STEAM NEWSLETTER

THE OFFICIAL NEWSLETTER FOR THE ILLINOIS DEPARTMENT OF INNOVATION & TECHNOLOGY (DoIT) STEAM EDUCATION GROUP

Computer Science Education Week December 6-12, 2021

As we recognize Computer Science Education Week December 6-12, 2021 across the world, we want to continue to share additional resources as a way to promote computer science across the enterprise with students, families, educators, businesses, and communities. The joint press release issued by the Illinois Department of Innovation & Technology and the Illinois State Board of Education highlights the importance of the role computer science plays in our world and the need to support computer science learning opportunities throughout the year.

Celebrate computer science education with a focus on #CSEverywhere! As you incorporate #CSEverywhere into your classrooms, we encourage you to utilize the posters and related lesson resources, as well as the additional resources curated by the Computer Science Teachers Association.

Utilizing the resources at Hour of Code can help recognize the importance of inspiring students of all ages to better understand computer science and coding concepts. Additional resources can be found at the Learning Technology Center of Illinois new Computer Science Resource Database, Digital Educators Alliance, and the National Governors Association 2021-2022 Chairman's Initiative in Computer Science Education.

The Discovery Partners Institute is hosting an Illinois Computer Science Opportunity Fair on December 11, 2021. The event "will bring together 100 high school students and their families to learn about the exciting career opportunities in Chicago tech and some academic paths to get there. Families will hear more about the computer science and data science programs at the University of Illinois Urbana-Champaign (UIUC), the University of Illinois Chicago (UIC) and Wilbur Wright College. Attendees also will meet with dozens of partner organizations that support inclusivity in Chicago's tech scene."

Let off some STEAM with these fun activities!

K - 4

A Butterfly's Life Cycle Dance

5 - 8

University of Chicago STEM Education CryptoClub

9 -12

Do It Yourself Science Activities from Carnegie STEM Girls+

Educator's Corner

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

- Swift Coding and App Development PD– Info Session provided by Discovery Partners Institute 4:30pm—5:00pm on December 9, 2021

- Changing the Curve: Women in Computing

- National Quantum Initiative

- Discovery Partners Institute Teacher Training Programs

- Counselors for Computing

- Quantum Information Science Resources and Tools

- Museum of Science and Industry "Welcome to Science Initiative"

- Illinois Quantum Information Science & Technology Center

- Learning Technology Center Computer Science Resource Database

News & Events

Swift Coding and App Development PD Info Session
December 9, 2021 4:30 pm—5:00 pm

"In collaboration with The Ohio State University and with funding support from Apple, Discovery Partners Institute (DPI) is offering a 9-month, online PD experience designed to provide K-12 educators – from all backgrounds and content areas – with the foundational knowledge to start building and creating apps, as well as the pedagogical tools to teach coding and support your students along the way. No prior experience is necessary!

This info session provides an opportunity for prospective teacher-learners to learn about Apple's Swift coding language and curriculum, preview PD course modules, meet our facilitators, and more!

NOTE: All info sessions will be recorded and made available for public access within 24 hours of the conclusion of each event." Register here.

Illinois Computer Science Opportunity Fair
Saturday, December 11, 2021 10:30am—1:00pm

"This event is designed for high school students and their fam**ilies**, especially current high school juniors and seniors throughout the Chicagoland area. Learn more about computer science and data science programs of study at the University of Illinois Urbana-Champaign (UIUC), the University of Illinois Chicago (UIC), and Wilbur Wright College. Find out how each of these paths can lead to exciting and high-paying job opportunities in Chicago!"

Code 'N Play
December 15, 2021 5:30pm-7:00pm
Computer Science Teachers Association

"Join us on Tuesday, December 15, 2021, from 5:30-7 p.m. CT for a CS House Party where you'll have an opportunity to select from different themes to Code 'N Play with your colleagues. This will be a great way to take a break and have fun coding and building community!"

SecurED Schools January 19 - 20, 2022
K12 Data Privacy & Cybersecurity Conference

A two-day professional development event focused on data privacy and cybersecurity for K-12 Administrators, Technology Leaders, and IT Staff.

SecurED Schools is an annual conference hosted by the Learning Technology Center that focuses on cybersecurity and data privacy best practices, strategies, and tools. Over two days, attendees participate in hands-on demonstrations, panel discussions, and presentations led by local, state, and national experts.

The goal of SecurED Schools is to improve the security posture of school districts. We know that the global pandemic fueled digital transformation and technology adoption in school districts across our country. With increased reliance on technology to empower learning comes increased risk, and PK-12 technology and education leaders increasingly understand the vulnerability of their networks and data.
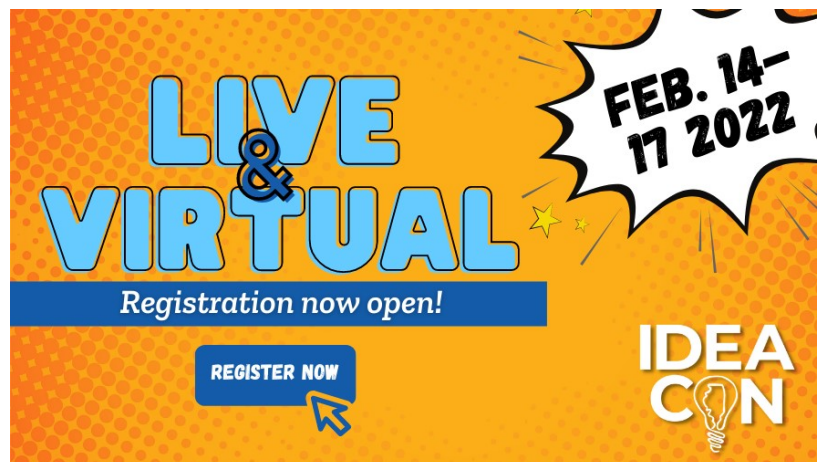
IDEAcon 2022 February 14 - 17, 2022

"IDEAcon is one of the Midwest's largest ed tech conferences. Hosted by IDEA every February, thousands of educators from Illinois and across the U.S join together to learn about sound pedagogical practices in education and how to leverage technology to engage, inspire, and reach all learners.

This 4-day conference includes inspirational keynote speakers and hundreds of educator-led sessions focused on engaging students, building relationships, and integrating tools to foster academic achievement. You'll also have the opportunity to visit 200+ vendors, explore state of the art educational technology resources, participate in hands-on learning explorations, and network with other passionate educators in our exhibit hall experience.

IDEAcon 2022 will include both virtual and in-person sessions at the Renaissance Hotel and Convention Center. Join us Feb. 14 - 17, 2022, for the best IDEAcon yet!"

STEAM Resource Spotlight

SMASH Academy
Intensive & holistic STEM focused college prep

SMASH ⚌

"SMASH Academy, our flagship program, is a FREE, 3 year, intensive STEM-focused college prep program that empowers students to deepen their talents and pursue STEM careers. Each summer, scholars are immersed in tuition-free studies in partnership with leading universities throughout the country. During the academic year, scholars participate in monthly programming."

SMASH x Illinois is the first state-wide initiative, with university partners Illinois Institute of Technology and Southern Illinois University and foundation partner, CPASS Foundation. *"Applicants must meet all the eligibility requirements listed below in order to be considered for SMASH (no exceptions).*

1) GPA: Must have minimum 9th grade 3.0 GPA or equivalent.
2) Grade Level: Be in the 9th grade at the time of application.
3) Math Skills: Have strong mathematics skills appropriate for your grade level, as determined by your state standardized math test scores.
4) Attend a public high school or private high school via scholarship.
5) Location: Reside in the United States within 50 miles of a SMASH site as determined by your zip code. Students applying to the IIT site must be an Illinois resident and within 25 miles of the Chicago, Carbondale, and East St. Louis Metro Areas. "

Target applicants include students from groups traditionally underrepresented in science, technology, engineering, and mathematics; first-generation college students; and, from a low-income family. 9th-grade applications are now open!

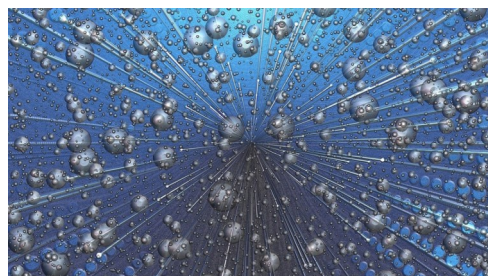## Quantum Atlas

"Quantum physics governs everything that's very small or very cold, and it has a reputation for being mystifying, unintelligible, obscure, and spooky."

Supported by the National Science Foundation and created by Joint Quantum Institute and the University of Illinois Quantum Information Science & Technology Center, the Quantum Atlas includes resources such as interactives, animations and illustrations to "help kindle your imagination and bring the quantum world to life."

The Quantum Atlas is created by a team of physicists, science communicators, and illustrators to make quantum concepts "easier to understand if you can play around with them." And, "lighthearted cartoons are sprinkled throughout to make the science more approachable."

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.

Lucy Soundscape

"Are you a musician – composer, performer, music educator, or student – inspired by exploration and discovery? Share your inspiration in your unique voice, and join with others to create the Lucy Soundscape, a public collection of original music inspired by NASA's Lucy mission launching in 2021!

The Lucy spacecraft will carry robotic cameras to places no one has ever seen: the Trojan asteroids, remnants from the formation of our Solar System's giant planets, like Jupiter. In an epic twelve-year voyage of discovery, Lucy – named for a fossil human ancestor – will visit seven of these prehistoric treasures that hold the lost tales about the origin of our solar system.

Lucy's team of scientists, engineers, managers, and other professionals have many stories to tell, in many different voices, but some stories are told best through music! NASA invites composers, performers, music educators and students to add their voices to Lucy's.

The Lucy Soundscape will be the collected original music of everyone who participates and shares their creativity with NASA and the world, all connected to each other through the Lucy Motif: Lucy Motif - high version - (MP3 file) The Lucy Team composed and adopted this three-note phrase as a symbolic "musical mission patch."

"Any *original music*, composed or improvised, instrumental or vocal, that *uses the Lucy Motif in some way* to express a feeling or tell a story of inspiration and discovery can be shared through the Lucy Soundscape. Through the combined creativity of participating artists, all starting from the same three notes, the Soundscape has the potential to become an evolving musical ecosystem that develops in unforeseeable ways as the mission itself develops and yields unforeseeable discoveries. Add your creative voice and join the Lucy Soundscape!"

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