Course Description
7th Grade
Math

Philosophy Statement: In Mathematics, God has blessed His creation with the ability to count, tell time, and make change. This is not an accident; it is a reflection of God's goodness. As students learn to appreciate God's gift of numbers and use of addition, subtraction, multiplication, and division, they should concurrently develop a heart of praise and thanksgiving in their study of mathematics. In mathematics the student will see the order and truth God created. Just as the Bible says "precept upon precept, line upon line . .." (Isaiah 28: 10), students will build concept upon concept in mathematics.

Course Objectives:

1. Synthesize new information with prior knowledge in a way that illustrates number sense
2. Model, real world situations using expressions, equations, and mathematical language
3. Solve real world problems using diverse strategies
4. Analyze, geometric shapes to compute measures, area, and volume
5. Contrast theoretical probabilities with the real world
6. Collect, interpret, and represent statistical data ethically
7. Formulate a biblical worldview of authority, modeling, reasoning, design, and ethics in mathematics

Textbook: Fundamentals of Math 3rd edition (BJU Press)

Biblical Integration: *Math is a way of describing the consistent way this universe operates. It is the language we use to express the quantities and consistencies around us; the quantities and consistencies God created and sustains. Creation is sustained by God's power. (Col. 1:16-17)*

Math is used to link the sacrifice of our gifts in relation to the treasure within our hearts. Scripture provides a basis for giving back to the Lord. Matthew 6:21 "For where your treasure is, there your heart will be also." Numbers 18: 21 "To the Levites I have given every tithe in Israel for an inheritance, in return for their service that they do, their service in the tent of meeting, 22 so that the people of Israel do not come near the tent of meeting, lest they bear sin and die. 23 But the Levites shall do the service of the tent of meeting, and they shall bear their iniquity. It shall be a perpetual statute throughout your generations, and among the people of Israel they shall have no inheritance. 24 For the tithe of the people of Israel, which they present as a contribution to the Lord, I have given to the Levites for an inheritance. Therefore I have said of them that they shall have no inheritance among the people of Israel."
25 And the Lord spoke to Moses, saying, 26 "Moreover, you shall speak and say to the Levites, 'When you take from the people of Israel the tithe that I have given you from them for your

inheritance, then you shall present a contribution from it to the Lord, a tithe of the tithe. 27 And your contribution shall be counted to you as though it were the grain of the threshing floor, and as the fullness of the winepress. 28 So you shall also present a contribution to the Lord from all your tithes, which you receive from the people of Israel. And from it you shall give the Lord's contribution to Aaron the priest. 29 Out of all the gifts to you, you shall present every contribution due to the Lord; from each its best part is to be dedicated.'

Time Allotment: 45 minutes one day per week, 90 minutes two days per week

Course Content:

Week 1-2

Chapter 1: Whole Numbers & Decimals

- I can develop number sense

- I can solve mathematical and real-world problems involving whole numbers and decimals

- I can simplify expressions involving exponents and radicals

- I can apply the order of operations to simplify expressions

- I can deduce ad definition of mathematics that demonstrates a biblical worldview

Week 3-4

Chapter 2: Integers

- I can analyze the subsets within the set of integers

- I can model absolute value, number comparisons, and integer operations on a number line

- I can solve mathematical problems involving integers

- I can critique the idea that mathematics determines truth

Week 4-6

Chapter 3: Numerical and Algebraic Expressions

- **I can write expressions to model mathematical ad real world situations**

- **I can evaluate numerical and algebraic expressions**

- **I can write equivalent expressions using the properties of addition and multiplication**

- **I can apply the properties of addition and multiplication to compute mentally**

- **I can evaluate the idea that mathematical models are objective**

Week 7-9

Chapter 4: Fraction Theory

- I can analyze rational numbers

- I can find the greatest common factor and least common multiple of the numbers

- I can convert rational numbers between fractional in decimal form

- I can solve real world problems, using the greatest common factor and least common multiple

- I can analyze the design of prime and composite numbers

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Week 10-12

Chapter 5: Fraction Operations

- I can solve math medical in real world problems involving fractions

- I can simplify expressions containing rational numbers

- I can use the properties of addition and multiplication to write equivalent expressions involving fractions

- I can distinguish between consistency and truth in writing equivalent expressions

Week 13-15

Chapter 6: Equations and Inequalities

- I can write algebraic equations and inequalities that model mathematical in real world problems.

- I can solve one and two step algebraic equations and inequalities

- I can solve equations involving groupings

- I can defend the claim that models rely on an orderly universe

Week 16-18

Chapter 7: Ratios and Proportions

- I can solve mathematical and real world problems involving ratios and proportions

- I can represent proportional relationships, using a model, graph, or equation

- I can defend the claim that mathematical design is an obvious result of the creator-God of the Bible

Week 19-21

Chapter 8: Percents

- I can analyze percents using conversions and comparisons

- I can solve mathematical problems involving percents

- I can model and Saul real world problems involving percents

- I can detect unethical procedures in the use of percentages

Week 22-24

Chapter 9: Measurements

- I can convert within customary and metric units of length, volume, and weight

- I can convert rates using unit conversions

- I can convert between measurement systems

- I can solve real world problems involving length, volume, and weight

- I can defend the statement that God has interpreted the world for us

Week 25-27

Chapter 10: Introduction to Geometry

- I can compare, basic, geometric figures and shapes using size, shape, or relative positions

- I can solve math medical in real world problems involving angle measures

- I can solve math medical in real world problems involving the perimeter and area of triangles and quadrilaterals

- I can analyze side relationships within triangles

- I can justify the statement that consistency is necessary, but not sufficient to determine truth

Week 28-30

Chapter 11: Exploring Area and Volume

- I can solve mathematical and real world problems involving the area and circumference of circles

- I can analyze composite figures to find missing measurement

- I can solve problems involving similar figures using proportions

- I can solve math medical in real world problems, involving prisms, cylinders, and pyramids

- I can analyze a model to determine its validity

Week 31-33

Chapter 12:Probability

- I can describe the probability of a simple event
- I can compare, theoretical, and experimental probabilities

- I can determine a sample space using a list, diagram, table, or the Fundamental Counting Principle
- I can solve real world problems involving the probabilities of compound, independence, and dependent events
- I can evaluate the effectiveness of theoretical probability in light of God's design

Week 34-36

Chapter 13: Statistics

- I can compare strategies to generate multiple samples from a population
- I can calculate the measures of variance in central tendency
- I can create a visual representation of statistical data
- I can make inferences about samples
- I can create a project that uses statistics to demonstrate love to others

Week 37-39

Chapter 14: Relations and Functions

- I can describe the differences between a relation and a function
- I can generate a set of ordered pairs from a mapping, grass, or function rule
- I can grab relations and functions on a coordinate plane
- I can determine the slope of a line using a graph or function rule
- I can find missing numbers in a sequence
- I can explain how they act of naming indicates that scripture is the foundation of mathematics

Resources:

- Delta Math website

- Teacher-made materials

- Student calculators (TI-30xa)

- Math manipulatives

- Pre-assessments