



# CLEVELAND CITY SCHOOLS CAREER & TECHNICAL EDUCATION

October 2021

## NEWSLETTER

### Manufacturing Month

It's no secret the manufacturing sector has a major impact on the U.S. economy, and every year Manufacturing Month offers an opportunity to recognize this sector's significant impact on the nation. Manufacturing Month is designed to coincide with Manufacturing Day, which has been held on the first Friday in October since 2011. During the month, manufacturers get to highlight their work and their workers and energize a future pipeline of skilled workers.



Typically, Cleveland's CTE department partners with the Chamber of Commerce to engage students with the world of manufacturing through field trips and tours of the facilities and a face-to-face question and answer session with industry professionals. Due to the pandemic, Cleveland CTE pivoted to still provide students and our manufacturing business community invaluable opportunities to connect. Partners like Polartec, Wacker, and Duracell partnered with the CTE teachers to give the students a real-world problem to solve.

Polartec joined Dr. Saez's Robotics class. The Polartec engineers spoke all about their company and gave the students a challenge to create a motorized build using Polartec fabric. Students were given all the necessary supplies donated by Polartec to create mobile cars to compete for prizes.

Duracell teamed up with Mr. Gluckner's Into to Engineering class. Duracell also presented a problem to the students to solve. Duracell stated that they currently have three chemicals that their employees have to clean off the production lines. Students were challenged to find a solution to safely remove the chemicals without their employees touching the moving conveyor.

Students and teachers have enjoyed the challenges presented by our industry partners. Together, Cleveland CTE and manufacturers showcased many aspects of the manufacturing industry to the students.

So, as we reflect back on this year's Manufacturing Month and look toward the next, keep an eye out for opportunities to expose students to new ideas and new possibilities. Let us know what you discover, and we'll help connect the dots.



## Arnold Elementary School

Third grade continued learning about the human body. They learned more about the skeletal system and created x-ray hands using crayon and oil.



## Blythe-Bower Elementary

Second grade students complete a project on sinking and floating.



## Candy's Creek Cherokee Elementary School

First grade students build a fence around a "garden" to keep the pests out or in the library.



## E.L. Ross Elementary

Ross students used the steps of the Engineering Design Cycle to design and improve straw towers.



## George R. Stuart Elementary

Fifth graders at the Stuart STEM Lab have been learning about the states of matter, the phases of matter, and what happens when we mix substances. To finish our unit, everyone explored chemical and physical reactions in a Mad Scientist Potions Lab!



## Mayfield Elementary

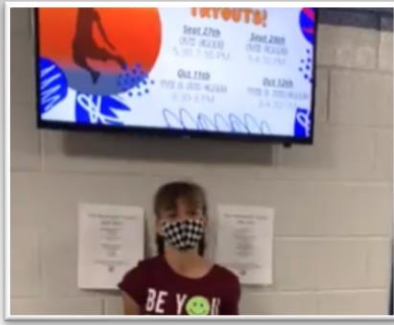
Mayfield's fourth and fifth graders used Makey-Makey Kits to learn about circuits. They learned how to make an open or closed circuit by fist bumping their partner to close the circuit and make their connection work. They also used play dough to make their own control panel. They had so much fun!



## Yates Primary

Kindergarten students at Yates Primary learned the basics of coding using Bee Bots. They programmed their Bots to complete an obstacle course.

## CMS BUSINESS



### Practicing Graphic Design

Business Communications students use professional level programs such as Adobe and Canva to practice their graphic design skills. Here is a 7th grader showing off their work while also helping the basketball team get word out about tryouts.



### Raider TV

Students continue to produce a daily morning show informing students, parents and staff of all of the happenings at Cleveland Middle School.

## CMS MEDICAL SCIENCE



### Students Perform Concussion Tests

Students got to hear from a Certified Athletic Trainer with the Baltimore Ravens in class!



### Learning What to do During a Medical Emergency

Medical Science students learn to properly remove football equipment during medical emergencies.

## CMS ENGINEERING



### Tennessee Tech Visits CMS Engineering

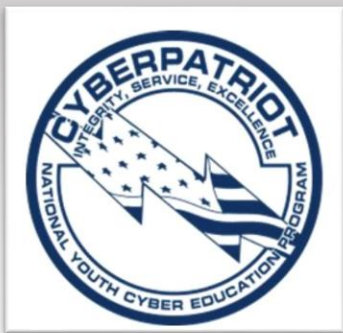
Tennessee Tech engineering students and teachers joined the engineering class. They engaged students in programming activities.



### Building Sustainable Structures

Engineering students put their work to the test. Teams built structures to see whose held the most textbooks.





## CyberPatriot

CyberPatriot has arrived at CHS. CyberPatriot is the premier national high school cyber defense competition that gives hands on exposure to the foundations of cyber security. Cadets pushing STEM to the limits.



## Raider Competition

Blue Raider Corps cadets had a grueling day at Soddy-Daisy's Raider competition.



## Blue Raider Corps Cadets in Uniform

Congrats to the Blue Raider Corps Freshmen FX class (3A) on winning Cleveland High School's Alma Mater competition! All the classes did a great job. We are so excited for all of our cadets!



## Students Replace Door Mirror Glass

Advanced CHS Automotive students replace a door mirror glass for CTE Director.



## Electrical System Check

Entry level automotive students chose teams and competed against each other to assemble a PVC puzzle. The captain, nor the blindfolded student can speak; however, the other group members can talk, but cannot touch any puzzle pieces.



## Replacing Brakes

Students replace brakes for one of their favorite substitute teachers.



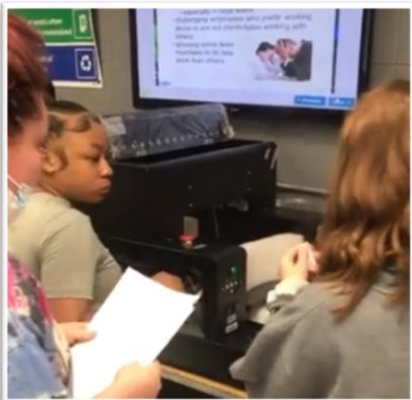
## Students Ready to Take Flight

Students learn all about what it takes to fly and prepare to take flight in the FMX Simulator. The Redbird FMX is a superior-quality, full motion, feature-rich Advanced Aviation Training Device priced with real-world flight training organizations in mind. With standard features that are anything but standard such as wrap-around visuals, a fully enclosed cockpit, quick-change configurations, scenario-based training compatibility and of course an electric motion platform.



## Student Spotlight

Alex Arnold always has a way of getting everyone's attention on the trails and in the classroom! Alex is a talented motocross racer and an exceptional student.



## Learning New Equipment

Intro to Business and Marketing students were introduced to the new equipment located in the business classroom. The business class has received multiple vinyl cutters, heat presses, embroidery machines and a large poster printer. These supplies will assist the business class and the new Raider Trader store.





### Hot Stone Massage

Students learning how to incorporate hot stones into a manicure or pedicure massage.



### Building Clientele

Guest speakers, Daniel and Becky Graham, Chop Shop and Beauty by Becky owners, teach cosmetology students how to build their business through social media. They shared their success story too!



### Color Theory

Students are learning color theory in preparation for hair color formulation. Nothing gets a hair colorist's artistic juices flowing more than a color wheel. The best colorist in the world would not attempt a client consultation, never mind a color formulation, without consulting the theory of color science and color mixing.



### DUI Testing

After an officer has conducted a traffic stop and suspects a DUI violation, he or she will conduct one or more tests to determine whether or not the motorist is impaired. Criminal Justice students learn how to conduct these tests correctly.



### Students Research Illegal Substances

Students research and create a booklet on illegal substances; prevention, the repercussions of substance abuse and treatments.



### Criminal Justice 1 Students Prepare for Court

Criminal Justice 1 students researched, defined, and drew out crimes that have been committed in order to prepare them to try the cases in court.



### Pellissippi State Community College Visits Culinary Students

Chef Joseph from Pellissippi State, demonstrated fresh pasta to the Raider Cafe Culinary students. He also told students what Pellissippi State had to offer in Culinary.



### Students Prepare for Chopped Class

Leonardo & Devan are getting mise en place for their chicken dish with couscous for their Chopped Class.



### Chef Rush Helps Students Make Fresh Pasta

Raider Cafe students prepared and rolled fresh pasta and Chef Rush served them. They used fresh sage and brown butter on the pasta to serve.



### CHSLive Streams Faculty vs. Student Basketball Game

As their teacher hit the court for the faculty vs. student basketball game, students ran the livestream solo. With multiple cameras and changing graphics, it was not an easy task. The students did a wonderful job!



### Students are Introduced to the Studio

Digital Media students were introduced to the studio and the equipment. Students were able to get hands-on and begin to operate the multi-camera setup, host, and produce the Raider Rundown. The Raider Rundown is a weekly news broadcast that updates students of happenings around campus. The show is posted on social media outlets.



@BLUERAIDERSLIVE



@CHSLIVE



CHSLIVE



CHSLIVE



### Simple Machines and Gear Ratios

Our Principles of Engineering students learned about the balance of scope, quality and time with their Rube Goldberg simple machines project. They had great plans and ideas, but had a deadline to meet!



### Class Visitors

Duracell visited Cleveland High School Engineering to give students a new design challenge and Cleveland Alumni visited to encourage students to apply for the Cleveland State ATI!



### Dual Credit

Civil Engineering and Architecture students are finishing up their floor plans for Cleveland State's Architecture dual credit. They're making quick and efficient progress!



### Checking Glucose Levels

Auriyan demonstrates how to check blood glucose with a simulated blood sample.



### Learning the Anatomy of the Heart

Anatomy and Physiology students learn the anatomy of the heart by dissecting a sheep's heart.



### Pharmacy Launch Day

Students were welcomed into the new pharmacy lab at Cleveland High School on October 20. Students were excited to take what they have been learning in the classroom into the new Raider Pharmacy for hands-on learning.





## Isbill Tech Speaks to Dr. Saez's Robotics Class

Thank you, Mr. Chris Isbill, for speaking to Computer Science Foundations students at CHS about your company Isbill Tech. They heard about industry related technology trends and solutions being used with companies all over the southeast region.



## Creating Google Logos

Students in Dr. Saez's Computer Science Foundations class created their own Google logo using Scratch programming. There were some creative logos with even better programming!



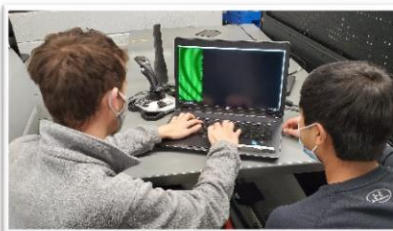
## Students Learn About The Advanced Technology Institute

Thank you, Mason Cochran and Austin Bayne (CHS class of 2020), for coming with Brooklyn Sewell to speak to Dr. Saez's classes about CSCC's Advanced Technology Institute (ATI). It's a great opportunity to use TN Promise while working at local industries!



## CAPS Students Work On-Site at Cleveland Utilities

CAPS students working with Cleveland Utilities professionals. This is real world, hands on experiences.



## Preparing for Competition

Our Ministry of Mechanics team met for the first time this month to start talking about this year's F.I.R.S.T Robotics Competition that will take place in the spring.



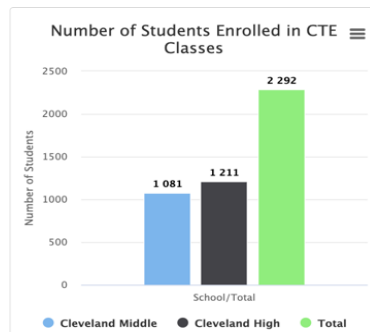
## Robotics 2 Dual Enrollment Students at Cleveland State

This semester, Robotics 2 Dual Enrollment students have the opportunity to go to Cleveland State Community College campus for class each Monday and learn from Dr. Tim Wilson. On the days students are not at Cleveland State, Dr. Wilson meets them at Cleveland High School campus to continue teaching the Mechatronics course. Students will earn high school and college credit for this course.

# A Message From The CTE Supervisor

October 29, 2021

Cleveland City Schools Career and Technical Education (CTE) is growing exponentially. Cleveland City Schools enrollment numbers in our CTE programs are the highest they have ever been. For the 2021/2022 school year, CTE enrollment numbers are as follows.



So, what does this tell us? It reveals the relevance of CTE as related to career options, student interest, and rewarding opportunities for our students. Our business/industry sector is in dire need of a skilled labor force that can brainstorm, troubleshoot, work in teams and be willing to be challenged daily. With technology growing at a rapid pace, current and future employees must be motivated and flexible to take on the changes and challenges of a never-ending technological evolution boom. Cleveland City Schools CTE is focused on rigor in our CTE classrooms and labs in order to prepare students for current careers, as well as careers that may have not been created yet. Cleveland City Schools CTE is continuing to move forward aggressively with our CTE programs and initiatives in order to create a pipeline of employees.

Sincerely,

*Renny Whittenbarger*



## Connect with us!

Join us on social media and stay up to date on many of the great things happening here everyday.



@ccscte



@ccscte

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## Important Dates

### **Nov 22**

Staff Development - Schools Closed

### **Nov 23 - Nov 26**

Thanksgiving Break - Schools Closed

### **Dec 21**

Abbreviated Day

### **Dec 22 to Jan 4**

Christmas/New Years Break - Schools Closed

