



Big Bear Middle School

Big Bear Lake, California

PROFILE

School District: Bear Valley Unified
School District

District Enrollment: 2,897

School Enrollment: 400

Grades: 7-8

Free/Reduced Price Lunch: 53%

Ethnicity:

- 66% Caucasian
- 27% Hispanic
- 4% Two or more races
- 1% Asian/Pacific Islander
- 2% African American

Seventh and eighth-grade math teacher Deborah Burton considers the color-keyed pie chart in ALEKS as one of her favorite teaching tools. The interactive pie chart displays the results of a student's current knowledge and each pie slice corresponds to a particular group of math topics, such as fractions or equations. The larger the area of a slice that is darker, the more mastery the student has of the topic area. Content mastery can be visually tracked by determining how much of each slice is dark.

Before class begins each day, Burton studies students' pie charts to determine which topics her students are ready to learn. For the first 10 minutes of class, she calls groups of students to the whiteboard to work on problems before sending them to the computer lab for independent study. She then spends the remainder of the class working with students as they work individually on the topics they are ready to learn.

"ALEKS accomplishes two big goals: filling in the gaps of students' knowledge and teaching them the topics they are ready to learn right now," said Burton. "Normally, I would have to take the whole class to the lab and spend time focused only on the students who need the most help. Or, I would teach the whole class the same topics, even though not everyone would be ready to learn it. ALEKS allows for extremely targeted teaching, which is just wonderful."

Burton's school, Big Bear Middle School, has its own set of unique challenges. It is in a rural community with declining enrollment and a socioeconomic profile on the lower end of the spectrum. For many of the students, English is not their first language, which adds a significant roadblock to their progress. Oftentimes, students come to the middle school lacking many basic skills, including an inability to add decimals or knowledge of the multiplication tables.

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"On one end of the spectrum were kids who had holes in their foundation," Burton said. "On the other end of the spectrum were students who were brilliant at math, but were unmotivated to do their homework. This made whole class teaching a nightmare."

Transforming Math Learning With ALEKS

Before coming to the middle school, Burton taught math for 18 years at the high school, which is where she first used ALEKS. Already sold on the program, Burton became a highly vocal advocate for bringing ALEKS to the middle school. Her enthusiasm convinced Principal Tina Fulmer that the program would help the math department meet its goals for the school year, and Fulmer and Burton worked together to find grant money to help cover the costs.

Once Burton began to use ALEKS at the middle school three years ago, the impact was immediate: Students who had been learning at a basic level were now at levels of advanced learning. After using ALEKS for a year, Algebra Readiness eighth graders more than doubled the increase of California Standards Test (CST) score typically seen at the school. Moreover, 56 percent of these students scored at least Proficient, compared with the usual 40 percent. Scores on the CST increased an average of 30 points, and students who used to need constant attention no longer required Burton's help, as they were now motivated and successfully working independently.

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Because ALEKS is also available in Spanish, English Language Learners (ELL) were able to work on problems in Spanish and then toggle over to English to show Burton their progress, allowing her to help them where needed.

For Principal Fulmer, ALEKS has been well worth the investment. Whenever she visits classrooms, she has found students to be completely engaged with the work and empowered enough to work at their own pace. Even students who don't struggle with math have been eager to share the success they've found with ALEKS.

"I had a student come into my office to show me her math grade, which was at 133 percent. When I asked her what she was doing, she said 'I'm addicted to the ALEKS program.' Even though this student already had an 'A,' she was excited to keep going and push herself as far as she could."

Parents became fans after witnessing the gains they saw their children making. The Big Bear community's parent organization has many members who volunteer in the classroom. Parents have been amazed to see that struggling students weren't overwhelmed, while more advanced students were able to accelerate their learning. In fact, when funding was cut for the ALEKS Algebra 1 class, one father contributed \$1,000, while other parents donated money for the Algebra 2 class, ensuring that all students would be able to continue the strides they had made with the program.

In another instance, Fulmer was contacted by a parent who was in tears because her daughter was failing math. She was able to use some additional funding to give the student access to ALEKS from home. Within one month, the student went from a failing grade to a "C-" and her mother was thrilled. Her daughter was so motivated by her quick progress that she spent every spare minute at home working on ALEKS.

Flexibility to Meet the Common Core

Another huge benefit of ALEKS that Burton sees is the way the program has allowed the district to expand its math offerings and implement the Common Core State Standards (CCSS) into its curriculum.

While Big Bear offered Algebra and Geometry during summer school sessions, it could only allot one teacher and one aide to facilitate both subjects. Incorporating ALEKS into the courses made it possible to accommodate more students, thus eliminating the need to hire an extra teacher.

“Before, if you had 13 students who needed to take geometry and 20 who needed to take algebra, you would have to put them in separate classrooms and have two teachers,” Burton said. “Now, we can put everyone in the same classroom and each individual is able to learn successfully at his own pace. It gives a small district like ours so much flexibility.”

Because ALEKS is web-based, even when students have to be away from school for extended periods of time, they don’t have to carry a textbook with them. Students can simply log on wherever they are and not miss a step, ensuring they won’t be behind when they do return to the classroom. This flexibility enables students to access ALEKS’ standards-based curriculum both inside and outside of the classroom.

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Burton believes ALEKS has already put the school two to three steps ahead of the curve with regard to implementing the CCSS.

“I am such a huge proponent of ALEKS, from the utility of it, to the creativity it allows you in the classroom,” said Burton. “It’s an amazing program.”