Course 3: Grades 2-5: Nemeth Code Symbols for Fractions and Spatial Problems, Instructional Tools, Materials, and Technology

Lesson 1: Fractions and Mixed Numbers

1.1   Participants will be able to read and write simple fractions using the Nemeth Code opening and closing simple fraction indicators.

1.2   Participants will be able to read and write mixed numbers using the Nemeth Code opening and closing mixed fraction indicators.

1.3   Participants will be able to read and write linear math problems and word problems using fractions and mixed numbers.

Lesson 2: Spatial Arrangements

2.1   Participants will be able to read and write addition, subtraction, and multiplication spatially aligned problems that include:

- Multi-digit numbers with and without commas
- Decimals
- Money
- Simple fractions
- Mixed numbers

Lesson 3: Long Division

3.1   Participants will be able to read and write division problems that do not have a quotient

3.2   Participants will be able to read and write division problems with and without remainders

3.3   Participants will be able to set up a math page that contains numbered division problems

3.4   Participants will be able to read and write division problems with decimals using multiple methods for formatting the problem.

Lesson 4: Formatting Spatial Material and Number Lines for Students in Grades 2-5

4.1   Participants will be able to locate and use formatting resources

4.2   Participants will be able to format the following:

- Directions
- Transcriber's notes
- Example problems
- Numbered spatial problems

- Number lines

Lesson 5: Instructional Tools and Materials

5.1　Participants will be able to identify materials that can be used when teaching math computation and fraction concepts to students in grades 2-5

5.2　Participants will be able to recognize ways they can support math instruction for students in grades 2-5 who are learning math computation and fraction concepts

Lesson 6: Developing Students' Abacus Skills

6.1　Participants will be able to identify the different types of abaci available

6.2　Participants will be able to recognize pre-requisite skills students need prior to abacus instruction

6.3　Participants will be able to name the parts of the Cranmer abacus

6.4　Participants will be able to describe the different methods for using the abacus including the counting method, logic or partner method, and paper compatible method

Lesson 7: Tech Skills for Math

7.1　Participants will be able to learn three critical screen reader tech skills which are often overlooked

7.2　Participants will be able to use these three tech skills to strongly support digital math concepts and skills