CME PROJECT

Program Overview

The CME Project ©2013 offers you a Common Core curriculum organized around the familiar structure of Algebra 1, Geometry, Algebra 2 and PreCalculus. The program meets the dual goals of mathematical rigor and accessibility for all students through innovative, research-based instruction and a curriculum that is designed around problem-based, student-centered tasks.

CME Project is an inquiry-based mathematical curriculum centered around problem-based student, centered tasks. The program employs innovative instructional methods, developed over decades of classroom experience and informed by research, that help students master mathematical topics. CME Project utilizes both student-centered and traditional elements to present a uniquely balanced math program. Students begin by experimenting and previewing the math before they formalize it through traditional instructional elements. It also employs the best models that call for grappling with ideas and problems as preparation for instruction, moving from concrete problems to abstractions and general theories, and situating mathematics in engaging contexts.

One of the core tenets of the CME Project is to focus on developing students' Habits of Mind, or ways in which students approach and solve mathematical challenges. Such mathematical habits include visualization, performing thought experiment, reasoning by continuity or linearity, and mixing deduction with experiment. The emphasis on mathematical habits of mind, the core organizing principle of the program, is aimed at helping students develop precisely the kind of mathematical practices described in the Common Core State Standards.

The "experience before formality" principle in *CME Project* has sense making as one of its main goals. Definitions and theorems are capstones, not foundations, and students spend plenty of time playing with ideas in simple and transparent cases before the ideas are formalized and made precise. The student dialogues play a role here, too, giving students examples of how they can gradually refine insights through perseverance and through interaction with others.

The structure of The CME Project is built to support all students' success in developing mathematical proficiency. There are eight chapters in each book, and each chapter has a low threshold—all students can find a place to begin that is within their current ability—and a high ceiling—every student can be challenged by the situation. Each chapter has easy entry, building on prior knowledge and carefully designed experiences. Each chapter also has several jumping-off points for more advanced work. In between, it introduces abstract concepts with concrete experimentation and specific numerical examples that students extend to deeper understanding. The texts set high expectations for all students, and expose all students to high-level questions.