



Waukesha STEM Academy, Saratoga Campus

Waukesha, Wis.

PROFILE

School District: School District of Waukesha

District Enrollment: 12,720

School Enrollment: 322

Grades: 6-8

Free/Reduced Price Lunch: 17%

Ethnicity:

- 78% White
- 10% Hispanic
- 8% Asian/Pacific Islander
- 2% Two or more races
- 1% African American
- <1% American Indian

James Murray, principal of the Waukesha STEM Academy's Saratoga campus, leads tour groups through the school regularly.

"Visitors are sometimes unsure of what they're seeing at first," he said. "It looks like a CSI episode in here, between the physical structure and students, teachers and parents scurrying around. It seems like too many moving parts, but everyone knows what they're doing... there is a lot going on behind the scenes to make everything cohesive and click."

The Saratoga campus of Waukesha STEM Academy is a proficiency-based, blended education charter school that was established in 2010 in Wisconsin's

Waukesha County. Serving grades six through eight, the public school focuses on science, technology, engineering and math. In addition to the standard Common Core curriculum, students can take classes on engineering; art and design; and business. Classes are multi-age, and instruction is based on student readiness levels. The learning model focuses on anywhere, anytime learning and individual mastery of subjects.

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"Our program is a 'blended education' school, with varied modalities presented to best meet the learners' needs," said Murray. "We 'promote' students into different proficiency levels, based on their individual mastery, so we're always looking for the best tools and multiple modalities to execute our vision. ALEKS is a part of that plan."

Fitting ALEKS into a flexible curriculum

At first, Waukesha STEM Academy primarily used ALEKS for students who needed enrichment.

“Some students wanted to complete algebra and geometry in the same year,” said Rick Nettlesheim, director of online learning for the School District of Waukesha. “But we quickly learned that there was no reason to limit ALEKS to enrichment. The goal was to accelerate learning overall, and we realized that could be achieved at all levels.”

Soon, the school had subscriptions for all students to use ALEKS, and teachers began implementing the program in a variety of ways. Since ALEKS is web-based and uses artificial intelligence to assess students’ math ability, teachers can easily have students pull up the

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program on classroom computers or at home and work on their personal learning paths at any time.

Some teachers use ALEKS more than others. For example, if students need to work on fractions, they can either find information on YouTube, on ALEKS, or work directly with the teacher. Other instructors use ALEKS on a regular basis in class or as homework.

Nettlesheim has found that teachers like ALEKS’ ease of use and functionality for tracking student progress. If a

student isn’t working like he or she should, it’s easy for the teacher to pull up one of the many available reports for progress data and address student needs.

For math teacher Alec Raebel, ALEKS fits well with his instructional style.

“I have three groups of students in various levels of math. During class time, I’ll meet with each group separately while the other groups work independently. There are some days when I instruct less, and observe more. ALEKS is great for that. Students work at their own pace, and I’m there to answer questions.”

Principal Murray agreed that often ALEKS facilitates a non-traditional teaching approach like Raebel’s.

“You don’t need to necessarily ‘teach’ while ALEKS is running,” he said. “But teachers need to ask themselves, ‘Now that I have this free time, how do I target learners who are struggling? Or students who want to move ahead faster?’ It’s a great opportunity for teachers to reevaluate how to use class time effectively.”

ALEKS helping all levels of students make strides

ALEKS is helping students advance in math all along the learning continuum. Murray said that since adding ALEKS, the school has had to make higher-level classes available to students, such as Algebra II, Trigonometry, and possibly Pre-Calculus. Some students graduating from the middle school have been able to skip introductory high school math classes and jump right into courses that match their skill level as a result of using ALEKS.

As for students who aren't hitting their grade-level targets, ALEKS helps teachers get students the help they need without damaging their self-esteem. When students use ALEKS, as they complete each skill, a pie chart begins to fill in with their accomplishments.

"Some of these kids are the ones who would have dropped out," Murray said. "ALEKS helps them learn the skills they need without them thinking they're bad at math. When those students see their pies fill up, they feel a sense of greatness. It gets them to try harder. I've had students tell me they hated math, and now they think math is awesome."

ALEKS is now an essential component of Waukesha STEM Academy's math curriculum. As Murray noted, ALEKS does more than accelerate achievement, it helps students gain a sense of accomplishment and excitement about math.

But the students say it best. Netteshiem read a recent letter from one of Waukesha's students:

"I wanted to tell you that I love ALEKS. I've never been so excited to do math in my life. I've always hated math, but I absolutely love this program.

I love how it explains things. They don't use a bunch of crazy terms I don't know and I understand almost everything. I've completed my six pieces of the pie chart today. Thank you so much. I'm sure I will be done with math in no time."