Summer Engagement Opportunities

Towards the end of a school year, students and educators are not always enthusiastic about enrolling in additional learning opportunities in the summer months. However, these events often rejuvenate and inspire deeper learning and offer a fresh perspective. This newsletter shares learning opportunities for summer camps, professional learning, and the STEAM Expo at the 2022 Illinois State Fair to offer that spark.

The Illinois Department of Innovation & Technology (DoIT) will host the Tech Prairie STEAM Expo at the 2022 Illinois State Fair. The event will provide fairgoers with opportunities to experience the many ways Illinois is advancing the areas of STEAM. Along with DoIT, the STEAM Expo is being presented by the University of Illinois Extension 4-H, Illinois Innovation Network, Learning Technology Center of Illinois, and Illinois Digital Educators Alliance (IDEA).

The STEAM Expo will run during the second half of the Fair to highlight K-12 and postsecondary education, business, industry, research, and development related to STEAM in Illinois. Feature attractions planned include: a mobile CNC lab, virtual reality opportunities, health sciences stations, and aerospace exhibits. Tech playground interactive activities planned include virtual reality and robotics exhibitions.

Visitors will engage with innovative technologies and demonstrations from organizations across Illinois. As part of Tech Prairie, a drone competition is scheduled for Friday, August 19, 2022 on the Illinois State Fairgrounds. Pilots, age 10 and up, are welcome to compete and there is no fee to enter. The competition is sponsored by "Grow Our Own" Minority Participation Program, which is supported by the City of Springfield, Sangamon County, and Hanson Professional Services Inc. The Central Illinois Drone Racers are managing the event and prizes will be awarded to winners.

An eSports competition is planned for Saturday, August 20, 2022 in the Tech Prairie STEAM Expo. Four separate games will be part of the in-person competition with prizes awarded in an 18 & under group as well as an open division. There is no fee to enter. The eSports competition is organized by the University of Illinois eSports Team.

Fairgoers and students will be able to explore STEAM career opportunities inside the Expo through guided or self-guided tours. Scheduled tours are also available that offer a behind-the-scenes view of Illinois agriculture on the Illinois State Fairgrounds. Tours are limited, so early registration is encouraged. More information is available at www.illinois.gov/steamexpo or you can email questions to doit.steam@illinois.gov. The Expo will be held daily from 10am to 6pm, August 17-21, 2022 in the Orr Building on the west side of the Illinois State Fairgrounds in Springfield. Plan to visit!

Let off some STEAM with these fun activities!

K - 4
JASON Learning "Scrap Map Interactive"

5 - 8
NASA's "Go with the Flow" An Ocean Currents Game

9 -12
Quantum Chess

Educator's Corner

STEAM resources for in-person, hybrid, remote learning, and professional development

- Smithsonian Learning Lab

- U.S. Department of Energy STEM Rising

- Internet 2 Presidential Primary Sources Project

- JASON Learning Resources

- U.S. Environmental Protection Agency "Learning and Teaching About the Environment"

- Argonne National Laboratory "Lowering the temperature on a hot topic: a climate change primer"

- Argonne National Laboratory Efforts to Reach Net-Zero Carbon Emissions

- US Department of Energy Pacific Northwest National Laboratory "A New "Fitbit" for Fish Spills Secret Life of Fish"

- The Art and Science of Black Farming

- IMSA's "Aviation Day" for 5th-12th grade educators June 16, 2022

- DoIT Quantum Resources

News & Events

2022 National Science Foundation STEM for All Video Showcase: Access, Inclusion, and Equity
Online | May 10-17, 2022

"We invite you to view short videos depicting innovative, federally funded projects aimed at improving Science, Math, Engineering and CS education. Discuss the videos online with the presenters and other visitors. Vote for your favorite presentations for the Public Choice award. Thousands of researchers, educators, higher ed faculty, and parents will take part in this free, NSF funded event. Sign up for updates!"

LEARNING TECHNOLOGY CENTER of ILLINOIS

Illinois' New Computer Science Standards
Webinar | 3:30 pm - 4:30 pm on May 17

"To ensure students are equitably prepared for the demands of the future workforce, the Illinois State Board of Education has published a new set of standards for computer science learning in K-12 public schools. How can we as school leaders and classroom educators develop programs that align with these standards and meet expectations? Come discover how as we strive toward creating CS learning experiences that are enriching and engaging for all students."

How to Start an eSports Program at your School 3:30—4:30pm on May 19, 2022

"You've heard about it in the news. Your students have been begging for it. Now it's time to finally pick up the controller and hit "start" on your district's esports program. But what are you supposed to do if you're starting at Level 1?

Join the Learning Technology Center's Holly Kelly and Eric Santos for a primer on kickstarting an esports program in your district. This 1-hour session will focus in on the background knowledge needed to start a successful esports program, including: current trends in esports, hardware/software needs and recommendations, game and league options, coaching tips, potential costs, and more! This session will cover information relevant to elementary, middle, and high school program, too, so all teachers and administrators curious about esports in education are encouraged to attend. Register for this free webinar."

News & Events Continued

Abraham Lincoln Presidential Library & Museum Presents "PD in Your PJs"
6:00—7:00 pm on May 23, 2022

Ten Tips to Grow Savvy Digital Citizens (Register) - Free webinar

"Join ALPLM's Director of Education Heather Nice as she discusses ten tips to share with students of any age to help them become savvy consumers and producers of digital content. The goal? Growing digital citizens who responsibly use technology in an engaged, inclusive, balanced, informed, and alert manner."

Register for CSTA 2022 by May 31 and Save up to $150

"Illinois CS and STEM Teachers: Are you looking to attend the Computer Science Teachers Association 2022 Conference? Get the best value for your CSTA 2022 experience by registering at the early bird rate. Prices will increase by $125 for CSTA+ members and $150 for basic CSTA members on June 1. Registration includes access to all programming, the Welcome Reception, CSTA After Hours, and the Exhibit Hall. Head to our conference website to reserve your spot today!"

CODE.org Summer Workshops and Scholarships

"The Learning Technology Center of Illinois and Code.org are hosting five-day summer workshops and year-long cohorts for new and beginning computer science teachers. Scholarships are available to cover the cost of attendance.

CS A Summer Workshop for Grades 9-12
Guide students through learning object-oriented programming using Java. Students take on the role of software engineers, and practice skills that are used in the field. The Code.org curriculum for CSA is designed for any high school student who wishes to continue their computer science education after completing an introductory course such as Computer Science Discoveries (CSD) or Computer Science Principles (CSP).
June 13-17, 2022
Parke Regency Hotel and Conference Center, 1413 Leslie Drive Bloomington, IL 61704

CS Discoveries Summer Workshop for Grades 6-10
Engage your students with a wide lens on computer science by covering topics such as programming, physical computing, web development, design, and data. The course inspires students as they build their own websites, apps, games, and physical computing devices.
July 25-29, 2022
Courtyard by Marriott - Chicago/Arlington Heights, 100 West Algonquin Road, Arlington Heights, IL 60005

CS Principles Summer Workshop for Grades 9-12
Introduce your students to the foundational concepts of computer science and challenge them to explore how computing and technology can impact the world. More than a traditional introduction to programming, it is a rigorous, engaging, and approachable course that explores many of the foundational ideas of computing so all students understand how these concepts are transforming the world we live in.
August 1-5, 2022
Parke Regency Hotel and Conference Center, 1413 Leslie Drive Bloomington, IL 61704"

STEAM Resource Spotlight

National Park Service Educator Resources

"National parks are America's largest classrooms. Find lesson plans about these great places. Take your students on a "virtual field trip" where they can talk with a ranger or go behind the scenes at a park. Search by subject and/or grade level.

"Teaching with Historic Places" include place-based lesson plans that teach history through images, maps, readings and other primary source documents. Teaching with Historic Places (TwHP) offers teaching tools and lesson plans to help educators engage young people with powerful stories representing America's diverse history. Historic places in National Parks and in the National Park Service's National Register of Historic Places enliven history, social studies, geography, civics, and other subjects.

"In Lincoln's Words" Lincoln Home National Historic Site is an ideal place to let your students' knowledge and curiosity of Abraham Lincoln lead the discussion. Our distance learning programs are inspired by the essential question: *How can artifacts help us understand a person or time period?* During a distance learning session, we take students on a virtual tour of the Lincoln Home to discuss important issues that shaped Lincoln's life, all while we look at artifacts that belonged to Abraham Lincoln, to his family, or to one of his many neighbors. Join us from your home or classroom to learn how objects help keep the Lincolns story alive!"

Southern Illinois University—Edwardsville STEM Resource Center

"The STEM Center at SIUE provides a variety of programming and services to broaden STEM education throughout the region. From organizing and judging science fairs to developing and testing innovative curriculum that builds computational thinking among elementary school students, our team of researchers, educators, and creators works to define best practices in STEM initiatives. With everything we do, we strive to learn what make STEM education work no matter the setting or audience.

Visit our **Research** and **Outreach** pages for a complete list of our services and programs. To access our online inventory of equipment, kits and books (most available for free loans!) click here: **SIUE STEM Resource Center**."

Summer Camp Opportunities

Summer is quickly approaching! Many organizations have STEAM-centric K-12 summer camps still open for registration with in-person, virtual, or hybrid models. Check out a few here or get inspired to research opportunities in your area.

Northern Illinois University STEAM Camps

An experience they'll remember.

"A week on a college campus can be a life-changing experience for a young person. It offers a chance to build friendships. To engage in intellectual development and career exploration. To gain confidence in social and academic realms that sets the stage for future success.

Our campers return year after year because of connections they create with peers who share their interests and passions and with faculty and staff who nurture their creativity. This may be the first time a camper develops their own robot, film or video game or conducts an experiment of their own design. But it likely won't be the last.

Northern Illinois University STEAM Camps are led by a passionate, well-trained team who love to teach, laugh, and have fun. Join them for an epic summer adventure in a wide range of areas such as: Coding, Career, Creative, Gaming, Making, Science, Space, and Robotics. Elementary School, Middle School and High School Camps are available."

## University of Illinois Springfield to Host Four Academic Summer Camps

"University of Illinois Springfield Continuing and Professional Education (CAPE) will offer four academic summer camps for middle and high school students in June and July. Each experience will be led by a UIS faculty member and will offer students a challenging, fun and affordable summer experience.

Programs include: "The Startup Academy: Raising Entrepreneurial Aspirations" 9 a.m. – 3 p.m. June 6-10 on the UIS campus; "Math Challenge: Cool math for middle school students" 9:30 a.m. – 12:30 p.m. June 20-21 held via Zoom; "Relativity: The physics and math behind Einstein's theory" 9:30 a.m. – 12:30 p.m. June 27-29 held via Zoom; and, "UIS-CSI: Crime Scene Institute" 9 a.m. – 3 p.m. July 7 & 8 at the UIS Residential Simulation Lab on campus. Register on the CAPE website."

Summer Camp Opportunities Continued

Southern Illinois University Edwardsville Odyssey Science Camp
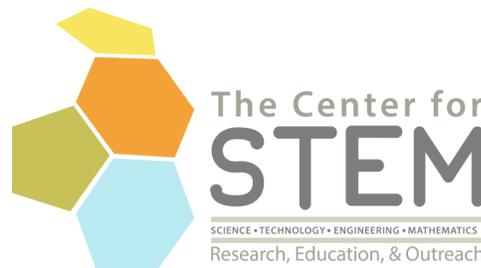
"Odyssey Science Camp provides area youth an opportunity to experience the excitement of science firsthand. Odyssey Science Camp is available for children entering grades 2-7. Participants are divided into groups by age and experience.

Lab activities are mixed with recreational periods for a well-rounded summer camp experience. Topics and activities include the introduction to scientific principles, building math skills through games, "crime scene" investigations, building and programming robots, renewable energy, and launching model rockets."

Governor's State University STEAM Camp

"Since 2014, Governors State University's STEAM Camp has introduced campers ages 11 to 16 to current topics in science, the arts, career development and life on a dynamic and modern college campus. GSU's STEAM Camp provides an exceptional opportunity for today's students to become tomorrow's innovators through extensive interaction with highly qualified faculty, business and industry volunteers and each other. Camp modules are taught by outstanding instructors and field practitioners, exceptional GSU students and alumni, and highly qualified volunteers from business and industry. Register now for Summer 2022 for campers ages 11 to 16 (mature campers as young as age 10 may register at parental/guardian discretion)."

"Join the National Society of Black Engineers (NSBE) - Chicago Professionals Chapter for our Engineering Explorers Summer Camp! The program is a week long experience that will introduce children to various disciplines of engineering.   Engineers from various companies like Baxter, Milhouse Engineering, Northrup Grumman, Molex, and Exelon will talk about a specific discipline of engineering, their company and their job. They will then do a hands on project having to do with that discipline of engineering and wrap up with a question answer session.
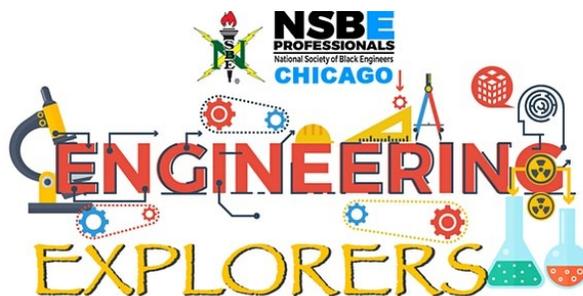
This is a week long program from 9 am to 3:30 pm June 20-24, 2022 at the Chicago State University Williams Science Center. Lunch will be provided and fun will be had by all! Limited spots are available, and registration for this session ends June 10, 2022. This is one of three sessions that we are offering over the summer. Can't make it to this one? Register for one of the other sessions."

The 'A' in STEAM
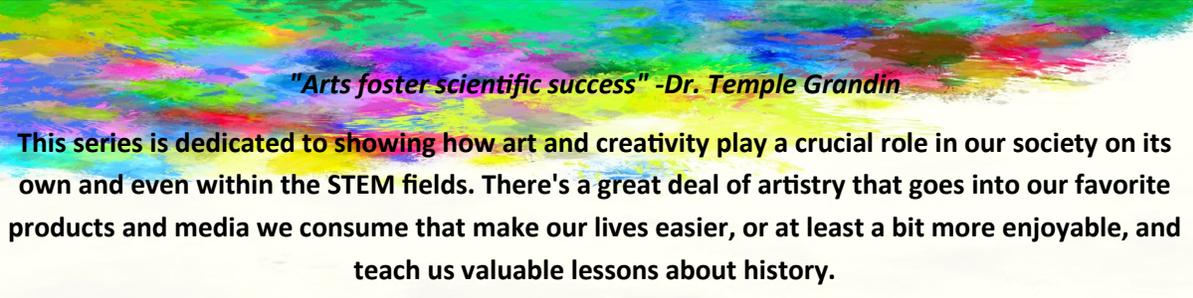
"Arts foster scientific success" -Dr. Temple Grandin

This series is dedicated to showing how art and creativity play a crucial role in our society on its own and even within the STEM fields. There's a great deal of artistry that goes into our favorite products and media we consume that make our lives easier, or at least a bit more enjoyable, and teach us valuable lessons about history.

Getty Museum

"How to Talk About Art: Leading a Student Dialogue that Supports Diversity Awareness"

"The J. Paul Getty Museum seeks to inspire curiosity about, and enjoyment and understanding of, the visual arts by collecting, conserving, exhibiting and interpreting works of art of outstanding quality and historical importance.

This K12 teacher webinar (geared for teachers in Grades 6-12) took place on January 26, 2022, as part of the webinar series entitled: "Building Student Visual Literacy for a Diverse, Image-Saturated World."

The webinar explores easy-to-use strategies for guiding student exploration of a visual image through dialogue, and looks at ways of supporting students' ability to forge human connections with people different from themselves by connecting with art."

Find more information about Getty resources for K12 teachers.

🌐 www.illinois.gov/doit-steam

🐦 Follow DoIT on Twitter @IllinoisDoIT

✉️ Please submit STEAM ideas, comments, or questions using our contact us form.