



## Common Core with a Focus on Fractions Conceptua® Math at Mequon-Thiensville School District

### Common Core Transition

Mequon-Thiensville School District, like so many districts across the country, is preparing for the implementation of the Common Core State Standards. In 2011, Mequon began mapping its curriculum to the new standards and found that they needed to update their math resources, particularly in the subject of fractions. The district chose Conceptua Fractions to meet this need because it was designed around the Common Core with an emphasis on visual models and the language of mathematics—both of which are central to the new standards.

“It is one thing when standards are on paper,” says Eric Dimmitt, the district’s Director of Curriculum, Instruction, and Assessment. “Conceptua Fractions helped us take the Common Core from the planning stage into the classroom. We are now teaching to these new standards.”

### Fluency with the Language of Mathematics

Mequon is a high-achieving district in Wisconsin. Students in this Milwaukee suburb excel at computation but were challenged by explaining their work. Conceptua Fractions’ focus on conceptual understanding and “math talk” developed student fluency with the language of mathematics. “We thought this level of fluency would take years, but we achieved it in only a few months,” says Melissa Hedges, K-8 Mathematics Teaching Specialist at Mequon.

### Visual Models Boost Understanding of Multiplication of Fractions

Conceptua Fractions uses visual models to guide students from concrete to representational to abstract numeric procedures, resulting in deep mathematical understanding. A number of Mequon students had already been introduced to the basics of fractions in earlier grades, but needed this visual scaffolding to help them understand the multiplication of fractions.

Conceptua’s approach proved to be effective. Over 1,000 students in grades 5–8 used Conceptua Fractions for three months in the fall of 2012 as a replacement fractions curriculum. Of these students, 317 studied the multiplication of fractions and experienced strong gains in comprehension. Students in grades 5–8 saw test scores almost double, from 41% to 81%, after using Conceptua Fractions. Proficiency rates for the same group jumped from 10% before using the program to 74% afterwards.



**Eric Dimmitt**  
*Director of  
Curriculum,  
Instruction, and  
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### District statistics

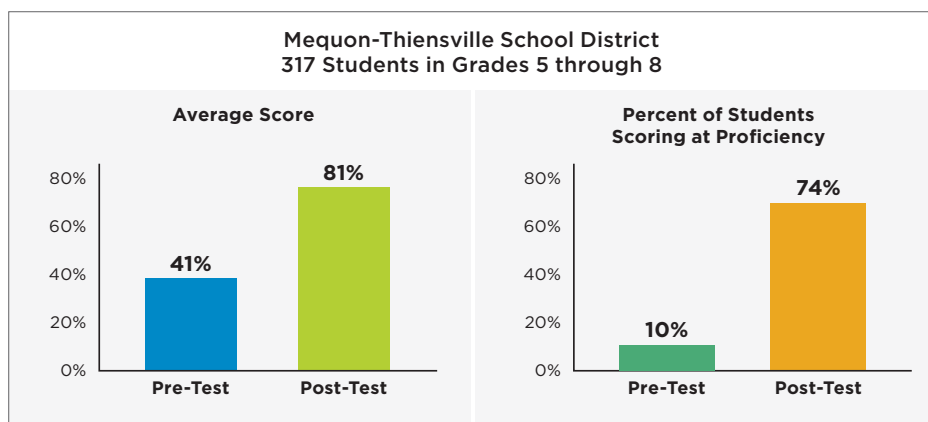
**High-performing** school district approximately 20 miles north of Milwaukee, WI

**3,600** students across 6 schools

**92%** of third-graders scored proficient or advanced on the Wisconsin Knowledge and Concept Examination in 2011–2012

**9%** free and reduced lunch

**84%** white, **6%** African American, **5%** Asian, **3%** Hispanic



Conceptua Math is the leader in online visually-interactive math curriculum. Conceptua Math was founded by a team of educational publishing and research leaders with a mission to transform the teaching and learning of mathematics.

## Pacing and Accountability Are Key Components to Growth

Connie Laughlin, Professional Development Partner and Lead Facilitator of the Fractions Project on the Common Core in Wisconsin, attributes the growth in student learning to two factors: the program's intentional pacing and the high level of accountability it sets for students. "Conceptua Fractions systematically moves students to increasing levels of understanding by reducing the scaffolding as students develop mastery. Students must demonstrate understanding of a concept before they can proceed to more difficult ideas."

## Effective Pedagogical Model Balances Instruction and Practice

The Conceptua Fractions model provides a critical balance of instruction and practice, ensuring that the teacher plays a central role with direct instruction but also gives students the independent practice they need. The teacher opens and closes each topic with curricular supports provided by the program. According to Melissa Hedges, "The teacher supports were instrumental in helping teachers deliver high quality lessons. The embedded prompts pushed the kids to think and pushed the teachers to be more precise in their questions to target the mathematics."

In between the openers and closers, students practice with guided lessons on iPads, laptops, or computers at the lab. "Conceptua helps teachers know when to lead and when to get out of the way to let students practice. The teacher's role turns from simply information giver to facilitator of learning," notes Eric Dimmitt.

## Monitoring Student Progress at the Class and District Levels

At the end of each guided lesson, students complete an assessment called a skills check. The teacher then has a one-minute dialogue with each student to gauge his or her understanding and determine the appropriate next steps. These conversations "made us better teachers," says Melissa Hedges. "With the skills check data, we could see in real-time what was going on with students and have meaningful conversations while they were engaged in the content."

Mequon administrators value the at-a-glance feedback provided by Conceptua Fractions' dashboard, which summarizes student performance on the skills checks. With a clear view of how many students are struggling in a given area, administrators are better able to allocate resources and provide appropriate remediation or enrichment activities.

## Conceptua Math Helps Mequon Achieve Its Best

Mequon is thrilled with its partnership with Conceptua Math. Melissa Hedges explains, "They have people who are really committed to making the program work. In the end, Conceptua Math is about helping teachers and students achieve their best."

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