Compass Homeschool Enrichment LLC

Math Masterminds 1

Dates: September 11- October 23 (7 weeks)

Instructor: Sarah Hogue

Objective: Meet the masterminds behind founding principles of modern mathematics. Each week students will overview the life and times of a great mathematician and then learn concepts, principles, and formulas introduced by the featured master. Students' problem solving skills will be honed as they examine the historical, cultural, and personal context for significant developments in mathematics. Students will learn "when" and "why" these real people made contributions to modern math and "what" lead them to their discoveries. The class will work sample problems and use experiments and manipulatives to demonstrate the contributions of each mathematician. Students will be exposed to a wide variety of math terms and concepts.

Mathematicians explored in Quarter 1 include: Pythagorus, Blaise Pascal, Pierre de Fermat, Archimedes, and Isaac Newton

Mathematicians explored in Quarter 2 include: Sophie Germain, Carl Gauss, John Napier, Galileo Galilei, and Leonhard Euler

Preliminary Course Outline

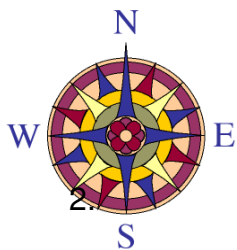| Week	Theme/Topic
1.	Pythagorus

- History of Pythagorus of Samos

- Number Shapes

- Kanoodle Puzzles and Pyramid Puzzles

2. Pythagorus

- Discovery of Irrational Numbers

- The Pythagorean Theorem

- Pythagorean Applications

3. Blaise Pascal

- History of Pascal

- Pascal's Triangle

4. Pierre de Fermat

- History of Fermat

- Primes and Squares

- Number Tricks

5. Archimedes

- History of Archimedes

- Archimedes' Mobiles

- A Balancing Act

6. Archimedes

- A Teeter-Totter Discovery

- Counting Kernels

7. Isaac Newton

- History of Newton

- A Tower of Powers

- Chain Letter Madness