Math 5, 3rd Edition—Lesson Plan Overview

Chapter 1: Number Sense

Lesson	Topic	Lesson Objectives	Chapter Materials
1	**Millions Period**	• Demonstrate an understanding of the repetition of the Ones, Tens, and Hundreds places in each period • Read numbers with 9 or fewer digits • Write numbers with 9 or fewer digits in standard form, word form, expanded form, and expanded form with multiplication • Identify the value of the digits in a number with 9 or fewer digits • Compare numbers with 9 or fewer digits	**Teacher Manipulatives Packet:** • Place Value Pocket Chart Kit • Decimal Place Value Pocket Chart Kit (A) • Place Value Kit • Thermometer • Red Strip • Roman Numeral Clock • Number Line **Student Manipulatives Packet:** • Place Value Pocket Chart Kit • Decimal Place Value Pocket Chart Kit (A) **Instructional Aids (Teacher's Toolkit CD):** • Place Value & Number Forms transparency (page IA1) • Number Lines: Decimals transparency (page IA2) • Number Lines: Decimals (page IA2) for each student • Place Value: Decimals transparency (page IA3) • Equivalent Decimals transparency (page IA4) • Equivalent Decimals (page IA4) for each student • Rounding Decimals transparency (page IA5) • Rounding Decimals (page IA5) for each student • Positive & Negative Number Line transparency (page IA6) • Positive & Negative Number Line (page IA6) for each student • Number Lines (blank) transparency (page IA7) • Number Lines (blank) (page IA7), 2 copies for each student • Cumulative Review Answer Sheet (page IA8) for each student **Other Teaching Aids:** • Chalk or erasable markers: black and red • A red colored pencil for each student • A meter stick (optional) **Math 5 Tests and Answer Key** **Optional (Teacher's Toolkit CD):** • Fact Reviews pages 1–17 • Enrichment pages 1–6 • Extended Activities
2	**Billions Period**	• Demonstrate an understanding of the repetition of the Ones, Tens, and Hundreds places in each period • Read numbers with 12 or fewer digits • Write numbers with 12 or fewer digits in standard form, word form, expanded form, and expanded form with multiplication • Identify the value of the digits in a number with 12 or fewer digits • Compare numbers with 12 or fewer digits • Round numbers to the place of greatest value or to a given place	
3	**Decimals**	• Develop an understanding of one thousandths • Identify a decimal on a number line • Write decimals in standard form, word form, fraction form, expanded form, and expanded form with multiplication • Identify the value of the digits in a decimal	
4	**Equivalent Decimals**	• Identify equivalent decimals • Compare decimals • Round decimals to a given place	
5	**Positive & Negative Numbers**	• Develop an understanding of positive and negative numbers • Label a number line to show positive and negative numbers • Explore positive and negative numbers in real-life situations • Read a Fahrenheit thermometer	
6	**Compare Positive & Negative Numbers**	• Compare and order positive and negative numbers • Identify the number that is 1 more or 1 less • Plot positive and negative numbers on a number line	
7	**Roman Numerals**	• Write Roman numerals 1–100 • Recognize a pattern in writing Roman numerals	
8	**Chapter 1 Review**	• Review	
9	**Chapter 1 Test Grade 4 Review**	• Identify the number that is 100 more • Identify related multiplication and division facts • Solve missing addend facts • Solve addition problems with 3 addends • Subtract 3-digit numbers	

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Chapter 2: Addition & Subtraction

Lesson	Topic	Lesson Objectives	Chapter Materials
10	**Properties**	• Apply addition properties: Commutative Property, Identity Property, and Associative Property • Apply the Zero Principle of Subtraction • Solve addition and subtraction equations with variables • Complete input/output tables	**Teaching Visuals (Teacher's Toolkit CD):** • Chart 1: *Problem-Solving Plan* **Teacher Manipulatives Packet:** • Place Value Kit • Decimal Place Value Kit • Rulers: Centimeter Ruler **Student Manipulatives Packet:** • Place Value Kit **Instructional Aids (Teacher's Toolkit CD):** • Cumulative Review Answer Sheet (page IA8) for each student • Equations & Tables transparency (page IA9) • Equations & Tables (page IA9) for each student • Bar Graph transparency (page IA10) • Decimal Number Lines transparency (page IA11) • Line Graph transparency (page IA12) • Addition/Subtraction Relationship transparency (page IA13) • Addition/Subtraction Relationship (page IA13) for each student • Addition & Subtraction transparency (page IA14) • Word Problems transparency (page IA15) **Other Teaching Aids:** • 2 pencils of different lengths • 2 unused pencil cap erasers of the same size **Math 5 Tests and Answer Key** **Optional (Teacher's Toolkit CD):** • Fact Reviews pages 18–35 • Enrichment pages 7–15 • Extended Activities
11	**Add Large Numbers**	• Add 4-, 5-, and 6-digit numbers • Estimate the sum by rounding to the place of greatest value • Solve addition problems with 3 or more addends • Read a bar graph	
12	**Add Decimals**	• Round decimals to the place of greatest value • Add decimals with 3 or fewer decimal places • Estimate the sum by rounding to the place of greatest value • Solve addition problems with 3 or more addends	
13	**Subtract Large Numbers**	• Subtract numbers with 6 or fewer digits • Estimate the difference by rounding to the place of greatest value • Subtract 5- and 6-digit numbers, renaming zeros • Interpret a line graph	
14	**Subtract Decimals**	• Subtract decimals with 3 or fewer decimal places • Estimate the difference by rounding to the place of greatest value • Solve subtraction word problems	
15	**Add & Subtract**	• Demonstrate an understanding of the relationship between addition and subtraction • Solve addition and subtraction equations with variables • Complete input/output tables	
16	**Compensation & Word Problems**	• Use compensation to add and subtract mentally • Solve addition and subtraction word problems	
17	**Chapter 2 Review**	• Review	
18	**Chapter 2 Test Cumulative Review**	• Round numbers to the nearest hundred thousand • Identify in a number the period for the place with the greatest value • Locate the position of a number on a number line • Identify the value of a digit within a number • Order numbers from least to greatest	

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Chapter 3: Multiplication

Lesson	Topic	Lesson Objectives	Chapter Materials
19	**Multiplication Properties**	• Demonstrate an understanding of multiplication and the terms *factor* and *product* • Solve multiplication equations with a multiplication dot • Apply properties of multiplication to variables and numbers: Commutative Property, Identity Property, Zero Property, and Associative Property • Write a mathematical expression for a word phrase	**Teaching Visuals (Teacher's Toolkit CD):** • Chart 1: *Problem-Solving Plan* **Teacher Manipulatives Packet:** • Place Value Kit **Student Manipulatives Packet:** • Place Value Kit **Instructional Aids (Teacher's Toolkit CD):** • Cumulative Review Answer Sheet (page IA8) for each student • Properties of Multiplication (page IA16) one for each student • Associative Property of Multiplication transparency (page IA17) • Associative Property of Multiplication (page IA17) for each student • Prime & Composite Numbers transparency (page IA18) • Prime & Composite Numbers (page IA18) for each student • Multiples of 10, 100 & 1,000 transparency (page IA19) • Grid Paper transparency (page IA20) • Input/Output Tables transparency (page IA21) • Sticker Sheet (page IA22), 3 copies • Divisibility Rules transparency (page IA23) **Other Teaching Aids:** • Overhead marker: red • 135 sheets of paper • 5 sentence strips **Math 5 Tests and Answer Key** **Optional (Teacher's Toolkit CD):** • Fact Reviews pages 1–17 • Enrichment pages 16–21 • Extended Activities
20	**Prime & Composite Numbers**	• Demonstrate an understanding of the term *multiple* • Determine whether a number is prime or composite • Develop number sense with multiplication	
21	**Distributive Property**	• Analyze patterns and use mental math to multiply factors that are multiples of 10 • Apply properties of multiplication: Associative Property, Commutative Property, and Distributive Property of Multiplication over Addition	
22	**1-Digit Multipliers**	• Apply the Distributive Property of Multiplication over Addition • Estimate the product by rounding to the place of greatest value • Solve a multiplication word problem • Multiply a 2-, 3-, or 4-digit factor by a 1-digit multiplier • Solve money multiplication problems	
23	**2-Digit Multipliers**	• Multiply a 2- or 3-digit factor by a 1- or 2-digit multiplier • Estimate the product by rounding to the place of greatest value • Solve multiplication word problems • Complete an input/output table	
24	**Multiply & Estimate**	• Multiply a 2-, 3-, or 4-digit factor by a 2-digit multiplier • Solve multiplication word problems • Solve money multiplication problems • Solve a multiplication problem with a variable, using substitution • Complete an input/output table	
25	**3-Digit Multipliers**	• Multiply a 3-digit factor by a 3-digit multiplier • Solve money multiplication problems • Solve multiplication problems with zeros in the multiplier	
26	**Factor Trees**	• Demonstrate an understanding of prime and composite numbers • Develop an understanding of a factor tree • Write the prime factorization of a number • Determine whether a number is divisible by 2, 5, or 10	
27	**Exponent Form**	• Develop an understanding of exponents • Develop an understanding of powers of 10 • Develop an understanding of the relationship between exponential notation and prime factorization	
28	**Chapter 2 Review**	• Review	
29	**Chapter 2 Test Cumulative Review**	• Use the information on a chart to solve problems • Identify the value of a digit in a number • Identify the expanded form or word form of a number • Identify an odd number • Order decimals from greatest to least	

		• Add decimals • Round whole numbers and decimals • Determine the rule for an input/output table • Apply the Commutative and Associative Properties of Addition	

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Chapter 4: Geometry—Lines & Angles

Lesson	Topic	Lesson Objectives	Chapter Materials
30	**Points, Lines & Planes**	• Identify and name points, lines, line segments, and planes • Write ordered pairs to identify points on a coordinate graph • Plot points on a coordinate graph • Construct a line using points on a coordinate graph	**Teaching Visuals (Teacher's Toolkit CD):** • Chart 4: *Points, Lines & Planes* • Chart 5: *Line Segments, Rays & Angles* • Chart 6: *Angles* • Chart 7: *Triangles* • Chart 8: *Center Points, Radii, & Diameters* • Chart 9: *Chords & Central Angles* • Chart 24: *Coordinate Graph* **Teacher Manipulatives Packet:** • 2 Rays (Angler) • Fractions Kit: 1 whole fraction circle, 1 fourth fraction circle **Student Manipulatives Packet:** • 2 Rays (Angler) **Instructional Aids (Teacher's Toolkit CD):** • Cumulative Review Answer Sheet (page IA8) for each student • Coordinate Graph transparency (page IA24) • Coordinate Graph (page IA24), laminate 1 copy for each student • Angles transparency (page IA25) • Angles (page IA25) for each student • Graph Paper transparency (page IA26) • Graph Paper (page IA26) for each student • More Angles transparency (page IA27) • More Angles (page IA27) for each student • Measuring Angles transparency (page IA28) • Measuring Angles (page IA28) for each student • Supplementary Angles transparency (page IA29) • Supplementary Angles (page IA29) for each student • Triangles transparency (page IA30) • Triangles (page IA30) for each student • Missing Angle transparency (page IA31) • Missing Angle (page IA31) for each student • Circle & Center Point transparency (page IA32) • Circle & Center Point (page IA32) for each student • Central Angles transparency (page IA33) • Central Angles (page IA33) for each student • Angle Review transparency (page IA34) • Angle Review (page IA34) for each student **Christian Worldview Shaping (Teacher's Toolkit CD):** • Pages 1–6 **Other Teaching Aids:** • 5 strands of beads, each strand a different solid color • 9 sheets of graph paper • A ruler • A transparent ruler • A brass fastener for each student and the teacher
31	**Rays & Angles**	• Identify and name rays and angles • Classify right, acute, obtuse, and straight angles • Use a protractor to measure angles	
32	**Measuring Angles**	• Identify lines as parallel, perpendicular, or intersecting • Identify right, acute, obtuse, and straight angles • Use a protractor to measure angles • Relate angles to real-life situations	
33	**Measure & Draw Angles**	• Use a protractor to measure angles • Draw angles using a protractor • Develop an understanding of supplementary angles and that the sum of the two angle measurements is 180° • Write an equation to find the unknown measure of an angle in a pair of supplementary angles	
34	**Triangles**	• Identify right, acute, and obtuse triangles • Measure the angles within a triangle • Develop an understanding that the sum of the angle measurements of any triangle is 180° • Find the unknown measure of an angle in a triangle	
35	**Circles**	• Identify the center point of a circle • Name a circle • Identify, name, and draw a radius, a diameter, a chord, and a central angle in a circle • Develop an understanding that the sum of the measures of the central angles in a circle equals 360° • Measure the central angles in a circle using a protractor • Relate circles to real-life situations	
36	**Graphing Figures**	• Construct geometric figures on a coordinate graph	
37	**Chapter 4 Review**	• Review	
38	**Chapter 4 Test Cumulative Review**	• Identify the related fact • Identify the prime factorization of a number • Identify the factors of a number • Identify names for a number • Determine the perimeter of a square • Identify names for sets of objects • Identify the fraction that names part of a whole and part of a set	

			• An overhead protractor • A protractor for each student • Overhead markers: black, red, blue, and green • Building blocks, to make an approximately 1-foot-tall tower • Colored pencils: red, blue, and green for each student • Three 8 ½ × 11 sheets of paper • A washable marker for each student **Math 5 Tests and Answer Key** **Optional (Teacher's Toolkit CD):** • Fact Reviews pages 35–61 • Enrichment pages 22–26 • Extended Activities

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Chapter 5: Division: 1-Digit Divisors

Lesson	Topic	Lesson Objectives	Chapter Materials
39	**Division**	• Demonstrate an understanding of division • Identify the *dividend*, *divisor*, and *quotient* in division problems • Illustrate and solve division word problems • Demonstrate an understanding of the inverse relationship between multiplication and division • Solve a missing factor equation	**Teaching Visuals (Teacher's Toolkit CD):** • Chart 4: *Points, Lines & Planes* • Chart 5: *Line Segments, Rays & Angles* • Chart 6: *Angles* **Teacher Manipulatives Packet:** • Place Value Kit • Money Kit **Student Manipulatives Packet:** • Place Value Kit • Money Kit • Multiplication/Division Mat **Instructional Aids (Teacher's Toolkit CD):** • Cumulative Review Answer Sheet (page IA8) for each student • Input/Output Tables transparency (page IA21) • Division Grids (4) transparency (page IA35) • Division Grids (4) (page IA35), several copies for each student • Division Grids (2) transparency (page IA36) • Division Grids (2) (page IA36) for each student • Mathematical Expressions transparency (page IA37) **Other Teaching Aids:** • Several half-sheets of paper for each student and the teacher • 3 pencils **Math 5 Tests and Answer Key** **Optional (Teacher's Toolkit CD):** • Fact Reviews pages 18–35 • Enrichment pages 27–31 • Extended Activities
40	**1-Digit Quotients**	• Divide to find a 1-digit quotient, using manipulatives • Solve a division word problem • Write a division equation for a word problem • Demonstrate an understanding of the long division process • Check the quotient of a division problem, using multiplication	
41	**1- & 2-Digit Quotients**	• Divide to find 1- and 2-digit quotients, using manipulatives • Solve a division word problem • Write a division equation for a word problem • Interpret a remainder • Check a division problem using multiplication	
42	**2- & 3-Digit Quotients**	• Divide to find 2- and 3-digit quotients • Write a division equation for a word problem • Interpret a remainder • Illustrate a division word problem using a part-part-whole model • Check a division problem using multiplication • Determine the average (mean)	
43	**Zero in the Quotient**	• Complete an input/output table • Divide to find quotients with zero • Solve a division word problem	
44	**4-Digit Dividends**	• Solve a missing factor equation with a variable • Divide a 4-digit dividend • Divide money • Solve a money division word problem • Write a money division word problem	
45	**Estimate**	• Complete a division input/output table • Analyze patterns and use mental math to divide multiples of 10 • Estimate a quotient using compatible numbers	
46	**Short Form of Division**	• Write a mathematical expression for a word phrase • Use the short form of division to find a quotient • Solve a division word problem	
47	**Chapter 5 Review**	• Review	
48	**Chapter 5 Test Cumulative Review**	• Demonstrate an understanding of the Distributive Property of Multiplication over Addition • Identify a name for a given number • Identify a multiple of a given number • Identify prime and composite numbers • Identify the number rounded to a given amount • Round to determine the estimate • Determine the unknown measure of an angle in a triangle • Read and interpret the data in a bar graph	

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Chapter 6: Fractions

Lesson	Topic	Lesson Objectives	Chapter Materials
49	**Compare & Order Fractions**	• Demonstrate an understanding of a fraction • Demonstrate an understanding of equivalent fractions • Compare and order like fractions • Compare and order unlike fractions • Compare fractions to 1 or ½ using >, <, =, or ≠	**Teacher Manipulatives Packet:** • Fraction Kit **Student Manipulatives Packet:** • Fraction Kit **Instructional Aids (Teacher's Toolkit CD):** • Cumulative Review Answer Sheet (page IA8) for each student • Fraction Number Lines transparency (page IA38) • Fraction Number Lines (page IA38) for each student • Equivalent Fractions transparency (page IA39) • More Fraction Number Lines transparency (page IA40) • Fraction Number Lines (blank) transparency (page IA41) • Venn Diagram transparency (page IA42) • Venn Diagram (page IA42) for each student • Grouping Fractions transparency (page IA43) • Problem Solving transparency (page IA44) • Problem Solving (page IA44) for each student **Math 5 Tests and Answer Key** **Optional (Teacher's Toolkit CD):** • Fact Reviews pages 62–78 • Enrichment pages 32–35 • Extended Activities
50	**Rename Fractions**	• Rename a fraction to higher terms • Rename a fraction to lower terms, using divisibility rules • Compare and order related fractions	
51	**Improper Fractions & Mixed Numbers**	• Rename an improper fraction as a mixed number • Rename a mixed number as an improper fraction	
52	**Compare Mixed Numbers**	• Compare mixed numbers and improper fractions • Round mixed numbers to the nearest whole number	
53	**Common Factors**	• List the factors of a number • Identify prime and composite numbers • Use a Venn diagram to identify common factors • Determine if a number is divisible by 2, 3, 4, 5, 6, or 10 • Use divisibility rules to identify common factors • Rename a fraction to lowest terms	
54	**Lowest Terms**	• Identify common factors of two numbers • Demonstrate an understanding of renaming fractions to lower terms • Rename a fraction to lowest terms using the Greatest Common Factor (GCF)	
55	**More Lowest Terms**	• Construct a factor tree • Determine the GCF for two numbers using prime factorization • Use a Venn diagram to determine the GCF for two numbers • Write the prime factorization of a number, using exponents • Rename a fraction to lowest terms using the GCF	
56	**Guess & Check**	• Use the guess and check strategy to solve problems	
57	**Chapter 6 Review**	• Review	
58	**Chapter 6 Test Cumulative Review**	• Compare and order positive and negative numbers • Compare equations using using >, <, or = • Determine the radius of a circle, given the diameter • Determine the diameter of a circle, given the radius • Identify acute, obtuse, and right angles • Determine the unknown measure of an angle in a pair of supplementary angles • Identify lines containing rays and line segments	

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Chapter 7: Division: 2-Digit Divisors

Lesson	Topic	Lesson Objectives	Chapter Materials
59	**Multiples of 10**	• Analyze patterns and use mental math to divide multiples of 10 • Estimate a quotient using compatible numbers • Divide by a multiple of 10	**Teaching Visuals (Teacher's Toolkit CD):** • Chart 1: *Problem-Solving Plan* • Chart 2: *Adjust the Quotient* (higher) • Chart 3: *Adjust the Quotient* (lower) • Chart 25: *Line Graph: Fair Week* **Teacher Manipulatives Packet:** • Place Value Kit **Student Manipulatives Packet:** • Place Value Kit **Instructional Aids (Teacher's Toolkit CD):** • Cumulative Review Answer Sheet (page IA8) for each student • Input/Output Tables transparency (page IA21) • Division Grids (4) transparency (page IA35) • Division Grids (4) (page IA35), several copies for each student • More Fraction Number Lines transparency (page IA40) • Venn Diagram transparency (page IA42) • Too Much or Not Enough transparency (page IA45) • Too Much or Not Enough (page IA45) for each student • Chart & Line Graph transparency (page IA46) • Class Popcorn Sales transparency (page IA47) • Multi-step Word Problems transparency (page IA48) • Line Graph: Air Show Attendance transparency (page IA49) • Bar Graph: Airline Flight 253 transparency (page IA50) **Other Teaching Aids:** • 130 small dried beans • A red overhead marker • A calculator for each student (optional) **Math 5 Tests and Answer Key** **Optional (Teacher's Toolkit CD):** • Fact Reviews pages 1–78 • Enrichment pages 36–44 • Extended Activities
60	**1-Digit Quotients**	• Divide to find 1-digit quotients • Estimate a quotient using compatible numbers • Solve a division word problem • Check division problems using multiplication	
61	**Adjust the Quotient**	• Adjust the quotient in a division problem • Divide to find 1-digit quotients • Check division problems using multiplication	
62	**2-Digit Quotients**	• Divide to find 2-digit quotients • Adjust the quotient in a division problem • Solve a division word problem • Interpret a remainder	
63	**4-Digit Dividends**	• Complete an input/output table using mental math • Divide 4-digit dividends to find 2-digit quotients • Adjust the quotient in a division problem • Solve a division word problem • Interpret a remainder	
64	**3-Digit Quotients**	• Divide to find 3-digit quotients • Determine whether a word problem has too much or not enough information • Solve a word problem • Write an equation for a division word problem • Interpret a remainder • Develop an understanding of a remainder written as a fraction	
65	**More 3-Digit Quotients**	• Divide to find 3-digit quotients • Divide to find a quotient containing 0 • Analyze a line graph • Use a line graph to solve word problems	
66	**More Division**	• Determine the rule for an input/output table • Analyze a pictograph • Use a pictograph to solve word problems • Develop an understanding of a remainder written as a fraction	
67	**Order of Operations**	• Use the order of operations to solve equations and multi-step word problems	
68	**Chapter 7 Review**	• Review	
69	**Chapter 7 Test Cumulative Review**	• Recognize related numbers and fractions • Identify equivalent fractions • Determine the number for a point on a number line • Rename improper fractions and mixed numbers • Read and interpret the data in a bar graph	

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Chapter 8: Time & Customary Measurement

Lesson	Topic	Lesson Objectives	Chapter Materials
70	**Time**	• Identify equivalent units of time • Tell and write time to the minute • Differentiate between AM and PM • Convert (rename) units of time to smaller or larger units • Read a calendar and write a date	**Teaching Visuals (Teacher's Toolkit CD):** • Chart 17: *Time Measurement* • Chart 18: *Time Line: Air & Space* • Chart 19: *Customary Measurement* **Teacher Manipulatives Packet:** • Clock • Rulers: Inch Ruler (fourths), Inch Ruler (eighths) • Thermometer • Red Strip • Boiling Point steam cloud • Measurement Flashcards: customary **Student Manipulatives Packet:** • Clock • Rulers: Inch Ruler (fourths), Inch Ruler (eighths), Measuring Tape (yard) • Thermometer • Red Strip **Instructional Aids (Teacher's Toolkit CD):** • Cumulative Review Answer Sheet (page IA8) for each student • 1776 transparency (page IA51) • Map Key transparency (page IA52) • Map Key (page IA52) for each student • Input/Output Tables (blank) transparency (page IA53) • Input/Output Tables (blank) (page IA53), 2 copies for each student • Temperature Chart (page IA54) for each student • Line Graph: Temperature transparency (page IA55) • Word Problems transparency (page IA56) **Christian Worldview Shaping (Teacher's Toolkit CD):** • Pages 7–10 **Other Teaching Aids:** • Judy Clock • A yardstick • A tape measure • A drinking straw • 14 feet of rope • A spring scale • 1 lb of sugar and 1 oz of sugar • A 1-lb loaf of bread • A small onion • An apple • A cabbage • Unpopped popcorn, rice, or dried beans • Two clear 1-cup measuring cups, an 8-ounce paper cup, a 1-pint container, a 1-quart container, and a 1-gallon container • 1 gallon of colored water • A thermometer for each group of 4 students • Six 3 × 5 cards
71	**Elapsed Time**	• Determine the elapsed time to the hour and minute • Determine the future elapsed time • Add and subtract time • Demonstrate an understanding of elapsed time on a time line	
72	**Linear Measurement**	• Recognize *inch*, *foot*, *yard*, and *mile* as linear measurement units • Use a map key to determine distance • Estimate length to the nearest inch • Measure to the nearest inch, half inch, fourth inch, and eighth inch • Draw a line to the nearest inch, half inch, fourth inch, and eighth inch • Measure the perimeter of a figure	
73	**Rename Measurements**	• Convert (rename) units of linear measurement to smaller or larger units • Recognize the symbols for *foot* and *inch*	
74	**Weight & Capacity**	• Recognize *pound*, *ounce*, and *ton* as measuring units for weight • Recognize *fluid ounce*, *cup*, *pint*, *quart*, and *gallon* as measuring units for capacity • Convert (rename) units of weight and capacity to smaller or larger units • Read a spring scale	
75	**Temperature**	• Recognize *degree* as a measuring unit for temperature • Recognize that *°F* represents *degrees Fahrenheit* • Read and set a Fahrenheit thermometer • Recognize standard Fahrenheit temperatures • Measure temperature using a Fahrenheit thermometer • Interpret a line graph	
76	**Measurement Problems**	• Add, subtract, and multiply customary measurements • Solve rate (speed) and distance word problems	
77	**Chapter 8 Review**	• Review	
78	**Chapter 8 Test Cumulative Review**	• Multiply a 2- or 3-digit factor by a 1- or 2-digit multiplier • Solve multiplication and division problems mentally • Identify lines, rays, and angles in a plane figure • Determine equivalent fractions	

			• A calculator for each student (optional **Math 5 Tests and Answer Key** **Optional (Teacher's Toolkit CD):** • Fact Reviews pages 1–78 • Enrichment pages 45–50 • Extended Activities

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Chapter 9: Fractions: Addition & Subtraction

Lesson	Topic	Lesson Objectives	Chapter Materials
79	**Add Like Fractions**	• Add fractions and mixed numbers with like denominators • Estimate the sum of mixed numbers by rounding to the nearest whole number • Simplify fraction answers by renaming to lowest terms • Simplify improper fraction answers by renaming as mixed numbers • Apply addition properties to fractions	**Teaching Visuals (Teacher's Toolkit CD):** • Chart 3: *Points, Lines & Planes* • Chart 4: *Line Segments, Rays & Angles* • Chart 5: *Angles* • Chart 6: *Triangles* **Teacher Manipulatives Packet:** • Fraction Kit: fraction circles • Fraction Number Line (tan) • Measurement Flashcards: customary capacity **Student Manipulatives Packet:** • Fraction Kit: fraction circles • Fraction Number Line (tan) **Instructional Aids (Teacher's Toolkit CD):** • Cumulative Review Answer Sheet (page IA8) for each student • Fraction Number Lines (blank) transparency (page IA41) • Venn Diagram transparency (page IA42) • Venn Diagram (page IA42) for each student • Fraction Paper (page IA57) (optional) • Hundred Chart (page IA58) for each student • Add & Subtract Fractions transparency (page IA59) **Other Teaching Aids:** • 26 Unifix Cubes for each student (10 of one color and 16 of another) • A calculator for each student (optional) • A measuring teaspoon • A measuring tablespoon • Ingredients, utensils, and other supplies for making cookies (optional; see recipe in Lesson 89) **Math 5 Tests and Answer Key** **Optional (Teacher's Toolkit CD):** • Fact Reviews pages 1–78 • Enrichment pages 51–58 • Extended Activities
80	**Subtract Like Fractions**	• Subtract fractions and mixed numbers with like denominators • Estimate the difference of mixed numbers by rounding to the nearest whole number • Rename 1 as an improper fraction to subtract • Simplify answers by renaming to lowest terms • Write an equation to solve a fraction word problem	
81	**Add Unlike Fractions**	• Add fractions and mixed numbers with unlike (related) denominators • Estimate the sum of mixed numbers by rounding • Simplify answers by renaming to lowest terms • Write an equation to solve a fraction word problem	
82	**Subtract Unlike Fractions**	• Subtract fractions and mixed numbers with unlike (related) denominators • Estimate the difference of mixed numbers by rounding • Simplify answers by renaming to lowest terms • Write an equation to solve a fraction word problem	
83	**Least Common Multiple**	• List multiples to determine the Least Common Multiple (LCM) of two numbers • Use a Venn diagram to determine the LCM of two numbers • Write equivalent fractions using the Least Common Denominator (LCD) • Add and subtract unlike fractions • Complete an input/output table	
84	**Compare Fractions**	• Determine the Least Common Denominator (LCD) by finding the Least Common Multiple (LCM) or find a common denominator by multiplying the unlike denominators • Compare unlike fractions (use the LCD to make equivalent fractions) • Add and subtract unlike fractions • Apply the LCM to problem-solving situations	
85	**Least Common Denominator**	• Determine the LCD by finding the LCM • Add and subtract fractions • Simplify answers by renaming to lowest terms • Evaluate equations by substituting fractions for variables	
86	**Add & Subtract Unlike Fractions**	• Determine the LCD by finding the LCM or find a common denominator by multiplying the unlike denominators • Add and subtract fractions • Simplify answers by renaming to lowest terms • Write an equation to solve a fraction word problem	
87	**Add & Subtract Mixed Numbers**	• Determine the LCD by finding the LCM or find a common denominator by multiplying the unlike denominators • Add and subtract mixed numbers	

		• Simplify answers by renaming to lowest terms • Estimate by rounding to the nearest whole number • Write >, <, or = to complete statements comparing sums or differences • Write an equation to solve a fraction word problem	
88	**Add & Subtract Fractions**	• Add fractions and mixed numbers • Subtract fractions and mixed numbers • Determine the LCD by finding the LCM • Simplify answers by renaming to lowest terms • Estimate by rounding to the nearest whole number • Apply the LCM to problem-solving situations • Solve math phrases • Complete an input/output table	
89	**Factoring to Compare Fractions**	• Construct a factor tree • Write the prime factorization of a number • Determine the LCM for two numbers using prime factorization • Apply knowledge of fractions to everyday life • Use a recipe to solve fraction problems	
90	**Chapter 9 Review**	• Review	
91	**Chapter 9 Test Cumulative Review**	• Read a circle graph, a line graph, and a bar graph • Determine the number, variable, or operation needed to complete an equation	

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Chapter 10: Equations

Lesson	Topic	Lesson Objectives	Chapter Materials
92	**Expressions**	• Write a mathematical expression for a real-life situation or a word phrase • Use two equal expressions to write an equation • Evaluate and relate expressions using >, <, or =	**Teaching Charts (Teacher's Toolkit CD):** • Chart 24: *Coordinate Graph* • Chart 26: *Double Bar Graph* **Student Manipulatives Packet:** • Place Value Kit **Instructional Aids (Teacher's Toolkit CD):** • Cumulative Review Answer Sheet (page IA8) for each student • Bar Graph transparency (page IA10) • Input/Output Tables transparency (page IA21) • Coordinate Graph transparency (page IA24) • Class Popcorn Sales transparency (page IA47) • Expressions & Equations I transparency (page IA60) • Expressions & Equations II transparency (page IA61) • Apply Properties transparency (page IA62) • Solve for *x* transparency (page IA63) • Solve for *x* (page IA63) for each student • Balanced Equations (numbers) transparency (page IA64) • Balanced Equations (objects) transparency (page IA65) • Part-Part-Whole Model (page IA66) for each student • Equations: Word Problems I transparency (page IA67) • Equations: Word Problems II transparency (page IA68) • More Expressions & Equations transparency (page IA69) • Part-Part-Whole Model (variable) transparency (page IA70) **Other Teaching Aids:** • 3 coffee stirrers for each student **Math 5 Tests and Answer Key** **Optional (Teacher's Toolkit CD):** • Fact Reviews pages 1–78 • Enrichment pages 59–62 • Extended Activities
93	**Equations**	• Apply properties and strategies to evaluate and relate equivalent expressions • Write an equation for a part-part-whole model	
94	**Balanced Equations**	• Determine the value of an expression using substitution • Determine an unknown value (value of a variable) in an equation using substitution or mental math • Determine the value of objects on a balanced scale	
95	**Equations in Word Problems**	• Solve word problems with unlike parts • Write an equation for a word problem • Rename parts with unlike labels	
96	**Chapter 10 Review**	• Review	
97	**Chapter 10 Test Cumulative Review**	• Solve problems mentally • Determine the perimeter of a triangle • Determine the unknown measure of an angle in a triangle • Identify the kind of angle • Recognize the diameter of a circle • Identify the equivalent fraction • Add fractions	

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Chapter 11: Geometry—Perimeter & Area

Lesson	Topic	Lesson Objectives	Chapter Materials
98	**Quadrilaterals & Other Polygons**	• Describe and identify regular and irregular polygons • Calculate the perimeter of a polygon • Identify a square, a rectangle, a parallelogram, a trapezoid, and a rhombus as quadrilaterals • Develop an understanding that the sum of the angle measurements of any quadrilateral is 360º	**Teaching Visuals (Teacher's Toolkit CD):** • Chart 7: *Triangles* • Chart 8: *Center Points, Radii & Diameters* • Chart 10: *Polygons* • Chart 11: *Quadrilaterals* • Chart 12: *Similar, Congruent & Symmetrical* • Chart 13: *Perimeter* • Chart 14: *Area* **Student Manipulatives Packet:** • Shapes Kit: 1 quadrilateral **Instructional Aids (Teacher's Toolkit CD):** • Cumulative Review Answer Sheet (page IA8) for each student • Triangles transparency (page IA30) • Triangles (page IA30) for each student • Equations: Word Problems I transparency (page IA67) • Quadrilaterals transparency (page IA71) • Quadrilaterals (page IA71) for each student • Circumference A (page IA72) for one third of the students • Circumferences B & C (page IA73) for two thirds of the students • Transformations transparency (page IA74) • Transformations (page IA74) for each student • More Triangles transparency (page IA75) • Area Grid transparency (page IA76) • Area Grid (page IA76) for each student • Complex Area transparency (page IA77) • Complex Area (page IA77) for each student • Area of Triangles transparency (page IA78) • Area of Triangles (page IA78) for each student • Perimeter & Area transparency (page IA79) • Perimeter & Area (page IA79) for each student **Christian Worldview Shaping (Teacher's Toolkit CD):** • Page 11 **Other Teaching Aids:** • A 25-inch strand of yarn for each student • Quadrilaterals of different shapes for each student • A 12-inch ruler for each student • A centimeter ruler for each student • Scissors for each student • A protractor for each student • An overhead protractor **Math 5 Tests and Answer Key** **Optional (Teacher's Toolkit CD):** • Fact Reviews pages 1–78 • Enrichment pages 63–70 • Extended Activities
99	**Perimeter & Circumference**	• Develop an understanding of the relationship between the diameter and the circumference of a circle • Estimate the circumference of a circle • Identify and describe similar, congruent, and symmetrical figures • Identify, model, and describe translations, rotations, and reflections • Calculate the perimeter of a polygon	
100	**Classify Triangles**	• Develop an understanding that the sum of the angle measurements of any triangle is 180° • Measure the angles in a triangle using a protractor • Classify triangles by angles (right, acute, obtuse) • Classify triangles by sides (equilateral, isosceles, scalene)	
101	**Area**	• Use a formula to calculate the area of squares and rectangles • Calculate the area of a complex polygon • Solve geometry word problems	
102	**Area of a Triangle**	• Develop an understanding of the area of a triangle • Solve geometry word problems	
103	**Perimeter & Area**	• Calculate the area of a square, a rectangle, a complex figure, and a triangle • Calculate the perimeter of a rectangle	
104	**Chapter 11 Review**	• Review	
105	**Chapter 11 Test Cumulative Review**	• Add and subtract fractions and mixed numbers • Determine equivalent measurements • Determine equivalent expressions • Solve problems with variables	

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Chapter 12: Fractions—Multiplication & Division

Lesson	Topic	Lesson Objectives	Chapter Materials
106	**Multiply a Whole Number and a Fraction**	• Write a multiplication equation for a repeated addition equation • Multiply a whole number and a fraction • Simplify answers by renaming to lowest terms • Write an equation to solve a fraction word problem • Complete an input/output table	**Teacher Manipulatives Packet:** • Fraction Kit: fraction circles • Shapes Kit: 12 red squares • Fraction Number Line (tan) **Student Manipulatives Packet:** • Fraction Kit: fraction circles • Shapes Kit: 12 red squares • Fraction Number Line (tan) **Instructional Aids (Teacher's Toolkit CD):** • Cumulative Review Answer Sheet (page IA8) for each student • Input/Output Tables (blank) transparency (page IA53) • More Fractions transparency (page IA80) **Other Teaching Aids:** • Four 8 ½ × 11 sheets of unruled white paper for each student and the teacher • 2 different colored crayons for each student • 2 different colored markers or chalk • Examples of fractions from home (e.g., measuring cups, recipes, serving labels from canned goods, fabric, ruler) • A bar graph (from a newspaper, a magazine, or an online encyclopedia) • A ruler for each student • A Bible **Math 5 Tests and Answer Key** **Optional (Teacher's Toolkit CD):** • Fact Reviews pages 1–78 • Enrichment pages 71–74 • Extended Activities
107	**Find a Fraction of a Whole Number**	• Find a fraction of a whole number using manipulatives • Multiply to find a fraction of a whole number • Simplify answers by renaming to lowest terms • Write an equation to solve a fraction word problem	
108	**Find a Fraction of a Fraction**	• Make a model or diagram to find a fraction of a fraction • Multiply to find a fraction of a fraction • Simplify answers by renaming to lowest terms • Write an equation to solve a fraction word problem • Apply multiplication properties to fractions	
109	**Multiply a Mixed Number**	• Multiply a whole number and a mixed number • Apply the Distributive Property of Multiplication over Addition to multiply a whole number and a mixed number • Simplify answers by renaming to lowest terms • Write an equation to solve a fraction word problem	
110	**Multiply Mixed Numbers**	• Estimate the product of mixed numbers by rounding to the nearest whole number • Multiply mixed numbers • Simplify answers by renaming to lowest terms • Write an expression for a phrase	
111	**Divide a Whole Number by a Fraction**	• Draw a diagram to solve a division equation with a fraction • Use a number line to solve a division equation with a fraction • Demonstrate an understanding of dividing a whole number by a fraction • Check a division problem using multiplication • Complete an input/output table	
112	**Divide a Fraction by a Fraction**	• Draw a diagram to solve a division equation with a fraction • Use a number line to solve a division equation with a fraction • Demonstrate an understanding of dividing a fraction by a fraction • Check a division problem using multiplication • Write an equation to solve a fraction word problem	
113	**Use Reciprocals to Divide Fractions**	• Write multiplication and division equations for a fraction family • Identify the reciprocal of a fraction • Divide by multiplying by the reciprocal of the divisor • Check a division problem using multiplication	
114	**Divide Fractions**	• Identify the reciprocal of a fraction • Divide by multiplying by the reciprocal of the divisor • Check a division problem using multiplication • Complete an input/output table • Write an equation to solve a fraction word problem	
115	**The World of Fractions**	• Connect math to other subjects in real-world situations • Write an equation to solve a fraction word problem • Solve multi-step word problems	

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116	**Chapter 12 Review**	• Review	
117	**Chapter 12 Test Cumulative Review**	• Recognize the factors of a number • Recognize the multiples of a number • Recognize characteristics of a number • Recognize addition properties • Determine the value of *n* in a part-part-whole model • Calculate perimeter and area of figures • Calculate the unknown measure of an angle in a triangle • Convert inches to feet	

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Chapter 13: Decimals—Multiplication & Division

Lesson	Topic	Lesson Objectives	Chapter Materials
118	**Decimals**	• Demonstrate an understanding of decimals • Read and write decimals to the One Thousandths place • Identify the value of digits in a decimal • Write decimals as fractions and mixed numbers • Identify the equivalent fraction for a decimal	**Teacher Manipulatives Packet:** • Decimal Place Value Pocket Chart Kit (B) • Place Value Kit **Student Manipulatives Packet:** • Decimal Place Value Pocket Chart Kit (B) • Place Value Kit **Instructional Aids (Teacher's Toolkit CD):** • Cumulative Review Answer Sheet (page IA8) for each student • Input/Output Tables (blank) transparency (page IA53) • Tenths transparency (page IA81) • Hundredths transparency (page IA82) • Hundredths (page IA82) for each student • One Thousandths transparency (page IA83) • Number Line Patterns transparency (page IA84) • Number Line Patterns (page IA84) for each student • Decimal Word Problems transparency (page IA85) • Multiply & Divide by Powers of 10 transparency (page IA86) • Multiply & Divide by Powers of 10 (page IA86) for each student • Decimal Review transparency (page IA87) • Decimal Review (page IA87) for each student • Decimal Review, Continued transparency (page IA88) • Decimal Review, Continued (page IA88) for each student **Christian Worldview Shaping (Teacher's Toolkit CD):** • Page 12 **Other Teaching Aids:** • A calculator for each student • Overhead markers: red, blue, orange, purple, and brown • Crayons: red and blue for each student **Math 5 Tests and Answer Key** **Optional (Teacher's Toolkit CD):** • Fact Reviews pages 1–78 • Enrichment pages 75–80 • Extended Activities
119	**Rounding Decimals**	• Demonstrate an understanding of decimals • Plot decimals on a number line • Round decimals to a given place • Order decimals from least to greatest	
120	**Compare & Multiply**	• Order decimals from least to greatest • Compare decimals • Multiply a decimal by a whole number • Estimate the product of a multiplication problem by rounding to the nearest whole number • Solve decimal word problems	
121	**Multiply Decimals**	• Multiply a decimal by a multiple of ten • Multiply a decimal by a decimal • Solve decimal word problems • Write an equation for a word problem	
122	**Estimate & Multiply**	• Write a decimal in expanded form with multiplication • Estimate the product by rounding to the nearest whole number • Multiply a decimal by a decimal • Determine the number of decimal places in a product • Annex zeros in the product • Write a multiplication equation for a word problem	
123	**Division: Decimal by a 1-Digit Divisor**	• Divide a decimal by a 1-digit whole number, with and without renaming in the dividend • Check a division problem using multiplication • Read a chart	
124	**Quotients Less Than One**	• Annex a 0 to rename a decimal • Check a division problem using multiplication • Determine if a quotient will be less than 1 • Divide a whole number by a 1-digit whole number to find a quotient less than 1 • Divide to rename a fraction as a decimal • Write an equation for a word problem	
125	**Zero in the Quotient**	• Round a decimal to the nearest Ones, Tenths, or Hundredths place • Demonstrate an understanding of zeros in the quotient • Estimate the quotient of a decimal division problem • Divide a decimal by a 1-digit whole number • Check a division problem using multiplication • Divide to rename a fraction as a decimal • Solve a money word problem	
126	**Powers of Ten**	• Multiply or divide a decimal by a power of 10 using mental math • Write an equation for a word problem	
127	**Solve Problems Backwards**	• Solve word problems, working backwards	
128	**Chapter 13 Review**	• Review	
129	**Chapter 13 Test Cumulative Review**	• Calculate area and perimeter of figures • Determine the measure of the unknown angle of a	

		triangle and a quadrilateral • Identify the transformation of a figure • Recognize congruent figures • Identify parallel line segments in a figure • Add fractions • Multiply fractions • Identify equivalent fractions • Write an expression for a number • Complete a part-part-whole model • Solve a multi-step money word problem	

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Chapter 14: Geometry—Surface Area & Volume

Lesson	Topic	Lesson Objectives	Chapter Materials
130	**3-Dimensional Figures**	• Distinguish between 2-dimensional and 3-dimensional figures • Recognize 3-dimensional figures: a sphere, a cone, a cylinder, a prism, and a pyramid • Identify flat and curved surfaces of 3-dimensional figures • Develop an understanding of polyhedrons • Identify faces, edges, and vertices of a polyhedron • Distinguish between prisms and pyramids • Recognize a square prism (cube), a rectangular prism, a triangular prism, a square pyramid, a rectangular pyramid, and a triangular pyramid • Construct a cone, a cylinder, a prism, and a pyramid from nets	**Teaching Visuals (Teacher's Toolkit CD):** • Chart 13: *Perimeter* • Chart 14: *Area* • Chart 15: *Volume* • Chart 16: *3-Dimensional Figures* **Teacher Manipulatives Packet:** • Shapes Kit • Rulers: Centimeter Ruler **Student Manipulatives Packet:** • Rulers: Centimeter Ruler **Instructional Aids (Teacher's Toolkit CD):** • Cumulative Review Answer Sheet (page IA8) for each student • Nets I transparency (page IA89) • Nets II transparency (page IA90) • Solid Figure Patterns (pages IA91–IA98) for each student and the teacher • Pyramids transparency (page IA99) • Prisms transparency (page IA100) • Surface Area: Rectangular Prism transparency (page IA101) • Surface Area: Rectangular Prism (page IA101) for each student • Surface Area: Square Prism transparency (page IA102) • Surface Area: Square Prism (page IA102) for each student • Cube Pattern (page IA103) for each student and the teacher • Face Area (page IA104) for the teacher • 3-Dimensional Figures transparency (page IA105) • 3-Dimensional Figures (page IA105) for each student • Nets Review transparency (page IA106) **Other Teaching Aids:** • An object to represent each of the following: sphere, cone, cylinder, rectangular prism, square prism (cube), triangular prism, rectangular pyramid, square pyramid, triangular pyramid • A cereal box • Construction paper: red, yellow, and blue • Scissors for each student and the teacher • Transparent tape for each student and the teacher • Crayons for each student: green, orange, purple • A shoebox • A piece of cardboard (large enough to cover the opening of the shoebox) **Math 5 Tests and Answer Key** **Optional (Teacher's Toolkit CD):** • Fact Reviews pages 1–78 • Extended Activities
131	**Prisms & Pyramids**	• Distinguish between prisms and pyramids • Construct a rectangular prism, a triangular prism, a rectangular pyramid, and a triangular pyramid from nets • Identify the characteristics of 3-dimensional figures: cone, cylinder, square prism (cube), rectangular prism, triangular prism, square pyramid, rectangular pyramid, triangular pyramid • Demonstrate an understanding of nets	
132	**Surface Area**	• Develop an understanding of surface area • Find the surface area of a rectangular prism and a square prism (cube)	
133	**Volume**	• Develop an understanding of volume • Use a formula to determine the volume of a 3-dimensional figure	
134	**More Volume**	• Develop an understanding of the relationship between perimeter, area, and volume • Use a formula to determine the volume of a 3-dimensional figure • Develop an understanding of square units and cubic units • Solve geometry word problems	
135	**More Surface Area & Volume**	• Demonstrate an understanding of surface area and volume • Find the surface area of a square prism (cube) and a rectangular prism • Use a formula to determine the volume of a 3-dimensional figure • Solve geometry word problems	
136	**Chapter 14 Review**	• Review	
137	**Chapter 14 Test Cumulative Review**	• Demonstrate an understanding of multiplication properties • Substitute a value for a variable to determine the value of the expression • Determine the operation needed to make an equation true • Solve multiplication and division problems • Solve time and measurement problems • Determine the standard form for the given word form of a number • Determine the value of an improper fraction • Solve a multi-step word problem	

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Chapter 15: Metric Measurement

Lesson	Topic	Lesson Objectives	Chapter Materials
138	**Metric Measurement: Linear**	• Develop an understanding of the metric system • Recognize metric prefixes and abbreviations • Develop an understanding of *meter*, *kilometer*, *centimeter*, and *millimeter* • Estimate and measure length, width, and height to the nearest meter, centimeter, and millimeter • Draw a line to the nearest centimeter or millimeter • Recognize that 1000 meters equal 1 kilometer • Determine the appropriate linear unit	**Teaching Visuals (Teacher's Toolkit CD):** • Chart 13: *Perimeter* • Chart 20: *Metric Measurement* • Chart 21: *Metric Measurement: Length & Distance* • Chart 22: *Metric Measurement: Capacity* • Chart 23: *Metric Measurement: Mass* **Teacher Manipulatives Packet:** • Rulers: Centimeter Ruler, Measuring Tape (meter) • Thermometer • Red Strip • Boiling Point Steam Cloud **Student Manipulatives Packet:** • Rulers: Centimeter Ruler, Measuring Tape (meter) • Thermometer • Red Strip **Instructional Aids (Teacher's Toolkit CD):** • Cumulative Review Answer Sheet (page IA8) for each student • Input/Output Tables transparency (page IA21) • Input/Output Tables transparency (page IA21) for each student • Pyramids transparency (page IA99) • Prisms transparency (page IA100) • 3-Dimensional Figures transparency (page IA105) • Metric Conversions transparency (page IA107) • Metric Conversions (page IA107) for each student • Metric Conversions Review transparency (page IA108) • Metric Conversions Review (page IA108) for each student **Christian Worldview Shaping (Teacher's Toolkit CD):** • Pages 13–15 **Other Teaching Aids:** • A meter stick • A 1-liter resealable plastic bag filled with 1 liter of water • A round bowl (to hold water-filled bag) • A square container (to hold water-filled bag) • A 1-liter beaker or metric measuring cup • A small medicine cup marked 1 to 5 mL or a medicine syringe • A balance or metric scale • A large paper clip and a standard-sized paper clip for each student • A dictionary with a mass of about 1 kg • 3 items, each with a mass of less than 1 kg, and 3 other items, each with a mass of 1 kg or more, that can be measured on a balance or metric scale • Several types of thermometers (e.g., medical,
139	**More Linear Measurement**	• Convert millimeters, centimeters, or kilometers to meters and meters to millimeters, centimeters, or kilometers • Convert centimeters to millimeters and millimeters to centimeters • Compare linear measurements using >, <, or =	
140	**Metric Measurement: Capacity & Mass**	• Develop an understanding of *liter* and *milliliter* • Convert milliliters to liters and liters to milliliters • Develop an understanding of *gram*, *kilogram*, and *milligram* • Convert milligrams or kilograms to grams and grams to milligrams or kilograms • Compare capacity measurements using >, <, or = • Compare mass measurements using >, <, or =	
141	**Celsius Temperature**	• Recognize *degree* as a measuring unit for temperature • Recognize that °*C* represents *degrees Celsius* • Recognize standard Celsius temperatures • Read and set a Celsius thermometer • Determine the temperature 10° warmer or 10° colder • Determine the amount of increase or decrease between two temperatures • Measure temperature using a Celsius thermometer • Determine the more reasonable temperature	
142	**Add & Subtract Metric Units**	• Add and subtract metric measurements with and without decimal form • Solve measurement word problems	
143	**Chapter 15 Review**	• Review	
144	**Chapter 15 Test Cumulative Review**	• Round a whole number or a decimal to a given place • Complete a mathematical statement or equation • Read a bar graph • Estimate the sum of 2 mixed numbers • Add unlike fractions • Determine the volume of a prism	

			candy, weather) • Celcius thermometers for a group activity • 3 containers to hold water at varied temperatures **Math 5 Tests and Answer Key** **Optional (Teacher's Toolkit CD):** • Fact Reviews pages 1–78 • Enrichment pages 81–85 • Extended Activities

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Chapter 16: Ratios, Proportions & Percents

Lesson	Topic	Lesson Objectives	Chapter Materials
145	**Ratios**	• Write ratios in 3 forms: word form, ratio form, fraction form • Write ratios to describe part-to-part, part-to-whole, and whole-to-part comparisons • Solve problems with ratios	**Teacher Manipulatives Packet:** • Shapes Kit: squares, triangles, parallelograms, rhombi, and trapezoids • Measurement Flashcards: metric **Student Manipulatives Packet:** • Shapes Kit: squares, triangles, parallelograms, rhombi, and trapezoids **Instructional Aids (Teacher's Toolkit CD):** • Cumulative Review Answer Sheet (page IA8) for each student • Favorite Sport Survey transparency (page IA109) • Favorite Sport Survey (page IA109) for each student • Percent of a Number transparency (page IA110) • Probability transparency (page IA111) • Probability (page IA111) for each student • Probability Experiments (page IA112), 1 table for each pair of students • Percent Practice transparency (page IA113) **Christian Worldview Shaping (Teacher's Toolkit CD):** • Page 16 **Other Teaching Aids:** • A model car or train • A map • A ruler for each student • A builder's square (optional) • A calculator for each student (optional) • Colored chalk or white board markers: yellow and blue • Overhead markers: 5 different colors • Colored pencils for each student: 5 different colors • 4 Unifix Cubes: 2 red, 1 blue, and 1 green • A container to hold 4 Unifix Cubes • Approximately 4 paper cups, 4 quarters, and 4 number cubes (1 item needed for each pair of students) **Math 5 Tests and Answer Key** **Optional (Teacher's Toolkit CD):** • Fact Reviews pages 1–78 • Enrichment pages 86–92 • Extended Activities
146	**Equivalent Ratios**	• Write ratios in 3 forms: word form, ratio form, fraction form • Write ratios to describe comparisons • Develop an understanding of equivalent ratios (proportion) • Make equivalent ratios by multiplying and dividing	
147	**Map Scales**	• Interpret a model, a scale drawing, or a diagram	
148	**Rates**	• Develop an understanding of rates • Use ratios to represent real-life situations and to solve problems • Make equivalent ratios to determine the unit rate • Calculate the distance traveled at a given rate and time	
149	**Ratios & Percents**	• Develop an understanding of percents • Write a percent as a ratio with 100 as the second term • Write a percent as a ratio (fraction) in lowest terms • Write a ratio (fraction) as a percent • Use a ratio to solve a percent problem	
150	**Decimals & Percents**	• Write a percent as a decimal • Write a decimal as a percent • Write a fraction as a percent • Compare percents to decimals and fractions using >, <, or = • Solve percent problems	
151	**Percent of a Number**	• Use a proportion to find the percent of a number • Multiply by a decimal to find the percent of a number • Use mental math to find 10% and multiples of 10% of a number • Solve percent word problems	
152	**Probability**	• Develop an understanding of probability • Write probability as a fraction and a percent • Conduct a probability experiment	
153	**Chapter 16 Review**	• Review	
154	**Chapter 16 Test Cumulative Review**	• Determine the unknown measure of an angle • Determine the volume of a cube • Identify a line of symmetry in a figure • Identify congruent figures • Add and subtract customary measurements • Round whole numbers and decimals to a given place • Demonstrate an understanding of place value • Solve word problems	

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Chapter 17: Integers

Lesson	Topic	Lesson Objectives	Chapter Materials
155	**Positive & Negative Numbers**	• Demonstrate an understanding of positive and negative numbers • Compare and order positive and negative numbers • Subtract positive numbers to get a negative number using a number line • Add positive numbers or negative numbers using manipulatives • Add negative numbers using a number line	**Teacher Manipulatives Packet:** • Number Line **Student Manipulatives Packet:** • Algebra Mat Kit • Number Line **Instructional Aids (Teacher's Toolkit CD):** • Cumulative Review Answer Sheet (page IA8) for each student • Algebra Mat transparency (page IA114) • Integer Review transparency (page IA115) **Other Teaching Aids:** • Plastic counters: opaque (to appear black on a transparency) and transparent red **Math 5 Tests and Answer Key** **Optional (Teacher's Toolkit CD):** • Fact Reviews pages 1–78 • Enrichment pages 93–96 • Extended Activities
156	**Adding Positive & Negative Numbers**	• Add positive and negative numbers using manipulatives • Add positive and negative numbers using a number line • Write an addition equation for a word problem	
157	**Subtracting Negative Numbers**	• Subtract positive and negative numbers using manipulatives • Subtract positive and negative numbers using a number line • Write a subtraction equation for a word problem	
158	**Adding & Subtracting**	• Add and subtract positive and negative numbers using manipulatives • Add and subtract positive and negative numbers using a number line • Write an equation for a word problem	
159	**Chapter 17 Review**	• Review	
160	**Chapter 17 Test Cumulative Review**	• Determine the value of a digit in a number • Round decimals to a given place • Identify 2-dimensional figures • Add, subtract, and multiply fractions • Add and subtract whole numbers and decimals • Multiply and divide whole numbers • Use mental math to multiply a factor that is a multiple of 10	

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Chapter 18: Data & Graphs

Lesson	Topic	Lesson Objectives	Chapter Materials
161	**Line Plot & Stem-and-Leaf Plot**	• Complete a tally/frequency table using given data • Calculate the mean (average) for a set of data • Determine the range, mode, and median for a set of data • Read and interpret a line plot • Read and interpret a stem-and-leaf plot	**Teaching Visuals (Teacher's Toolkit CD):** • Chart 26: *Double Bar Graph* • Chart 27: *Pictograph* • Chart 28: *Double Line Graph* **Instructional Aids (Teacher's Toolkit CD):** • Tally Table transparency (page IA116) • Tally Table (page IA116) for each student • Line Plot & Stem-and-Leaf Plot transparency (page IA117) • Double Bar Graph transparency (page IA118) • Double Bar Graph (page IA118) for each student • Double Line Graph transparency (page IA119) • Double Line Graph (page IA119) for each student • Pictograph & Circle Graph transparency (page IA120) • Make a Pictograph transparency (page IA121) • Circle: Tenths transparency (page IA122) • Test Scores transparency (page IA123) • Circle Graph transparency (page IA124) • Mental Math Problems (page IA125) (optional) **Other Teaching Aids:** • Colored pencils: red and blue for each student • Overhead markers: red and blue; 2 other colors **Math 5 Tests and Answer Key** **Optional (Teacher's Toolkit CD):** • Fact Reviews pages 1–78 • Enrichment pages 97–100 • Extended Activities
162	**Double Bar & Double Line Graphs**	• Read and interpret a double bar graph • Complete a double bar graph using given data • Read and interpret a double line graph • Complete a double line graph using given data	
163	**Pictograph & Circle Graph**	• Read and interpret a pictograph • Make a pictograph using a table of data • Read and interpret a circle graph • Make a circle graph using given data	
164	**Chapter 18 Review**	• Review	
165	**Chapter 18 Test Cumulative Review**	• Estimate a product or a quotient of given whole numbers • Find the sum of given whole numbers or fractions • Identify an expression for a given value • Solve word problems • Calculate area, surface area, and volume of figures • Rename improper fractions to lowest terms • Solve for a variable • Find a fraction of a whole number • Divide a decimal by a 1-digit divisor	