

After-school computer coding club inspiring tech-savvy kids

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A group of local students is learning the language of the future.

Not a spoken language like Mandarin or Spanish, but a technical language to tell computer programs what to do: computer coding.

For the past month students from Grade 4 to 6 have gathered with school laptops in the classroom of teacher Tina Money Penny to learn the ins-and-outs of computer coding using a fun youth-oriented computer coding instructive software developed by the Massachusetts Institute of Technology (MIT) called Scratch.

“We usually don’t have the chance to do these things at school,” said Karsten Neumann, a Grade 6 student whose code runs a game that lets a player try to catch a basketball and score points. “At the beginning it was really hard but now I find it easy,” he added.

The students are preparing for a project fair where they show their parents and school members what they’ve been creating later this month and were busy and excited to be preparing.

The Thursday evening class is taught by Tina Money Penny’s husband Greg Money Penny, an Information Technology (IT) manager, who spent the first half explaining new concepts and the second half providing one-on-one help to students.

“Why is it called debugging?” Greg asked students April 30 in a lesson.

“Because bugs are really annoying?” one student responded to laughs.

“That’s an excellent observation,” Greg answered with a chuckle, going on to explain the name actually derives from an early giant computer which was having problems that turned out to be caused by a moth flying around inside it.

Tina was at a conference when she met an education professional who tipped her off about countries on the cutting edge of including coding in education. She then asked her husband if he'd lead a class for her, got him the required background checks and introduced the club.

“If statements, decision-making, looping over and over again, functions: those are universal. If you learn Cobol or Pascal or C++ or Java or any of those languages they all have those same constructs,” Greg said regarding the universality of the concepts being taught.

He added that the club was originally slated to include 20 students but has over 30 students now taking part, including one from Midland.

Greg works in IT for an area defence contractor and emphasized that the applications of coding can affect a number of things, including the security and prosperity of a country. He referred to the former-Soviet nations of Estonia an example of a country which built up a formidable and effective technological grid that handles everything from medical to government services.

“They digitized every service in the 90s,” he explained, adding that Skype was developed there. “They basically decided they were going to skip the tail end of the industrial wave and get right into the knowledge economy.”

In September, 2014, coding was added to the United Kingdom's national mandatory curriculum. There, students as early as age 5 are exposed to coding. By the age of seven, students are expected to be able to create and debug simple programs, understand algorithms in programs and understand coding basics.

“We want to keep the club going,” Greg said about the club's future. “They're fantastic,” he added of the kids.

The website www.code.org reports that more than 1.4 million computer jobs will be in demand in the United States by 2020, yet only a projected 400,000 students will study Computer Science there by that time.

Curriculum consultant Chris Ashford-Smith with the Simcoe Muskoka Catholic School Board attended the coding club on April 30 to get a look at what students were doing and was very supportive, calling their work “awesome,” saying the board would “like to get more of this in classrooms” and get the students “more devices.”

Grade 4 students Meorah Mathias and Isabella Lamsee were working together on coding a game for the project fair and said they are both enjoying the class and have learned a lot.

“We’ve learned how to make games and move the character,” Meorah said, adding the class was difficult at first but is getting easier.

“I like making scripts and learning together for different challenges,” Isabella said. “At first I thought ‘what is this? I don’t know what to do,’ and then I got really used to it after awhile and it got really fun.”

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Ten-year-old Meorah Mathias (left) and nine-year-old Isabella Lamsee (right) of St. Mary’s Catholic Elementary School in Collingwood work on their computer coding program April 30 during the school’s after-school coding club. PAUL BRIAN / THE ENTERPRISE-BULLETIN