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Coventry High School

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CHS students take on real-world STEAM projects

JOE BLAKE
COVENTRY HIGH SCHOOL PRINCIPAL

The infusion of hands-on problem solving and engineering lessons and activities within our mathematics and science courses has given students multiple opportunities to experience real-life scenarios that bring STEAM to life inside and outside of our classrooms.

Our recently constructed aquaponics laboratory geodesic dome was created through the collaboration between science teacher Tim Dillon and CHS graduate Alex Bohr.

The Coventry Board of Education's generosity and a grant from Northrup Grumman allowed Dillon, Bohr and many other students to construct the geodesic dome in a courtyard at CHS.

As a result of this project, Coventry High School created a sustainable agriculture and aquaponics course.

The students develop the engineering design skills needed to build the physical aquaponics system and gain real-world experience on electrical systems, solar power and plumbing. The laboratory and instruction allows students to develop sustainable food production.

An aquaponics laboratory geodesic dome was constructed in the courtyard at Coventry High School. As a result of the project, the school created a sustainable agriculture and aquaponics course. Contributed photo

Also in Coventry Public Schools ...

Seventh-grader Jash Dakin works on a STEM project in Sarah Landry's class recently at Capt. Nathan Hale Middle School in Coventry. Contributed photo

STEM curriculum at CNHS is a-maze-ing

DENA DEJULIUS
CAPT. NATHAN HALE MIDDLE SCHOOL PRINCIPAL

Grade 6 and Grade 7 students at Capt. Nathan Hale Middle School in Coventry collaborate in their STEM classes with a focus on the engineering and design process and problem solving.

Students are involved in computer coding using Sphero robots.

Students collaborate to design mazes and then have to code their Sphero robot to move through each maze.

STEM classes challenged each other with increasing the complexity of each classroom's maze.

Students also design marble roller-coasters to explore potential and kinetic energy and have a paper bridge building contest.

Other STEM work includes designing the "Daredevil" free-fall amusement park ride, 3D design and printing, laser cutting and engraving and understanding solar ovens.

Bringing shapes to life at Coventry Grammar

RONDA CARRIE
COVENTRY GRAMMAR SCHOOL PRINCIPAL

A group of mathematicians launched an investigation into two-dimensional shapes and three-dimensional prisms using a 3D printer.

These were second-grade students at Coventry Grammar School.

After studying cubes in math class, the students noticed all the faces were squares, a 2D shape they had studied previously.

"Does every 2D shape have a 3D partner?" they asked.

We launched into a two-week investigation using the scientific method. Each student designed a 2D shape to turn into a prism using Google and Makerbot software.

After making predictions about the faces and angles of the 3D prism they designed, students watched the 3D printer construct their 3D prisms.

Students were given their design with the 3D printed prism on top of it. They were able to turn the shape over and analyze it from all angles. Their creations were alive!

Students concluded that every 2D shape can indeed be made into a 3D prism, each prism is named after its 2D shape and the number of faces and angles on the prism are directly related to the number of sides and angles on the 2D shape.

GHR pupils are creating high-tech presentations

JENNIFER DERAGON
GEORGE HERSEY ROBERTSON SCHOOL PRINCIPAL

STEAM is thriving at George Hersey Robertson School.

As an extension to classroom literacy, students in Grade 5 will be visiting the library media center as they finish novels to create a multimedia presentation that will be shared with their class.

These presentations will utilize such technology as Animoto to create book trailers, green-screen animation and video book talks.

Fifth-grade students also have the opportunity to participate in talent groups with the support of our challenge and enrichment teachers.

Based on specific interests, students will pursue and in-depth study of a topic, such as chemistry or engineering, each trimester.

Additionally, all GHR families will be invited to an upcoming STEAM event. Thanks to a district-wide Innovative Teaching Grant, "Family STEAM Night" will occur in early spring and incorporate hands-on demonstration stations devoted to science, technology, engineering, art and math.

Student experts from GHR and volunteer staff members will facilitate this interactive experience, which will include 3D printing, green-screen animation, a "Breakout Box" family escape room, and robots Dash and Dot controlled by the iPad. Each of these experiences will showcase the innovative opportunities offered at GHR throughout the year.