



Celebrate CTE Month With CCTE

February is Career & Technical Education Month across America. It is certainly something to celebrate for all of us involved in education. A CTE education directly prepares students for high-wage, high-skill, and high-demand careers. Of course, those of us involved in CTE see first-hand its benefits every day. But for quick reference, or for those of you who may be reading this that do not understand the positive impact of CTE, here are just a few of those benefits:

- 91% of high school graduates who earned 2-3 CTE credits enrolled in college.
- Taking one CTE class for every two academic classes minimizes the risk of students dropping out of high school.
- Students who take advanced CTE courses in high school see higher earnings, including a 3.2% wage increase for CTE concentrators.
- 80% of high school students taking both CTE and college prep courses meet college and career readiness goals, versus 63% who are college and career ready through college prep courses alone.
- According to the United States Department of Labor Bureau of Labor Statistics, the fastest growing occupations projected through 2022 require career & technical education.

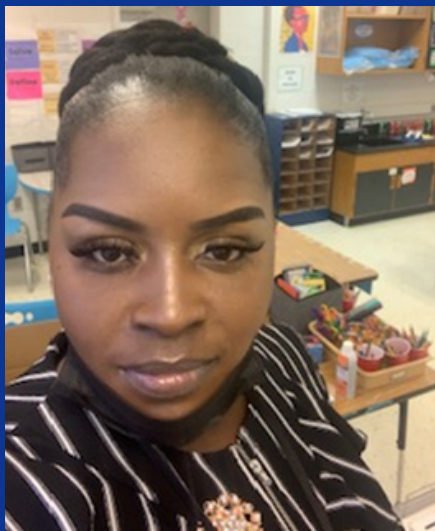
CTE works for everyone!

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MIDDLE SCHOOL TEACHER SPOTLIGHT Claytarcia Holliday



Claytarcia Holliday teaches 6-8 STEM at Barret's Chapel School in Lakeland, TN. Mrs. Holliday holds an undergraduate degree in Computer Science and a Master of Business Administration with concentration in Management. The first 18 years of her career were spent substitute teaching with Shelby County Schools, and these last two years teaching full time in the CTE Department. Holliday is a team player on her school's STEM team. She serves as a coach for the Junior Basketball Team and Girls Track Team. She also is the assistant coach for the Boys Baseball Team.

Over the last two years, Mrs. Holliday's classroom has served as one of the labs for the Denver Zoo Conservation Challenge, Boreal Toad Program, and the testing lab for the Youth Engineers Solution Program. Her classroom also strongly embeds the key principles of Computer Science and the curriculum provided by MSCS CTE, Project Engineers, Project Lead the Way, Amazon Boot Up, Code.org, Learning Blade, and TSIN. She also serves as a mentor for schools/school leaders who are training to obtain Tennessee Stem Designation for their schools.

Grants awarded:

- The Battelle Education TSIN/STEM Classroom Grant
- The Agri-Stem in the Classroom Grant
- The Big Green Garden Grant
- The Junior League Grant for G.I.R.L. Coding Club
- Led Barret's Chapel School process to become a Tennessee STEM designated school, which resulted in being awarded for the year 2021-2027 and the grant funds.
- Member of TSIN 2022 Rural TN Rural STEM Collaborative.
- Member of the Computer Science MSCS Advisory Board for Tennessee Department of Education

WHAT IS STEM?

Most people think of STEM as just an acronym for the four subject areas of science, technology, engineering, and math. STEM education is an approach to transform traditional teaching and learning. It fosters creativity and innovative thinking in all students. An integrated STEM approach teaches students how to solve complex problems by using critical-thinking and problem-solving skills necessary across all disciplines. Through the world of STEM, we are developing a workforce that will be able to compete and succeed in the current and emerging global economy.

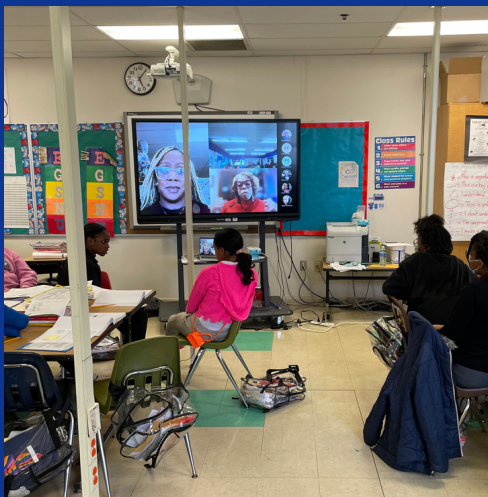
Memphis-Shelby County Schools (MSCS) inspires our next generation of STEM leaders in Memphis by developing equitable pathways to STEM careers. We provide students with real-world experiences through industry partnerships and project-based learning that foster critical thinking, problem solving, and collaboration to provide students with an awareness of technical careers that improve our lives.

MSCS defines STEM as a transdisciplinary approach to equipping students with the tools and strategies that help them think critically and reason logically within tomorrow's interconnected world. Our approach includes instructional strategies that challenge students to think, innovate, and solve real-world problems.



GIRLS WHO CODE KICKOFF

We are excited to announce that we partnered with Girls Who Code to launch a coding club in January of 2023. The club is a free program for students to join a sisterhood of supportive peers and role models using computer science to change the world. The club offers fun activities through a flexible curriculum that adapts to their unique needs. The club members are building their coding skills and community as they complete coding projects. The program spotlights different Girls Who Code Techs during each session.



HIGH SCHOOL TEACHER SPOTLIGHT Ghanz Crawford



Ghanz Crawford teaches STEM at Southwind High School. Mr. Crawford is a seasoned teacher with a desire to not only teach students, but to also instill a joy of learning and exploration. Before joining MSCS, Mr. Crawford built quite a legacy with the Ministry of Education in Jamaica. His love and knowledge of science awarded him Teacher of the Year, Vice Chairman of the Science Teachers Association of Jamaica, and head of the science department.

If you step into Mr. Crawford's STEM classroom today, you will see students engaged in meaningful projects that inspire creativity and critical thinking. Not only are students exploring scientific and engineering ideas to solve everyday problems, but they are also receiving certifications! The students in Mr. Crawford's classes have earned 17 passes in Autodesk Inventor and 55 passes in Dremel 3D Idea Builder. We would like to congratulate Mr. Crawford for all his "heart" work. We are looking forward to what comes next!

STEM MONTHLY CHALLENGE FOOD TRUCK ENTREPRENEUR

Goal: Your partners have decided to build a food truck that can travel around the region. You will need to develop a business plan to make the truck successful based upon the foods offered, how much you sell, the goods needed for the truck, and the cost of getting the truck from place to place.

Role: You are part of a team of entrepreneurs that has decided to start a food truck business serving fresh food from local farms. You are planning to travel and sell your food out of a food truck at fairs, outside markets, and carnivals within a 60-mile radius of your location and/or a farm.

Audience: Your team has asked you to create the business plan for this entrepreneurial opportunity. You will need to gather the necessary information and put it together. The team will then make an informed decision regarding going forward with the creation of the food truck based upon your presentation of the plan.

Situation: Food trucks are becoming very popular across the United States. These trucks can be found in any area with people looking to eat. Many of these trucks specialize in a certain type of food. A food truck is a large vehicle equipped to cook and sell food. Some sell frozen or prepackaged food, while others have on-board kitchens and prepare food from scratch. Sandwiches, hamburgers, french fries, and other regional fast food fare are common. In recent years, food trucks offering gourmet cuisine, a variety of specialties, and ethnic menus, have become particularly popular.

Product: You will want to present your team with a name, logo, and design for your food truck. The design should allow people to recognize your truck quickly and give potential customers an idea of what the food truck sells. Also, provide two or three menu items that you hope the truck will become known for by customers.

Resources:

The food truck design PBL can be found in the Middle School STEM Curriculum under 6th-grade PBL's. You can also find the PBL in Defined Learning.

UPCOMING EVENTS

Professional Development Opportunities

/Competitions:

- 3D Printing Basics - Feb. 11 (9 A.M.-12 P.M.)
Educators Innovation Center
- 3D Printing Basics - Feb. 18 (9 A.M.-12 P.M.)
Educators Innovation Center
- Amazon BootUp Training - Feb. 23 (8 A.M.-3:30 P.M.) Sheffield CTC
- Basic DC Electrical Circuits - Feb. 25 (9 A.M.-12 P.M.) Educators Innovation Center
- MOS Teacher Training/Kickoff - Feb. 28 (8 A.M.-3:30 P.M.) Sheffield CTC
- Basic Soldering - March 4 (9 A.M.-12 P.M.)
Educators Innovation Center
- Programming with Arduino - March 7, 9 and 21 (9 A.M.-12 P.M.) Educators Innovation Center
- Sea Perch - March 25 and April 1 (9 A.M.-12 P.M.)
Educators Innovation Center

Professional Development

Opportunities/Competitions:

- Engineering with Pathfinders - March 23 (9 A.M.-12 P.M.) Educators Innovation Center
- 3D Design Challenge Grades 6-12 (Deadline for Submission is Feb. 28)
- Middle School Sphero and Obstacle Course Design Challenge - Feb. 24 @ Various Middle Schools
- Girls Who Code-NPR Student Podcast Challenge (Deadline for Submission is April 28)
- Hour of Code Grades (K-12) - Feb. 20-22
- Amazon Boot Up Challenge (K-5) - Feb. 27
- Junior Achievement Biztown Field trips - Feb. 8-March 27
- Junior Achievement Finance Park Field trips - Feb. 1-March 22

CCTE STEM DEPARTMENT

DEDRIC MCGHEE-CCTE DIRECTOR OF STEM

MONICA SMITH-CCTE MIDDLE GRADES MANAGER

DR. ANGELA ASKEW-CCTE SENIOR STEM MANAGER

LAKATA JACKSON-GREEN-CCTE ELEMENTARY/MIDDLE SCHOOL ADVISOR

DESTINI DEMARCO- CCTE STEM ADVISOR

YORI LATIKER- CCTE CLERICAL ASSISTANT

IF YOU ARE HOSTING OR PARTICIPATING IN AN EVENT WITH STUDENTS AND WOULD LIKE TO BE FEATURED IN THE STEM NEWSLETTER, PLEASE CONTACT LAKATA GREEN AT GREENLD@SCSK12.ORG OR 901-416-1166.

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