School Matters

Special Insert
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School News for Residents of the Kimberly Area School District

Robert S. Mayfield, Ed.D.
Superintendent

Welcome to this Special Insert section to our School Matters newsletter. Perhaps you've heard the buzz about the Hour of Code, also known as the world's largest learning event. Organized by Code.org, the initiative seeks to empower people of all ages and all backgrounds to try computer coding. The role of technology in education, much like in the rest of the world, has great potential. We have worked very hard to develop plans that incorporate technology as a tool we can leverage to enhance student learning. During the last four years, we have been able to implement and grow one-to-one device access for students in 5th through 8th grade. This access provides more opportunities for the incorporation of computer science into classrooms. I am continually amazed at what students and staff are capable of when given innovative tools.

-- Bob Mayfield

Learning Computer Science Can Be Fun and Games

The excitement for computer programming was palpable in Chris Fitzgerald's sixth grade class at Mapleview Intermediate School. The previous day, students learned about the Hour of Code, the world's largest learning event organized by Code.org during Computer Science Week, and today they arrived with excitement to try computer coding for themselves.

Some of the students have been coding for years, that's no typo – some sixth grade students have been coding since the fourth grade, while for others in the class it was their first try. With the benefit of having one-to-one technology access for their entire school day, the students got to work on their District provided Chromebooks. Some were watching instructional videos online to learn how to use code blocks in new ways. Others were trying their hand at coding in Java, a programming language used by those working in the field. Their task assigned from Mr. Fitzgerald was to "Create Something New." Be it a game, artwork, or a character in a story, they set out to create a computer programmed project that was their own.

Along with Mr. Fitzgerald's assistance, students could ask their peers who had more experience coding for help. One student, Ethan Sommer, was creating a screencast during the class. His screencast, a digital recording of a computer screen output with audio narration, was a tutorial for his classmates on how to use an online coding resource from MIT called Scratch. By capturing his actions on the computer screen and narrating, he was demonstrating how to make an animated greeting card.

Ethan Sommer coded a game using Scratch.

Scratch allows users to see the code behind other people's creations so they can learn how something was created. Although he has experience coding, Ethan thinks that anyone can learn to do it. "It's very simple and easy to use," said Ethan. "It's very self-explanatory and a good introduction to coding, so if they choose to be a software engineer when they grow up, they'd know some of the basic introductory building blocks." The 11-year-old added, "And it's fun, too."

Over the last three years, since the District has implemented one-to-one technology access for 5th and 6th graders, Fitzgerald has seen an increase in the students' computer science knowledge. "The first year we tried Hour of Code, they were excited if they could get a character to walk across the screen," said Fitzgerald. "Now, that's almost too basic for them. They're making art projects, they're writing in Java and HTML, they're doing things with computer science that three years ago most students would have had no idea about."

He noted the encouragement of other educators and the leadership of the District as especially motivating for teachers and students alike. Ulrike Balistreri, PACE coordinator for Mapleview, demonstrated Hour of Code at a staff meeting earlier this year. Principal John Schultz encouraged all teachers at the school to consider trying it with their students.

It was clear that most of the sixth graders enjoyed coding. "Now, some students even list coding or computer programming as one of their hobbies," noted Fitzgerald. "That wasn't always the case before we had these opportunities. Without the chance to try it, they wouldn't be exposed to something that they could potentially be really good at."

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Computer Science Careers

Preparing students for the next step in their lives, such as college and careers, is the ultimate goal of the Kimberly Area School District. “We value the collaboration between students, educators and parents to prepare children to become productive, successful, and competitive members of our 21st century global society,” said Superintendent Bob Mayfield. “By providing students of all ages with STEM (Science, Technology, Engineering and Math) learning opportunities, it prepares them for high-demand and good paying careers that exist right here in our community.”

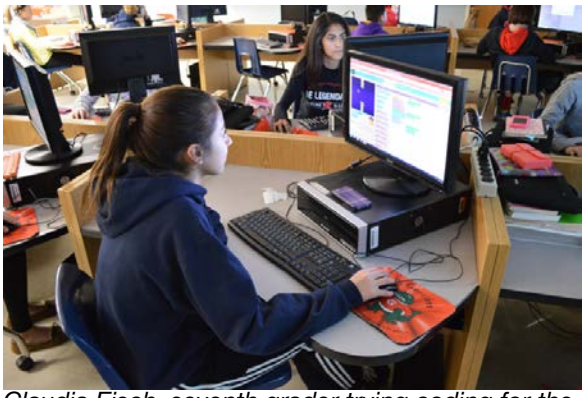
The Board of Education for the District recently approved two new computer science courses for Kimberly High School (KHS): IT Career Exploration and HTML Website Creation. KHS was recently accepted to participate in the Microsoft IT Academy, which will provide the school with a full curriculum for teaching technology courses and learning tools that help students earn Microsoft certifications while still in high school. Students also have the opportunity participate in an extra-curricular activity where they learn how to program video games.

Coding is for All Ages

Code.org promotes Hour of Code as an activity for anyone ages 4 to 104. There are multiple options and scenarios to try. To make coding approachable and interesting to students, they can program in pop culture themed lessons like Star Wars, Minecraft, Frozen, Flappy Birds and Angry Birds.

Elementary students in 3rd and 4th grade had opportunities to try coding with PACE teacher Kelly Zaletel. Several parents who work in computer science fields volunteered their time at Woodland Elementary School to talk about their jobs. Fifth and sixth graders at Woodland Intermediate also had coding incorporated into their classes similarly to Mapleview.

At J.R. Gerritts Middle School (JRG), the Hour of Code was incorporated into all math and computer classes. Jodi King, a math teacher at JRG, believes the Hour of Code activities help students see the connection between math and coding through concepts like abstract thinking and problem solving. For future classes, she plans to help students explore STEM career options and hear from professionals working locally in those fields. This marks the first school year that 8th graders also had one-to-one access to technology throughout their school day and she noted how much easier it was to incorporate coding into her curriculum because students can readily access the technology.



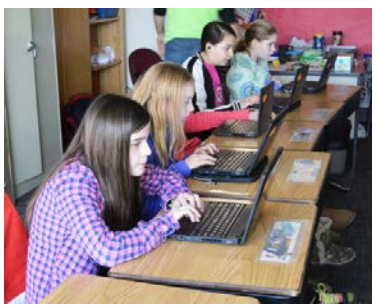
Claudia Eisch, seventh grader trying coding for the first time, “It kind of amazes me because I never knew this is how they actually made games.”

Until they learned about coding at school, seventh graders Claudia Eisch and Gabby Congemi had not thought about it as a career option. Now that they’ve tried it in Aimee Froze’s computer class, both think coding is fun. “I like creating my own game,” said Claudia, who was coding for the first time. “It kind of amazes me because I never knew this is how they actually made games.” Gabby, who was coding for her second year at school, sees how learning to code can help prepare students for the future, “It can help you with anything in life, it opens up so many more jobs.”

Anybody Can Learn

Interested in trying out coding yourself but feeling a bit hesitant? The students shared words of encouragement:

- “It’s not hard to start, you have to know how to operate things, but then it’s pretty simple,” said Cal McGinnis, a seventh grader.
- “It’s pretty awesome and it forces you to use your imagination,” said Lucy Krieg, sixth grade. “I think people should try it out because it is a lot of fun.”
- “Anybody can do it and I think everybody should know how to do it,” said Claudia Eisch, a seventh grader.
- Sixth grader Mason Freund added, “You can be creative and make other people happy. They get excited about what you’re doing and they enjoy what you’re making.”



To try coding, all you need is a device, like a laptop, tablet or smartphone, with access to the Internet. Online coding resources:

- https://code.org
- https://scratch.mit.edu
- https://www.khanacademy.org/hourofcode

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