

GGM STEM

September/October 2021

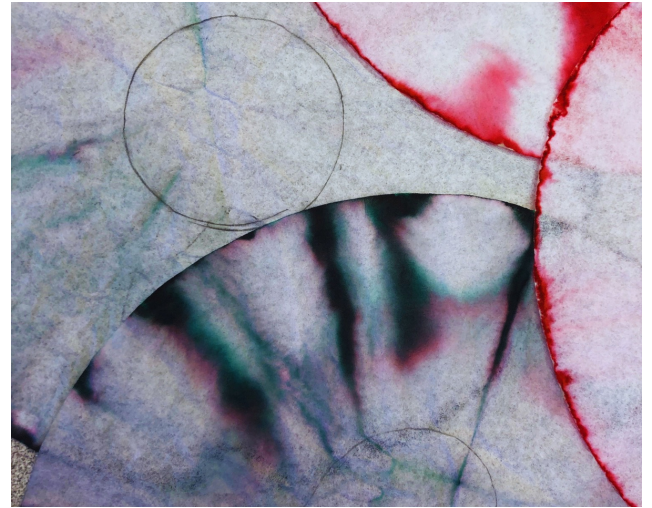
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KINDERGARTEN STEM

Kindergarten students made predictions for a chromatography experiment! Chromatography is the process of separating out components of a mixture. The students first made a prediction if black ink would separate into different colors when placed into water.

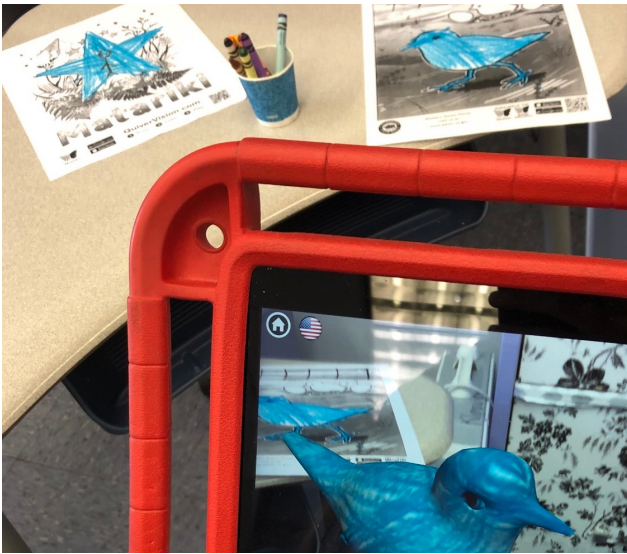
To do this experiment, students took a coffee filter and used a black marker to draw and fill in a circle on their filter. The students then folded their filter several times and placed the ink into water. As the filter sat in the water, the students observed the colors separating from the ink as the water crept up the coffee filter! We were very excited to see the colors change as we waited for the water to reach the top of the filter!



FIRST GRADE STEM

First Grade STEM participated in a fall STEM challenge! Students used the Engineering Design Process to sketch and build prototypes of a stand to support a pumpkin! The constraints for the challenge were that the students had a limited supply of materials and could only use 4 paper cups, 10 wooden planks and no adhesives. The students tested their prototypes to identify any problems. After identifying any issues with the designs, the class made adjustments and improvements to make their designs even better!





SECOND GRADE STEM

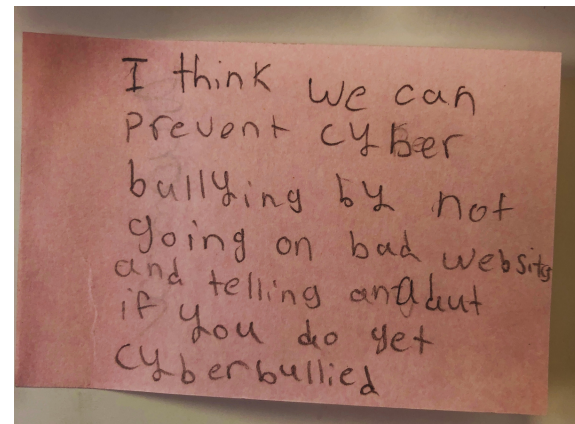
Second Grade STEM students have been working on the Quiver app to make 2-D drawings become 3-D! Quiver is an augmented reality coloring app that makes the students' work go from flat to three-dimensional.

Students color in their 2-D design and use an iPad to scan the QR code on the page. The students then get to see their design come to life and transform into a 3-D design that they can interact with on the iPad!

THIRD GRADE STEM

Both Third Grade classes took part in activities for Digital Citizenship Week! Digital Citizenship Week reminds students how to think critically, behave safely, and participate responsibly in our digital world.

Students used the website Nearpod and post-it notes to learn about and brainstorm different ways to help prevent and address cyber bullying and safely navigate the internet and social media. We proudly displayed these ideas in our classroom to honor Digital Citizenship Week.



FOURTH GRADE STEM

Fourth Grade students have been busy taking care of their plants that have been rapidly growing in our new classroom hydroponics system! The system was purchased through a grant that was awarded to the GGM STEM program from Orange & Rockland Electric Company.

The students assembled the hydroponics system, planted bean, pea and salad green seeds and have been measuring and making observations of their plants' growth during each class. Recently, the students have used K'nex to create supports on which the plants continue to grow!



FIFTH GRADE STEM

The Fifth Grade STEM class participated in a celery science observation and experiment! The students predicted whether or not celery would change colors if it was placed in water with food coloring for over 24 hours. After returning to class, the students made observations of the changes that occurred in the leaves and the stalks of the celery. We carefully cut open the stalks to observe how the water moved through the plant. When we opened the stalk up, we could identify the long hollow tubes that carry the water through the plant since they were now dyed from the food coloring! This part of the plant is called the xylem.

