

Virtual Bite of Science Recordings & Resources

Check out some recent *Bite of Science* recordings and their related educational resources. The full 2020—2021 *Bite of Science* playlist can be found [here](#).

[Colin Redhead](#), Material Process & Delivery
Director at Procter & Gamble

[Tracy Brubaker](#), District Systems Operations
Manager at FirstEnergy

[Kevin Stevenson](#), Associate Engineer, Nordson
Corporation Advanced Technology Solutions
Division

[Joe May](#), Chief Technology Officer at EIT

2021 USABO Finals Guest Lecture Recordings

The USABO invites TEP teachers to watch lectures from this year's USABO Finals. The complete playlist can be found [here](#) and include these highlights:

[Dr. Frederick Y. Chen](#), MD, Ph.D., Chief, Division
of Cardiac Surgery, CardioVascular Center;
Professor of Surgery, Tufts University School of
Medicine

[Dr. Simon James Archibald](#), Ph.D., Chief
Scientist, Integra LifeSciences Corporation

[Dr. Jamie L. Wells](#), MD, FAAP, an RSI '91
alumna, Director of the Research Science
Institute (RSI)

[Dr. Chetan Goudar](#), Ph.D., Vice President,
Process Development at Amgen

“Theme” in STEM

Science

[Butterflies regularly cross the Sahara in longest-known insect migration](#)

A species of butterfly found in Sub-Saharan Africa is able to migrate thousands of miles to Europe, crossing the Saharan Desert, in years when weather conditions are favorable, scientists have found.

Technology

[Scientists detect signatures of life remotely](#)

It could be a milestone on the path to detecting life on other planets: Scientists detect a key molecular property of all living organisms from a helicopter flying several kilometers above ground.

Engineering

[Novel smart cement can be used to build more durable roads and cities](#)

By introducing nanoparticles into ordinary cement, Northwestern University researchers have formed a smarter, more durable and highly functional cement.

Mathematics

[How one physicist is unraveling the mathematics of knitting](#)

Understanding how knots influence textile properties could lead to new materials.

Timeless STEM



The Smithsonian Institute has been working to digitize, organize and share with educators its vast treasure trove of artifacts and data through the [Smithsonian Learning Lab](#).

The Smithsonian National Air and Space Museum recently updated their [learning resources](#) and continue to work on ways to share their resources with teachers across the country.



A Lesson to Learn

RSI Guest Lecture Series

During CEE's Research Science Institute, RSI scholars RSI's Distinguished Guest Lecture Series, RSI scholars learn about the careers, achievements and challenges of STEM through presentations and dialogue in RSI's Distinguished Guest Lecture Series. RSI's 2021 guest lecturers include distinguished professors, Nobel laureates and RSI alumni.

CEE invites TEP teachers to listen in on the Research Science Institute's Guest Lecture Series and learn from some of the world's foremost STEM experts. Additional information about the series and guest lectures is available [here](#).

CEE Program News

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

Research Science Institute ([RSI](#)):

RSI will be held virtually June 27th through August 7th in collaboration with Massachusetts Institute of Technology. Over 80 US and international students will work virtually with their project mentors, who are scientists from across the country.

United States Biolympiad ([USABO](#)):

The USABO recently wrapped up its 19th Annual USA Biolympiad National Finals. Nearly 9,000 students from 464 schools, 42 states, and 8 International Schools registered in the nationwide high school competition. The 2021 Team USA members are:

- **Derek Chen**, Belmont High School, Belmont, MA
- **Judson Lam**, Naperville North High School, Naperville, IL
- **Greycen Ren**, Adlai E. Stevenson High School, Lincolnshire, IL
- **Albert Zhang**, North Hollywood Senior High School, North Hollywood, CA

Celebrate Discovery!

Beth Anne Brown, Ph.D.

"My Head is crowned with Blazing Stars; whirling galaxies play at my feet."

Dr. Brown (1969–2008) was a Roanoke, VA native who turned her love of science and science fiction into a career. While in high school, Dr. Brown visited an observatory for a school assignment and saw the [Ring Nebula](#) through a telescope.



This experience intensified her interest in astronomy.

Dr. Brown became the first African-American woman to receive a doctorate in astronomy from the University of Michigan and developed the still-popular course, Naked Eye Astronomy, during her time there.

Dr. Brown spent her career at NASA collecting data on the environment of [elliptical galaxies](#) which are thought to be the result of two smaller galaxies merging, and each is believed to contain a [supermassive black hole](#) in its center.

In 2006, she received a NASA Administrator's Fellowship and served as a visiting assistant professor at Howard University. During her time at NASA, where she represented NASA in television interviews and developed a website for the public on the Milky Way.

"[I want others to] have a connection to the physical universe we live in," Dr. Brown said. "Our ancestors used to depend on looking up at the night sky, but we don't look up anymore. I want them to know there are fascinating things in the night sky and understand what they see. I want to translate my wonder of the night sky to others."

Dr. Brown passed suddenly in 2008 from a pulmonary embolism, but her work and legacy live on in the lives of the many students she inspired and the Dr. Beth A. Brown Science Foundation,. The foundation provides scholarships to high schooler who pursue degrees in astronomy or physics.