LEVEL 4 MATH SCOPE AND SEQUENCE

CURRICULUM FRAMEWORK

Germantown Academy Lower School uses **Math in Focus** as a curriculum framework. Math in Focus, the United States' adaptation of Singapore Math, is a mastery-based program that builds problem solving skills through hands-on learning, visualization, and pictorial representations.

PROGRAM ELEMENTS

Concepts Students build a solid understanding of the mathematical ideas underlying procedures and algorithms.	**Fact Fluency** Students gain automaticity with their basic facts (+/- to 20; x/÷ 1-12). Fact fluency is an important foundation that allows students to access, apply, and retain new, more complex learning.
Skills Students learn strategies and procedures for problem solving. They learn to apply these strategies and procedures flexibly and efficiently.	**Assessment** Student progress is regularly monitored, both formally and informally. Assessment guides skills-based grouping (1st -5th grades) and identifies need for support or challenge.

INSTRUCTIONAL GROUPINGS

Progressing through typical developmental stages, students' pace of learning may vary within the same grade level. Beginning in third grade, math instruction occurs in "just right" skills-based groups. "Just right" groups are determined in the first few weeks of school and monitored throughout the year through a variety of formal and informal assessments. Our goal is to best meet students' need for support and challenge while helping them build confidence as math learners.

LEVEL 4 MATH CONCEPTS

Numbers, Operations, Algebraic Thinking and Problem Solving

Whole Numbers

- Count, write, and represent numbers up to 1,000,000
- Compare (use >, <, and =) and order whole numbers up to 1,000,000
- Round whole numbers to estimate
- Add and subtract whole numbers to 1,000,000
- Multiply by 1 or 2 digit numbers
- Divide by 1-digit numbers (with and without remainders)
- Write, model, and solve real world problems using all 4 operations
- Understand prime and composite numbers, factors, and multiples

Fractions and Decimals

- Compare and order fractions and mixed numbers
- Add and subtract fractions and mixed numbers
- Multiply fractions and whole numbers
- Rename improper fractions and mixed numbers
- Read, write, and understand decimals (tenths and hundredths)
- Compare and order decimals
- Round decimals to the nearest tenth or whole number
- Add tenths and hundredths
- Express fractions as decimals; express decimals as fractions
- Write, model, and solve real world problems involving fractions and decimals

Measurement, Data and Geometry

- Represent and interpret data on line plots
- Calculate area and perimeter of simple and composite figures
- Convert between units of measurement (length, weight/mass, volume) using customary and metric units