|  |  |  |  |
| --- | --- | --- | --- |
| 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 |

|  |  |  |  |
| --- | --- | --- | --- |
| 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 |

|  |  |  |  |
| --- | --- | --- | --- |
| 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 |

|  |  |  |  |
| --- | --- | --- | --- |
| 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  • 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 |
| 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 |

|  |  |  |  |
| --- | --- | --- | --- |
| 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 |

|  |  |  |  |
| --- | --- | --- | --- |
| 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 |

|  |  |  |  |
| --- | --- | --- | --- |
| 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 |

|  |  |  |  |
| --- | --- | --- | --- |
| 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  • 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 |
| 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 mileas 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 |

|  |  |  |  |
| --- | --- | --- | --- |
| 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 |

|  |  |  |  |
| --- | --- | --- | --- |
| 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 xtransparency (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 |

|  |  |  |  |
| --- | --- | --- | --- |
| 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 |

|  |  |  |  |
| --- | --- | --- | --- |
| 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 |
| 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 nin 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 |

|  |  |  |  |
| --- | --- | --- | --- |
| 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 |

|  |  |  |  |
| --- | --- | --- | --- |
| 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 |

|  |  |  |  |
| --- | --- | --- | --- |
| 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, 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 |
| 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 literand 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 degreeas a measuring unit for temperature  • Recognize that °Crepresents 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 |

|  |  |  |  |
| --- | --- | --- | --- |
| 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 |

|  |  |  |  |
| --- | --- | --- | --- |
| 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 |

|  |  |  |  |
| --- | --- | --- | --- |
| 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 |