



CASE STUDY

Everyday Mathematics 4 promotes fluency and mathematical discourse in Iowa district

ABOUT THE SCHOOL

Name

Johnston Community School District

Location

Des Moines, Iowa

Grades

K–5



Overview

When Johnston Community schools needed a core math curriculum, *Everyday Mathematics 4* was the solution. Achievement results have shown that students at Johnston are succeeding, with more students now testing proficient or advanced than ever before.

ON THE 2017–18 IOWA STATE ASSESSMENT, 91 % OF THE DISTRICT'S THIRD-GRADERS WERE PROFICIENT IN MATH.

7,370
STUDENTS

9.6%
ENGLISH-LANGUAGE
LEARNER

24%
FREE AND
REDUCED LUNCH

Everyday Mathematics 4 helps elementary students experience productive struggle on the way to mastery

As a longtime elementary school teacher, Jolene Rude has seen her share of students struggle with—and sometimes abandon—difficult math problems. After using *Everyday Mathematics 4*, however, even struggling students are learning challenging math concepts, along with life skills, says Rude, an elementary CORE math teacher at Johnston Community School District, located in a northern suburb of Des Moines, Iowa.

“*Everyday Mathematics* provides students the opportunity to try different strategies—to work with a partner or group,” Rude says. “Students know if one strategy doesn’t work, they can try another or talk it out. That builds stamina and perseverance, which helps students know, with confidence, ‘I accomplished that; I can accomplish this.’”

Comprehensive program

Everyday Mathematics 4, designed for grades K through 6, teaches various methods of problem-solving to accommodate different learning styles; repeats standards-aligned concepts over multiple lessons and units to improve mastery; and uses real-world problems to demonstrate practical applications of skills. The product’s research-based approach to math instruction supports the Johnston district’s growth mindset, while promoting mathematical discourse, fluency and productive struggle, says Jyll Johnson Miner, math/science K12 coordinator for the district. “We are trying to create opportunities for small-group learning and personalized instruction,” Miner says.

“*Everyday Mathematics 4* lessons encourage small-group learning through games, technology and math boxes. And automaticity, fluency, is built into the core through different activities.”

Jyll Johnson Miner,
Math/Science K12 Coordinator

Proficiency above state average

Since implementing an earlier version of *Everyday Mathematics* in 2012, the district has seen steady proficiency growth across all grades, Miner says. On the 2017–18 Iowa state assessment, 91 percent of the district’s third-graders were proficient in math, compared with the state average of 78 percent; 86 percent of the district’s fourth-graders and fifth-graders were proficient in math, compared with the state average of 78 percent for grade 4 and 75 percent for grade 5.

In addition, grade 3 students scored 16 points higher than the National Standard Score for math proficiency; grade 4 scored 13 points higher; and grade 5 scored 17 points higher.

The *Everyday Mathematics 4* program is known for its spiral instructional design, which helps students master a topic after seeing it multiple times in multiple contexts. But the open-response and challenge questions are also noteworthy, Rude and Miner say, because they encourage mathematical discourse while students experience productive struggle on the way to mastery.

“Students can explain or defend how they solve the math box,” Rude says. “They can compare strategies and talk about why theirs is better than someone else’s. Sometimes, they learn a better way to solve a problem.”

2018 Iowa State Math Assessment:
Students Proficient or Advanced

