Teacher Enrichment Program
September 2021 Newsletter

Fall 2021 TEP Events

*Educators are encouraged to register for all events of interest regardless of location. Click **here** for additional event and speaker information.*

Virtual Bite of Science

Join for presentations by STEM professionals from industry, academia, and/or government. Events from 5—6:30 pm, ET

Event	Date
Harrisonburg	Sept 14
Roanoke	Sept 15
Richmond/Petersburg	Oct 6
Hampton Roads	Oct 7

Virtual College & Career Panels

Join to learn from STEM industry professionals and representatives of institutions of higher education to share information and insights about STEM careers and educational pathways in your area. Events from 5—6:15 pm, local time.

Event	Date
West Virginia	Sept 28
Texas	Sept 30
Central Florida	Oct 26
Panhandle Florida & Alabama	Oct 28
California	Nov 4
Maryland	Nov 16

√STEM

Learn more about the interdisciplinary nature of STEM, the real-world applications of STEM skills and how STEM intersects with our daily lives. Events from 5—6:15 pm, ET.

Event	Date
Super Snouts: The Olfactory Excellence of Man's Best Friend	Oct 12
Changing the Game: The Technological Revolution of Sports	Nov 9
To Infinity & Beyond: The Implications of Civilian Space Travel	Dec 14

"Taking Flight" in STEM

Science

New algorithm flies drones faster than human racing pilots can

For the first time an autonomously flying quadrotor has outperformed two human pilots in a drone race.

Technology

Hydrogen-powered aviation will be tested on turboprops at new Moses Lake venture

"An ambitious new project aims to modify small regional turboprop aircraft there to fly on hydrogen fuel, test and certify them to carry passengers, and potentially offer a long-term solution to aviation's carbon emissions by demonstrating that hydrogen aviation is economically viable."

Engineering

Meringue-like material could make aircraft as quiet as a hairdryer

The University of Bath's Materials and Structures Centre engineered a new material that could silence the aviation industry.

Mathematics

Study: Empty middle seats make flying safer during COVID-19

Statistics Professor Arnold Barnett, of the Massachusetts Institute of Technology's Sloan School of Management, brings a unique statistics-based perspective to flying amid COVID-19.

RSI & USABO Deadlines

The Center for Excellence in Education offers two STEM programs at no cost to high-performing high school students: the Research Science Institute (RSI) & US Biolympiad (USABO).

Research Science Institute (RSI)

The application for RSI opens mid-November. Dates and additional information to be announced.

United States Biolympiad (USABO)

The USABO is the nation's largest biology education and testing program. Explore the world of Biology through the USABO. Registration for the USABO opens September 10, 2021.

For more information about programs and how to register or apply, visit program websites (RSI & USABO).

A Lesson to Learn

Illumina: Exploring Genomics at Every Age

Illumina's extensive collection of materials, "will help you bring genomics into your classroom in dynamic and exciting ways to inspire the next generation—whether you're an educator or a learner."

Upcoming Illumina events open to all teachers:

- **October 11: 1-2pm ET** - Women in Biotech
- **October 20: 7-8pm ET** - Using Genomics in Agriculture to Advance Sustainable Solutions (part of Illumina Genomic Discoveries Industry Speaker Series)

CEE Program News

The Center for Excellence in Education offers two STEM programs at no cost to high-performing high school students: RSI & USABO.

Research Science Institute (RSI) is pleased to announce winners of RSI 2021 awards:

Top Five Written Presentations

- Kevin Cong, Exeter, New Hampshire
- Amber Luo, Stony Brooke, New York
- Dheepthi Mohanraj, Chapel Hill, North Carolina
- Michelle Park, Solon, Ohio
- Ella Wang, Chandler, Arizona

Top Five Oral Presentations

- Meenakshi Ambati, Charlottesville, Virginia
- Frank Liu, Newton, Massachusetts
- Donald "DJ" Liveoak, Allen Park, Michigan
- Amber Luo, Stony Brook, New York
- Michelle Park, Solon, Ohio

Rickoid of the Year

- Isabella Quan, Westlake High School, Texas

United States Biolympiad (USABO) is pleased to announce Team USA's International Biology Olympiad results:

Gold

- Judson Lam, Naperville North High School, Naperville, IL
- Albert Zhang, North Hollywood Senior High School, North Hollywood

Silver

- Greycen Chen, Adlai Stevenson Highs School: Lincolnshire, IL
- Derek Chen, Belmont High School, Belmont, MA

Celebrate Flight!

Aprille Ericsson-Jackson

Dr. Aprille Ericsson-Jackson's STEM story launched while watching the Apollo missions on television as a young girl. The mesmerizing visuals created a lasting impact, instilling the deep fascination of space so perfectly fitting with the inherent curiosity of youth. She continued to foster her passion through middle school, where she attained success in school science fairs for the invention of various scientific instruments.

These formative events inspired Ericsson-Jackson to attend a high school STEM educational enrichment experience through the Massachusetts Institute of Technology. During the program, she had the opportunity to observe the systems of an aircraft tower and operate a flight simulator at an Air Base in New Hampshire. She was hooked. This experiential exposure to aerospace ignited the career of a pioneer.

After graduating from MIT with a Bachelor of Science in Aeronautical/Astronautical Engineering in 1986, she went on to earn a master's degree in engineering from Howard University in 1992. Ericsson-Jackson accepted a role as an aerospace engineer at the NASA Goddard Space Flight Center, working for three years before returning to Howard University to earn a doctorate in mechanical engineering. The doctorate degree she earned established her as a trailblazer. She was officially the first African American female at the Goddard Space Flight center to obtain a Ph. D in Engineering, paving the way for a more diverse workforce.

Since then, Dr. Ericsson-Jackson has utilized that same childhood wonder to develop spacecrafts and instruments integral to our comprehension of the Earth-Sun connection, space science, and Earth itself. Among the most prominent of her accomplishments are: designing instrumentation for the Wilkerson Microwave Anisotropy Probe, designing instrumentation for the Lunar reconnaissance Orbiter, designing a laser altimeter instrument for the ICESat-2 Atlas satellite that measures ice sheets over Greenland and Antarctica to determine the impact on global sea level, predetermining the dynamics and structural reactions of satellites and observing the effects of El Nino and La Nina through Nasa's Tropical Rain Measuring Mission.