Foundations to Fractions

This full-day, six-hour session allows participants to explore the development of geometry, measurement, and base ten concepts in Kindergarten through Grade 2. Participants discover the essential connection between the early elementary content in these domains and the development of number concepts and fraction understanding in Grades 3 through 5.

Fluency activities, concrete experiences, and facilitator-led demonstrations invite participants to experience primary level math from the students' point of view. The session incorporates the specific use of models and tools that support student understanding in geometry, measurement, and base ten numbers and includes plenty of time for analyzing content and pedagogy, practicing effective delivery, and discussing and reflecting on the foundational role that math in the early elementary grades has on students' success with fractions.

Related to geometry in Kindergarten through Grade 2, participants can expect to deepen their understanding of

- how the Common Core State Standards for Mathematics introduce fractions and create a foundation for decomposing a whole into equal parts.
- the importance of these often overlooked lessons in developing spatial reasoning and number concepts.
- how pattern blocks, fraction strips, tape diagrams, and area models support early fraction understanding.

Related to measurement in Kindergarten through Grade 2, participants can expect to deepen their understanding of

- how the Standards create a foundation for understanding fractions as numbers on the number line.
- the big idea that when units are short or small, more iterations of the unit are needed to cover the same length or to fill the same capacity (e.g., there are more fifths than halves in 1).
- how linking cubes, centimeter cubes, inch tiles, the number path, and number lines support deeper understanding of measurement concepts.

Related to number and operations in base ten in Kindergarten through Grade 2, participants can expect to deepen their understanding of

- how the Standards express the idea of *one arithmetic* for both whole numbers and fractions.
- the critical work in this grade band that supports students' ability to add and subtract like units, compose a higher value unit to add fractions, and decompose a higher value unit to subtract fractions.