

Students entering STEM School Chattanooga as high school freshmen are required to have a baseline knowledge of algebra and geometry. Students identified as deficient in those skills were offered EdReady over the summer and into the fall as a free tool to help fill in knowledge gaps and ensure that the students were ready to succeed in the math courses that awaited them. Between 2014 and 2015, students who used EdReady in both the algebra and the geometry tracks reported an average EdReady score gain of 31.5 points (on a 100-point scale\*) for the algebra track, and 24 points\* for the geometry track, with median final scores of 99.5 and 95.5\*, respectively, indicating a significant increase in their mastery of the content in these foundational subjects.

#### INSTITUTIONAL PROFILE

STEM School Chattanooga is a Hamilton County Department of Education magnet high school located on the campus of Chattanooga State Community College. The school's curriculum focuses on using a real-world, project-based approach to learning science, technology, engineering, math, and the arts. Students work with local industry and higher education institutions and are encouraged to explore real-world challenges and focus on the practical application of the academic material they learn.

#### IMPLEMENTATION

STEM School Chattanooga uses EdReady to assess the prerequisite knowledge of their incoming 9th graders. Students are accepted into the STEM School via county-wide lottery. Each accepted student was given an EdReady login that led to either the EdReady Algebra 1 Readiness initial diagnostic (if the student had previously taken pre-algebra) or the EdReady Geometry Readiness initial diagnostic (if the student had previously taken Algebra 1).

*“Students who completed the assessment and used the available resources to improve their scores were better prepared and more confident in their transition to their 9th grade mathematics course”*

—Dr. Sue Williamson, 9th Grade Mathematics Teacher



#### DETAILS

**WHO WAS SERVED:** Students entering 9th grade at STEM School Chattanooga 2014 and 2015

**WHEN:** Summer 2014 and Summer 2015

**NUMBER OF STUDENTS:** 96

**IMPLEMENTATION:** Independent study

**RESULTS:** Students who had taken pre-algebra in 8th grade raised their median EdReady Algebra 1 Readiness score from 52 to 99.5\*, with an average point gain of 31.5. Students who had taken Algebra 1 in 8th grade raised their median EdReady Geometry Readiness score from 63 to 95.5\*, with an average point gain of 24.

**INSTRUCTIONAL APPLICATION:**  
Self-paced

Students who did not score 100 percent on their initial diagnostic were considered less prepared to master the content of their 9th grade math course. The STEM School required that those students follow their individual EdReady study paths independently during the summer and the first few weeks of school to improve their knowledge until they could re-test and achieve 100 percent. Use of the program varied based on students' self-motivation.

#### RESULTS

##### Algebra 1 Readiness

In 2014 and 2015, a total of 36 students completed the Algebra 1 Readiness diagnostic and went on to work through their individual study paths. The median initial diagnostic score for those students was 57.5\*. Students worked independently over the summer and into the fall, learning material in seven units of core math

content, including whole numbers; fractions and mixed numbers; decimals; ratios, rates, and proportions; percents; measurements; and solving equations and inequalities. While using EdReady, the median score improved to 99.5\*—with an average score gain of 31.5 points.

### **Geometry Readiness**

In 2014 and 2015, a total of 60 students completed the Geometry Readiness diagnostic and went on to work through their individual study paths. The median initial diagnostic score for those students was 63 out of 100. Students worked independently over the summer and into the fall, learning material in 14 units of core math content, including the seven units covered in Algebra 1, as well as geometry; concepts in statistics; real numbers, exponents and polynomials; factoring; graphing; and systems of equations and inequalities. While using EdReady, the median score improved from 62 to 95.5\*—with an average score gain of 24 points.

### **WHAT'S NEXT**

STEM School Chattanooga will continue to use EdReady to assess the prerequisite knowledge of their incoming 9th graders next year, as it provides the instructor with a quick snapshot of student skill readiness prior to the start of the school year. EdReady is also valuable to students since they have access to web-based resources that address their individually identified knowledge gaps. ■

*\*If a student scores 100 points, he or she has achieved 100% mastery of all of the content in the curriculum for his or her class. Algebra 1 students studied seven pre-algebra topics, while Geometry students studied 14 pre-algebra, algebra, and geometry topics.*