

School using a different kind of sandbox

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Special to the Sentinel

FITCHBURG -- This is not your ordinary sandbox.

The students at South Street Elementary School have been in awe of the Augmented Reality Sandbox, which was officially introduced by Fitchburg Public Schools in November.

The sandbox -- a combination of the traditional sandbox, paired with a high-end gaming computer, digital projector and Xbox 360 Kinect camera -- work together to create an experience that allows students to manipulate and shape the sand and project a topographical overlay based on what they create.

The sandbox is filled with 200 pounds of white safety sand.

Chris Turner, the district data manager for Fitchburg Public Schools, helps teach the students about the Augmented Reality Sandbox.

"The augmented reality sandbox provides an opportunity for Fitchburg students to experience geography and land formations like they've never experienced before by touching and creating the landforms themselves," Turner said. "This allows our students the ability to bring to life what they've been learning in the classroom and demonstrate their understanding of topography."

Researchers at UC Davis created the hands-on sandbox and, according to the Augmented Reality Sandbox web site, www.arsandbox.ucdavis.edu: "The project combines 3D visualization applications with a hands-on sandbox exhibit to teach earth science concepts. The augmented reality (AR) sandbox allows users to create topography models by shaping real sand, which is then augmented in real time by an elevation color map, topographic contour lines, and simulated water. The system teaches geographic, geologic, and hydrologic concepts such as how to read a topography map, the meaning of contour lines, watersheds, catchment areas, levees, etc."

Students in the fourth grade at South Street Elementary School got to play in the sand recently.

"It feels like clay, but it's sand," said Emmanuel Eule, who was focusing on building an island. "I wish I could get one of these for my birthday or as a Christmas present."

Students were creating perfectly-shaped mountain ranges, and digging deep down in the sandbox to unveil the depths of the ocean floor. The vibrant colors in the sandbox were also mesmerizing.

"I think it's really cool how it shows all the colors," said fourth-grader Lismarys Grullon. "I thought it was really cool. It's sand and you can't really do anything with sand, but this makes another perspective."

Fourth-grader Caleb Gravel couldn't wait to get home and tell everyone about this sandbox experience.

"I'm going to tell them that we did this thing at school," Gravel said, "and it was a sandbox that had a projector with an Xbox camera and it projected down the different landforms and the water that you can make around it."

The Augmented Reality Sandbox will be touring the elementary schools throughout the year and will incorporate the classroom learning with a real-time application.

Garner is the Fitchburg Public School's Family and Community Partnership Champion.

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