



# Elementary Math Topics

## Course Syllabus

### Course Description

The mathematics skills students learn in elementary school are foundational to success in later school years and adult life. What are the foundational math skills elementary students learn, what are some engaging strategies for teaching these skills, and what are activities teachers can use to build these skills? This course will answer these questions and give you a more well-rounded view of math in elementary school. Topics to be covered include: Place Value, Operations (addition/subtraction, multiplication/division), Geometry, Fractions, Measurement, Counting Money, and Basic Facts!

This course enhances classroom teaching effectiveness and supports improved student outcomes by introducing new knowledge in foundational elementary math concepts and developmentally appropriate instructional strategies, including place value, operations, geometry, fractions, measurement, money, and basic facts, to promote deep understanding and engagement in young learners.

### Course Objectives

At the end of this course you should be able to:

1. Develop a deep understanding of place value and how to teach place value to elementary aged students.
2. Develop a deep understanding of addition and subtraction and how to teach addition and subtraction to elementary aged students.
3. Develop a deep understanding of multiplication and division and how to teach multiplication and division to elementary aged students.
4. Develop a deep understanding of geometry concepts and how to teach geometry to elementary aged students.
5. Develop a deep understanding of fractions and how to teach fractions to elementary aged students.
6. Develop a deep understanding of measurement concepts and how to teach measurement to elementary aged students.
7. Develop a deep understanding of counting money and how to teach counting money to elementary aged students.
8. Develop a deep understanding of basic facts and how to teach basic facts to elementary aged students.

### Modules

- Module 1: Place Value, Quiz 1
- Module 2: Addition and Subtraction, Quiz 2
- Module 3: Multiplication and Division, Quiz 3



- Module 4: Geometry, Quiz 4
- Module 5: Fractions, Quiz 5
- Module 6: Measurement, Quiz 6
- Module 7: Money, Quiz 7
- Module 8: Basic Facts, Quiz 8

### **Grading**

Each quiz must be passed at an 80% or higher (three attempts allowed).

### **Format**

This is a self-paced, asynchronous (no required live meetings) course. Throughout the PD course, you will find it helpful to take notes along the way to assist with the quizzes. Within each module, you will find reflection assessments that are not graded but will help in your journey through the course. There is an interactive forum in the course to help you connect with peers and instructors, share ideas, and collaborate on best practices throughout your learning journey.