Computer Science Education Week
December 5-11, 2022

Computer Science Education Week (CSEdWeek) will be celebrated **December 5-11** across the world as an opportunity to inspire K-12 students to learn computer science and expand equitable access to computer science education. To honor the week, the Illinois Department of Innovation & Technology issued a press release which encourages educators, families, and businesses to leverage resources to support exploration and demonstrate that computer science is foundational for problem solving and critical skill building. Governor Pritzker proclaimed December 5-11 as Computer Science Education Week in Illinois.

Registration is available for hosting an Hour of Code. Activities designed for all ages can be explored and a guide of how to plan your hour of code can be reviewed for ideas. Code.org celebrates Hour of Code with NASA featuring computer science in space. Additional resources that enrich activities in classrooms include CS educational resources (NASA STEM Engagement), curriculum for coding (CSforALL), professional development opportunities (CSTA), and CS Resources Database (Learning Technology Center of Illinois).

The CSEdWeek theme this year is "CS Heroes #CelebratingProgress" which highlights the progress made to advance computer science education over the last decade. A kick-off panel for CSEdWeek begins with a discussion with CS Heroes on December 5, at 12 pm. Ideas and what can you expect during the week are part of the hundreds of activities and resources available to utilize. We encourage interaction around the world by sharing your CS journey on social media with hashtags #CSEdWeek and #CelebratingProgress.

The 2nd Illinois CS Opportunity Fair will be hosted by Discovery Partners Institute at the McCormick Tribune Campus Center in Chicago from 10am – 1pm on December 10, 2022. This event is designed for high school students (especially 11th & 12th graders) and their families. Hear from City Colleges, universities, and non-profit organizations about how CS & tech programs in Illinois can lead to exciting and high-paying job opportunities in Chicago!

Let off some STEAM with these fun activities!

◊ **K - 4**
Energy Kids | Quiz

◊ **5 - 8**
NASA | Launch The Rocket

◊ **9 - 12**
OK GO Sandbox | The One Moment of Math

Educator's Corner

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

- NOAA | Climate Education Resources

- NIEHS | Health & Education: Science Education Materials

- EiC | Ideas to Stimulate Your Chemistry Teaching

- NASA | Make a Moon Phases Calendar and Calculator

- EPA | Homework Resources about Environmental Issues

- NASA | Artemis Camp Experience

- IMSA's Signature Strategy of Professional Development

- AirNow | Air Quality Workshop for Teachers: A Toolkit for Facilitators

- Royal Society of Chemistry | Professional Development for Teachers

Hour of Code Corner:
- NASA's Space Jam
- Minecraft Hour of Code
- Star Wars
- Grinch Hour of Code
- Coding Cup
- CodeLab Live
- Dance Party
- Hello World
- Mind Makers Maps

Register Your Hour of Code

NEWS & EVENTS

Liftoff! NASA's Artemis I Mega Rocket Launches Orion to Moon

"Following a successful launch of NASA's Space Launch System (SLS), the most powerful rocket in the world, the agency's Orion spacecraft is on its way to the Moon as part of the Artemis program ...

Through Artemis missions, NASA will land the first woman and the first person of color on the surface of the Moon, paving the way for a long-term lunar presence and serving as a steppingstone for astronauts on the way to Mars."

Credits: NASA/Joel Kowsky

Snoopy Hitches Ride to Space Aboard Artemis I

Image Credit: NASA

"Snoopy, the zero-gravity indicator for NASA's Artemis I flight test, floats in space on Nov. 20, 2022, while attached to his tether in the Orion spacecraft. In this enhanced image, Snoopy stands out in a custom orange spacesuit, while Orion's interior has been shaded black and white for contrast. The character's spacesuit is modeled after the suit astronauts will wear during launch and reentry in Orion on future missions to the Moon. NASA has shared an association with Charles M. Schulz and Snoopy since the Apollo missions and the relationship continues under Artemis."

Scientists Discover Significant Critical Minerals Potential in Northern Maine

"RESTON, Va.— A team of state and federal scientists have discovered an area in northern Maine that is high in critical mineral resources, highlighting for the first time the importance of this region to the U.S. mineral resource economy ...

The geologic feature was revealed by surveys flown by aircraft in 2021. The flights collected geophysical data, such as variations in Earth's magnetic field and natural low-level radiation."

NEWS & EVENTS Cont.

December 6 (9am), 7 (12pm), 8 (2pm) | Online
Virtual Field Trip with NASA's Chandra X-ray Observatory

"As NASA's premier X-ray telescope, Chandra gives us a powerful tool to investigate hot regions of the Universe … Get a backstage pass to Chandra's Operations Control Center, tour the Chandra spacecraft through virtual reality, and take a (virtual) quick trip to some exploding stars in our own galaxy."

Tue. December 6 | 3:30 pm - 4:30 pm | Online
CS & STEM Networking Meeting

"Teachers, administrators, and curriculum stakeholders are invited to attend, as well CS & STEM educators of all experience levels and at all grade levels. Whether you're just starting out or interested in taking your district's CS & STEM program to the next level, this networking group will help you achieve your goals."

Tue. December 6 | 12 pm - 1 pm | Online
Tynker Hour of Code- Coding Cup Live Event

Register for Event   "Byju's Coding Cup is a soccer-themed learning experience for students around the world, tied to this year's FIFA World Cup. Our #CSEdWeek CodeLab sessions will be LIVE on YouTube. In these sessions, our Tynker Teachers will walk students through the basics of the Coding Cup CS activity, offering strategies for success, inviting special guests, highlighting some special students, taking questions from the audience, and having a blast! Coding Cup is for grades 3 and up."

Thu. December 8 | 6 pm - 7 pm | Online
Finding Joy in Teaching Chemistry

"Are you struggling with keeping your sanity and motivating students who are addicted to their phones? What are ways to meet students where they are at and keep your smile? Come learn approaches to help students interact with their teacher and the rest of the class. **Strategies** will be shared to guide you in creating a classroom where all students feel safe to learn and be themselves."

NEWS & EVENTS Cont.

Thu. December 8 | 11 am - 3 pm | Online

STEMIEFest 2022

Registration is now open for STEMIEFest. "STEMIEFest is a gathering of families, professionals, STEM industry members, faculty, and more to engage in innovative and inclusive STEM learning experiences and activities for young children birth to five. Learn more: https://stemie.fpg.unc.edu/stemiefest." Spend four hours learning about opportunities for young children with disabilities and increasing the inclusion of young children in STEM learning.

Thu. December 8 | 4 pm | Online

NASA STEM: PBL-Science for a Hungry World

"Explore NASA's remote sensing educational resources and how NASA contributes to the understanding of agriculture and ecosystem changes. The activities **integrate STEM with English language arts skills**. Use NASA data to develop or refine your theories about how water and soil impact the ability of a country to grow crops as the climate changes. Water and soil-based experiments will test theories and provide evidence for the solutions. Multiple inquiry-based activities will deepen the understanding of the problem of growing crops in countries that are struggling to provide food for their people."

Thu. December 8 | 6 pm | Online

Virtual Studio Tour with Artist Katie Hudnall

"Join artist Katie Hudnall as she provides a behind-the-scenes look at her woodworking studio in Madison, Wisconsin, while bringing new purpose to salvaged materials, crafting works of differing sizes and shapes and creating harmony from imperfections. **Participants will see the tools Hudnall regularly uses in her work, learn about her creative process, and ask her questions in a live chat**."

NEWS & EVENTS Cont.

Sat. December 10 | 10 am - 1 pm | Chicago

2nd Illinois CS Opportunity Fair

"This event is designed for high school students (especially 11th & 12th graders) and their families, throughout the Chicagoland area.

Hear from city colleges, universities, and non-profit organizations about how CS & tech programs in Illinois can lead to exciting and high-paying job opportunities in Chicago!"

Thu. December 15 | 4 pm | Online

3-2-1 Lift-Off! NASA's Beginning Engineering Science and Technology (BEST) Curriculum

"The activity will focus on teaching the **engineering** design process, building confidence, encouraging creativity and allow for innovative designs. The activity can be used to supplement curricula during the school day or as an after-school activity. At the end of the session the learners will be able to develop lesson plans that are more interactive and engaging by independently using NASA resources, knowledge, and acquired new skills in a culturally responsive manner."

Tue. December 20 | 4 pm | Online

Explore Space Tech: NASA's BEST Programming Activities

"Come and discover **NASA's BEST: Programming Activities** for students in grades K-12. This webinar will include hands-on inquiry activities, NASA STEM K-12 videos, educator guides and instructional Power Point presentation. The session will end with sharing exciting NASA STEM resources, engineering design challenges, and ways to inspire our next generation of innovators."

STEAM Resource Spotlight

Explore Health Care Inspired STEAM

Spark curiosity in **health care** careers through Jump STEAM. An OSF HealthCare program, Jump STEAM offers **in-person, mobile, virtual reality, video on-demand and DIY experiences** that open young peoples' minds to different medical careers. Choose your resource and give learners of all ages a unique opportunity to explore the world of health care through STEAM!
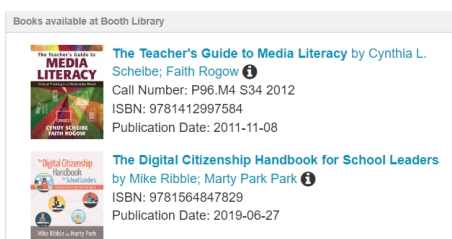

Science 101 - *Complex science and technology research, simply explained*

"Science is complicated and sometimes hard for non-scientists to understand. But science is important for solving problems and making life better for everyone on the planet. Argonne's Science 101 series is aimed at helping to break down the complex concepts behind our work. Our videos and infographics will help you understand the language and concepts important to Argonne science and technology, from quantum science to batteries for clean energy."

Digital Literacy 2.0 : Digital Literacy/Citizenship

Books available at Booth Library

The Teacher's Guide to Media Literacy by Cynthia L. Scheibe; Faith Rogow
Call Number: P96.M4 S34 2012
ISBN: 9781412997584
Publication Date: 2011-11-08

The Digital Citizenship Handbook for School Leaders by Mike Ribble; Marty Park Park
ISBN: 9781564847829
Publication Date: 2019-06-27

"The resources in this section explore digital literacy and digital citizenship from an educator perspective, exploring various aspects of digital media-related pedagogies." Prepared as part of IL Broadband READY Digital Literacy efforts in Southeastern IL and hosted by Eastern Illinois University.

The Sound of Science

"WNIJ and NIU STEAM are partnering to create 'The Sound of Science,' a weekly series explaining important science, technology, engineering and math concepts using sound. The feature will air at 1:04 p.m. Fridays as a lead-in to Science Friday."

Art x Climate:
A Project of the Fifth National Climate Assessment

"Art x Climate seeks to strengthen partnerships between science and art and demonstrate the power of art to advance the national conversation around climate change. Selected art submissions will be featured in the Fifth National Climate Assessment as chapter covers and within the chapters. Selected artworks may also be used in case studies, in public events, or in communication materials.

There are two calls, one for artists ages 13–17 and one for artists 18 and up. Artists who wish to submit their works must do so by **January 27, 2023**."

STEAM Daydream Podcast

a podcast that elevates children's voices and answers their biggest questions

"With the help of experts from across the country and some very curious kids, we explore a wide range of important and timely topics in STEAM—science, technology, engineering, arts, and math."

STEAM Daydream podcast Season II

"The National Children's Museum launched a second season of the children's podcast STEAM Daydream with National Children's Museum. Each of the season's eight episodes is led by a young innovator, who—with the help of content experts from across the country—solves an everyday STEAM mystery aligned to science standards and classroom content. Funded in part by the Department and developed by museum educators for classrooms grades 1-5, each 20-minute episode empowers young listeners to ask big questions about important STEAM topics. The *STEAM Daydream* podcast fosters young learners' curiosities and challenges them to think critically about the world around them."

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.

Art and Science: Renaissance Illuminations

Lorenzo Monaco, Praying Prophet

"This is an illumination from a choir book commissioned by the Camaldolese monks of Santa Maria degli Angeli in Florence at the end of the 14th century. Can the pigments and paint binders used be mapped in situ? ...

These new analytical methods allow for a more rapid and portable analysis that can be performed on site where collections are stored. The hope is such methods will reveal more about artists' methods and workshop practices.

To examine how manuscript pages are made and treated by paper conservators click here to see a related project. Visit the Projects page to see research completed by conservators and scientists in a variety of departments."

Smithsonian 3D

"The 3D Program is a small group of technologists working within the Smithsonian Institution Digitization Program Office. We focus on developing solutions to further the Smithsonian's mission of "the increase and diffusion of knowledge" through the use of three-dimensional capture technology, analysis tools, and our distribution platform."

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