

Computer Science Education Week (CSEdWeek) December 4-10, 2017, seeks to raise public awareness of the critical role computer science education has in preparing students for 21st Century careers and the transformative role computing plays in today's society. #csedweekMA

<http://bit.ly/CSEdWeekEvents2017>

CS Ed Week at Milton High School

In the Classroom

Hour of Code

All students will be exposed to an hour of code during one of their classes. The Hour of Code will be through the site, code.org.

Robotics Presentation Students will show off their connected robots created using Lego Mindstorm NXTs and explain how they created the robot as well as the significance of learning robotics.

Student Leaders: Daniel Truog, Philip Phan, and Adam Young, Jack Elliot, Elena Lambert, and Arlo Stoodt

Around the School

Banner

A banner will be hung promoting CS Ed Week.

Posters

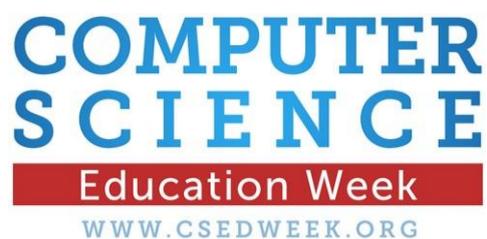
Students have created informative posters about computer science, the importance of computer science education, and social justice issues around computer science education, which will be displayed throughout the school.

Student Leaders: Amanda Arcieri, Amanda Kwong, Matt Norris, Anson Yip, Calvin Siu

Name Plates

Each teacher will receive a name plate to hang outside his/her door. The teacher's name will be in ASCII code in hexadecimal and the room number will be in binary.

Student Leaders: Luke Botsford, Jack Curley, Yeager Ferreira, Tyler MacNeil



How Well Do You Know Your Computer Science Facts?

Every morning for the entirety of CS Ed week, a trivia question about computer science will be presented during the morning announcements. Then students will be able to submit their answers in the box that will be located in the library. Students who answer correctly will be eligible to win a \$10 gift card to Dunkin Donuts.

Student Leaders: Courtney Dunn, Allison Eckard, Owen Fennessy, and Amanda Tam

Binary Bingo

This project is a game that consists of a short review about the basics of binary for interested students, followed by a game. The game is like bingo in the sense that you have a card with numbers and to win you must get a certain number in a row. The catch is that the numbers we call out will be in binary, and the students must translate this binary number into a real number to see if they have a match. This will let students practice their ability to quickly translate binary numbers into their real number counterparts. The game will take place in computer science classrooms, where students already have a basic understanding of binary. There will be a prize for winning!

Student Leaders: Michael Daly, Jack Rush, and Juyuan Su

A Scratch Advertisement in Scratch

We created a program in Scratch that demonstrates what you can do with Scratch! We plan to send our project link to all math teachers at the high school so that they can show their classes and students will become interested in computer science!

Student Leaders: Allen Dai and Cameryn Morris

Problem of the Day

During each day of Computer Science Ed Week, the location of a problem will be broadcasted over the loudspeaker. Manila folders will be hung up around the schools containing the problem and an area to put your work and answer. Upon entering the cafeteria, students can also grab a slip of paper containing the problem at the front doors. Students will have plenty of time to answer the problem of the day during lunch.

Student Leaders: Asher Cardoza, Ralph Destin, Jack Roche, and Calvin Siu

Computer Science Scavenger Hunt

We will be hosting a scavenger hunt around various areas of Milton High School. People who participate will be rewarded clues after solving various computer science riddles and puzzles. Players will start by coming to Mrs. Jarboe's room to receive an informational sheet containing the first riddle. The riddles will be related to various aspects of computer science, such as java math, decoding binary, reading code, and more. The first few players who complete the scavenger hunt will be rewarded.

Student Leaders: Mohamed Makouk, Finley Link, Tyler Tewksbury, Jeffrey Chan

Robotics Team Robot Demonstration and Mock Challenge

The main part of our CS Ed Week Project is to give a presentation about the robotics club, and the basics of the java/python code that we use to control the robot. We'll prepare a presentation that could be given to anybody that would coincide with a demonstration of the Robotics Team robot and the capabilities and possibilities involved with robotics and programming. The programming aspect can be broken down into simple commands, and the building/engineering part of robotics would add more interest to the CS aspects.

Our secondary plan, after prior talks with Mr. Moray, is to give his J Period class a week to create robots that will be able to complete one of four simple tasks related to the 2017-2018 FTC Team's competition, to introduce the ideas behind an official robotics team. This part would encourage the robotics class to take more initiative or to get more interested in our club and apply their knowledge from class in a real application. We would meet with them on the friday during CS Ed week to see how they did and to showcase our team.

Student Leaders: Ryan Au, Matthew Noris, Edward Enyedy

Space game

Using scratch students make a space shooter game. This will show that computer science is actually cool and worth trying out. Flyers will be posted with links to our game.

Student Leaders: Jeffrey Chen, Shemar Mahase, Justin Wilmot, Joshua Bradley

Professional Speaker for Milton's Young Men's Group

The plan is for an african american male guest speaker to talk about their experience about how they got to where they are now. The hope is the presentation is for the speaker to address the lack of african americans in the field of computer science. The goal is for a speaker will share their experiences and inspire students in the Young Men's Group to participate in Computer Science classes or pursue a career in computer science.

Student Leader: Ramsey Julmice

Scratch CS Ed Week

The project will be presented to student in the Achieve program at Milton High School. The presentation will start with the importance of Computer Science. From there, students will go over a game that they created in Scratch with the students and have them try to recreate the first few lines of code. Students will get the chance to "remix" the original game with assistance from the student leaders.

Student Leaders: Halle Armstrong, Amanda Kwong, Rebecca Noris

Coding in Python

A presentation on:

- What is Programming
- What Programming can be used for
- Python basics
- Fields you can enter/wages

will be presented to a Math class during CS Ed week before students work on the hour of code.

Student Leader: Brendan Kenney

Things to Do in Advisory

Robotics Website

Students created an informational website about robotics to help get students interested in what robotics is about and how they can get into robotics. Head on over to csed.mrmoray.com for more info!

Student Leaders: Robbie Dexter, Tyler Tewksbury, Mitchell Kevaney

Outside of MHS

School Visits

Groups of students will visit the Elementary and Middle Schools to present about computer science and assist in the Hour of Code.

Pierce Middle School

Communicating in Binary

Students will explain to students how to use binary code to send messages, then lead students through a game in which they need to use binary code to spell out a word.

Student Leaders: Demi Davis, Lila Slymon, Emma Scapicchio, Maxwell Blake

Stranger Things in Websites

We will present a story from onion.com to the students about Stranger Things 2 as if it were real. We will then explain to them how to use problem-solving skills to determine whether or not websites are reliable. After, we will elaborate on problem-solving skills by solving riddles.

Student Leaders: Amanda Arcieri, Adriana Halpin-Quiroga, Maureen Lang, and Dominique Thomas

Got Problems? So Do We!

During our presentation, students will be introduced to the problem-solving process. They will practice this process by solving riddles collaboratively with their peers.

Student Leaders: Katie Biagiotti, Aliyah Farnum, Ailish Flynn, Henry Hall, and C.J. Pinto

How Many Times Do You Use a “Computer” in a Day?

Our project will focus on teaching students how big of an impact computers have on their lives, while also defining what exactly a computer is. We will have a PowerPoint presentation about how “computers” are everywhere nowadays, and that they are very important in jobs, especially ones that are technology based. In our presentation, we will also give the exact definition of a computer, and examples of what is and isn’t one. At the end of the presentation, we will play a game to answer the question: what is a computer? To conclude our presentation, we will hand out prizes to the game winners, ask students what they have learned from us being there, and if they would be interested in taking a computer science class in high school.

Student Leaders: Muberra Manavoglu, Alexandra Quiroga Kuhs, Aoidon Salmon, and Bryce Stovell

Pun Hunt

Students will be visiting Pierce Middle School to teach 8th grade students how to read binary, translating it into both decimals and ASCII. This will be done through a fun and interesting presentation. After the presentation, a scavenger hunt will have already been set up for the students to partake in. Students will have to spot binary messages posted around the 8th grade wing, translate them into decimals, then translate the decimals into ASCII. This will lead them to part of a message, and once they have translated all the messages around the school, they will be lead to a prize.

Student Leaders: Karissa Lassoff, Alyssa Foster, Caroline Cronin, Patrick Fitzgerald

Favicons

Students will go to middle school and do presentation at the Middle School. The objectives are explaining favicons, how they are coded, and how the colors work. The

presentation will include an activity for students to make/code a favicon.
<http://www.favicon.cc/> This is to help students understand the basics of coding, binary, and RGB color concepts.

Student Leaders: Alex Rene, Emily Dobrindt, Jaleigha Williams

Sending and receiving messages on the Internet

Students will present a lesson about sending and receiving messages on the internet will be taught to middle school classes. Simplified descriptions aided with visuals will help in grasping the concepts. A Kahoot game summarizing the most important topics will follow and finalize the lesson.

Student Leaders: Alex Dhima, Dietrich Werner, Taylor Snellen, Trong Tran

Artificial Intelligence

Students will visit the middle school and instruct students about artificial intelligence, it's dangers, uses, past, and future via a combination of interactive presentations, activities and the importance of computer science in artificial intelligence.

Student Leaders: Robbie Dexter, James Tran, Max Walker, Andrew Viveiros

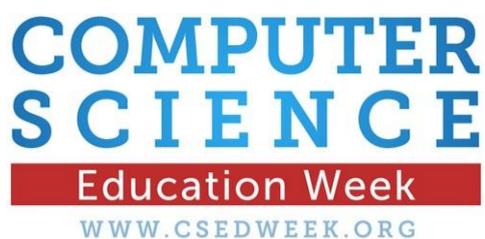
Computer Science: What the heck is that?

The group will go to the middle school and teach the students about computer science. Students will start with a kahoot as an icebreaker to check in to see what the student know about computer science. Then having a prezzi to show interesting facts about the basic of computer science and the implication on daily life. Then the group will have them try out Scratch or the hour of code website.

Student Leaders: Gary Leung, Kendall Smith, John Daly, Salamata Jalloh

Computer Science trivia/ computer science trial

Help middle school students better understand what Computer Science is and what it is used for and persuade them to take Computer Science in High School. Have them play a Kahoot so that they can hopefully learn some of those things, and afterwards explain



those things more in detail with a quick presentation on Google Slides. Then after that have the students do the Hour of Code activities on Code.org.

Student Leaders: Patrick Kennedy, Jackson Macmillan, Nate Dickens

Elementary School

Learning to Code with Disney ® Characters

Students will create a presentation to teach elementary school students what code is. The presentation will involve groups working on activities using scratch. First the group will go over what coding is and how they might be using it in their lives. The activity will have them code a dance for a character in scratch. The group will circulate around the students to help the students and make sure they are utilizing the driver/navigator technique. At the end we will have the students present their dances to the class, encouraging the students to dance along with the character.

Student Leaders: Scott Yuen, Eliza O'Donnell, Brian Bennett, Peter Tougias

Get interested in coding!

Student from Milton High will bring their enthusiasm for CS Ed Week to elementary schools specifically Collicot so that students of younger ages can learn more about coding and technology. High Schoolers will bring projects they have created in hopes of getting the younger students interested and will be making signs writing teachers' names out in pixels and printing the code with it. We would like to send the message that coding is in the future for everyone. It's something that anyone can do and that so many people dismiss as being too confusing or foreign. We want to show our students that everything around them uses code by listing examples and having them identify some too. Also, the topic of simple binary could be introduced to explain how some things that might not seem like things that utilize code really do.

Student Leaders: Mary Kate Murtagh, Griffin McLaughlin, Haley O'Brien, Caitlin O'Sullivan

