



# Personalizing Instruction

Providing Individualized Learning Paths for 3,300 Students

## PARKWAY FAST FACTS

- Top performing school district
- 14 U.S. Department of Education Blue Ribbon Schools of Excellence
- 18 Elementary schools
- 17% Gifted education services
- 8% Special education

## DREAMBOX IMPLEMENTATION

- Deployed since 2008
- 3,300 Students
- 60 minutes per week
- Grades 1–2 curriculum for all students
- Grades 3–5 intervention
- Before- and after-school programs

## FUNDING SOURCE

District curricular software budget

## ABOUT DREAMBOX LEARNING

DreamBox Learning's Intelligent Adaptive Learning™ program accelerates student learning by ensuring every student works continually in their optimal learning zone and helps all students achieve math proficiency.

## → CHALLENGE:

**Personalize learning for all students**

In the Parkway School District in suburban St. Louis, Missouri, the mission is to ensure students become self-directed learners and to honor students' unique abilities and needs. DreamBox Learning is a key part of that vision in all 18 elementary schools. "DreamBox helps us personalize mathematics education for our students," said Tim Hudson, the District Math Curriculum Coordinator. "The adaptive nature of the DreamBox program tailors lessons to each student based on his or her individual degree of mathematical understanding."

A typical math curriculum is taught in a linear way. Teachers must constantly adjust to help students who miss a concept while also keeping those who excel in math challenged. "It is very difficult to give all students intensely personalized attention in mathematics with lessons that are uniquely sequenced and presented to each individual student. This level of responsiveness is extremely valuable in guaranteeing every single student meets Common Core State Standards," said Hudson.

## → SOLUTION:

**An adaptive learning environment for math education**

An intelligent adaptive learning approach constantly adjusts to each student's needs by embedding assessment in every activity to provide appropriate scaffolding, sequencing, and pacing as students work at, above, or below grade level. This level of differentiation requires a keen understanding of what students know, where they have gaps, and what strategies they use to solve problems, as well as different approaches for different kinds of learners.

Hudson notes one of the benefits of the DreamBox program is the integration of assessment and instruction and the ability to adapt based on that information. "DreamBox is a completely neutral 'teacher' that is informed entirely by evidence of learning, makes no assumptions, has unlimited patience, and can meet the needs of students from diverse backgrounds."

Amy Fitter, a math intervention specialist at Shenandoah Valley Elementary School, finds that DreamBox

**"DreamBox develops genuine number sense and cultivates students' automaticity and quick reasoning with numbers, rather than having them believe that mathematics is about remembering."**

— Tim Hudson, K–12 Coordinator of Mathematics, Parkway School District

**“DreamBox Learning identifies each child’s academic strengths and areas in need of support, and it scaffolds the learning from that point. Students meet success at every level. This differentiation for students is invaluable.”**

— Amy Fitter, Math Intervention Specialist  
Shenandoah Valley Elementary School

Learning not only differentiates learning, but also makes students feel successful, even when they work below grade level. “I’ve been teaching for 22 years and I thought I was good at individualizing,” said Fitter, “but for a class of 22 kids? DreamBox Learning gets them to their level and takes it from there. They feel that they are working on something advanced. They feel successful.”

As a mathematician and an educator, Hudson appreciates that DreamBox supports students’ mathematical thinking about big ideas of numbers such as grouping and efficiency. Hudson noted, “The youngest students begin working with quantities and groups of objects (‘more, less, the same’) before seeing any numbers or digits. It is important for our curriculum that DreamBox cultivates students’ automaticity and quick reasoning with numbers rather than having them believe that mathematics is about remembering.”

### → IMPLEMENTATION: 60 minutes each week

Parkway first used DreamBox Learning as an intervention resource for grades 3 to 5. The adaptive nature of DreamBox helped differentiate instruction to struggling students who had varying degrees of difficulty learning math. Because Hudson was so impressed with the flexible and responsive way

that DreamBox engaged students in learning, he recommended adopting the program as part of the regular curriculum for all 2,800 students in grades 1 and 2. The district intends to include DreamBox in the kindergarten curriculum in the future.

Students typically log in to DreamBox Learning for 20 to 30 minutes, 2 to 3 times a week, in their classroom or a computer lab. In addition to scheduled class time, students can access their DreamBox Learning account anytime, from any Internet-connected device. During a recent snow day, many students logged in from home to “play” math. Teachers and administrators track student progress with reports that show the time students spend online, lessons completed, and concept proficiency.

### → RESULTS: Increased understanding and application of foundational math concepts

Hudson sees DreamBox Learning as an important means to an end in meeting the Common Core State Standards. DreamBox increases student understanding of foundational math concepts and helps them apply those concepts in more challenging lessons, reinforcing their knowledge.

“The continuous data collection and analysis within the DreamBox

program ensures that activities are appropriately timed to personalize the learning experience for each student,” said Hudson. “Our teachers have been impressed with the detailed student reporting and the differentiated experience that students receive.”

As a district coordinator of mathematics Hudson finds the DreamBox Administrator reports help him monitor student growth and performance in mathematics. “The DreamBox Administrator Dashboard reports help us monitor and validate our students’ achievement that results from using DreamBox Learning.”

As a teacher, Amy Fitter uses DreamBox Learning several times a week with her students. She has found that DreamBox is a positive learning tool that helps students build confidence in their math abilities. “DreamBox Learning understands how kids learn,” said Fitter. “Children work on learning activities for just the right amount of time. It reinforces learning and grows in difficulty with appropriate scaffolding as students progress.”



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