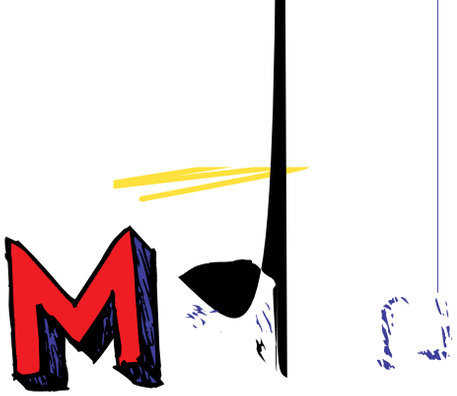
Mc Graw Hill Education



Redefining Instructional Excellence with the Rigor of

b. Procedural skills and fluency: Core procedural skills, such as single-digit multiplication, must be mastered in order to access more complex concepts and procedures. Fluency is addressed in the classroom and through supporting materials to be used over an extended period of time.

- McGraw-Hill My Math embeds fluency practice opportunities throughout each lesson, utilizing a variety of formats for optimal engagement by all students – games, manipulative work, traditional practice, and many others. Homework pages are built into the Student Edition. Additionally, a vast collection of extra practice is available in black line masters, practice with manipulatives, online games, online assessment, and by using the adaptive learning tool, ALEKS.

c. Application: Application is the outcome—and the goal—of the conceptual understanding and procedural skills or fluency. Students must continuously use their knowledge in situations that require applying mathematical concepts to relevant, every day activities.

- McGraw-Hill My Math lessons launch with a relevant, Math in My World application that takes students out of the classroom and into daily life. Higher-Order Thinking push students to think deeply about the content as they apply it to other mathematical concepts, look for patterns in their work, and draw conclusions about what they experience, see, and do. Chapter Projects and Real-World Problem-Solving Readers entice students to enrich their learning with additional engaging, real-world, multi-layered experiences.

In order to embed rigor into daily practice, teachers must create a learner-centered, discourse-rich, risk-free learning environment in which students are intrinsically motivated to succeed. The Common Core Standards for Mathematical Practice[4] provide a clear description of this type of classroom—one in which students productively persist through difficult and challenging problems to find a justifiable and reasonable solution. Three research-driven strategies put teachers and students on the path to creating this dynamic, learning atmosphere.

1. Teachers engage students in thought-provoking student discussions that are prompted by open-ended, stimulating questioning. Classroom conversations involve all of the students. A teacher poses questions to the class for students to discuss in small groups or with a partner. Every student is held accountable to think about and articulate a response. Teachers facilitate the collection of students' ideas, and encourage a clarifying discussion surrounding them. In one scenario, a teacher embracing Cognitively Guided Instruction[5, 6] listens to children's mathematical thinking and uses their responses to drive instruction.

   - McGraw-Hill My Math lessons feature Talk Math, a challenging question that encourages a multi-layered discussion around the day's learning. In addition, each lesson concludes with Building on the Essential Question, which connects the day's learning to the broader, Common Core Standards-based goal. Students see how each piece fits in the overall body of mathematical knowledge, and teachers can listen to students' responses to inform future instruction.

2. Teachers nurture a risk-free atmosphere in which students believe that mistakes are markers on the road to success. In Mindset[7], Carol Dweck suggests nurturing a growth mindset, where students are encouraged to work through productive persistence. Praise is given to students who demonstrate perseverance. Dweck says, "When children are taught the value of concentrating, strategizing, and working hard when dealing with academic challenges, this encourages them to sustain their motivation, performance, and self-esteem."[8]

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