



## CASE STUDY

# Overcoming Learning Barriers for Special Needs Students with Virtual Reality Technology

## The Challenge

Students in Special Education and English Language Learner classes experience frustration learning in traditional classroom environments.



## The Solution

Using zSpace Virtual Reality STEM Labs, students collaborate, build critical thinking skills, and succeed in solving complex challenges at their own pace and in their own languages.

The Mathson students are just completing their first year learning with the zSpace STEM lab, which includes a set of virtual reality stations, each outfitted with an interactive stylus as well as a wide variety of educational software ranging from life science to physics and engineering. Virtual-holographic images can be “lifted” from the screen and manipulated with the stylus.

The impact of zSpace for students and teachers is exciting, particularly because many students using the system have special needs, and have experienced frustration learning in the traditional way. Students at Mathson reflect the population of the larger Alum Rock Union Elementary School District, in which about three-quarters of students speak a language other than English at home, and more than 80 percent participate in the district’s free- and reduced-lunch program.

“Working with zSpace in the classroom makes it easier to address each student’s needs,” said Teacher Victor Guendulien. “They can work at their own pace, in their own language, and understand and explain concepts in their own words.”

With two or three students at each virtual reality desktop, students collaborate in teams and build critical thinking skills to solve complex challenges. They perform highly engaging tasks that are often impossible in the real world, like exploring a volcano or experimenting with zero gravity.

Principal Oscar Leon sees zSpace as one way his students can break down barriers. Technology and other STEM programs at his school are opening new doors for Hispanic and Latino students to move toward careers in technology and science.

Giselle Postrado, a resource teacher, can see both the fascination of the students as well as their growing confidence. “They think, ‘wow, I can really do this,’” she said.