

## Course Description

**Course Title:** 5th Grade Math

**Course Length:** Full Year

**Class Meetings (Per Week):** Daily

**Textbook:** Math 5 for Christian Schools  
BJU Press

**General Course Description:** This course combines hand on activities, daily mathematics challenge problems and traditional math to teach math concepts.

### **Biblical Principles:**

**There are accounts of numbering and counting. (II Samuel 24:2, Numbers 4:41, Psalm 90:12)**

**God cares about numbers. He has recorded many of our information. (Psalm 147: 4, Luke 12:7)**

**Mathematical truths demonstrate the orderliness, precision, and consistency of God. (Genesis 6:14-16, Numbers 14:29-33, 26: 64-65)**

**Mathematical study should result in greater appreciation of the works of God in His creation. (Psalm 8:3-9, Colossians 1:16-17)**

### **General Course Content:**

#### **1<sup>st</sup> Quarter:**

Review of Multiplication Facts 1-12

Place Value

Addition and Subtraction

Multiplication

#### **2<sup>nd</sup> Quarter:**

Geometry Lines and Angles

Decimal Fractions: Addition and Subtraction

Division: One- Digit Divisors

Common Fractions

#### **3<sup>rd</sup> Quarter:**

Measurement: Metric

Division: Two Digits

Common Fractions: addition and Subtraction

Geometry: Plane and 3-D Figures

Decimal Fractions: Multiplication

#### **4<sup>th</sup> Quarter:**

Decimal Fractions: Multiplication and Division

Measurement: Customary

Common Fractions: Multiplication and Division

Statistics and Graphing

### **Related Student Objectives/Learner Objectives:**

The student will learn:

1. To recognize and read 4 to 12 digit numbers
2. To demonstrate writing 4 to 12 digit numbers in standard & expanded form & as number words
3. To identify the value of all digits in 4 to 12 digit numbers
4. To demonstrate making the greatest possible number from 6 given digits

5. To demonstrate the ability to read and write Roman numerals
6. To demonstrate the ability to prioritize and use logic to solve problems
7. To read and write time and demonstrate it
8. To demonstrate the commutative, identity, and associative properties of addition
9. To demonstrate addition and subtraction facts for a fact family
10. To demonstrate how to find the missing number in an addition or subtraction problem
11. To demonstrate how to write an equation for a word problem
12. To estimate the sum of an addition problem
13. To add 2 to 6 digit numbers
14. To use compensation to add 2 and 3 digit numbers mentally
15. To subtract 2 to 6 digit numbers
16. To use compensation to subtract 2 digit numbers mentally
17. To solve multi-step word problems
18. To apply Commutative, Identity, Zero, Associative & Distributive Properties of multiplication
19. To solve a multiplication problem having more than 2 factors
20. To write an equation for a word problem
21. To list the factors of a number
22. To determine whether a number is prime or composite
23. To list the multiples of a number
24. To identify and name points, lines, line segments, rays, and planes
25. To identify parallel, intersecting, and perpendicular lines
26. To identify the vertex and sides of an angle
27. To identify and name angles
28. To identify the center of a circle and identify the name
29. To identify and distinguish among right, acute, and obtuse angles
30. To write multiplication problems
31. To mentally compute numbers using multiples of 10
32. To display the ability to multiply 2,3 and 4 digit numbers by 2 or 3 digit numbers
33. To demonstrate solving multi-step problem
34. To determine the difference between the diameter and the circumference of a circle
35. To calculate the circumference of a circle
36. To illustrate and interpret a Venn diagram
37. To locate a city/country using latitude and longitude coordinates
38. To identify the tenths, hundredths, and thousandths place using decimals
39. To name a circle
40. To identify, name, and draw a radius, a diameter, and a chord of a circle
41. To demonstrate the use of a protractor to measure the central angles of a circle
42. To demonstrate the use of a compass to draw a circle
43. To demonstrate a decimal fraction with pictures and on a number line
44. To write a common fraction or mixed number as a decimal fraction
45. To compare fractions using a  $<$ ,  $>$ , or equal sign
46. To demonstrate rounding decimal fractions to the nearest whole number, tenth and hundredth
47. To rename one as tenths, 1 tenth as hundredths, and 1 hundredth as 10 one thousandths
48. To solve problems adding and subtracting decimals
49. To write an equation for a word problem involving decimals
50. To demonstrate adding and subtracting of decimal fractions

51. To identify the dividend, divisor, and quotient in division problems
52. To demonstrate solving equations with a missing factor
53. To figure the averages of a group of numbers
54. To identify the correct order for solving multi-step problems
55. To use manipulatives to demonstrate a common fraction
56. To identify the numerator and denominator of common fractions
57. To demonstrate equivalent fractions using multiplication or division
58. To identify the greatest common factor of two numbers
59. To complete a factor tree
60. To rename a fraction in lower terms using prime factorization
61. To rename an improper fraction as a mixed number & a mixed number as an improper fraction
62. To compare mixed numbers and fractions using  $>$  and  $<$  signs
63. To write ordered pairs to identify points on a coordinate graph
64. To graph points on a coordinate graph
65. To identify word problems having too little information
66. To identify word problems having extra information
67. To solve word problems
68. To demonstrate an understanding of the metric system
69. To identify metric prefixes and their meanings
70. To identify the symbol (abbreviation) for each metric unit
71. To rename metric linear, capacity and mass units
72. To determine the appropriate unit of length, capacity, and mass
73. To demonstrate an understanding of the metric
74. To name the metric prefixes and identify their values
75. To determine the appropriate metric unit of length, capacity, or mass
76. To determine the correct temperature using a Celsius thermometer
77. To rename metric linear, capacity, and mass units
78. To demonstrate adding and subtracting metric measurements
79. To determine distance using a map scale
80. To rename standard English measurements in metric
81. To divide multiples of 10 to determine 1 digit quotient
82. To demonstrate checking a division problem using multiplication
83. To write an equation for a division word problem
84. To divide 2,3,4, and 5 digit dividends to find 1,2, and 3 digit quotients
85. To solve a missing factor equation
86. To use traditional form of division to find quotients
87. To demonstrate dividing money
88. To write a word problem for a division problem
89. To identify more than one way to solve a problem
90. To demonstrate correct addition of like fractions
91. To demonstrate adding like fractions
92. To demonstrate adding mixed numbers
93. To demonstrate subtracting like fractions
94. To write a subtraction equation for a word problem
95. To identify the number of sides and angles of polygons
96. To identify and draw congruent, similar, and symmetrical figures

97. To identify and draw a line of symmetry on a figure
98. To identify equilateral, isosceles, and scalene triangles
99. To identify a square, rectangle, parallelogram, trapezoid, and a rhombus as special quadrilaterals
100. To estimate to the nearest inch
101. To measure to the nearest inch, half inch, fourth inch, eighth inch, and sixteenth inch
102. To write the abbreviation for each customary unit of length, capacity and weight
103. To measure temperature using a Fahrenheit thermometer
104. To measure to the nearest cup, pint, and quart
105. To measure to the nearest ounce and pound
106. To solve problems multiplying a whole number times a fraction
107. To solve problems multiplying fractions
108. To solve problems multiplying a whole number times a mixed number
109. To solve problems dividing a whole number times a fraction
110. To demonstrate understanding of recipes and their use of fractions
111. To write a common fraction for part of a set, and a point on a number line
112. Compare like and unlike fractions using  $<$  and  $>$
113. To determine whether a number is prime or composite
114. To identify prime numbers to 100
115. To list the factors of a number
116. To find the common factors between 2 numbers

**Presentation Method:**

- Hands On Instruction
- Manipulatives
- Games
- Worksheets
- Teacher Presentations
- Daily Homework or Activity
- Group or Partner Projects Planning a Menu plus Expenditures

**Evaluation and Grading Methods:**

- Competency is noted during game situations
- Written Tests
- Recitation of Math facts: oral and written (Mad Minutes)
- Daily Homework or activity
- Grading Scale as follows:
  - 90% - 100% - A
  - 80% - 89% - B
  - 70% - 79% - C
  - 60% - 69% - D
  - 0% - 59% - F

**Enrichment and/or Supplemental Activities:**

- Math challenge daily – a daily is kept
- A pattern is observed daily on calendar introducing future math concepts
- Menu Math – using real menus, meal costs are calculated

- Times Tables the Fun Way Manual
- Heath Worksheets
- Daily Math – Houghton Mifflin
- Mad Minutes (Students do 25 problems in 1 minute)
- Cooking Lessons using fractions
- Dry Erase Boards used for math races