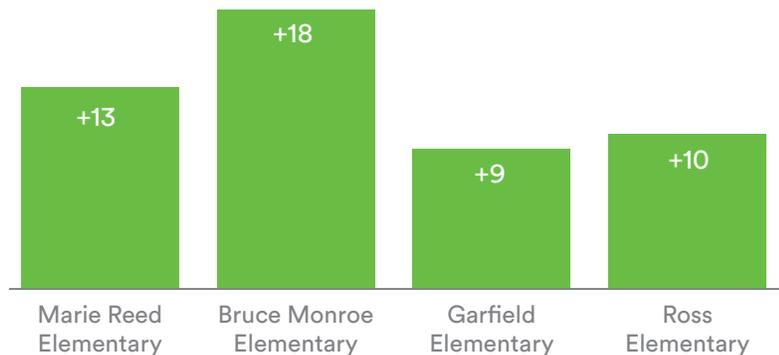


Washington, DC Schools Make Record Gains Across Grades with *Eureka Math*™

After some Washington, DC schools began using *Eureka Math*™ as early as 2013-2014, District of Columbia Public Schools adopted the curriculum for all grades in 2016-2017. They already are seeing results. The percentage of students scoring proficient on the district's PARCC test in math grew by 3.5 percent at the end of the 2016-2017 school year, the largest annual gains the district has made since it started using PARCC in 2014–2015. Importantly, all grade levels and all subgroups of students improved.

DCPS PERCENTAGE POINT GAINS ON PARCC MATHEMATICS ASSESSMENT FROM 2014–2015 TO 2016–2017



CHOOSING *EUREKA MATH* FOR DCPS

Kaiulani Ivory Akpan, director of elementary mathematics for DC Public Schools, describes the switch to *Eureka Math* as “educator led.” “*Teachers weren’t loving the curriculum we were using, and some were trying EngageNY Math* [the early version of *Eureka Math* developed under an agreement with the New York State Education Department]. So we started a *Eureka Math pilot with some of our schools during the 2015–2016 school year and supported them with materials and professional development. We got a lot of positive feedback, and when the PARCC scores for that year came out, we saw gains among students in our pilot schools,*” Akpan says.

The school district formed a committee of school leaders, teachers, and senior administrators to decide on a curriculum to use district-wide. The committee chose *Eureka Math* based on the pilot results, positive reviews of the curriculum from the independent nonprofit EdReports.org, and gains made in Louisiana, where most of the state’s schools had been using the curriculum for several years.

EARNING TEACHER BUY-IN

Marie Reed Elementary, a Title I school where a majority of students are considered economically disadvantaged, is among those that participated in the pilot. By the end of the 2015–2016 school year, students made an almost 10-point gain in proficiency on the PARCC test—from 33 percent to 42 percent. That growth



Marie Reed Elementary School students made a 13 percentage point increase in proficiency rates on the PARCC Mathematics Assessment between school years 2014-2015 and 2016-2017.

STUDENT DEMOGRAPHICS (2016-2017)

Enrollment: 398	English Learners 46%
Black: 15%	Economically Disadvantaged 100%
Hispanic/Latino: 63%	Special Education 10%
White: 13%	
Asian: 6%	
Native/Alaskan: 1%	
Multiple races: 3%	

continued during the 2016–2017 school year, when proficiency rose to 46 percent.

Marie Reed Elementary Principal Katie Lundgren says giving teachers a voice in curricular decisions is critical and plays a role in student success. *“Teachers are the ones who have to implement. If they haven’t bought in from the beginning, then their effort and commitment will be a lot less,”* she says.

Although student math proficiency has grown tremendously at Marie Reed, the first year of implementation took a lot of work and perseverance, Lundgren recalls. *“It was a challenge to really understand the flow of the lessons and to understand the paring down that has to happen with the curriculum. Teachers first thought the lesson plan was scripted. But then they learned that’s not how it’s meant to be used,”* she says, adding that teachers had to learn how to choose problems that best supported their students’ development. *“Even with assessments, we couldn’t do it all. We had to select the most high-leverage questions from the assessment item banks.”*

Today, instruction is much more consistent, and teachers are moving through the curriculum much more efficiently, Lundgren notes.

Since Marie Reed Elementary switched to *Eureka Math*, Lundgren says her students have a much deeper understanding of mathematics. *“I see students grappling with the concepts in a much deeper way. They’re not just focused on the algorithms,”* she says. *“It’s critically important for kids to have this depth of understanding with math. They need to be able to talk about how fractions are related to decimals and what it means to regroup and decompose. They have to have a strong grasp of what those things are for when they get into more advanced math, like algebra and calculus.”*

EARLY ADOPTER DOUBLES PROFICIENCY RATES

Bruce Monroe Elementary School was one of the first DC schools to use *Eureka Math*, starting in 2013–2014. Since 2014–2015, the first year the PARCC was administered locally, students’ proficiency levels have doubled on the assessment—from 18 percent to 36 percent in the 2016–2017 school year. The school began using *Eureka Math* early on for several



Bruce Monroe Elementary School students made an 18 percentage point increase in proficiency rates on the PARCC Mathematics Assessment between school years 2014–2015 and 2016–2017.

STUDENT DEMOGRAPHICS (2016–2017)

Enrollment: 473	English Learners 50%
Black: 16%	Economically Disadvantaged 100%
Hispanic/Latino: 75%	Special Education 11%
White: 6%	
Native/Alaskan: 1%	
Multiple races: 1%	

reasons. First, some of the school’s teachers helped write EngageNY Math, so much of the curriculum was already familiar. Also, the school had previously used Singapore Math, which had similarities to *Eureka Math*, including an emphasis on conceptual understanding and the use of models such as number bonds and tape diagrams.

The teaching team says one advantage of *Eureka Math* over other curricula is the artful way it moves students in earlier grades from concrete thinking about math to pictorial and then abstract thinking. They say this sequence can be especially helpful with young English learners, who make up 67 percent of the student population at Bruce Monroe.

BOOSTING TEACHER KNOWLEDGE

Akpan says DCPS teachers, like many who use *Eureka Math*, are asked to study the curriculum as they prepare their math lessons, and that practice has greatly benefitted the teachers. “*What I like most about Eureka Math is that while it supports the students, it also deepens teachers’ content knowledge,*” she says.

Jordan Meyer, a math intervention teacher at Bruce Monroe, agrees. “*I’ve learned a lot through using the curriculum and studying it. Eureka Math is very focused on presenting the mathematics very clearly. I think a lot of teachers don’t have a strong understanding of how kids learn math, of how an algorithm works, or what you’re doing when you’re regrouping with addition and subtraction. The new math standards expect students to have a stronger conceptual understanding of math, and I think it’s important that teachers have that too,*” she says.

USING PD TOOLS AND DATA-DRIVEN INSTRUCTION

Kennard Branch, a principal at Garfield Elementary School, says the *Teach Eureka* video series, which features the curriculum’s teacher-writers explaining concepts and instructional strategies, has been a particularly helpful professional development tool for teachers. “*The videos are powerful resources,*” he says. “*For some teachers who may not be as strong in the content, the videos help deepen their own conceptual understanding. We didn’t learn math this way.*”



Garfield Elementary School students made a 9 percentage point increase in proficiency rates on the PARCC Mathematics Assessment between school years 2014-2015 and 2016-2017.

STUDENT DEMOGRAPHICS (2016-2017)

Enrollment: 301	English Learners 0%
Black: 98%	Economically Disadvantaged 100%
Hispanic/Latino: 2%	Special Education 13%

At Garfield, 100 percent of students are from low-income families. Student math proficiency rose by nearly 9 percent on the PARCC test in 2016–2017, when the school first started using *Eureka Math*. Branch says his teachers spend a lot of time looking at student data, particularly during 90-minute weekly professional learning sessions, which he says is imperative when trying to help kids who are behind make up lost ground. “*We look at Exit Ticket data from each lesson. We identify the learning gaps our kids have and then trace those to the standards and any prerequisite skills they may have missed. Then we work with the kids in small groups or introduce ‘do nows’ exercises before lessons to help fill in their gaps,*” he says.

Branch encourages other school leaders to spend time in math classrooms and listen for changes in math discussions. He says students in his school are having wonderful conversations about mathematics. “*I think they’re the most exciting classrooms in our building,*” he says. “*Sometimes my teachers say they think I like math more than other subjects. I do end up in the math classrooms a lot. It’s just great to see those kids having so much fun.*”

WELCOMING STANDARDS-ALIGNED INSTRUCTION

Ross Elementary School piloted *Eureka Math* in 2015–2016, the same year Marie Reed did. Ross Elementary Principal Holly Searl says the school previously used other curricula, but after realizing they didn't meet the Common Core State Standards, teachers revised existing resources and pulled from various online sources to deliver more rigorous, standards-aligned instruction to their students. Since Ross Elementary switched to *Eureka Math*, proficiency scores have risen from 75 percent to 85 percent.



Ross Elementary School students made a 10 percentage point increase in proficiency rates on the PARCC Mathematics Assessment between school years 2014-15 and 2016-17

STUDENT DEMOGRAPHICS (2016-2017)

Enrollment: 171	English Learners 8%
Black: 18%	Economically Disadvantaged 12%
Hispanic/Latino: 18%	Special Education 3%
White: 47%	
Asian: 9%	
Multiple races: 8%	

Asked what advice she had for other school leaders and teachers who are just getting started with *Eureka Math*, Searl says, “*I think people need to be patient and persistent. Look at student work vertically: Bring teaching teams together across grade bands, and look at how the years inform each other.*”

See how DCPS continued to improve during the 2017-18 school year here: greatminds.org/DCPS-Update