THE MERRICK UNION FREE SCHOOL DISTRICT NEWSLETTER

Merrick Messenger

Winter 2022

TEACHING WITH TECHNOLOGY

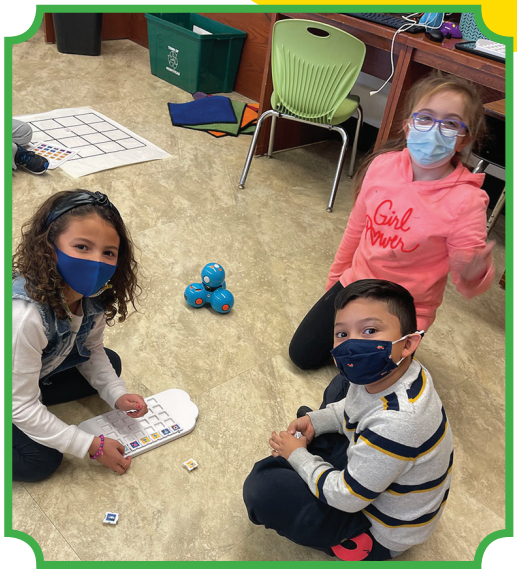
The Merrick Union Free School District has worked diligently over the last few years to increase our vision of a Digital Age learning environment. Our revamped technology curriculum is in its first full year of implementation.

"The curriculum incorporates problem-solving and collaboration with students at the forefront of all decision making," explained Dr. Salvatore Dossena, the Assistant Superintendent for Student Services & Technology.

By increasing student engagement through technology, our students can take a more active role in their learning, essentially becoming digital natives. Technology teachers and library media specialists have been implementing various portions of this grade K-6 STEAM-driven curriculum.

Students in first grade computer classes at Birch School combined their coding and reading skills. Working with a partner, students applied their coding skills to find consonant-vowel-consonant words within the Code Mouse activity.

"Students were challenged to find sound blends and four-letter words," said Jamie Kanner, a technology teacher. "They worked together to find a word to code, plan out the correct code and then test out their ideas to see if they correctly coded the word."



Lakeside second graders spent time exploring exciting options for coding Dash robots with a Puzzlet board. After some exploration time, they had to complete challenges. For example, they coded Dash to travel in a square on the floor.

"They also coded to get Dash from the green start sign to the red stop sign and included three tricks for Dash to perform along the path," said Keri Sabella, a technology teacher. "Tricks are things like spinning, flashing different colored lights, laughing or making a kiss noise."

Students in second grade at Chatterton also used Puzzlets to program their Dash robots. "They created a sequence of six or more commands for their robots to follow using their knowledge of coding and

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Teaching With Technology

problem-solving skills," said Andrea McCabe, a technology teacher.

At the fifth and sixth grade levels, students are exploring BlocksCAD, a 3D coding program. Throughout the coding unit, students could apply their coding skills to 3D design.

"We spoke about how engineers use 3D programs to make real-life models such as baseball helmets and cars," Kanner explained. "Students utilized both the engineering design process and various coding skills and strategies to code and design in 3D."

Students at all three schools explored the program and applied their skills to create various objects.

Fifth and sixth graders are also learning about ways that drones are helping and changing the world, from delivering medical supplies and helping with search and rescue to taking photos and videos. In the classroom, they're learning to code drones.

"They will be using these coding skills to accomplish a task," Sabella said. "They will be 'bowling', coding the drone to fly into a group of foam pins; scoring a 'field goal' by coding the drone to fly through a goal post and land; and even coding the drone to score a goal in soccer."

Students kicked off a Drones Olympics unit at Birch by attending "training camp" where they learned how drones are used in the real world and how to connect, fly and land their drones.

"As they are coding, students must utilize their communication skills to ensure success," Kanner added.

These programs are aimed at making coding engaging as well as educational. By utilizing laptops, applications and hands-on equipment, kids are learning how to lead a group and accomplish a shared goal.

"We are using robotics and coding as a mechanism for kids to collaborate and problem solve," Dossena said.

The Merrick Union Free School District has procured a variety of technology tools to aid students in hands-on learning. These are intended to help children develop computational thinking and coding skills, as well as integrate a dynamic aspect to technology lessons. This play practice relies on operational reasoning and fosters students' sense of perspective.

Ozobots

Ozobots are desk-friendly coding bots that can follow lines and detect colors or roam freely. Students can program these smart robots to use visualized codes.

Dash and Dot

Dash and Dot are robots that can sense, act and think, all the while teaching math facts. Students use block coding on four different iPad apps to control their robots. Students create grids on the floor using numbers in each square that represent number facts. When Dot says a number fact, students program the robot to move to the correct answer.

Code Mouse

Students work collaboratively to build a hands-on maze, using coding cards to create a step-by-step path for Colby the programmable mouse. Colby lights up, makes sounds and has two programmable speeds. Colored buttons and matching coding cards make for easy programming for younger students.

Drones

These flying robots can be remotely controlled or fly autonomously using software-controlled flight plans. Programming these devices provides a tangible and dynamic way for students to explore their possibilities.

Blocks CAD

This 3D coding program uses modeling software, allowing students to create designs that can later be 3D printed. The block-based program interface is easy to use, streamlining the 3D printing process for teachers and students.

NEWS Around the Schools

Birch School Kicks Off PARP Activities

Birch School's annual PTA-sponsored Pick a Reading Partner weeks kicked off Jan. 14.

The theme for this year's PARP was "Birch Readers Know How to Get in the Game."

Fifth graders in Jessica Giovino's class showed they know how to "get in the game" for PARP's Game Day by playing a game-based reading activity to help strengthen their nonfiction reading skills.

Students practiced reading various passages and identifying their text structure.

Students spent the next two weeks choosing family activities that involve reading.

Chatterton Third Graders Conduct Egg Drop Experiments

Third graders at Chatterton School conducted egg drop experiments in the school yard Nov. 18. Guided by co-teachers Nancy Russo and Sharon Elefante, students crafted structures intended to protect an egg from cracking when dropped to the ground. They started at an entrance ramp to the school and finalists went on to the highest point of the school playground. Teachers later incorporated similarities in students' protected egg creations into the science lesson.

Lakeside Third Graders Create Book Companion STEM Project

Levy Lakeside School third graders enjoyed the book "Balloons Over Broadway," along with a coordinating STEM activity. Jennifer Bennett, Jon Flick, Dr. Jennifer Gargan, Scott Jackson, Dara Morrison and Jamie Wolf assisted students in this activity.

"Our students planned, designed and executed their own Thanksgiving Day balloon for their class parade," Dr. Gargan explained.

"Not only did our students design the balloon, but as an added challenge they created a device to keep it floating in the air," Jackson added.

"Balloons Over Broadway" is a story about Tony Sarg and his upside-down puppets that have become Macy's Thanksgiving Day Parade icons.

A few of the students' character creations included Baby Shark, Dogman, Mickey and Minnie Mouse, Shrek, Sonic and Turkey.