

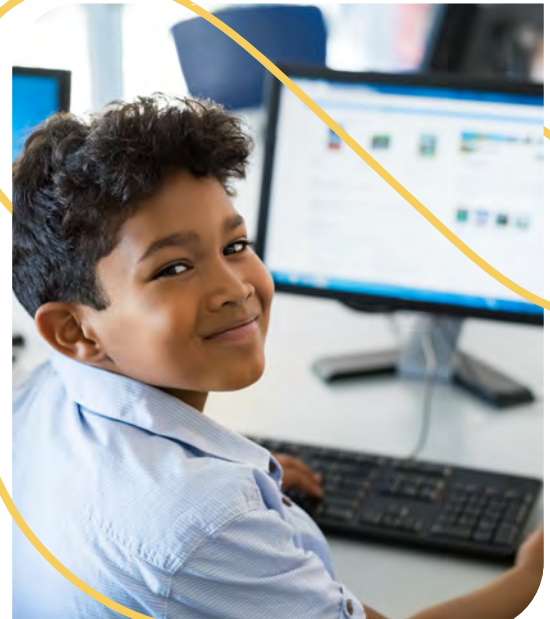
# 3 Reasons conceptual understanding is critical to your students' learning journey

Educational experts, researchers and practitioners designed DreamBox Learning® to assess mastery and measure student progress based on demonstrated knowledge of a concept. This conceptual understanding, crucial for school math, is supported by the National Council of Teachers of Mathematics, the Common Core State Standards for Math and other state and Canadian standards.

## 1 Mathematics learning is contextual Students must know more than isolated facts and methods.

As students build conceptual understanding, they can apply that knowledge to new situations and use these skills in context. True math mastery requires that students acquire the foundational math skills, practice using these skills together and know when and where to apply them.

**Example:** All lessons within the DreamBox platform use virtual manipulatives that allow students to show their thinking. The lessons move away from a pedagogy based on math-fact memorization and present problems that prioritize conceptual understanding. Through interactive and open-ended problem-solving lessons, the software captures every decision a student makes. It also gathers data regarding response time, the strategy used, types of mistakes made and more.



**“DreamBox helps students understand the background information, making them stronger mathematically and conceptually, helping them fully understand the material. That’s what I like. They’re walking away with a deeper understanding of math.”**

– Amber Stagi | Mixed-Grade Math Teacher, San Jose Unified School District, California

# 2

## Knowledge construction is complex and unique to each student

Every student brings different experiences, perspectives and strategies to their learning journey.

Educators know that learning is a complex, interconnected web. Students develop knowledge when they have experiences in which they reason inductively and deductively. Not all students learn easily, and it rarely happens in a straight line. It's critical for students to construct their own knowledge and understanding in a way that honors their prior knowledge and skills.

**Example:** DreamBox's Intelligent Adaptive Learning™ technology analyzes data delivered in real time to provide an in-depth view of exactly how students think about a concept during a lesson. The technology uses this information to personalize the current lesson and inform future instruction pathways. Adaptive technology enables the highest levels of personalized learning.

We were looking for a digital program that promoted a deeper conceptual understanding of math. DreamBox was the only one we felt represented the thinking we wanted our kids to have: it worked well to identify prerequisite skills and truly individualize learning and process while providing exposure to standards.”

— Josh Noland | Instructional Support Specialist, Fayette County Public Schools, Georgia

“Adaptive learning programs are so important for meeting students where they are, especially in classrooms where there is such a wide range of skill levels. When you combine that with teacher input and guidance, which DreamBox does through the assign-a-focus feature, you're creating a truly individualized learning experience for each student.”

— Allison Wall | Second Grade Teacher at Mt. Rainier Elementary, Prince George's County Public Schools, Maryland

# 3

## Formative instructions is the pathway

Ongoing formative assessments capture diverse data to tailor instruction in real time.

Many educators recognize ongoing, formative assessment as a valuable tool to drive formative instruction. Learning that is captured and measured effectively in the moment can inform personalized instruction in real time. Lessons are tailored to each student's strengths, challenges and approaches to math learning.

**Example:** As students work through lessons, DreamBox captures and analyzes thousands of pieces of data about their behavior. Ongoing formative assessments allow the platform to continuously adapt instruction, including the level of difficulty, scaffolding, sequencing, the number of hints and the pacing in real time. Formative instruction ensures students at all levels work in the optimal learning zone and progress at the right pace.

## DREAMBOX IMPACT

With the power to deliver millions of individualized learning paths, DreamBox tailors every math lesson and ensures that students work in their optimal learning zone. The math curriculum connects to upcoming assessments and effectively builds conceptual understanding, procedural fluency and college and career readiness.



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