



Math Teachers Press, Inc.

4850 Park Glen Road, Minneapolis, MN 55416
 phone (800) 852-2435 fax (952) 546-7502

Tennessee Mathematics Standards Correlated to Moving with Math Extensions Grade 3

		Student Book	Skill Builders
STANDARD 1: MATHEMATICAL PROCESSES			
Grade Level Expectations:			
GLE 0306.1.1	Use mathematical language, symbols, and definitions while developing mathematical reasoning.	15	
GLE 0306.1.2	Apply and adapt a variety of appropriate strategies to problem solving, including estimation, and reasonableness of the solution.	20, 24-26	
GLE 0306.1.3	Develop independent reasoning to communicate mathematic ideas and derive algorithms and/or formulas.	journal prompts	
GLE 0306.1.4	Move flexibly between concrete and abstract representations of mathematical ideas in order to solve problems, model mathematical ideas, and communicate solution strategies.	11, 28	
GLE 0306.1.5	Use mathematical ideas and processes in different settings to formulate patterns, analyze graphs, set up and solve problems and interpret solutions.	5	
GLE 0306.1.6	Read and interpret the language of mathematics and use written/oral communication to express mathematical ideas precisely.	journal prompts	
GLE 0306.1.7	Recognize the historical development of mathematics, mathematics in context, and the connections between mathematics and the real world.	63	
GLE 0306.1.8	Use technology/manipulatives appropriately to develop understanding of mathematical algorithms, to facilitate problem solving, and to create accurate and reliable models of mathematical concepts.	8, 27	
Formative/Summative Assessment:			
0306.1.1	Read and write time to the nearest minute.	58	41-1
0306.1.2	Compare and order decimal amounts in the context of money.	63	

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0306.1.3	Count the value of combinations of coins and bills up to five dollars.	63	
0306.1.4	Analyze problems by identifying relationships, distinguishing relevant from irrelevant information, and observing patterns.	24, 25	
0306.1.5	Determine when and how to break a problem into simpler parts.	27	
0306.1.6	Use estimation to check answers for reasonableness, and calculators to check for accuracy.	20	
0306.1.7	Make and investigate mathematical conjectures.	13, 14	
0306.1.8	Explain and justify answers on the basis of mathematical properties, structures, and relationships.	13, 14	
0306.1.9	Use manipulatives to demonstrate that the commutative property holds for addition but not for subtraction.	13 (T.G.)	
0306.1.10	Use correct, clearly written and oral mathematical language to pose questions and communicate ideas.	journal prompts	
0306.1.11	Develop strategies for solving problems involving addition and subtraction of measurement.		
0306.1.12	Analyze and evaluate the mathematical thinking and strategies of others.	11 (T.G.)	
0306.1.13	Create and use representations to organize, record, and communicate mathematical ideas.	44	
0306.1.14	Use age-appropriate books, stories, and videos to convey ideas of mathematics.	26	
	State Performance Indicators:		
SPI 0306.1.1	Solve problems using a calendar.		42-1
SPI 0306.1.2	Solve problems involving elapsed time.		
SPI 0306.1.3	Determine the correct change from a transaction less than a dollar.		47-1
SPI 0306.1.4	Match the spoken, written, concrete, and pictorial representations of fractions with denominators up to ten.	47, 48	30-1
SPI 0306.1.5	Represent problems mathematically using diagrams, numbers, and symbolic expressions.	28, 31	
SPI 0306.1.6	Identify and use vocabulary to describe attributes of two- and three-dimensional shapes.	57	
SPI 0306.1.7	Select appropriate units and tools to solve problems involving measures.	59, 60	45-1

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SPI 0306.1.8	Express answers clearly in verbal, numerical, or graphical (bar and picture) form, using units when appropriate.	journal prompts	
STANDARD 2: NUMBER AND OPERATIONS			
Grade Level Expectations:			
GLE 0306.2.1	Understand the place value of whole numbers to ten-thousands place including expanded notation for all arithmetic operations.	1, 2, 8	1-1, 6-1
GLE 0306.2.2	Develop understanding of multiplication and related division facts through multiple strategies and representations.	27-31, 39, 40	20-1
GLE 0306.2.3	Relate multiplication and division as inverse operations.	40	25-2
GLE 0306.2.4	Solve multiplication and division problems using various representations	27-31, 39-42	20-1, 21-2, 25-1
GLE 0306.2.5	Understand the meaning and uses of fractions.	47-50	30-1, 31-1
GLE 0306.2.6	Use various strategies and models to compare and order fractions and identify equivalent fractions.	49	32-1
GLE 0306.2.7	Add and subtract fractions with like denominators using various models.	50	33-1, 33-2
Formative/Summative Assessment:			
0306.2.1	Represent whole numbers up to 10,000 using various models (such as base-ten blocks, number lines, place-value charts) and in standard form, written form, and expanded form.	1, 2, 7, 8	
0306.2.2	Understand and use the symbols =, < and > to signify order and comparison.	3	2-1
0306.2.3	Use parentheses to indicate grouping.	14	9-2
0306.2.4	Use a variety of methods to perform mental computations and compare the efficiency of those methods.	33	
0306.2.5	Use highest order value (such as tens or hundreds digit) to make simple estimates.	20	
0306.2.6	Solve a variety of addition and subtraction story problems including those with irrelevant information.	24-26	10-5, 15-5, 15-6
0306.2.7	Represent multiplication using various representations such as equal-size groups, area models, and equal jumps on number lines.	27-31	20-1, 21-2, 22-1

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0306.2.8	Represent division using various representations such as successive subtraction, the number of equal jumps, partitioning, sharing	39-41	25-1, 25-2
0306.2.9	Describe contexts for multiplication and division facts.	27-31, 39-42	
0306.2.10	Understand that symbols such as $\frac{1}{2}$, $\frac{1}{3}$ and $\frac{1}{4}$ represent numbers called unit fractions.	47	30-1
0306.2.11	Identify fractions as parts of whole units, as parts of sets, as locations on number lines, and as division of two whole numbers.	47, 48	30-1, 31-1
0306.2.12	Compare fractions using drawings, concrete objects, and benchmark fractions.	49	32-1
0306.2.13	Understand that when a whole is divided into equal parts to create unit fractions, the sum of all the parts adds up to one.	47 (T.G.)	30-1
	State Performance Indicators:		
SPI 0306.2.1	Read and write numbers up to 10,000 in numerals and up to 1,000 in words.	1	4-1, 5-1
SPI 0306.2.2	Identify the place value of numbers in the ten-thousands, thousands, hundreds, tens, and ones positions.	8	1-1
SPI 0306.2.3	Convert between expanded and standard form with whole numbers to 10,000.	2, 8	
SPI 0306.2.4	Compare and order numbers up to 10,000 using the words less than, greater than, and equal to, and the symbols $<$, $>$, $=$.	3, 4	2-1, 2-2
SPI 0306.2.5	Identify various representations of multiplication and division.	27-31, 39-42	20-1, 21-2, 22-1, 25-1, 25-2
SPI 0306.2.6	Recall basic multiplication facts through 10 times 10 and the related division facts.	33	20-2
SPI 0306.2.7	Compute multiplication problems that involve multiples of ten using basic number facts.	34, 38	22-1
SPI 0306.2.8	Solve problems that involve the inverse relationship between multiplication and division.	40	25-2
SPI 0306.2.9	Solve contextual problems involving the addition (with and without regrouping) and subtraction (with and without regrouping) of two- and three digit whole numbers.	15, 16, 21-23	10-5, 15-5, 15-6
SPI 0306.2.10	Identify equivalent fractions given by various representations.		
SPI 0306.2.11	Recognize and use different interpretations of fractions.	47, 48	30-1, 31-1

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SPI 0306.2.12	Name fractions in various contexts that are less than equal to, or greater than one.		
SPI 0306.2.13	Recognize, compare, and order fractions (benchmark fractions, common numerators, or common denominators).	49	32-1
SPI 0306.2.14	Add and subtract fractions with like denominators.	50	33-1, 33-2
STANDARD 3: ALGEBRA			
Grade Level Expectations:			
GLE 0306.3.1	Develop meaning for and apply the commutative, associative, and distributive properties using various representations.	13, 14, 32	9-1, 9-2
GLE 0306.3.2	Develop understanding that a letter or symbol can represent an unknown quantity in a simple mathematical expression/equation.	13	
GLE 0306.3.3	Describe and analyze patterns and relationships in contexts.	5	
GLE 0306.3.4	Create and represent patterns using words, tables, graphs, and symbols.	5	
Formative/Summative Assessment:			
0306.3.1	Show that addition and multiplication are commutative operations.	13, 14, 32	9-1
0306.3.2	Show that subtraction and division are not commutative operations.		
0306.3.3	Use commutative, associative, and distributive properties to multiply whole numbers.	32	
0306.3.4	Solve problems using the commutative, associative, and distributive properties.	13, 14	9-1, 9-2
0306.3.5	Find unknowns in number sentences and problems involving addition, subtraction, multiplication, or division.	32	
0306.3.6	Analyze patterns in words tables, and graphs to draw conclusions.	5	3-1
0306.3.7	Create different representations of a pattern given a verbal description.		
0306.3.8	Analyze patterns in quantitative change resulting from computation.		
State Performance Indicators:			
SPI 0306.3.1	Verify a conclusion using algebraic properties.	14	
SPI 0306.3.2	Express mathematical relationships using number sentences/equations.	41, 42	

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SPI 0306.3.3	Find the missing values in simple multiplication and division equations.	32	
SPI 0306.3.4	Describe or extend (including finding missing terms) geometric and numeric patterns.	5	3-1
STANDARD 4: GEOMETRY AND MEASUREMENT			
Grade Level Expectations:			
GLE 0306.4.1	Describe, compare, and analyze properties of polygons.		
GLE 0306.4.2	Understand and apply the concepts of congruence and symmetry.	55, 56	38-1, 39-1
GLE 0306.4.3	Understand and use attributes of 2- and 3-dimensional figures to solve problems.		40-1
GLE 0306.4.4	Use appropriate units, strategies and tools to solve problems involving perimeter.	61	46-1
GLE 0306.4.5	Solve measurement problems involving fractional parts of linear units and capacity units.	59	43-1
Formative/Summative Assessment:			
0306.4.1	Describe properties of plane figures (such as circles, triangles, squares and rectangles) and solid shapes (such as spheres, cubes and cylinders).	57	40-1
0306.4.2	Classify polygons according to the number of their sides and angles.		
0306.4.3	Classify lines and segments as parallel, perpendicular, or intersecting.	53, 54	37-1
0306.4.4	Identify, create, and describe figures with line symmetry.	55	38-1
0306.4.5	Understand that all measurements require units.	59, 60	
0306.4.6	Recognize the use of fractions in liquid measures.		
0306.4.7	Recognize the relationships among cups, pints, quarts, and gallons.		44-2
0306.4.8	Estimate and/or measure the capacity of a container.		
0306.4.9	Measure weight to the nearest ounce or gram.		
0306.4.10	Use reasonable units of length (i.e. kilometer, meter, centimeter, mile, yard, foot, inch) in estimates and measures.	60	45-1
0306.4.11	Know common equivalences for length (1 meter = 100 centimeters, 1 yard = 3 feet, 1 foot = 12 inches).	60	44-1, 45-1

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0306.4.12	Make and record measurements that use mixed units within the same system of measurement (such as feet and inches, meters and centimeters)		
0306.4.13	Use common abbreviations; km, m, cm, in, ft, yd, mi.	60	44-1, 45-1
	State Performance Indicators:		
SPI 0306.4.1	Recognize polygons and be able to identify examples based on geometric definitions.		
SPI 0306.4.2	Determine if two figures are congruent based on size and shape.	56	39-1
SPI 0306.4.3	Identify the line of symmetry in a two-dimensional design or shape.	55	38-1
SPI 0306.4.4	Calculate the perimeter of shapes made from polygons.	61	46-1
SPI 0306.4.5	Choose reasonable units of measure, estimate common measurements using benchmarks, and use appropriate tools to make measurements	59	43-1, 45-1
SPI 0306.4.6	Measure length to the nearest centimeter or half inch.	59	43-1
SPI 0306.4.7	Solve problems requiring the addition and subtraction of lengths.		
	STANDARD 5: DATA ANALYSIS, STATISTICS, AND PROBABILITY		
	Grade Level Expectations		
GLE 0306.5.1	Organize, display, and analyze data using various representations to solve problems.	64	50-1
	Formative/Summative Assessment:		
0306.5.1	Collect and organize data using observations, surveys and experiments.	64	
0306.5.2	Construct a frequency table, bar graph, pictograph, or line plot of collected data.	64	
0306.5.3	Compare and interpret different representations of the same data.		
0306.5.4	Solve problems using data from frequency tables, bar graphs, pictographs, or line plots.	64	
	State Performance Indicators:		
SPI 0306.5.1	Interpret a frequency table, bar graph, pictograph, or line plot.	64	50-1

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SPI 0306.5.2	Solve problems in which data is represented in tables or graphs.	64	
SPI 0306.5.3	Make predictions based on various representations of data.		