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DEVCOM C5ISR CENTER
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NEWSLETTER | APPROVED FOR RELEASE | VOL 5| ISSUE 01

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MATH CORNER

Mrs. Hilt's class room is 48 feet long and 39 feet wide. What's the area of Mrs. Hilt's classroom?

SME Q&A - MR. SAMUEL BROSH

Job Title: Electronics Engineer Experience: 1 Year Education: Columbia University, MS in Electrical Engineering and University of Maryland-Baltimore County, BS in Computer Engineering

1. What drew you to the STEM field originally?

I've always been passionate about problem solving, especially when it comes to practical applications. During high school, I frequently discussed with my teachers how the subjects we were studying applied to real-world problems. Noticing my enthusiasm, my physics teacher suggested that engineering might be a perfect fit for me. He then introduced me to the RISE program, which allows high school students to collaborate with C5ISR Center engineers on engineering challenges. This experience significantly fueled my passion and guided me to where I am today, serving as a mentor and role model for current high school students.

2. What should students be engaging in to further their interests in a STEM field?

Students should cultivate their curiosity by delving into STEM topics that genuinely interest them. A great way to start is by exploring beginner projects that involve building a complete system from start to finish. Once they have the basics down, they can modify and adapt the design to align with their personal interests. This approach mirrors the way engineers tackle real-world problems, including those relevant to the US Army. By embracing this approach, students can develop a mindset that is needed to be a brilliant engineer.

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A SUMMER TO REMEMBER

RISE

The C5ISR Center Community Outreach Office had two hugely successful summer programs this year. The Real-World Internship in Science and Engineering (RISE) program at APG and the Math and Science Summer Camp held at Harford Glen Environmental Center in Bel Air, MD.

The Real-world Internships in Science & Engineering (RISE) Program is a two-week annual program held at Aberdeen Proving Ground for high school students that provides a mean-ingful, in-lab experience for those interested in pursuing STEM related fields. Students in RISE work with professional engineers and scientists to complete result-oriented work which they later present to a combination of APG leadership, local participating industry partners, and local academia.

SUMMER CAMP

The C5ISR Math & Science Summer Camp returned to Harford Glen Environmental Center with hands-on learning with activities that ranged along different areas of science, technology, engineering and math. All the campers participated in various STEM related activities geared towards their grade-level (Grades 5-10). Each activity promoted STEM learning and encouraged the interest and engage-ment of many students.

Math Corner answer and Explanation
Area = Length x Width
48 x 39 = 1,872 Mrs. Hilt's classroom is 1,872 square feet.

TO LEARN MORE ABOUT THESE AMAZING OPPORTUNITIES GO TO HTTPS://C5ISR.CCDC.ARMY.MIL/STUDENT_PROGRAMS/

STEM ACTIVITY

STEM Activity: Fast Ru STOP Adult supervision required Rust is a natural element that can be seen on many old metal surfaces. We often see rust develop on the hoods and bumpers of old cars. It is a type of corrosion that occurs when iron reacts with oxygen and water. The chemical reaction that causes rust is called oxidation. The oxidation process eats away at the metal and creates visible rust on the metal's surface. While rust build occurs over many years, this experiment will allow you to make rust appear faster.

Materials:

- Steel Wool (not the soapy kind)
- Jar
- Water
- Vinegar
- Bleach
- Thermometer

Directions:

1. Place the steel wool into the jar then cover it with water.
2. Pour a dash of vinegar and a dash of bleach.
3. Wait a few hours and watch as the steel wool begins to rust.
4. After a few hours, place a thermometer into the wool and see the temperature rise.

STEM NEWS

We have all heard of the ever-popular electric cars that have been sweeping the nation. But a new car powered by a different form of renewable energy is about to makes its debut. "A team of students in the Netherlands designed and built a tough car that's completely powered by the sun. The car, called Stella Terra, is the first solar-powered car that can travel off-road for long distances without needing a recharging station." (NFK Editors) This hard-working team of students worked tirelessly to make their car drivable in the sense that, they wanted it to handle a tough form of driving. So how does it work? Like most electric cars, the Stella Terra still stores energy in a battery. But unlike electric cars, Stella Terra is designed to hold solar panels on its hood. Thanks to these powerful solar panels, its battery, when sunny, can provide extra power to the battery, allowing the car to run for 440 miles (710 kilometers) a day. To read the article in its entirety please visit: https://newsforkids.net/articles/2023/10/19/students-create-tough-solar-powered-car/

FUN FACT:

The fastest solar-powered car is the SunSwift IV; which averages a speed of 88.738 km/hr or 55,13 mph.

Ready, Set, STEM: The C5ISR Educational Outreach Program is a collection of Kindergarten through College Level programs designed to give students in the Northeastern Region of Maryland and Northern Virginia access to educational and extracurricular opportunities in the areas of science, technology, engineering, and math, or STEM. For more information about our STEM Outreach Program, visit us at: https://c5isr.army.mil/student_programs/
To reach our office, you can email us at: usarmy.apg.devcom-c5isr.mbx.outreach@army.mil