

## Math Support

### Achieve the Core Mathematics

Reference the [Achieve the Core Mathematics Instructional Practice Guide: Coaching Tool](#) to access a math instructional module to help build understanding and experience with standards.

### Math Design Collaborative

Math Design Collaborative (MDC) is an instructional framework for implementing Kentucky's Academic Standards and improving teacher effectiveness by design: the instructional cycle includes teacher collaboration in designing instruction, analyzing student work, and adjusting instructional practice based upon data and lessons learned about students and their needs.

Would you like to see your students improve their skills in any of the following?

- Critical thinking
- Understanding mathematics conceptually
- Active, collaborative problem-solving
- Engage in productive struggle with mathematics
- Flexible application of mathematics knowledge

Would you like to see your teachers improve their practice in any of the following?

- Clarifying and sharing learning intentions and criteria for success
- Engineering effective discussion, questions, activities, and tasks that elicit evidence of learning
- Providing feedback that moves the student forward
- Activating students as owners of their own learning and instructional resources for one another

Reference the [Making Mathematics Matter YouTube video](#).

[Math Design Collaborative](#) (MDC) is an instructional framework for implementing Kentucky's Academic Standards and improving teacher effectiveness by design: the instructional cycle includes teacher collaboration in designing instruction, analyzing student work, and adjusting instructional practice based upon data and lessons learned about students and their needs. Although MDC specifically targets the math standards, mathematical literacy developed through MDC extends into science, technology, engineering, and other content areas. MDC offers well-engineered tools for formative and summative assessment that expose students' mathematical knowledge, reasoning, and misconceptions, helping teachers guide them toward improvement and monitor progress. MDC tools are designed to deepen students' understanding of mathematical concepts and develop their

ability to apply that knowledge to non-routine problems. MDC is based upon two kinds of *Classroom Challenges or Formative Assessment Lessons (FALs)*: concept development and problem solving lessons.

Access [elementary MDC lessons](#) created by Kentucky Department of Education Mathematics Specialists and field tested by Kentucky teachers. Access [middle and high school MDC lessons](#) created through the [Mathematics Assessment Project](#).

### **Related Resources**

The [Brief Guide for Teachers and Administrators](#) is designed to help classroom teachers and district administrators understand the structure and organization of the MAP Classroom Challenges, as well as how they stimulate and deepen students' mathematical thinking and put the Common Core State Standards for Mathematics and Mathematical Practice into action.