TEP Teacher Enrichment Program

Excellence
Center for Excellence in Education

STEM Lyceums

June/July 2024 NEWSLETTER

Upcoming Events

TEP

A Different Look at STEM in the Classroom

- June 5; 5:00-6:00 (EST)

Click here to register!

STEM Lyceums

Insight to College

- June 26; 5:00-6:00 (EST)

Click here to register!

STEM Spotlight

Dr. Terry Hufford

CEE is saddened to announce the passing of Dr. Terry Hufford, who served as the Director of USABO for CEE from 2006-2009. He was an emeritus professor of botany at George Washington University and a member of GW's Academy of Distinguished Teachers. Terry was an innovator and recognized nationally for his work in STEM teaching, learning, and curriculum design.

Upon retirement, he continued to write scholarly manuscripts on science learning and taught courses like his "Biology in the City." Funded by the Hewlett Foundation, this student-centered course allowed students the opportunity to work through big idea problems within biology while exploring resources in the Washington, DC area.

Terry epitomized what it meant to be a leader in life science education and was a beloved mentor and friend.

For Teachers & Students

Teacher Enrichment Program

Teachers can join us this year in our Virtual Bite of Science and College & 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 News

Over 500 million years ago, weird complex creatures emerged on Earth

Summary:

Earth's magnetic field plays a key role in making our planet habitable. The protective bubble over the atmosphere shields the planet from solar radiation, winds, cosmic rays and wild swings in temperature.

These weird animals barely resembled life today — squashy fans, tubes and doughnuts, and discs. Prior to this time, life had been largely single-celled and microscopic. The researchers believe that a weak magnetic field may have led to an increase in oxygen in the atmosphere, allowing early complex life to evolve.

Partner Opportunities

2024 Congressional App Challenge

The Congressional App Challenge's mission is to inspire, include, and innovate efforts around STEM, Coding, and Computer Science Education. Every year students in congressional districts are challenged to create and submit their original apps for a chance to win the Congressional App Challenge (CAC). Each challenge is district specific. U.S. Representatives publicly recognize the winning teams, and each winning app may be put on display in the U.S. Capitol Building for one year. **Click Here to Register!**

STEM Bellringers

Click the links for the answers

Biology:

What makes the soil in tropical rainforests so rich?

Chemistry

What makes a "fluorescent" highlighter marker so bright?

Human Anatomy and Physiology

How do nerves control every organ and function in the body?

STEM Scholarships/Internships

Students

The Gates Scholarship

GE-Reagan Foundation Scholarship Program

Ron Brown Scholarship

Sierra Nevada Corporation Women in STEM Scholarship

Amazon Future Engineer Scholarship Program

Foot Locker Scholar Athletes Program

McDonald's Hacer National Scholarship

United States Senate Youth Program

Teachers

Albert Einstein Distinguished Educator Fellowship (AEF) Program

McCarthey Dressman Teacher Development Grants

NEA Foundation Learning and Leadership Grants

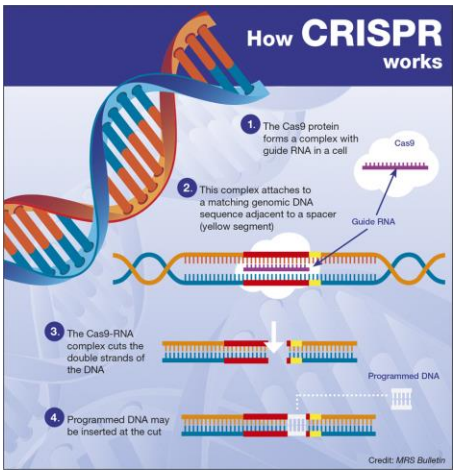
NEA Foundation Envision Equity Grants

STEM Activities

Cool STEM

Repair of CRISPR-guided RNA breaks enables site-specific RNA excision in human cells

Genome editing with CRISPR RNA-guided endonucleases generates DNA breaks that are resolved by cellular DNA repair machinery. However, analogous methods to manipulate RNA remain unavailable. Within the research, it is shown that site-specific RNA breaks generated with type III CRISPR complexes are repaired in human cells, and this repair can be used for programmable deletions in human transcripts to restore gene function. Collectively, this work establishes a technology for precise RNA manipulation with potential therapeutic applications: bit.ly/3zQRQPB



Classroom Activities

Explore the various standards-based classroom lessons from FutureU.

- Long-Endurance Space Flight
- Space Ergonomics
- Ocean Eco-Exploration
- Bioremediation
- Cabin Redesign
- Cargo Air Vehicle (CAV) Aid
- Future of Satellites