



Welcome to Ozville!

Welcome to Ozville is a true example of 21st-century learning. This STEM project required first-grade students to apply their knowledge of recycling (science); learn about 3-D shapes, measuring, and mapping out locations for their buildings (mathematics and engineering); and research 3-D shapes within the community (technology) to build, design, and engineer configurations of buildings to create a “city” called Ozville.

The students applied concepts through STEM to answer the question: How are 3-D shapes used in real-life construction? Under the guidance of the first-grade teaching team, students applied their understanding of science and math to collect recyclable materials that represented a variety of different three-dimensional shapes. They used problem-solving and critical-thinking skills to decide how to best configure the shapes for the construction of a building and to plan the layout of the community.

The students also collaborated on using creativity to apply the shapes in the construction and design of buildings found in their community. Finally, they integrated technology to research the design of actual buildings and explored the NSU campus to take pictures and sketch the actual use of 3-D shapes found in our community. The students also had the opportunity to meet a design engineer, who spoke to them about how 3-D shapes are used to construct stages used in entertainment venues. He showed the importance of using computer graphic design to plan for the layout of set design. This project promoted inquiry and encouraged their natural curiosity about the world around them. The integration of STEM had students engaged in powerful and effective learning.

“Seeing students apply their creativity and critical thinking while working collaboratively with others is a true example of 21st-century learning,” said Cory De La Fuente, Lower School associate director and STEM project coordinator. “This type of authentic learning empowers children at an early age to become problem solvers and decision makers.”

STEM

The National Science Teachers Association (NSTA) recommends that teachers in early childhood/elementary levels emphasize the integration of science, technology, engineering, and mathematics (STEM) to develop scientific inquiry and investigation of skills and concepts through a multidisciplinary approach.

University School recognizes that STEM education provides a purposeful context for developing 21st-century skills.