



AUGUST/SEPTEMBER 2022 NEWSLETTER

Upcoming Events

TEP

Bite of Science

- **September 13**

College and Career Panel

- **September 27**

[Click here to register!](#)

STEM Lyceums

Zoology

- **September 21**

[Click here to register!](#)

For Teachers & Students

Teacher Enrichment Program

Teachers can join us this year in our Virtual Bite of Science or in a College and Career Panels to learn about new cutting-edge research and technology.

STEM Lyceums

Students can join this virtual club to build STEM communities and engage in discussions and explorations of STEM concepts and STEM career pathways.

STEM Spotlight

Dr. Freeman Hrabowski



Dr. Freeman Hrabowski is a renowned academic leader who transformed a one-time commuter school into one of the country's strongest pipeline

of Black graduates in STEM. Dr. Hrabowski is an educator, advocate, and mathematician, who served as President of the University of Maryland, Baltimore County, more than 30 years, transforming the school into a noted institution of research and innovation. Under his leadership, UMBC was ranked the #1 Up and Coming University in the U.S. for six consecutive years. Hrabowski also chaired the President's Advisory Commission on Educational Excellence for African Americans. Dr. Hrabowski is a strong advocate for underrepresented groups in STEM.

Partner Opportunities

TEP in ALABAMA

TEP has expanded! TEP will now include the great state of Alabama. TEP will offer teachers resources and tools to share with their students and will offer Bite of Science and College & Career Panels.

Claude Moore Scholars

Update Meeting in Richmond, VA

September 23, 2022

CEE will partner with the Claude Moore Foundation for an event for teachers and students to learn more about healthcare careers and opportunities in Virginia.

STEM News

Major Step Forward in Fabricating an Artificial Heart, Fit for a Human

Summary:

Bioengineers have developed the first biohybrid model of human ventricles with helically aligned beating cardiac cells, and have shown that muscle alignment does, in fact, dramatically increases how much blood the ventricle can pump with each contraction.

Heart disease -- the leading cause of death in the U.S. -- is so deadly in part because the heart, unlike other organs, cannot repair itself after injury. That is why tissue engineering, ultimately including the wholesale fabrication of an entire human heart for transplant, is so important for the future of cardiac medicine.

STEM Bellringers

Click the links for the answers

Biology:

[Why are veins blue?](#)

Chemistry

[how can glass be liquid if its so hard?](#)

Earth/Environmental Science

[What would happen if you fell into a hole that went through the center of the Earth?](#)

Physical Science

[Can sound waves generate heat?](#)

STEM Activities

Cool STEM

Medical Robots

Do you help people when they're sick or injured? Doctors and nurses do amazing work to help people every day in hospitals, but did you ever wonder about the technology they use? Biomedical engineers use knowledge of how the human body works to create all kinds of hi-tech devices used in hospitals. They've even started creating robots to help patients. Robots are being designed to help patients recover after surgery, deliver medications to patients, and sanitize rooms in hospitals. There are even robots being used to perform surgery, especially helpful when a doctor isn't available in a certain area. Can you think of other ways that robots could be used in hospitals? Can you think of any problems with robots being used in medical situations? If you like robotics and helping people, learn more about careers with robotics in medicine: bit.ly/3zQRQPB



STEM Challenge

Have you ever tried making origami?

A frog is a pretty good starting project. The best part about this frog is that after you make it, you can make the frog hop! Maybe you could even challenge friends to see which frog hops the farthest or can land on a target (like a lily pad). Learn how in this video: youtu.be/uj5t4klo-SA



STEM in the News

Did you ever hear of the Zombie frog?

The small orange spotted frog was recently discovered in the Amazon rain forests of South America. How did it get its name? "Actually, we chose this name because the researchers are the ones that look like zombies when they dig out the frogs from the ground," said researcher Raffael Ernst. The frog is unique because of its round shape and small mouth. They're hard to find because they only make noises during or after heavy rains, and they're usually buried under the mud. Researchers think there are many more species to find. They think that for every 1 creature they've found living in the Amazon jungles, there are 6 more creatures that haven't been discovered yet. That's a lot of discovery waiting to happen! Would you like to search for new species someday? Learn more: bit.ly/3iilLcm

STEM Activity Corner

Can you solve these riddles?

1. What can go up and down without moving?
2. What has a foot on each side and one in the middle?
3. What did one earthquake say to the other?

ANSWERS: 1) stairs 2) yardstick 3) it's not my fault