## STEAM NEWSLETTER

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













Technology Engineering

Arts

Mathematics

## **EDUCATION**



# Let off some STEAM with these fun activities this winter!

#### <u>K-4</u> OUICK IDEAS: FUN WINTER MATH IDEAS

<u>5-8</u>
• <u>EARTH'S SEASONS AND THE SUN: A CROSSWORD</u>
<u>PUZZLE</u>

<u>9-12</u>

 LEARN MORE ABOUT THE 'GREAT' CONJUNCTION OF JUPITER AND SATURN FROM <u>ADLER</u> <u>PLANETARIUM</u> AND <u>NASA</u>

#### **Educator's Corner**

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

- NGSS Unit "Grade 3: Why Do I See So Many Squirrels, but I Can't Find Any Stegosauruses?"
- <u>Implementing Meaningful STEM Education with</u>
   <u>Indigenous Students & Families</u>
- Social Justice Mathematics and Science Curricular Resources for K-12 Teachers

#### **News & Events**

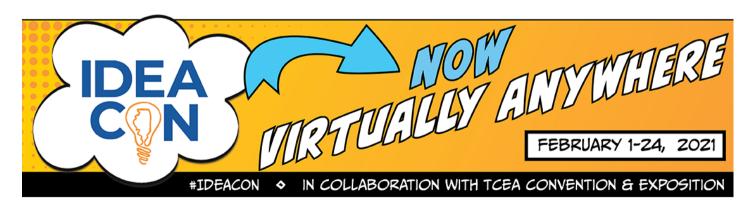
#### <u>CyberStart America Competition is Now</u> <u>Open For Registration Through March</u>

CyberStart America, the sequel to Girls Go CyberStart which premiered last year, is a national program of online challenges that allow high school students to act as cyber protection agents, solving cybersecurity-related puzzles and exploring related topics such as code breaking, programming, networking, and digital forensics. 381 students from Illinois high schools participated in 2019 with 45 making it to the national finals. A national program offered free of charge, CyberStart America could open doors for job opportunities and even scholarships. Spread the word among your High School friends and family. Click here to register.



#### Register for IDEAcon, happening virtually Feb 1-24, 2021

"IDEAcon is a teaching and learning conference that attracts educators, educational leaders, and pre-service teachers from PreK - Higher Ed. The conference engages educators from across the Midwest in an exploration of pedagogical strategies and resources connected to instructional technology. Districts, schools, classrooms, and libraries will all gain valuable insights at one of the Midwest's largest educational technology conferences. This year, IDEAcon is excited to team up with TCEA's Convention & Exposition this February to provide expanded virtual learning opportunities and new ways for educators to grow their professional learning networks."



#### LTC Remote Learning Conference | January 14-15, 2021

"Let's design, enhance, and engage! The Remote Learning Conference will showcase the best practices, pedagogy, apps, and tools that allow us to leverage remote and hybrid learning to reach all learners.

Sponsored by the Learning Technology Center and the Illinois State Board of Education, the Remote Learning Conference will help all Illinois educators elevate their craft by highlighting research-based practices, proven instructional strategies, and essential apps and tools. Illinois educators have months — almost a year — of experience working with students in remote and hybrid environments, and there are no shortages of lessons-learned to guide our practice. Join educational leaders from Illinois and beyond who will share the expertise you need to take students to the next level."



Click here to check out the general schedule and find the link to register!

#### The New York Times STEM Writing Contest | January 19 - March 2, 2021



"For this contest, <u>The Learning Network</u> invites you to bring that same spirit of inquiry and discovery to finding a STEM-related question, concept or issue you're interested in, and, in 500 words or fewer, explaining it to a general audience in a way that not only helps us understand, but also engages us and makes us see why it's important."

PLUS: <u>Register</u> for the NYT live webinar on Jan. 14 on teaching informational writing with a STEM theme.

### STEAM Resource Spotlight

## IL State Board of Education Podcasts | Episode 2: CTE DURING COVID-19

"Career and Technical Education courses are now more important than ever. They prepare students for high-wage jobs in the post-pandemic economy, and bolster local businesses by supplying the necessary skilled workers. But how do you have a hands-on CTE class when you can't have in-person instruction?" Check out this ISBE podcast to hear from Township High School District 214.



# Illinois Extension 4-H Programs





Empowering & Preparing Youth for Success | Illinois 4-H produces the youth leaders, innovators, entrepreneurs, stewards, and builders we need to solve world problems. Many programs can be tailored to meet the needs of youth in school classrooms, after school programs, partner sites, military bases, or community groups. Programs include Animal Sciences, Environment, STEM & Robotics, and more!

## the 'a' in steam

Engaging in the sciences, technology, engineering, and math requires an incredible amount of creativity. There's a great deal of artistic thought that goes into the science behind our favorite products and media we consume that make our lives easier, or at least a bit more enjoyable. This series is dedicated to the 'A' (art) in STEAM to show off the art within STEM fields. To kick things off, here's an article showing off the convergence of STEAM and holiday light displays!

# "EVER WONDERED HOW THOSE COMPUTER-CONTROLLED CHRISTMAS LIGHT DISPLAYS WORK?"

(BY WILLIAM GRYDE FOR TECHSPOT)



Did you do some COVID safe holiday activities this year like driving around to look at light displays? Those really cool kinds where the lights are choreographed with music? Did you think, "How do they DO that?!"

Well, here's how-- featuring a home in Illinois!



#### www.illinois.gov/doit-steam



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