

## Foundations to Middle and High School Math

In this full-day, six-hour session, participants explore foundational learning from elementary mathematics related to the distributive property, interpretations of division, and the division algorithm. By deepening their understanding of these foundations, educators in Grades 6 through 12 are empowered to close learning gaps more efficiently. The session invites participants to study one concept at a time, using a replicable cycle that connects new learning to the practicalities of classroom instruction.

The steps of the cycle are to

- understand foundational learning from earlier grades.
- assess related student work samples that show learning gaps.
- use the standards and the curriculum to explore the parameters of the learning gaps.
- engineer teaching sequences to address the learning gaps.
- practice delivering the teaching sequences.

The rhythm of the session allows significant time for collaborative analysis of student work, studying the standards and curriculum, and practice developing and delivering responsive teaching sequences. To support participants in the various aspects of this work, the facilitator periodically models relevant instructional segments. Doing so gives participants a glimpse into the classroom, allowing them to see more clearly how foundational work can be redelivered to support students in Grades 6 through 12, while overcoming learning gaps.

Participants can expect to deepen their knowledge of

- how the consistent use of specific models, including place value models, unit language, number bonds, rectangular arrays, area models, number lines, and the coordinate plane, leads to strong understanding.
- how the properties of operations are presented by the *Eureka Math*™ curriculum.
- partitive and measurement division and the division algorithm.
- the division of polynomials by using the reverse tabular method.