

RESEARCH SUMMARY

FORMER METAL SHOP TRANSFORMS MATH AND SCIENCE LEARNING

**Grover Cleveland
Middle School**
WEST CALDWELL, NEW JERSEY

*Steelcase Education Active
Learning Grant Recipient,
Cycle 1*

The ALC “has allowed my students to be more engaged with the lesson of the day and has made their experience in science all that more enjoyable.”

*iSTEM Instructor,
Grover Cleveland Middle School*

Grover Cleveland Middle School strives to infuse a design-based pedagogy throughout its curriculum for students in grades 6 to 8, but for an 8th-grade iSTEM course focused on science, technology, engineering and math, this approach seemed especially important. Design-based teaching encourages students to take charge of their learning, engage in problem solving and collaborate with peers.

In 2015, the school was awarded a Steelcase Education Active Learning Center (ALC) Grant to transform what was once a metal shop, and then a storage room since the 1990s, into a blended learning classroom to better support more active, design-based teaching and learning styles.

The new classroom features a collaborative lab area and a lounge that encourages students to work independently in comfort. Node mobile seating and Verb mobile tables move with students as they shift from lecture configuration to large and small groups. According to the school, “the students constantly remark how great the chairs are,” and when former students visit they say how much they miss the chairs in particular.

The instructor says he continues to find new uses for portable Verb whiteboards, which allow students to capture and

share data easily during lab activities. He also values Thread – an ultra-thin power distribution system that invites students and teachers to plug in at convenient hubs throughout the space.

“I’d have a difficult time going back to more traditional lab furniture,” he said.

One year in, 87.3 percent of students using the ALC said that the furniture makes it easier to work with others. Faculty observed that with a space designed for collaboration, students were more likely to discuss their ideas and communicate with each other about proposed solutions.

That same year, 83.1 percent of students said that the ALC had a positive impact on learning. And while many factors influence a student’s ability to learn, by the second year, Grover Cleveland Middle School students in the ALC had achieved some impressive academic gains.

87.3%

**OF STUDENTS SURVEYED SAY
ALC FURNITURE MAKES IT EASIER
TO WORK WITH OTHERS**

MOVING AHEAD IN MATH

Grover Cleveland Middle School students using the new classroom made several improvements on standardized math tests.

Before ALC

8th-grade test scores were:

2% above state average

4% below the multi-state average

84% of 8th-graders taking Algebra I met or exceeded expectations on state test

After ALC

8th-grade test scores were:

7% above state average

4% above the multi-state average

91% of 8th-graders taking Algebra I met or exceeded expectations on state test

STRONGER IN SCIENCE

Students also improved total performance on the New Jersey Assessment of Skills and Knowledge the school administers in science.

Before ALC

8th-grade results were:

93% of 8th-graders scored proficient or advanced

After ALC

8th-grade results were:

97% of 8th-graders scored proficient or advanced