



November 2023 NEWSLETTER

Upcoming Events

TEP

What's in Your Food? Agricultural Biotechnology

- November 16th ; 5:30-6:45 (EST)

[Click here to register!](#)

STEM Lyceums

STEM in Music

- November 15th; 4:30-5:45 (EST)

[Click here to register!](#)

STEM News

[An Indigenous focus on Dental Care initiatives in Canada](#)

Summary:

The Indigenous Dental Association of Canada (IDAC) is the newest and most prominent Indigenous – led initiatives addressing the inequities of oral health in Canada. To counteract these inequities, the IDAC plans to create a network of Indigenous dental professionals from across the country through student mentorship and expanding access to dentistry in remote

With the development of a new training center, students will have access to virtual simulators to provide a culturally appropriate learning environment. The goal is to build capacity within Indigenous communities and address the growing demand for dental care while respecting Indigenous cultural perspectives.

STEM Spotlight

Jack Carson



Jack Carson's RSI experience marked a profound turning point. Collaborating with Ph.D. student Kevin Chung in Dr. Alan Jasanoff's lab, Jack's ingenuity led to significant advancements in neurofeedback through the creation of pioneering software and machine learning models, reshaping the landscape of brain-machine interactions. As a Native American student, his enduring passion revolves around addressing the pervasive educational inequalities and underrepresentation within STEM fields. Jack's commitment goes well beyond the lab's boundaries. Back in his hometown, he actively bridges the educational gaps that have held back aspiring scientists, particularly in underserved communities. Through collaborations high schools within the Cherokee Nation, Jack provides mentorship opportunities and introduces crucial STEM curricula, catalyzing positive change in education and igniting the aspirations of the next generation. The RSI experience acted as a catalyst that fueled Jack's fervor for Biochemistry and Neuroscience, serving as the springboard for his future academic pursuits. His journey, deeply rooted in a determination to make a difference, carries the promise of significant contributions to the fields of science and education leaving an indelible mark on the world of STEM.

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.

USABO

Students and teachers can register their school for the opportunity to be a part of the premier biology competition open to all schools in the United States.

Partner Opportunities

4H

4-H, a dynamic and influential youth organization, has been making a lasting impact on the lives of young people for over a century. Originally founded in the United States, 4-H has evolved into a global movement, instilling a sense of purpose, leadership, and community engagement in the minds of participants.

For those who are eager to discover more about 4-H and how they can become a part of this transformative organization, visit their website [here](#) to find out how to reach your local 4-H chapter, or connect with their dedicated volunteers. Your journey with 4-H starts with a simple step, and it can lead to a world of opportunities for growth and community involvement.

STEM Bellringers

Click the links for the answers

Space:

[Are there different types of black holes?](#)

Health:

[How long do you have to exercise for it to count?](#)

Chemistry:

[Why doesn't the planet Uranus explode if it contains so much hydrogen and methane?](#)

STEM Activities

Cool STEM

New Research Rewrites the History of American Horses

A recent study published in the journal Science challenges existing narratives about the history of horses in North America. The research, involving over 80 scientists and scholars, including experts from Indigenous nations, suggests that Indigenous peoples had horses in the American West by the early 1600s, well before the arrival of Europeans. This finding aligns with Indigenous oral histories that mention interactions with horses before the arrival of colonizers, contradicting European texts from the 1700s and 1800s. Radiocarbon dating and DNA analysis of horse remains across the Western U.S. revealed that these horses had Spanish ancestry and were part of Native American culture, emphasizing the importance of Indigenous oral traditions in understanding history. This study provides new evidence of horses spreading through Native social networks in North America. For more information please visit [:https://www.smithsonianmag.com/](https://www.smithsonianmag.com/)



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](#)

[Fund for Teacher Fellowship Grant \(Opens Oct. 1\)](#)

[Connecting Mathematics to Other Subject Areas](#)

[Classroom Research Grant](#)

[National Science Teacher Award](#)

Classroom Activities

[Witness the carbon cycle in action](#)

[Detect latent fingerprints](#)

[Discover the size of a mole](#)

[Generate a Lichtenberg figure](#)

[Build your own Newton's Cradle](#)