

TECH CORNER

Tech Corner highlights exemplary examples of technology instruction in Council Rock and the teachers who make it happen.

Mr. Matt McCarthy - Richboro Middle School

Citizens For Education (CFE) has chosen Mr. Matt McCarthy, a dedicated and highly knowledgeable Informational Technology Teacher at Richboro Middle School (RMS), and the middle school's 7th and 8th grade Computer Courses for this edition of Tech Corner. Mr. McCarthy is representative of the importance of teachers who teach computer technology in Council Rock (CR).

Mr. McCarthy's education, experience, personality and passion for technology shapes his teaching skills and strategies to engage middle school students in 7th and 8th grades to learn, practice and enhance their technology capabilities. He encourages his students to use their assigned technology projects to showcase something they are also passionate about, whether it be horses, sports, pizza, or any other topic of their choosing.

Mr. McCarthy attended Neshaminy grade schools and graduated from Holy Ghost Preparatory School in 2006, but has teaching roots in Council Rock, where his father is a teacher at Newtown Middle School. His mother is a nurse. Mr. McCarthy attended Bloomsburg University, where he earned his BS with a double major in History and Secondary Education, and a minor in French. In 2013, he received a Master's Degree in Education, in Curriculum and Instruction, with an emphasis in Informational Technology. When he is not working, Mr. McCarthy enjoys gardening, and is an avid cook. His true passion is working on computers and software applications in his spare time. The light of his life is his 3 year-old- niece.

Prior to teaching, Mr. McCarthy's experiences included working at Bloomsburg University in the Office of Residence Life, and freelancing as a media consultant.

In 2012, Mr. McCarthy student taught in Mr. Jack Fitzpatrick's Social Studies class at RMS, and in 2013 he started substitute teaching in Council Rock as an Information Technology (or Computer) teacher. From December 2013 until June of 2014, he was back in RMS, teaching Introduction to Computers 7 and Introduction to Computers 8. The following year, 2014-15, he was hired by the Neshaminy School District to teach Business at their Carl Sandburg Middle School. He was hired back in 2015 as a .8 Council Rock Information Technology teacher at RMS. He makes himself available during the rest of the school day as well as before and after school hours to help faculty and students learn about the technology that is available to them.

At RMS, Introduction to Computers 7 and Introduction to Computers 8 are part of an arts rotation schedule where each subject is taught every other day for 2 periods for 6 weeks. Each student gets about 15 to 16 days of class time, amounting to about 32 hours of technology instruction a year. When asked if this is a sufficient amount of time, Mr. McCarthy said that the time is enough for students to acquire proficiency, but he would, of course, love to have more time to guide them in more complex usages of the curricular programs.

RMS currently has 481 students, in two 7th grade teams and two 8th grade teams. Every RMS student will go on to high school having had Mr. McCarthy as their teacher. Currently there are approximately 19 to 24 students in each of his classes.

Students enter middle school with a wide variety of computer skills. Mr. McCarthy has observed that students know their phone and its web browser, how to access the internet to do research, and are very familiar with social media. Most CR 7th graders know how to create a Word document or a PowerPoint presentation; yet some don't know how to properly file a document or access different drives, how to use an Excel spreadsheet, or have any design skills. Many are hunt-and-peck typists when using the keyboard. Although most Council Rock students live in homes where there is access to a computer with internet capabilities, there are 7th grade students who rarely use a computer and are only attached to their phones. At the other end of the spectrum, there are students who are very knowledgeable of every aspect of the curricula, know how to program, and may even have created an "app".

There is no elementary computer curriculum in Council Rock, and students in CR middle schools come from multiple elementary schools, with multiple numbers of teachers who may or may not have integrated technology into their classroom curriculum. Just as the elementary teachers' technology skills may run the gamut, so does an elementary student's technology skill set. One reason for the diversity of knowledge is that 7th grade is the first time a student in Council Rock is mandated to be in a class with a computer curriculum that is solely designed to review and reinforce and teach computer technology skills.

It is the first time every student's parents and all their teachers can be assured that every child is receiving the same technology education.

One of Mr. McCarthy's first expectations is that every 7th grade student acquires proper keyboarding skills. Mr. McCarthy uses a free program, Typing.com, and a blank rubber cover over the keyboard that hides each letter, number or symbol. The program guides all students, from those who hunt-and-peck to the intermediate level typist, to become more proficient on the keyboard.

In 7th grade students receive an introduction to information technology for real world use. They expand their knowledge of the computer operating system, computer vocabulary, the internet, web browsing and programs, including word processing (Microsoft Word), data spreadsheets (Microsoft Excel), and slideshow presentations (Microsoft PowerPoint). No matter what his students' technology abilities are when they start, Mr. McCarthy adapts the mandated 7th grade curriculum according to the students' level of proficiency.

In 8th grade the technology curriculum is designed to reinforce the knowledge and skills acquired in 7th grade, and to further advance the students' technology skills. Students explore and use the computer network to access various research and curriculum-based programs needed for integrated curricular projects. Presentation graphics and design skills are emphasized. Along with the programs, Mr. McCarthy teaches students design skills such as the "rule of thirds." Every student is required to make clip art from shapes. They use "Scratch", a web-based programming language, to create their own computer programs.

Mr. McCarthy also uses differentiated teaching strategies to meet every student's needs in 8th grade. For example, he teaches HTML, but if a student wanted to learn or become more proficient in programming with CSS or JavaScript, he tutors them. If students want to try and create an app, Mr. McCarthy helps them achieve their goal.

While getting his Certification of Instruction, Mr. McCarthy wrote a paper on online learning environments: what they are, how they work, and how they impact student achievement and growth in comparison to brick-and-mortar classrooms. He utilizes Google Classroom and has helped many teachers in the RMS building incorporate the application into their own classrooms. He is a big proponent of the "flipped classroom," where his students are assigned to view one of the many tutorials on his web site at home and return to class ready to apply their new knowledge.

Mr. McCarthy keeps up with emerging technologies and their applications. He has researched several different options for lab management software, which helps teachers in a computer lab setting monitor what students are doing on the computers; some of the companies he has researched and communicated with include Impero and AB Tutor. He is also familiar with “Nearpod,” which enables teachers, schools and districts to use their tablets/Google Chromebooks to manage content on students’ mobile devices. It seamlessly combines interactive presentation, collaboration, and real-time assessment tools into one integrated solution. The “Bring Your Own Device” movement is also something that intrigues Mr. McCarthy, but he understands that it will take a careful commitment among students, parents, and staff to roll out the policy with appropriate safeguards and rules. In addition to his own expertise, staff and students rely on Mr. Gary Papazian, the technology mentor for RMS, and Ms. Curran, the library media specialist, for technology assistance.

At RMS, there are two Computer labs: The Arts lab, which is open for all students and teachers to use, and the lab where Mr. McCarthy teaches. There is also a section of the library which consists of desktop computers. A couple of other rooms in the building have a few (2-5) dedicated machines for student use, including Mr. Mallalieu’s Technology Education classes. Other classroom teachers can sign up for access to the one mobile cart full of iPads, or use the computer lab when it is not in use by Mr. McCarthy. RMS has connectivity in every part of the building, but it can be slow at times, as can be true with any large wireless network.

Mr. McCarthy has confidence that the middle level technology curriculum will benefit students as they go forward, as it gives students:

- Curriculum-based program knowledge needed to for integrated curricular projects.
- Skills needed for an academic world that is moving towards less testing and more presentations.
- Digital citizenship guidelines, such as how to properly and safely use the Internet.
- An asset to compete for a summer or part time job, and/or an entrance into a future career.

CFE would like to thank Mr. McCarthy for the time he spent with us and the other middle school teachers involved with technology, who are making an important contribution to the education of Council Rock students.

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