LEVEL 3 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 3 MATH CONCEPTS

Numbers, Operations, Algebraic Thinking and Problem Solving

- Count, write, and represent numbers up to 10,000
- Compare (use >, <, and =) and order whole numbers up to 10,000
- Understand place value to 10,000 (ones, tens, hundreds, thousands)
- Round whole numbers to the nearest 10 or 100
- Add and subtract whole numbers to 10,000
- Conceptualize and represent multiplication and division in different ways (ex. repeated addition/ subtraction, models, equations, etc.)
- Fluently multiply and divide within 144
- Multiply ones, tens and hundreds with and without regrouping
- Use a variety of concrete, pictorial, and symbolic models for multi-digit addition, subtraction, multiplication, and division
- Write and solve number sentences for one- and two-step real-world problems
- Understand the meaning and uses of fractions, fraction equivalence, and comparison
- Identify rules to show number patterns

Measurement, Data and Geometry

- Create and interpret pictographs, line plots, and bar graphs
- Tell time to the minute, convert between hours and minutes, and solve elapsed time problems
- Measure and estimate liquid volumes and masses of objects using standard units of grams, kilograms, and liters
- Sort and classify two- and three-dimensional shapes by properties
- Solve one- and two-step area and perimeter problems