zSpace

CASE STUDY

Preparing Students for STEM and Other Careers with Virtual Reality Technology

The Challenge

Traditional classrooms and textbooks fail to excite and encourage students to pursue STEM careers.

The Solution

Discovery in zSpace inspires students to pursue STEM careers.

When Chi Kim, superintendent of Ross School District in Ross, California, saw the students in her school try zSpace, she knew her district needed to find a way to get it into the classroom. zSpace is a virtual reality technology that allows users to create, test and experiment in an interactive, 3D world. “They were hooked,” Kim said. “Their engagement and excitement were palpable.”

After a year of learning with zSpace, engagement levels are still high. The zSpace STEM Lab consists of 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, and the system optimizes the virtual reality experience by tracking students’ head movements.

Students use zSpace for everything from dissection to designing circuit boards. Staff and teachers at Ross said the zSpace platform is particularly suited to teaching students the skills required for advanced design thinking. They can build and test experiments in zSpace, create prototypes and make mistakes virtually before building something in the “real” world.

Ross School District had already integrated numerous technologies into daily instruction, from coding to 3D-design and printing. Nevertheless, the members of the district’s Board of Trustees were open to the opportunity to interact with zSpace. “The board could see right away how different zSpace was,” said Kim. “It was clear that the technology was the future.”

The skills students learn through zSpace are key to future careers in STEM fields, or any field. zSpace developed a discovery-based mentality in students. They are willing to try things out without fear of failure, because they know they can continue to refine and experiment with their ideas. “If you want students to have jobs, you need to keep pushing forward,” said Kim. “You need teachers and students who are willing to take chances.”