

21ST CENTURY: SCHOOL IN 3-D



Photo: STEM teacher Kathryn Post watches as Araya, a 6th grade student at Sage Park, marvels at the 3D virtual reality system she is trying, Tuesday.
Photo by John Karas

By John Karas

Hands-on training was always considered the gold standard in education, but the problem has always been how do you bring that kind of experience in the classroom - especially for STEM subjects like astronomy, biology, or architecture? [STEM is an acronym for science, technology, engineering, mathematics]

On Tuesday, Sage Park Middle Students found out a very 21st century answer - ZSpace, a "three dimensional, virtual reality platform that allows students to interact with content in a hands-on and innovative way," as Sage Park STEM coach Kathryn Post described the system.

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- For those of us who wore those cumbersome glasses and watched the old 3-D movies in drive-ins, ZSpace is based on the same principles, but is a very different animal. Using computers to seamlessly combine the glasses with position sensors and light pens, the system creates a virtual world that encircles the student who is now able to work directly with the objects he/she sees. It may sound complicated, but the beauty of it all is how intuitive the system is. The moment the kids wore the glasses and looked at the screens, they were hooked.

For Araya, a 6th grade student at Sage Park and member of the first group in the school to try the system, her smile said it all. "It's so cool," she gushed, as she used her pen to move the objects of a virtual classroom on her screen around. Other students were manipulating on their screens 3-D robot arms, chess pieces, and dinosaur bones. And all of them were enthralled.

It was exactly what Post had hoped to see, when she invited the company to send its mobile lab to Windsor to demonstrate ZSpace at Sage. The lab, essentially a large trailer, houses 9 workstations that can be used to demonstrate the capabilities of the system. Since it would be impossible to offer the experience to every student at Sage, a small competition was set up: the kids saw a one-minute preview, and then said why they thought the school should purchase the computers, and what kind of skills they believed they would gain by using them. 27 students made the grade, and by every account all of them were delighted with what they saw.

As always, there is a cost for installing such a system at Sage Park. For 10 workstations allowing 20 students to work at a time, Post calculated that the school would need around \$50,000 - a very reasonable investment for the kind of experience the system promises. ZSpace (the company) has already created hundreds of interactive lessons,

for the system and more are in the pipeline. Post has already started writing a grant application and she is hopeful that the school will soon have it's own ZSpace lab.

"I am especially excited to make this our first purchase for our new STEM Center because it can be used with all grade 6-8 students in a wide variety of topics," she noted. "Students will be able to have class in our STEM Center while they are learning and explore places and items we wouldn't normally be able to provide in the classroom. Giving them this platform helps them to build spatial awareness and think outside of the box, both skills required for STEM related careers."

"The students shared that they would like to have ZSpace at Sage Park because it allows them to see things in a new and different way, is fun, and easy to use," the teacher told the Windsor Journal.

Isn't that exactly what a 21st century education should be?