Emmaus Lutheran School

Math Curriculum

# Rationale based on Scripture

God is the Creator of all things, including Math. Our school is committed to providing students with a quality education in math so they can function effectively as Christians in their church, community, and country. A quality education in Math will help students succeed in high school, in the work place, and help them witness to friends, neighbors, and co-workers about our Savior.

# Exit goals for graduation

Students will demonstrate proficiency, understanding, and/or commitment to the following set of exit goals upon graduation. The level of proficiency of these exit goals will be dependent upon the individual gifts and effort of the student and at what grade the student started attending Emmaus.

* Demonstrate a positive attitude toward Math.
* Able to do mental multiplication.
* Compute fractions in all four math operations.
* Solve ratios and proportions.
* Evaluate variable expressions and polynomials.
* Evaluate exponents.
* Know basic geometry formulas.
* Solve simple probability and statistics problems.
* Graph and locate points on a coordinate planes.
* Factor prime and composite numbers.
* Solve percent computation problems.
* Perform operations on positive and negative integers.
* Know and practice order of operations.
* Understand points, lines, planes, and geometric figures.

# Grade specific measureable objectives

At the end of each school year, students will demonstrate proficiency, understanding, and/or commitment to the following set of grade specific measureable objectives in these classifications: knowledge, skills, and attitudes.

The level of proficiency of these measureable objectives will be dependent upon the individual gifts and effort of the student and at what time of year the student started attending Emmaus.

**Houghton Mifflin Math (Kindergarten)**

**Chapter 1: Sorting & Classifying**

Top, Middle, Bottom

Before, After, Between

Inside, Outside

Right, Left

Same and Different

Sort by Color, Size, & Shape

Problem Solving: Logical Thinking

Sorting and Graphing

Picture Graphs

Problem Solving: Use a Graph

**Chapter 2: Patterns**

Patterns with Color, Shape, & Size

Problem Solving: Find a Pattern

Patterns & Positions

Patterns That Are the Same

Making Patterns

Problem Solving: Use a Pattern

**Chapter 3: Numbers 0-5**

Equal Sets

More

Less

Problem Solving: Draw a Picture

One and Two

Three

Four

Five

Zero

Number 0-5

Ordinal Numbers

Use a Graph

Review / Quick Check

**Chapter 4: Numbers 6-12**

Six

Seven

Eight

Nine

Names for 6-9

Ten

Eleven

Twelve

Names for 10-12

Ordering #s to 12

Problem Solving: Find a Pattern

Sort by Number

More and Less

Estimating

Problem Solving: Use a Graph

**Chapter 5: Calendar & Clocks**

Days of the Week

Months of the Year

Longer & Shorter Time

Order Events

Use a Calendar

Hours and Minutes: Estimating with Time

Time to the Hour

Matching Digital & Analog Clocks

Relate Time to Events

Elapsed Time

**Chapter 6: Measurement & Money**

Comparing Lengths

Sorting & Ordering by Length

Measuring Lengths

Estimate & Measure Lengths

Problem Solving: Use a Graph

Compare & Order by Weight & Capacity

Penny

Nickel

Dime

**Chapter 7: Addition Concepts**

Add 1 to Numbers 0-9

Recording Addition

Problem Solving: Use a Picture

Add 2 to Numbers 0-8

Adding Doubles

Vertical Addition

Addition Facts Through 10

Problem Solving: Draw a Picture

**Chapter 8: Subtraction Concepts**

Subtract 1 from Numbers 1-10

Recording Subtraction

Problem Solving

Subtract 2 from Numbers 2-10

Vertical Subtraction

Modeling Subtraction

Relating Addition & Subtract

Subtracting Pennies

Problem Solving: Choose the Operation

**Chapter 9: Geometry & Fractions**

Circle, Square

Rectangle, Triangle

Sorting Plane Shapes

Patterns with Plane Shapes

Sorting 3-D Shapes

Surfaces of Solids

Problem Solving: Use a Picture

Symmetry

Combine & Separate

Halves

Problem Solving: Use Logical Thinking

**Chapter 10: Greater Numbers**

Numbers 10-19

Dimes & Pennies

Ordering Numbers 10-19

Problem Solving: Use a Graph

Twenty

Numbers 21-30

Orders Numbers 1-30

Calendar

Estimating

Problem Solving

**Houghton Mifflin Math (1st Grade)**

**Chapter 1: Addition Concepts**

Model Addition

Use Symbols to Add

Write Addition Sent.

Add with Zero

Problem Solving: Use Models

Add in Any Order

Ways to Make 7

Ways to Make 8

The Equals Sign

Add in Vertical Form

Problem Solving: Use Addition

**Chapter 2: Subtraction Concepts**

Model Subtraction

Use Symbols to Subtract

Write Subtracting Sentences

Zero in Subtraction

Problem Solving: Draw a Picture

Sub. From 7 or Less

Subtract from 8 or Less

Subtract in Vertical Form

Problem Solving: Choose the Operation

**Chapter 3: Addition & Subtraction Facts to 10**

Count on the Add

Add in Any Order

Use a Number Line to Add

Use Doubles to Add

Draw a Picture to Add

Different Ways to Add

Count Back to Sub.

Use a Number Line to Subtract

Draw a Picture to Subtract

Subtract to Compare

Problem Solving: Use Subtraction

Relate Addition & Subtraction

Fact Families

Different Ways to Subtract

Problem Solving: Write Number Sent.

**Chapter 4: Data & Graphing**

Sorting Objects

Make a Tally Chart

Read & Make a Picture Graph

Problem Solving: Logical Thinking

Read & Make a Bar Graph

Different Ways to Show Data

Problem Solving: Use a Bar Graph

**Chapter 5: Numbers & Patterns to 100**

Teen Numbers

Count by Tens

Tens and Ones

Numbers to 50

Numbers to 99 & 100

Different Ways to Show Numbers

Count by Twos

Count by Fives

Number Patterns

Ordinal Numbers

Problem Solving: Find a Pattern

Use Ten to Estimate

Compare Numbers & Use Symbols

Order Numbers

Problem Solving: Too Much Information

**Chapter 6: Addition & Subtraction Facts to 12**

Count on to Add

Sums to 11

Sums to 12

Add 3 Numbers

Missing Addends

Problem Solving: Make a Table

Count Back to Subtract

Subtract from 11 & Less

Subtract from 12 & Less

Relate Addition & Subtraction

Fact Families for 11

Fact Families for 12

Names for Numbers

Problem Solving: Choose Operation

**Chapter 7: Money**

Value of Coins

Nickels & Pennies

Dimes & Pennies

Count Coins

Equal Amounts

Problem Solving: Money

Quarters

Count with Quarters

Problem Solving

**Chapter 8: Geometry, Fractions, & Probability**

Position Words

Plane Shapes

Sorting Plane Shapes

Solid Shapes

Problem Solving: Find a Pattern

Symmetry

Equal Parts

One Half

One Third and One Fourth

Spinners & Probability

Problem Solving: Use Data from a Picture

**Chapter 9: Addition & Subtraction Facts to 20**

Add Doubles

Doubles Plus One

Add with Ten

Make a Ten to Add

Add Three Numbers

Use Doubles to Subtract

Subtract from 13-20

Problem Solving: Write a Number Sentence

Fact Families

Relate Add. & Sub.

Different Ways to Sub.

Problem Solving: Choose the Operation

**Chapter 10: Measurement**

Compare Length & Height

Non-Standard Units

Inches

Centimeters

Problem Solving: Logical Thinking

Compare Weight

Pounds

Kilograms

Cups, Pints, Quarts,

Liters

Problem Solving: Use Measurement

**Chapter 11 Time & Calendar**

Hour

Half-Hour

Write Time Another Way

Digital Clocks

Practice Telling Time

Elapsed Time

Problem Solving: Time

Calendar

Problem Solving: Use a Table

**Chap. 12: Two Digit Addition & Subtraction**

Add Tens

Add 1-Digit Numbers

Add 2-Digit Numbers

Different Ways to Add

Practice 2-Digit Add.

Problem Solving: Make a Table

Subtract Tens

Subtract 1-Digit #s

Subtract 2-Digit #s

Different Ways to Sub.

Practice 2-Digit Sub.

Check Subtraction

Add and Sub Money

Count On, Count Back

Problem Solving: Multistep Problems

**Houghton Mifflin Math (2nd Grade)**

**Chapter 1: Addition & Subtraction Facts**

Add in Any Order

Count On to Add

Add Doubles Facts

Use Double Facts to Add

Add 10

Make 10 to Add

Add Three Numbers

Count Back to Subtract

Use Addition to Subtract

Subtract Through 15

Subtract Through 20

Problem Solving

Subtract to Compare

Names for Numbers

Fact Families

Problem Solving

**Chapter 2: Number Pattern to 100**

Tens to 100

Tens & Ones to 100

Identify Place Value

Regroup Tens as Ones

Different Ways to Show Numbers

Problem Solving: Different Ways to Show Numbers

Even & Odd Numbers

Number Patterns

Compare 2-Digit Numbers

Round to the Nearest Ten

Problem Solving: Find a Pattern

**Chapter 3: Data & Graphing**

Make a Tally

Comparing Data in Tables

Read a Pictograph

Problem Solving

Read a Bar Graph

Make a Bar Graph

Range & Mode

Problem Solving: Use a Graph

**Chapter 4: Money**

Dimes, Nickels, & Pennies

Quarter, Dimes, Nickels

Count Coins

Equal Amounts

Compare Money Amounts

Problem Solving

Half Dollars

Use Money

Use Coins to Show an Amount

One Dollar

Make Change

Problem Solving

**Chapter 5: Adding Two-Digit Numbers**

Mental Math: Add Tens

Add Tens on a Hundred Chart

Regroup Ones

Decide When to Regroup

Add One-Digit Numbers

Add Two-Digit Numbers

Practice Regrouping 10 to 18

Estimate Sums

Problem Solving: Guess & Check

Different Ways to Add

Horizontal Addition

Add Money

Add Three Numbers

Problem Solving

**Chapter 6: Subtracting Two-Digit Numbers**

Mental Math: Subtract Tens

Subtract Tens on a Hundred Chart

Regroup Tens

Decide When to Regroup

Subtract One-Digit Numbers

Subtract Two-Digit Numbers

Problem Solving

Practice Regrouping with 10 or 11

Practice Regrouping with 12 to 14

Practice Regrouping with 15 to 18

Estimate Differences

Different Ways to Subtract

Horizontal Subtraction

Add and Subtract Money

Check Subtraction

Problem Solving

**Chapter 7: Geometry, Fractions & Probability**

Plane Shapes

Sides & Vertices

Solid Shapes

Congruent Shapes

Make New Shapes

Symmetry

Problem Solving: Find a Pattern

Unit Fractions

More Fractions

Wholes & Parts

Comparing Fractions

Fractions of a Group

Fractional Parts of a Group

More Likely or Less Likely

Problem Solving

**Chapter 8: Multiplication & Division**

Count by 2s, 5s, 10s

Add Equal Groups

Multiply with 2

Multiply with 5

Multiply in Any Order

Multiply with 10

Multiply in Vertical Form

Multiply with 1 and 0

Different Ways to Multiply

Problem Solving: Draw a Picture

Share Equally

Equal Groups of 2

Equal Groups of 5

Equal Groups with Remainders

Problem Solving: Choose the Operation

**Chapter 9: Measurement**

Nonstandard Units

Compare Nonstandard Units

Inches and Feet

Centimeters and Meters

Perimeter

Problem Solving: Guess & Check

Pounds

Kilograms

Cups, Pints, and Quarts

Liters

Temperature

Measurement Units and Tools

Problem Solving: Use Measurement

**Chapter 10: Time and Calendar**

What Is a Minute?

Time to the Hour

Time to the Half-Hour

Time to Five Minutes

Time to 15 Minutes

Elapsed Time

Problem Solving

Calendar

Hours, Days, Weeks, Months

Problem Solving: Use a Schedule

**Chapter 11: Numbers and Patterns to 1,000**

Count by Hundreds

Hundreds, Tens, and Ones

Numbers Through 500

Numbers Through 1,000

Identify Place Value

Regroup Tens as Hundreds

Problem Solving: Make a Table

Different Ways to Show Numbers

Before, After, Between

Compare Three-Digit Numbers

Order Three-Digit Numbers

Count Dollars and Cents

Problem Solving: Use Money

**Chapter 12: Adding & Subtracting Three-Digit Numbers**

Mental Math: Add Hundreds

Regroup Ones

Regroup Tens

Mental Math: Subtract Hundreds

Regroup Tens

Regroup Hundreds

Problem Solving: Choose the Operation

Horizontal Addition & Subtraction

Check Subtraction

Estimate Sums & Differences

Add and Subtract Money

Problem Solving: Guess & Check

**Houghton Mifflin Math (3rd Grade)**

*Students will be able to…*

1. Numbers through 999 (Chapter 1)
2. Round two-digit numbers (Chapter 1)
3. Round Three-digit numbers (Chapter 1)
4. Modeling One Thousand (Chapter 1)
5. Place Value to Thousands (Chapter 1)
6. Compare Numbers (Chapter 1)
7. Ordering Numbers (Chapter 1)
8. Round Four-digit numbers (Chapter 1)
9. Place Value to Ten Thousands (Chapter 1)
10. Place Value to Hundred Thousands (Chapter 1)
11. Value of Money (Chapter 2)
12. Counting Coins and Bills (Chapter 2)
13. Counting Change (Chapter 2)
14. Telling Time from Hour to the Minute (Chapter 2)
15. Elapsed Time (Chapter 2)
16. Using a Calendar (Chapter 2)
17. Addition Properties (Chapter 3)
18. Regroup Ones (Chapter 3)
19. Regroup Ones and Tens (Chapter 3)
20. Estimate Sums (Chapter 3)
21. Column Addition (Chapter 3)
22. Adding Greater Numbers (Chapter 3)
23. Subtraction Strategies and Properties (Chapter 3)
24. Regroup Tens and Hundreds (Chapter 3)
25. Estimate Differences (Chapter 3)
26. Subtract Greater Numbers (Chapter 3)
27. Subtract Across Zeros (Chapter 3)
28. Measuring Length (Chapter 4)
29. Measure to the Nearest Half Inch (Chapter 4)
30. Customary Units of Length (Chapter 4)
31. Estimating and Measuring Capacity (Chapter 4)
32. Customary Units of Weight (Chapter 4)
33. Temperature: Degrees Fahrenheit (Chapter 4)
34. Centimeter and Decimeter (Chapter 4)
35. Meter and Kilometer (Chapter 4)
36. Metric Units of Capacity (Chapter 4)
37. Metric Units of Mass (Chapter 4)
38. Temperature: Degrees Celsius (Chapter 4)
39. Modeling Multiplication (Chapter 5)
40. Arrays and Multiplication (Chapter 5)
41. Using a Multiplication Table (Chapter 5)
42. Multiply from 0-12 (Chapter 5-6)
43. Patterns on a Multiplication Table (Chapter 5-6)
44. Multiply 3 numbers (Chapter 5-6)
45. Lines, Line Segments, Rays and Angles (Chapter 7)
46. Plane Figures (Chapter 7)
47. Quadrilaterals (Chapter 7)
48. Triangles (Chapter 7)
49. Congruent Figures (Chapter 7)
50. Line of Symmetry (Chapter 7)
51. Perimeter (Chapter 7)
52. Estimating Area (Chapter 7)
53. Finding Area (Chapter 7)
54. Solid Figures (Chapter 7)
55. Estimating Volume (Chapter 7)
56. Modeling Division (Chapter 8)
57. Relate Multiplication and Division (Chapter 8)
58. Division Rules (Chapter 8)
59. Using a Multiplication Table to Divide (Chapter 9)
60. Fact Families (Chapter 9)
61. Dividing by 2-9 (Chapter 8-9)
62. Collecting and Organizing Data (Chapter 10)
63. Using Line Plots (Chapter 10)
64. Make a Pictograph (Chapter 10)
65. Make a Bar Graph (Chapter 10)
66. Graph Ordered Pairs (Chapter 10)
67. Probability (Chapter 10)
68. Recording Outcomes (Chapter 10)
69. Making Predictions (Chapter 10)
70. Fractions and Regions (Chapter 11)
71. Fractions and Groups (Chapter 11)
72. Compare Fractions (Chapter 11)
73. Order Fractions (Chapter 11)
74. Modeling Equivalent Fractions (Chapter 11)
75. Find Equivalent Fractions (Chapter 11)
76. Fractional Parts of a Group (Chapter 11)
77. Mixed Numbers (Chapter 11)
78. Add and Subtract Fractions (Chapter 11)
79. Tenths (Chapter 11)
80. Hundredths (Chapter 11)
81. Decimals Greater Than 1 (Chapter 11)
82. Compare and Order Fractions and Decimals (Chapter 11)
83. Decimals, Fractions, and Money (Chapter 11)
84. Multiply Multiples of 10, 100, 1,000 (Chapter 12)
85. Multiplying Two-Digit Numbers (Chapter 12)
86. Multiplying Three-Digit Numbers (Chapter 12)
87. Regrouping Twice (Chapter 12)
88. Multiply Money (Chapter 12)
89. Modeling Division with Remainders (Chapter 12)
90. Two-Digit Quotients (Chapter 12)
91. Regrouping in Division (Chapter 12)
92. Three-Digit Quotients (Chapter 12)
93. Divide Money (Chapter 12)
94. Placing the First Digit (Chapter 12)

**Houghton Mifflin Math (4th Grade)**

*Students will be able to…*

1. Place Value Through Hundred Thousands (Chapter 1)
2. Compare and Order Numbers (Chapter 1)
3. Rounding Numbers (Chapter 1)
4. Place Value Through Hundred Millions (Chapter 1)
5. Compare and Order Greater Numbers (Chapter 1)
6. Rounding Greater Numbers (Chapter 1)
7. Compare Money Amounts (Chapter 1)
8. Make Change (Chapter 1)
9. Addition Properties (Chapter 2)
10. Add Whole Numbers (Chapter 2)
11. Subtract Whole Numbers (Chapter 2)
12. Estimate Sums and Differences (Chapter 2)
13. Subtract Across Zeros (Chapter 2)
14. Expressions and Equations (Chapter 2)
15. Write and Evaluate Algebraic Expressions (Chapter 2)
16. Solving Addition Equations (Chapter 2)
17. Equations with Two Variables. (Chapter 2)
18. Use Doubles to Multiply (Chapter 3)
19. Multiplication Properties (Chapter 3)
20. Use Patterns to Multiply (Chapter 3)
21. Relate Multiplication and Division (Chapter 3)
22. Use Doubles to Divide (Chapter 3)
23. Division Rules (Chapter 3)
24. Divide by 5, 7, 9, or 10 (Chapter 3)
25. Division with Remainders (Chapter 3)
26. Write and Evaluate Expressions (Chapter 3)
27. Solve Multiplications Equations (Chapter 3)
28. Two-Step Functions (Chapter 3)
29. Mental Math: Multiply Multiples of 10, 100, 1,000 (Chapter 4)
30. Modeling Multiplication by One-Digit Numbers (Chapter 4)
31. Multiply Two-Digit Numbers by One-Digit Numbers (Chapter 4)
32. Estimate Products (Chapter 4)
33. Multiply Three-Digit Numbers by One-Digit Numbers (Chapter 4)
34. Multiply Greater Numbers (Chapter 4)
35. Multiply with Zeros (Chapter 4)
36. Mental Math: Multiply Multiples of 10 and 100 (Chapter 4)
37. Multiply Three-Digit Numbers by Two-Digit Numbers (Chapter 4)
38. Modeling Division (Chapter 5)
39. Two-Digit Quotients (Chapter 5)
40. Regrouping in Division (Chapter 5)
41. Mental Math: Divide Multiples of 10, 100, 1,000 (Chapter 5)
42. Three-Digit Quotients (Chapter 5)
43. Place the First Digit of the Quotient (Chapter 5)
44. Divide Money (Chapter 5)
45. Zeros in the Quotient (Chapter 5)
46. Divisibility Rules (Chapter 5)
47. Prime and Composite Numbers (Chapter 5)
48. Modeling Averages (Chapter 5)
49. Find Averages (Chapter 5)
50. Estimate Quotients (Chapter 5)
51. Divide Greater Numbers (Chapter 5)
52. Inch, Half Inch, and Quarter Inch (Chapter 6)
53. Perimeter and Customary Units of Length (Chapter 6)
54. Customary Units of Capacity (Chapter 6)
55. Centimeter and Millimeter (Chapter 6)
56. Perimeter and Metric Units of Length (Chapter 6)
57. Metric Units of Capacity and Mass (Chapter 6)
58. Degrees Fahrenheit and Negative Numbers (Chapter 6)
59. Degrees Celsius and Negative Numbers (Chapter 6)
60. Represent Fractions (Chapter 7)
61. Fractional Part of a Number (Chapter 7)
62. Modeling Equivalent Fractions (Chapter 7)
63. Equivalent Fractions (Chapter 7)
64. Compare and Order Fractions (Chapter 7)
65. Write Mixed Numbers (Chapter 7)
66. Add with Like Denominators (Chapter 7)
67. Subtract with Like Denominators (Chapter 7)
68. Fractions and Decimals (Chapter 8)
69. Mixed Numbers and Decimals (Chapter 8)
70. Fractions and Decimal Equivalents (Chapter 8)
71. Compare and Order Decimals (Chapter 8)
72. Compare and Order Fractions, Mixed Numbers, and Decimals (Chapter 8)
73. Add and Subtract Decimals (Chapter 8)
74. Round Decimals (Chapter 8)
75. Estimate Decimal Sums and Differences (Chapter 8)
76. Collect and Organize Data (Chapter 9)
77. Mean, Median, and Mode (Chapter 9)
78. Use Bar Graphs (Chapter 9
79. Read and Understand Line Graphs (Chapter 9)
80. Probability and Outcomes (Chapter 9)
81. Find Probability (Chapter 9)
82. Making Predictions (Chapter 9)
83. Represent Outcomes (Chapter 9)
84. Points, Lines, and Line Segments (Chapter 10)
85. Rays and Angles (Chapter 10)
86. Polygons and Quadrilaterals (Chapter 10)
87. Classify Triangles (Chapter 10)
88. Circles (Chapter 10)
89. Congruent Figures (Chapter 10)
90. Symmetry (Chapter 10)
91. Modeling Perimeter and Area (Chapter 10)
92. Use Formula for Perimeter and Area (Chapter 10)
93. Perimeter and Area of Complex Figures (Chapter 10)
94. Solid Figures and Nets (Chapter 10)
95. Surface Area (Chapter 10)
96. Volume (Chapter 10)
97. Locate Points on a Grid Using Whole Numbers (Chapter 11)
98. Graph Ordered Pairs (Chapter 11)
99. Integers (Chapter 11)
100. Identify and Graph Ordered Pairs on a Coordinate Plane (Chapter 11)
101. Find Lengths on a Coordinate Plane (Chapter 11)
102. Mental Math: Divide by Multiples of 10 (Chapter 12)
103. One-Digit Quotients (Chapter 12)
104. Estimate the Quotient (Chapter 12)
105. Two-Digit Quotients (Chapter 12)
106. Adjusting the Quotient (Chapter 12)
107. Zeros in Two-Digit Quotients (Chapter 12)

**Prentice Hall 1 Math (5th Grade)**

*Students will be able to…*

1. write and compare and ordering whole numbers to the trillions. (Chapter 1)
2. read, write, compare, order, and estimate decimals. (Chapter 1)
3. add, subtract, multiply, and divide decimals. (Chapter 1)
4. multiply and divide by 10, 100, and 1,000. (Chapter 1)
5. use order of operations. (Chapter 1)
6. continue and write a rule for a number pattern. (Chapter 2)
7. use variables and evaluate algebraic expressions. (Chapter 2)
8. write and use algebraic expressions. (Chapter 2)
9. solve addition, subtraction, multiplication, and division equations. (Chapter 2)
10. use exponents and simplify expressions that have exponents. (Chapter 2)
11. apply the Distributive Property. (Chapter 2)
12. apply divisibility rules to numbers. (Chapter 3)
13. find factors of a number and to prime factor numbers. (Chapter 3)
14. find the Greatest Common Factor and Least Common Multiples of two or more numbers. (Chapter 3)
15. find equivalent fractions and write fractions in simplest form. (Chapter 3)
16. write numbers as improper fractions and mixed numbers. (Chapter 3)
17. find the Least Common Multiple and Greatest Common Factors. (Chapter 3)
18. compare and order fractions. (Chapter 3)
19. write decimals as fractions and fractions as decimals. (Chapter 3)
20. estimate sums and differences of fractions. (Chapter 4)
21. add and subtract fractions and mixed numbers. (Chapter 4)
22. solve equations with fractions. (Chapter 4)
23. measure elapsed time. (Chapter 4)
24. multiply and divide fractions and mixed numbers. (Chapter 5)
25. solve fraction equations by multiplying. (Chapter 5)
26. choose appropriate units of measurement in the customary system. (Chapter 5)
27. change units in the customary system. (Chapter 5)
28. find and use unit rates. (Chapter 6)
29. use ratios and complete proportions. (Chapter 6)
30. identify and solve proportions. (Chapter 6)
31. find the scale of a drawing and to find actual dimensions. (Chapter 6)
32. write percents as decimals and fractions, and to write decimals and fractions as percent. (Chapter 6)
33. find percent of a number. (Chapter 6)
34. estimate sales tax, tip, and sale price. (Chapter 6)
35. solve problems by writing an equation. (Chapter 6)
36. apply mean, median, and mode. (Chapter 7)
37. read and to make bar graphs, line graphs, circle graphs, and stem-and-leaf plots. (Chapter 7)
38. identify and name points, lines, segments, and rays. (Chapter 8)
39. identify parallel, intersecting, and skew lines. (Chapter 8)
40. measure and classify angles. (Chapter 8)
41. use angle measurements to classify angles as acute, obtuse, or right. (Chapter 8)
42. find complements and supplements. (Chapter 8)
43. identify special pairs of angles. (Chapter 8)
44. classify triangles and find angle measurements. (Chapter 8)
45. explore and classify polygons. (Chapter 8)
46. identify congruent and similar figures. (Chapter 8)
47. identify translations, reflections, and rotations. (Chapter 8)
48. use metric units of length, mass, and capacity. (Chapter 9)
49. convert units in the metric system. (Chapter 9)
50. find perimeters and areas of rectangles. (Chapter 9)
51. find the areas of parallelograms and triangles. (Chapter 9)
52. find identify the parts of a circle and find its circumference and area. (Chapter 9)
53. identify three-dimensional figures. (Chapter 9)
54. find surface area of prisms and cylinders. (Chapter 9)
55. graph integers on a number line. (Chapter 10)
56. compare and order integers. (Chapter 10)
57. add, subtract, multiply and divide integers. (Chapter 10)
58. solve equations with integers. (Chapter 10)
59. name coordinates and graph points on a coordinate plane. (Chapter 10)
60. make a function table and graph functions. (Chapter 10)
61. find the probability of an event. (Chapter 11)
62. find experimental probabilities. (Chapter 11)
63. make tree diagrams. (Chapter 11)
64. solve two-step equations. (Chapter 12)
65. write inequalities and identify solutions of inequalities. (Chapter 12)
66. solve one-step inequalities. (Chapter 12)
67. find square roots and classify numbers as rational. (Chapter 12)

**Prentice Hall 2 Math (6th Grade)**

*Students will be able to…*

1. use estimation strategies. (Chapter 1)
2. add, subtract, multiply, and divide decimals. (Chapter 1)
3. measure in metric units. (Chapter 1)
4. compare and order integers. (Chapter 1)
5. add, subtract, multiply, and divide integers. (Chapter 1)
6. use order of operations and the distributive property. (Chapter 1)
7. determine mean, median, and mode.
8. evaluated and write algebraic expressions. (Chapter 2)
9. use number sense to solve equations. (Chapter 2)
10. solve equations by adding, subtracting, multiplying, and dividing. (Chapter 2)
11. explore and solve two-step equations. (Chapter 2)
12. graph and write inequalities. (Chapter 2)
13. solve inequalities by adding, subtracting, multiplying, and dividing. (Chapter 2)
14. use exponents and order of operations. (Chapter 3)
15. use scientific notation with positive and negative exponents. (Chapter 3)
16. apply divisibility rules. (Chapter 3)
17. prime factor numbers. (Chapter 3)
18. simplify fractions and convert mixed numbers and improper fractions. (Chapter 3)
19. compare and order fractions. (Chapter 3)
20. write terminating and repeating decimals. (Chapter 3)
21. write a decimal as a fraction and order fractions and decimals. (Chapter 3)
22. understand and order rational numbers. (Chapter 3)
23. estimate with fractions and mixed numbers. (Chapter 4)
24. add, subtract, multiply and divide fractions and mixed numbers. (Chapter 4)
25. solve equations with fractions. (Chapter 4)
26. convert units in the customary system. (Chapter 4)
27. write and find equal ratios. (Chapter 5)
28. find unit rates and use unit prices. (Chapter 5)
29. test if ratios can form and a proportion and use cross products. (Chapter 5)
30. use unit rates to solve proportions and solve proportions involving variables. (Chapter 5)
31. identify similar figures and find missing lengths in similar figures. (Chapter 5)
32. use ratios and proportions in scale drawings and scale models. (Chapter 5)
33. understand percent, fractions, and decimals. (Chapter 6)
34. write equivalent fractions, decimals, and percent, including percent less than 1 and greater than 100. (Chapter 6)
35. find percent of a number. (Chapter 6)
36. solve percent problems using proportions and equations. (Chapter 6)
37. find tax, tips, and commissions. (Chapter 6)
38. find percent of change. (Chapter 6)
39. identify segments, rays, and lines. (Chapter 7)
40. measure and classify angles. (Chapter 7)
41. classify triangles by sides and angles and to measure these angles. (Chapter 7)
42. classify and identify polygons and special quadrilaterals. (Chapter 7)
43. identify and work with congruent figures. (Chapter 7)
44. identify parts of a circle. (Chapter 7)
45. analyze and construct circle graphs. (Chapter 7)
46. estimate length and area. (Chapter 8)
47. find the area of parallelograms, triangles, trapezoids, and irregular figures. (Chapter 8)
48. find the circumference and area of a circle. (Chapter 8)
49. find square roots and classify numbers. (Chapter 8)
50. use the Pythagorean Theorem. (Chapter 8)
51. identify three-dimensional figures. (Chapter 8)
52. find the volume and surface area of prisms and cylinders. (Chapter 8)
53. make graphs and use graphs to make estimates. (Chapter 9)
54. use arithmetic and geometric sequences. (Chapter 9)
55. represent patterns in tables and write rules using tables. (Chapter 9)
56. write and evaluate functions. (Chapter 9)
57. use tables, rules, and interpret graphs. (Chapter 9)
58. find simple and compound interest. (Chapter 9)
59. graph points in four quadrants. (Chapter 10)
60. graph linear equations. (Chapter 10)
61. find the slope of a line. (Chapter 10)
62. graph nonlinear equations. (Chapter 10)
63. identify lines of symmetry. (Chapter 10)
64. graph translations and reflections. (Chapter 10)
65. identify rotational symmetry and rotate a figure about a point. (Chapter 10)
66. make a frequency table or line plot. (Chapter 11)
67. draw a histogram. (Chapter 11)
68. interpret double bar and double line graphs. (Chapter 11)
69. make stem-and-leaf plots and box-and-whisker plots. (Chapter 11)
70. explore scatter plots. (Chapter 11)
71. find the probability of an event. (Chapter 12)
72. find permutations and combinations. (Chapter 12)

**Prentice Hall Course 3 Math (7th Grade)**

*Students will be able to…*

1. write and evaluate algebraic expressions using the order of operations. (Chapter 1)
2. identify integers and absolute value. (Chapter 1)
3. add, subtract, multiply, and divide integers. (Chapter 1)
4. use integers to find mean, median, and mode. (Chapter 1)
5. use powers and exponents. (Chapter 1)
6. identify and use properties of numbers. (Chapter 1)
7. simplify algebraic expressions. (Chapter 2)
8. solve one-step, two-step, and multi-step equations. (Chapter 2)
9. solve inequalities by adding, subtracting, multiplying, and dividing. (Chapter 2)
10. solve two-step inequalities. (Chapter 2)
11. graph points on a coordinate plane. (Chapter 3)
12. graph equations with two variables. (Chapter 3)
13. understand slope and use the y-intercept. (Chapter 3)
14. solve linear systems by graphing. (Chapter 3)
15. graph and identify transformations – translations, reflections, and rotations. (Chapter 3)
16. use divisibility tests to factor numbers. (Chapter 4)
17. compare and order rational numbers. (Chapter 4)
18. add, subtract, multiply, and divide rational numbers. (Chapter 4)
19. use formulas to solve problems. (Chapter 4)
20. identify square roots and irrational numbers. (Chapter 4)
21. use the Pythagorean Theorem. (Chapter 4)
22. using ratios to find unit rates. (Chapter 5)
23. use customary units and metric units to measure. (Chapter 5)
24. solve proportions. (Chapter 5)
25. identify similar figures using proportions. (Chapter 5)
26. transform similar figures. (Chapter 5)
27. use scale models and map scales. (Chapter 5)
28. use indirect measure measurement to find similarity. (Chapter 5)
29. use sine and cosine ratios. (Chapter 5)
30. write equivalent fractions, decimals, and percents. (Chapter 6)
31. estimate with percents. (Chapter 6)
32. use percents to solve proportions and equations. (Chapter 6)
33. find the percent of change. (Chapter 6)
34. find simple and compound interest. (Chapter 6)
35. find probability. (Chapter 6)
36. write in scientific notation. (Chapter 7)
37. multiply and divide exponents. (Chapter 7)
38. raise a power to a power.
39. understand number systems. (Chapter 7)
40. identify different types of angles. (Chapter 8)
41. identify parallel and perpendicular lines. (Chapter 8)
42. identify congruent figures. (Chapter 8)
43. classify triangles and quadrilaterals. (Chapter 8)
44. find angle measures of polygons. (Chapter 8)
45. find area of polygons. (Chapter 8)
46. find circumference and area of circles. (Chapter 8)
47. construct segments, angles, and bisectors. (Chapter 8)
48. name 3-dimensional figures. (Chapter 9)
49. find the surface area of prisms, cylinders, pyramids, and cones. (Chapter 9)
50. find the volume of prisms, cylinders, pyramids, and cones. (Chapter 9)
51. find mean, median, and mode. (Chapter 10)
52. make frequency tables, line plots, and histograms. (Chapter 10)
53. make stem-and-lea plots and box-and-whisker plots. (Chapter 10)
54. make scatter plots. (Chapter 10)
55. read and make circle graphs (Chapter 10)
56. use and make a Venn diagram. (Chapter 10)
57. use a tree diagram and the counting principle to find outcomes. (Chapter 11)
58. find and use permutations and combinations. (Chapter 11)
59. find experimental and theoretical probability. (Chapter 11)
60. find the probability of independent and dependent events. (Chapter 11)
61. identify methods of sampling to conduct a survey, and if questions are biased. (Chapter 11)
62. describe and evaluate arithmetic and geometric sequences. (Chapter 12)
63. identify functions and use function notation. (Chapter 12)
64. graph linear functions. (Chapter 12)
65. write rules for linear functions. (Chapter 12)
66. relate graphs to events. (Chapter 12)
67. graph nonlinear functions. (Chapter 12)
68. write variable expressions. (Chapter 12)
69. add, subtract, and multiply polynomials. (Chapter 12)

**Prentice Hall Pre-Algebra (AP 7th Grade/8th Grade)**

*Students will be able to…*

1. identify numerical and variable expressions. (Chapter 1)
2. use the order of operations. (Chapter 1)
3. evaluate expressions. (Chapter 1)
4. compare integers and find absolute value. (Chapter 1)
5. add, subtract, multiply, and divide integers. (Chapter 1)
6. use inductive reasoning for patterns. (Chapter 1)
7. graph on the coordinate plane. (Chapter 1)
8. identify and use properties of numbers. (Chapter 2)
9. write and evaluate variable expressions and equations. (Chapter 2)
10. solve equations by adding, subtracting, multiplying, and dividing. (Chapter 2)
11. solve and graph inequalities. (Chapter 2)
12. solve inequalities by adding, subtracting, multiplying, and dividing. (Chapter 2)
13. round and estimate decimals. (Chapter 3)
14. find mean, median, and mode. (Chapter 3)
15. use formulas. (Chapter 3)
16. solve equations by adding, subtracting, multiplying, and dividing decimals. (Chapter 3)
17. use the metric system. (Chapter 3)
18. use divisibility tests to factor numbers. (Chapter 3)
19. multiply and divide using exponents. (Chapter 4)
20. use prime factorization to find greatest common factor. (Chapter 4)
21. simplify fractions. (Chapter 4)
22. identify rational numbers. (Chapter 4)
23. write in scientific notation. (Chapter 4)
24. compare and order fractions. (Chapter 5)
25. convert between fractions and decimals. (Chapter 5)
26. add, subtract, multiply, and divide fractions. (Chapter 5)
27. use customary units of measurement. (Chapter 5)
28. solve equations by adding, subtracting, and multiplying fractions. (Chapter 5)
29. find powers of products and quotients. (Chapter 5)
30. use ratios to find unit rates. (Chapter 6)
31. write and solve proportions. (Chapter 6)
32. identify similar figures and use scale drawings. (Chapter 6)
33. find probability and odds. (Chapter 6)
34. write equivalent fractions, decimals, and percents. (Chapter 6)
35. proportions and percents. (Chapter 6)
36. find the percent of change. (Chapter 6)
37. solve two-step and multi-step equations with whole numbers, fractions, and decimals. (Chapter 7)
38. solve two-step inequalities. (Chapter 7)
39. transform formulas. (Chapter 7)
40. find simple and compound interest. (Chapter 7)
41. identify relations and functions. (Chapter 8)
42. find slope and the y-intercept. Chapter 8)
43. solve and graph linear functions. (Chapter 8)
44. solve systems of linear equations. (Chapter 8)
45. graph linear inequalities. (Chapter 8)
46. make scatter plots. (Chapter 8)
47. identify basic geometric figures and types of lines, and draw them. (Chapter 9)
48. identify, measure, and construct angles (Chapter 9)
49. classify polygons. (Chapter 9)
50. identify congruent figures. (Chapter 9)
51. identify and measure parts of a circle. (Chapter 9)
52. graph transformations – translations, reflections, and rotations. (Chapter 9)
53. find the area of parallelograms, triangles, trapezoids, and circles. (Chapter 10)
54. identify and name 3-dimensional figures. (Chapter 10)
55. find the surface area of prisms, cylinders, pyramids, cones, and spheres. (Chapter 10)
56. find the volume of prisms, cylinders, pyramids, cones, and spheres. (Chapter 10)
57. find square roots and classify real numbers. (Chapter 11)
58. use the Pythagorean Theorem. (Chapter 11)
59. use distance and midpoint formulas. (Chapter 11)
60. identify special right triangles. (Chapter 11)
61. use sine, cosine, and tangent ratios. (Chapter 11)
62. find angles of elevation and depression. (Chapter 11)
63. make frequency tables, line plots, and box-and-whisker plots. (Chapter 12)
64. find theoretical and experimental probability. (Chapter 12)
65. differentiate between independent and dependent events. (Chapter 12)
66. solve permutations and combinations. (Chapter 12)
67. identify patterns and sequences. (Chapter 13)
68. graph nonlinear functions and exponential growth and decay. (Chapter 13)
69. add, subtract, and multiply polynomials. (Chapter 13)

**Prentice Hall Algebra I (AP 8th Grade)**

*Students will be able to…*

1. use exponents and order of operations. (Chapter 1)
2. add, subtract, multiply, and divide real numbers. (Chapter 1)
3. identify and use properties of real numbers. (Chapter 1)
4. graph data on the coordinate plane. (Chapter 1)
5. solve one-step, two-step, and multi-step equations. (Chapter 2)
6. use formulas. (Chapter 2)
7. use measures of central tendency. (Chapter 2)
8. identify properties of inequalities. (Chapter 3)
9. solve inequalities by using addition, subtraction, multiplication, and subtraction. (Chapter 3)
10. solve multi-step inequalities. (Chapter 3)
11. write ratios and solve proportions (Chapter 4)
12. identify similar figures. (Chapter 4)
13. apply proportions to percent problems. (Chapter 4)
14. find the percent of change. (Chapter 4)
15. apply ratios to probability. (Chapter 4)
16. find the probability of compound events. (Chapter 4)
17. relate graphs to events. (Chapter 5)
18. identify relations and functions (Chapter 5)
19. use function rules, tables, and graphs. (Chapter 5)
20. write function rules. (Chapter 5)
21. find a solution that satisfies two linear equations. (Chapter 5)
22. find direct variation. (Chapter 5)
23. find a solution that satisfies two linear equations. (Chapter 5)
24. describe number patterns. (Chapter 5)
25. find rate of change and slope. (Chapter 6)
26. write and graph linear equations. (Chapter 6)
27. identify and use slope-intercept form, standard form, and point-slope form. (Chapter 6)
28. identify and graph parallel lines and perpendicular lines. (Chapter 6)
29. make scatter plots. (Chapter 6)
30. graph absolute value equations. (Chapter 6)
31. graph absolute value equations. (Chapter 7)
32. solve systems by graphing, using substitution, and elimination (Chapter 7)
33. graph absolute value equations. (Chapter 7)
34. apply linear systems (Chapter 7)
35. solve systems of linear inequalities. (Chapter 7)
36. write in scientific notation. (Chapter 8)
37. use multiplication and division properties of exponents. (Chapter 8)
38. identify geometric sequences. (Chapter 8)
39. evaluate and graph exponential functions. (Chapter 8)
40. add, subtract, and multiply polynomials. (Chapter 9)
41. factor trinomials. (Chapter 9)
42. graph quadratic functions and inequalities. (Chapter 10)
43. solve quadratic equations. (Chapter 10)
44. use the quadratic formula. (Chapter 10)
45. use the discriminant. (Chapter 10)
46. complete the square. (Chapter 10)
47. find and estimate square roots. (Chapter 10)
48. simplify radicals. (Chapter 11)
49. use the Pythagorean Theorem. (Chapter 11)
50. use the distance and midpoint formulas (Chapter 11)
51. solve radical equations. (Chapter 11)
52. graph square root functions. (Chapter 11)
53. use trigonometric ratios. (Chapter 11)
54. solve inverse variations. (Chapter 12)
55. graph rational functions. (Chapter 12)
56. add, subtract, multiply, and divide rational expressions. (Chapter 12)
57. solve rational equations. (Chapter 12)
58. divide polynomials. (Chapter 12)
59. use the counting method, permutations, and combinations. (Chapter 12)

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# **Evidence of continuity from grade to grade**

The curriculum is constructed using skill-based measurable objectives so that the knowledge, attitudes, and skills learned in each grade form building blocks for what is taught in the succeeding grades.

|  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | Counting and Cardinality | Operations and Algebraic Thinking | Number and Operations in Base Ten | Measurement and Data | Geometry | Number and Operations – Fractions | Ratios and Proportional Relationships | The Number System | Expressions and Equations | Statistics and Probability | Functions |
| K | X | X | X | X | X |  |  |  |  |  |  |
| 1st |  | X | X | X | X | X |  |  |  | X |  |
| 2nd |  | X | X | X | X | X |  |  |  | X |  |
| 3rd |  | X | X | X | X | X |  |  |  | X |  |
| 4th |  | X | X | X | X | X |  |  |  | X |  |
| 5th |  | X | X | X | X | X | X | X | X | X | X |
| 6th |  | X | X | X | X | X | X | X | X | X | X |
| 7th |  | X | X | X | X | X | X | X | X | X | X |
| 8th |  |  |  |  |  |  | X | X | X | X | X |

# **Assessment of the academic growth and achievement of each student**

Each individual teacher will assess the academic growth of their students on a regular basis. Teachers assess students in a variety of ways (e.g. worksheets, class discussions, projects, quizzes, and tests). The length and level of the assessment is dependent on the grade level being taught.

Students in grades 3-8 take the NWEA MAP Test in the fall, winter, and spring. These tests are another form of assessment the teachers can use to gauge the progress of the students.