

THE SCIENCE EDITION

Classroom Connection

Dear Families,

Why STEAM education? The jobs that are available today are not jobs that were available to workers in the 20th century and a 20th century education will not adequately prepare today's students for the world they will need to navigate. The "new" 21st-century jobs require a growth mind-set, the ability to solve problems, think critically, be innovative, multitask and work collaboratively with a diverse group of colleagues.

With almost daily advances in technology, the world keeps shrinking and becoming more accessible to its citizens. Today there are libraries with no visible books. Many younger students known as "digital natives"- those who are born with a sixth sense for technology as opposed to older adults who are viewed as "digital immigrants" in need of user guides and often the help of their students to operate everything from their smartphones to their entertainment systems. Being STEM-ready and digitally literate is what our students need to be prepared for this new global reality.

Scientifically speaking,
Mrs. Shari Gigante

**"Impossible only means
that you haven't found
the solution yet."**

- Anonymous



Grade	Units and Lessons
1	Students make observations of the Sun and shadows throughout the day and across the seasons. They use their observations to understand patterns that occur throughout the day.
2	Students explore how water shapes the Earth's surface. Students construct and use models of mountains to demonstrate that water flows downhill, and in the process, transforms huge rocks into the tiny grains of sand we find at the beach. Students also construct and use model hills to determine the causes of erosion, and to design solutions to problems caused by erosion.
3	Students compare the structures and functions of traits that enable organisms to survive in a specific environment. Analyzing the traits of animals provides evidence for how those traits vary, how they are inherited, and how they have changed over time through selection. Students also examine how the environment can affect inherited traits and determine which animals will survive in a particular environment.
4	Students plan and carry out investigations to explore the transfer of energy through matter and how understanding patterns can be used to transfer information. Students observe about energy transfer and information that provides evidence to help construct explanations about conservation of energy. Student understanding is applied by designing and testing a device that converts energy from one form to another.
5	Students expand their understanding of the dynamic nature of matter and energy as life scientists. Specifically, students use models to describe the path that energy takes from the Sun to the Earth, where producers convert it into food. They use evidence to support arguments about where plants obtain materials needed for growth.