

For Immediate Release

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Media Release

STEM studies picking up *STEAM* in CCSD

Office of Communications

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Charleston, SC – Charleston County School District (CCSD) is at the forefront when it comes to offering students STEM (Science, Technology, Engineering, and Math) and STEAM (Science, Technology, Engineering, Arts, and Math) experiences and educational opportunities. In recognition of National STEM Day, November 8, 2022, CCSD is highlighting the [various programs](#) offered across the district.

STEM curriculum is specifically designed to prepare and inspire generations of learners to meet the challenges of our 21st century society by fostering technological literacy, academic achievement, innovation, collaboration and creative problem-solving.

“From McClellanville to Edisto, all students throughout CCSD have access to academically rigorous and relevant Project Lead The Way (PLTW) STEM instruction that prepares students for the high-skill, high-demand, and high-wage occupations of the 21st century global economy,” said Rich Gordon, Executive Director of Career and Technology Education. “Students learn how to problem-solve, think strategically, and work in teams, all the while building determination and grit.”

STEM and STEAM instruction is available to all elementary through high school students in various ways.

For example, fifth grade students at Julian Mitchell Elementary School participate in a STEAM leadership group. Under the guidance of Margeaux Coyne, science lab teacher, students are learning about sustainable garden projects thanks to a BOSCH grant. Some of those funds were used to kick start culinary activities as well.

Mitchell is a constituent magnet where math and science are infused into all curriculum.

“Our [EL](#) and Bridges curriculum has STEM activities embedded in the lessons,” said Coyne. “We use our science lab to either build background knowledge before class lessons, or extend and enhance the lessons already taught. For example, in Bridges Unit 8, third grade students build model bridges. When students come to the science lab, they continue to build bridges around a specific problem. Students will make evidence-based claims to support why their bridge would be the best choice.”

"These activities are bringing real-world opportunities to our students," explained Coyne. "This year, I am writing another Bosch grant to continue the work we have started called Farm to Table Cooks Up Leaders."

Coyne's science lab is also full of hands-on activities. This month students are preparing to plant an urban garden. Students will design their own crop plan, start plants from seed, harvest, compost, and cook their own recipes.

"We want our students to have numerous opportunities to be creative, innovative, and make real-world connections," added Coyne.

At A.C. Corcoran Elementary School, Susan Farmer is teaching her students about aeronautics. A representative from Trident Technical College presented an overview and virtual tour of their new S.C. Aeronautical Training Center and discussed programs that they offer with a focus on the connection to STEM and a brief exploration of those careers. The students were treated to hands-on STEM activities as a result.

Laing Middle School's STEM approach is a whole-school initiative that focuses on improved academic performance, 21st century career skills, and information on STEM professions.

Analyn Haynes is the pre-engineering instructor at Laing Middle school. Her classes are all project-based.

"Students are given a problem to solve," said Haynes. "They use their engineering design processes to come up with solutions that they have tested and retested. Students show their understanding of the skills taught to them through their builds and make sure to present their research and solutions to the class at the end of their projects."

Initiatives

According to Chad Vail, CCSD's Work-based Learning Partnerships Coordinator, the district is fortunate to have excellent business partnerships that support STEM career awareness, exploration, and experiences for students from throughout the district.

"Examples of partnerships with local champions for STEM education include Naval Information Warfare Center's support for robotics teams and cyber security summer career camps, Medical University of South Carolina's Career Discovery Day held on their campus annually, and Boeing South Carolina's high school internships, apprenticeships, and long-standing DreamLearners program," said Vail.

"The [Liberty Hill STEM Initiative](#) has been a source of 'STEMspiration' for scholars and families in CCSD," added Gordon.

This initiative consists of high-quality STEM learning programs for students attending the Liberty Hill neighborhood schools (North Charleston Elementary School, Morningside Middle School, and North Charleston High School).

"Through the work of the initiative, students have the opportunity to participate in PLTW, robotics, coding, Toastmasters, internships, STEM after school, summer programs, and a wealth of competitions and community events," said Gordon.

Students are also exposed early to local industry professionals, learning about pathways and requirements for success in STEM-related careers.

"We are excited to see a significant increase in participation among our African American and Hispanic students in STEM," added Gordon. "Families are now seeking opportunities to engage and participate in STEM programs during and beyond the school day."

Haynes believes that STEM/STEAM should be embedded in all student classes and activities.

An example of that is happening at Mitchell. The STEM theme for the second quarter is animals. Animal activities related to the new science standards will be integrated into all classes.

"Our librarian will have students researching animals," said Coyne. "Our music teacher will create a song related to animal adaptations. Our art teacher will make animal murals (farm, ocean, wild). In science, students will get to study a variety of living animals in class (guinea pigs, birds, fish, hedgehogs, caterpillars, rabbits, worms)."

All of Haynes' units also build on their content classes.

"I work hard in tying their content materials into the unit skills I teach each year," said Haynes. "I research their standards for the weeks that I plan on teaching a skill and make sure to embed their core class standards."

"As adults, we are faced with problems that we sometimes have to solve by testing things and thinking outside the box," said Haynes. "Building experiences and perseverance in my students will help them be able to solve real-world problems without giving up."

To learn more, contact the Office of Communications at (843) 937-6303.

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About the Charleston County School District

Charleston County School District (CCSD) is a nationally accredited school district committed to providing equitable and quality educational opportunities for all of its students. CCSD is the second-largest school system in South Carolina and represents a unique blend of urban, suburban, and rural schools spanning 1,300 square miles along the coast. CCSD serves approximately 49,000 students in 88 schools and specialized programs.

CCSD offers a diverse, expanding portfolio of options and specialized programs, delivered through neighborhood, magnet, IB (international baccalaureate), Montessori, and charter schools. Options include programs in science, technology, engineering, and mathematics (STEM); music and other creative and performing arts; career and technical preparation programs; and military.