Teacher Enrichment Program
January 2021

Predictions for the Future
National Bird Day, January 5th

TEP Events

Register for all events of interest by clicking on the event.

The World Inside Us: Microbiomes & Human Health

Tuesday, January 18, 2022

5:00 – 6:00 pm, ET

How do microbes effect human body systems and our health? What's an oral microbiome? What bacteria live in our gastrointestinal tract? What's the difference between pathogenic and commensal organisms?

Learn more about the speakers

Sweet Treats: Confectionary Science and Technology

Tuesday, February 8, 2022

6 – 7 pm, ET

Health Science Highway: Pharmacy Tech & Pharmaceutical Sciences

Thursday, February 10, 2022

5 – 6:30 pm, ET

STEM College & Career Webinar: Manufacturing

Thursday, February 17, 2022

5 – 6:15 pm, ET

Virtual Bite of Science

Tuesday, February 22, 2022

5 – 6:30 pm, ET

STEM News

Science

Exquisitely preserved embryo found inside fossilized dinosaur egg

A 72 to 66-million-year-old embryo found inside a fossilized dinosaur egg sheds new light on the link between the behavior of modern birds and dinosaurs, according to a new study.

Technology

Birds' dazzling iridescence tied to nanoscale tweak of feather structure

Researchers found that the iridescent shimmer that makes some birds so striking is rooted in an evolutionary tweak in feather nanostructure. This insight could help inspire the development of new materials that can capture or manipulate light.

Engineering

Birds: The World's Best Engineers

Engineers are learning about efficient avian habits that they can apply in developing aircraft and other technology from birds.

Mathematics

Keeping a closer eye on seabirds with drones and artificial intelligence

Scientists used an AI deep-learning algorithm to analyze more than 10,000 drone images of mixed colonies of seabirds in the Falkland Islands. The algorithm's automated counts closely matched human counts at 90% of the time.

A Lesson to Learn

Audubon Society

Audubon Adventures
Activities and resources for young nature-lovers and teachers

Find your local Audubon for programs and resources near you!

Material Science

Materials science is the study of stuff— what it's made of, how it can be used, and even how it can be changed to create new kinds of stuff.

Resources & Experiments

Partner Opportunities

Dominion Energy Solar for Students (Virginia Only)

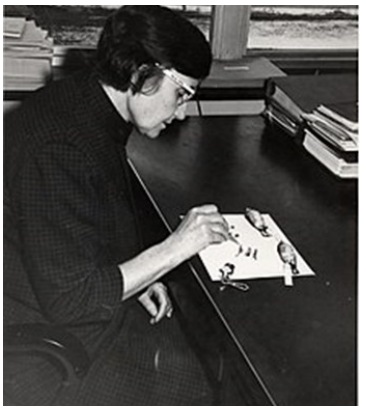
- Participating public schools and educational organizations receive a 1.2 kilowatt solar system that converts sunlight into electric power, as well as educational materials and training for educators.
- Applications due January 30.

Illumina

- DNA Decoded provides ready-to-go, standards-aligned lessons and activities for teachers and students to explore the ways they can see genomics in their everyday lives.
- Discover Careers in Genomics Video Series
- Get ready for DNA Day on April 25, 2022!

Celebrating Ornithology!

Roxie C. Laybourne



Laybourne identifying bird feathers, circa 1944.

Roxie C. Laybourne was born in Fayetteville, NC in 1910. As a child, she climbed trees to get a better look at birds, especially owls, and spent hours watching turkey vultures flying overhead and catching thermal air currents. Laybourne earned an undergraduate degree from Meredith College in 1932 and eventually received a master's degree in botany from George Washington University in 1951.

Laybourne started her career at the North Carolina State Museum of Natural History in its taxidermy an exhibit departments. In 1944, Laybourne joined the Smithsonian Institution, where she worked for over 40 years in the bird division perfecting her system for identifying birds and overseeing the institute's collection of over 650,000 bird specimens.

Laybourne pioneered the science of forensic ornithology. In 1960, an aircraft took off from Boston Logan airport, then crashed into Boston Harbor after flying through a flock of birds. Laybourne gathered bits of charred materials from the engine intake areas and examined them under a microscope. From this, she suggested that starlings had clogged one of the engines and caused the crash.

Laybourne continued to investigate bird strikes to engines or cockpits of commercial, private, and military aircraft, and became the world's foremost authority in identifying bird species by the remains of their feathers. Her work has been instrumental in safety improvements within the manufacturing of aircraft engines, the development of military fighter canopies, and the creation of runway management plans. Laybourne's skills in forensic ornithology helped solve around 1,000 cases of bird-related airplane incidents a year.

Often called the "feather detective," Laybourne also used feathers to solve crimes for the FBI, to identify feathers unearthed by archeologists, and to recognize species of endangered poached or illegally killed birds.

For more information: Audubon