp.430-431	tessellate, tessellation	Fine Arts Connection p. 430B

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	<b>21.2</b> How do we identify solid figures within complex solid figures?	3G3	PP.428-429		Early Finishers p. 428B
	<b>21.3</b> How do we combine plane figures to form tessellations?	3A2	PP.430-431	tesselate, tessellation	Art Connection p. 430B
	<b>21.4</b> How do we draw and classify polygons and solid figures?	3G1	pp.432-435		Art Connection p. 432B
	<b>21.5</b> How do we use the problem solving skill <i>identify relationships</i> to identify solid figures from different perspectives?	3G4	pp.436-437		ESOL/ESL p. 436B
	<b>Review</b>		pp. 402-405 pp. 418-421 pp. 438-441 pp. 456-459		
	<b>Getting Ready for the NYS Mathematics Test</b>		pp. 462-463		
	<b>Unit test</b>				
	<b>Getting Ready for the NYS Mathematics Test</b>		pp.462-463		
	<b>Unit 7: Patterns &amp; Probability</b>				
	<b>Chapter 23: Algebra &amp; Patterns</b>				
	<b>23.1</b> How do we describe and extend geometric patterns?		pp. 470-473	pattern, unit	Alternative Teaching Strategy p.470B
	<b>23.2</b> How do we write a rule to describe a visual pattern?	3A2	pp. 474-475		Alternative Teaching Strategy p.474B
	<b>23.3</b> How do we describe and extend number patterns and identify missing numbers in a number pattern?	3A2	pp. 476-477		Writing in Math p.476B.
	<b>23.4</b> How do we use a pattern unit or a rule to make a pattern?	3A2	pp. 478-479		Language Arts Connection p.478B
	<b>23.5</b> How do we use the problem solving strategy <i>find a pattern</i> to solve a problem?	3A2	pp. 480-481		Reading Strategies p.480B
	<b>24.6</b> How do we solve problems involving arrangements by using the strategy <i>make an organized list</i> ?	<b>3N24</b>	pp. 500-501		Science Connection p.500B
	<b>Review</b>		pp. 482-485 pp. 502-505		

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	<b>Getting Ready for the NYS Mathematics Test</b>		pp. 508-509		
	<b>Unit Test</b>				
	<b>Chapter 25: Understand Fractions</b>				
	<b>25.1</b> How do we identify, read, and write fractions as parts of a whole?	3N11 3N12	pp. 516-519	denominator, fraction, numerator	Fine Arts Connection p. 516B
	<b>25.2</b> How do we identify, read, and write fractions as parts of a group?	3N11 3N12	pp. 520-521		Special Needs p.520B
	<b>25.2</b> How do we identify, read, and write fractions as part of a group?	3N10 3N13	pp.520-521		Special Needs p.520B
	<b>25.4</b> How do we compare and order fractions?	<b>3A1</b>	pp. 526-529		<b>Writing in Math p.526B</b>
	<b>25.5</b> How do we use the problem solving strategy <i>make a model</i> to solve problems?	3A1	pp. 530-531		ESOL/ESL p.530B
	<b>Getting Ready for the NYS Mathematics Test</b>		pp. 592-593		
	<b>Unit Test</b>				
	<b>UNIT 9: Multiply and Divide by 1-Digit Numbers</b>				
	<b>Chapter 29: Multiply By 1-Digit Numbers</b>				
	<b>29.1</b> How can we multiply multiples of 10 and 100?	2N1,3N1	pp. 600-601	factor, multiplication, multiple, pattern, skip counting	Science Connection p. 600B
	<b>30.5</b> How do we use basic facts and patterns to estimate quotients?	3N26	pp. 628-629		<b>Alternative Teaching Strategy p.628B</b>
	<b>Getting Ready for the NYS Mathematics Test</b>		pp.636-637		Alternative Teaching Strategy p.628B
	<b>BEGIN REVIEW FOR STATE TEST NOW IN MAY</b>				
	<b>REVIEW FOR STATE TEST</b>				

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	<b>NYS MATH ASSESSMENT</b>				
	<b>MAY-JUNE TOPICS</b>				
	11.3 How do we multiply with 3 factors and use the Associative Property of Multiplication?	3S9 4N6	pp. 218- 219	Associative Property of Multiplication	Advanced Learners p.218B
	15.1 How do we collect and organize data into a table?	3S2	pp. 302-303	data, frequency table, tally table,	Music Connection p. 302B
	15.2 How do we interpret survey results?	3S2	pp. 304-305	results, survey	Alternate Teaching Strategy p.304B
	15.3 How do we use a table to group data in more than one way?	3S2	pp. 306-307	classify	Early Finishers p.306B
	16.4 How do we locate points on a coordinate by using ordered pairs?	4S4	pp. 328-329	grid, ordered pair	Fine Arts Connection p. 328B
	16.5 How do we read and interpret data in line graphs?	3S8 4S4	pp. 330-331	line graph, trends	Alternate Teaching Strategy p.330B
	22.1 How do we estimate and find the perimeter of an object or plane figures?	3M1	pp.444-447	perimeter	Alternative Teaching Strategy p.444B
	22.2 How do we find the area of a plane figure?	3N21 4G4	pp.448-449	area, square unit	ESOL/ESL p. 448B
	24.1 How do we identify and predict certain, impossible, likely, or unlikely events?	3S2	pp. 488-489	certain, event, likely, impossible, probability, unlikely	Alternative Teaching Strategy p.488B
	24.2 How do we record the possible outcomes of experiments?	3S2	pp. 490-491	equally likely, predict, outcome	Vocabulary Strategy p.490B
	24.3 How do we record and display results and make predictions for experiments?	3S1 3S8	pp. 492-495		Early Finishers p.492B

