Course Lead Sheet

Course Title	**Math Logic**	
Theme / Master Question	How do we see God's hand in math? How do we apply math concepts to everyday problems?	**Homework:** 20-30 minutes/day

Course Description:

Math Logic is a course that reviews and builds basic skills necessary for entering an Algebra I course. Review of basic algebra properties will be applied to operations with integers, fractions and decimals. Students also learn to write proper steps to solving algebraic equations and use them to solve problems. Students will review and apply the topic of percent and solve problems applying it. Other topics of study include introduction to formal geometry, linear graphs and systems, areas and volumes of solids, statistical data and graphs, and probability.

Time / Schedule:
10 Credit Hours
1 period/day
M- T-W-Th-F

Key Teacher Resources:

Pre-Algebra: An Accelerated Course, Houghton Mifflin

Key Student Texts:

Pre-Algebra: An Accelerated Course, Houghton Mifflin

Primary Teaching Goals

Students will be able to:

1. define, use, and recognize basic properties of algebra.
2. evaluate expressions with positive and negative numbers using the order of operations.
3. calculate operations with positive and negative numbers including the use of positive and negative exponents.
4. calculate operations with positive and negative fractions and mixed numbers.
5. solve algebraic equations including: one and two-step equations, equations with variables on both sides, equations using the distributive property and proportions.
6. solve and graph inequalities.
7. problem solve using algebraic equations and application of percent.
8. use geometry notation to describe and define various triangles, polygons and circles.
9. graph points on the coordinate plane and determine if points are on a given linear equation.
10. calculate area of common geometric shapes and volume of solids.
11. calculate the mean, median, mode, and range from a table or set of data.
12. given a frequency table or set of data, draw a histogram, dot plot, box and whisker, or frequency polygon.
13. calculate and apply permutations, combinations, probability of events, and find odds in favor or odds against an event to occur.
14. evaluate their own work, explain mathematics learned in the course, and collaborate with other students.

Primary Teaching Methods

Class should be conducted around the following parameters:

1. class should begin each day with checking homework and answering students' questions; this may be done in a variety of ways to save time and to improve their understanding of the concepts;
2. lesson with new topics includes engaging the students in the lesson using a variety of lesson presentations.

Curriculum Guide: Vision Statement | Curriculum Roadmap | **Course Lead Sheet** | Course Scope and Sequence | Course Syllabus | Gold Sheet Source Docs. | Lesson Plans | Rubric	**Primary Measures and Assessments** Student work should be evaluated according to the following guidelines: 1. breakdown of grades: 55% tests, 20% quizzes, 25% homework; 2. students should be given a major assessment at the end of each unit and a minimum of three per quarter or five times per semester; 3. students should be given daily homework problems with at least one minor assessment per week or at least 8-10 per quarter.

Course Scope and Sequence

	Math Logic			
Master Skills, Ideas, or Knowledge Taught	□ Review and master basic arithmetic and pre-algebra skills needed for success in upper division math. □ Gain an awareness of math concepts, not simply math procedures. □ Apply logic and math skills, including pre-algebra concepts, to everyday problem solving.			
Complete Texts and Materials List	□ *Pre-Algebra: An Accelerated Course*, Houghton Mifflin □ Ambrose teacher-created chapter review sheets, quizzes, tests □ Kuta worksheets for additional practice			
Suggested Quarterly Schedule	Quarter 1	Quarter 2	Quarter 3	Quarter 4
	Chapters 1–3	Finish chapter 3 Chapters 4–5	Chapters 6–8	Chapters 9–10

Suggested Daily Schedule **Curriculum Guide:** Vision Statement | Curriculum Roadmap | Course Lead Sheet | **Course Scope and Sequence** | Course Syllabus | Gold Sheet Source Docs. | Lesson Plans | Rubric	**Suggested Daily Schedule** 1) Correct homework 2) Answer questions 3) Teach new concept 4) Apply concept with practice problems 5) Begin new homework set