

Teacher Enrichment Program May 2020 Newsletter

Calendar of Events

The Center for Excellence in Education has been busy sharing a selection of outstanding CEE presentations through our new <u>Digital Education</u> <u>Series!</u> Learn from leading experts through short videos with associated knowledge-based and application questions.

Digital Education Series



Released April 9th

Harnessing New CRISPR Systems with Dr.
Gootenberg, Cancer Sucks with Dr. Fein, and
Reprogramming the Brain's Immune Cells to
Fight Alzheimer's Disease with Dr. Yang

Released April 23th

Artificial Intelligence & Robotics with Dr. Lee,
Using STEM Cells to Cure Disease with Dr. Li, and
Oil Spills: What Happens After the Cleanup? with
Dr. Jones

May 7th & May 21st

High school students present their research in Biology, Chemistry, Data Science and more!

More videos to be released every two weeks! Want to stay informed? Join the <u>TEP Facebook</u> group!

Recent Disruptions in STEM

Science

COVID-19; Where do we go from here?

(Harvard Webinar was recorded April 21)

Technology

The intersection of COVID-19 & artificial intelligence

Engineering

Disparity between mathematical models and behavior of industrial components

Mathematics

We're walking more! Math professor and students solve the long-standing math query behind "random walks," a rare feat (no pun intended) in the mathematical world, where "Part of being a mathematician is getting used to failure" (CalTech, 2020).



Scientific American celebrates its 175th year!

The first issue of <u>Scientific American</u> was published on August 28, 1845. Through the decades, it has kept us up-to-date with the key advances in research and discovery.

Looking forward, we can expect new columns:

Observatory: helping us ascertain what is true and false in our lives and in the world.

<u>Meter</u>: a tradition of poems begun in 1849 being rekindled

<u>Epic Tales</u>: commentary on the evolution of significant

stories over the decades

A Lesson to Learn

Explore a different kind of biological disruption with your students.

What causes allergic reactions?

Does everyone have allergic reactions
to the same stimuli?



The Allergy Chronicles

Photo Art by Elena Mozhvilo Lesson hosted by ScienceNetLinks of AAAS

Additional teaching resources and remote learning support can be found on our <u>TEP</u> homepage and <u>Lab Bench</u> resource site!

Additional CEE Programs

The Center for Excellence in Education offers two No Cost, STEM programs for high-performing high school students:

Research Science Institute (RSI):

RSI is hosted at the prestigious Massachusetts Institute of Technology for six weeks each summer.

United States Biolympiad (USABO):

USABO brings together students and expert mentors for rigorous study within biological research.

Celebrate Perseverance

Dr. Percy Julian

Disrupting the Status Quo

Chemist Dr. Percy
Julian developed the
groundbreaking
treatments for
glaucoma and
rheumatoid arthritis,
including synthesis of
physostigmine which
the American
Chemical Society
named "one of the



top 25 achievements in the history of American chemistry."

Dr. Julian was born April 11, 1899 in Montgomery, Alabama. His grandparents had been enslaved. Julian, however, earned his high school diploma and bachelor's from DePauw University in Greencastle, Indiana (number one in his class with Phi Beta Kappa honors), his master's from Harvard, and his doctorate from the University of Vienna, Austria.

His research at Glidden Company led him to develop Aero Foam, a soybean-based product that quenched both oil and gas fires and was of great benefit to the troops during World War II.

In1954, Dr. Julian founded his own laboratory. He sold it less than a decade later and became one of the nation's first African American millionaires. Dr. Julian died of liver cancer in 1975, but not before being elected the first African American to the National Academy of the Sciences.

Read more about Dr. Julian's life and studies at NOVA: Who was Percy Julian? or view the award-winning documentary:

Forgotten Genius.