

# STEM-IN'

Indiana STEM News



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### Coming Events of Interest For STEM Educators

**STEM Fest 2018** On Feb. 11 the Indiana Pacers will host STEM Fest 2018. This interactive event is open to students of all ages and their families. It is a great opportunity to learn how science, technology, engineering and mathematics are used in sports and other careers. Throughout the day, students and their families will be partnered with a mentor from a local company, university or non-profit organization while participating in several STEM activities. Representatives from universities and STEM organizations will be available to discuss future career paths for those interested. Tickets are \$10 a person and include admission to the event and the Pacers game. Tickets must be purchased by Feb 1. To learn more and register, click here <http://www.nba.com/pacers/stem-fest-2018-family-orders>

### Indiana Summit on Out-of-School Learning, Indiana Convention Center, Indianapolis, April 9-10, 2018

The SEVENTH annual conference will feature two days of exciting workshops and events hosted by the Indiana Afterschool Network and the Indiana Department of Education. More than 750 youth programs, educators and community partners will come together to connect, learn new ideas, and access valuable resources for Indiana's K-12 youth.

For information on the conference, including exhibitor opportunities, click on [IAN 2018 Summit - general info](#)

To register to attend, click [IAN 2018 Summit registration](#)

**EcoScience Fair, April 13, 2018, Indiana State Museum** Save the date; details are forthcoming. For information about past fairs, click on <https://www.earthcharterindiana.org/ecosciencefair/>

**Indiana STEM Education Taskforce Spring Meeting — late April, 2018; location TBD** As directed by the 2017 legislative session, the Indiana STEM Advisory Council is in the process of developing a comprehensive STEM education plan for the state. At this April meeting of the STEM Taskforce, the Indiana Department of Education policy team that is managing the plan development

process will review the preliminary proposal details with the group with the purpose of gathering feedback prior to finalizing the plan.

### Grant Opportunities for STEM Educators

**Advancing Student Achievement, a program of the Actuarial Foundation** ASA grants support math programs that open students' minds to the practical power of math. The purpose of an ASA grant is to support math enhancement programs that bridge the gap between classroom and real world mathematics. [MORE HERE.](#) Deadline: Rolling. Amount: up to \$5,000

**Afterschool Alliance list of STEM funding** <http://www.afterschoolalliance.org/STEMfunding.cfm>

**American Honda Foundation Grants** The American Honda Foundation's funding priorities are STEM education, the environment, job training and literacy. Nonprofits, public school districts, private/public elementary and secondary schools are eligible to apply. Funding deadlines are February 1, May 1, August 1, and November 1 each year. The maximum award is \$75,000. [http://www.honda.com/about?id=honda\\_foundations](http://www.honda.com/about?id=honda_foundations)

**Connect a Million Minds (Spectrum)** Connect a Million Minds supports after-school STEM programs, mentorship programs that inspire the pursuit of STEM education and careers, STEM-related competitions, visitations to technology companies and labs, and apprenticeship programs. For more information, go to: <http://www.connectamillionminds.com/request-support>

**The Max and Victoria Dreyfus Foundation — \$1,000 to \$20,000** Looking for a way to inspire the youth in your afterschool program? Want to start a project but don't have the necessary funds to start. The Max and Victoria Dreyfus Foundation offers grants of different amounts for projects big and small! Through a fairly simple application

organizations that deliver standards-based science, technology, engineering and math (STEM) education to students in K-16. Amount: Varies Deadline: Rolling. More [HERE](#).

STEMfinity          STEM          Grants          Listings:  
Indiana          <http://www.stemfinity.com/stem-grants-indiana>

**TechPoint Foundation for Youth Robotics Grants** Could your organization benefit from receiving a free VEX IQ Robotics Kit, training, and other resources needed to get a robotics program started? [TechPoint Foundation for Youth](#) has \$500 Robotics Grants available to any 501c3 that does not already have a VEX IQ Robotics team!

The Robotics Grant includes:

- VEX IQ Robotics Kit
- Project Lead the Way classroom Activities
- Professional Development Training and ongoing support
- Team Registration Cost

We are looking for enthusiastic educators, who are interested in beginning a robotics team, to apply for the grant. No experience needed. We have already awarded over 450 grants, and we have more available! This grant application is straight forward, easy to complete, and there is no catch! This is an amazing and unique opportunity for Indiana schools, and we don't want your school to miss out!

Learn more and apply [here](#) today! ([www.techpointyouth.org/apply-for-robot-grant-nonschools/](http://www.techpointyouth.org/apply-for-robot-grant-nonschools/)) Inquiries may be directed to [RobotGrant@TechPointYouth.org](mailto:RobotGrant@TechPointYouth.org). Follow us on [Twitter](#) and [Facebook](#) for the most current updates on the State Robotics Grant!

## Resources for STEM Educators

**Afterschool & STEM: System-Building Evaluation 2016** (INCLUDES INDIANA RESEARCH!) This evaluation is among the first at a large scale to measure the impact of afterschool programs on students' STEM-related attitudes and social-emotional/21st-century skills. The primary goals

of this work were (1) to examine levels of change in youth outcomes among programs receiving resources and training support from system-building states; (2) to inform on national trends related to STEM learning, such as gender or grade differences in science interest; and (3) to link STEM program quality with student outcomes and facilitator beliefs.

<https://www.thepearinstitute.org/publications>

**The Afterschool STEM Hub** This collaboration of out-of-school-time program leaders and stakeholders can provide coordinated messaging and communications that impact advocacy and policy and help ensure the important place of informal, afterschool and summer programs in the STEM learning ecosystem. For more information on this initiative (including the list of participating organizations,) visit [www.afterschoolstemhub.org](http://www.afterschoolstemhub.org)

**Black Girls Code** Introducing programming and technology to a new generation of coders who will become builders of technological innovation, the program empowers girls of color (ages 7-17) to become innovators in STEM fields, leaders in their communities, and builders of their own futures through exposure to computer science and technology. Black Girls Code has a goal of training one million African American girls to code by 2040. <http://theconnectory.org/program/black-girls-code>

**The Black Family Technology Awareness Association (BFTAA)** Campaigning to empower and equip its community of families with the resources needed to become actively involved with the technology revolution, BFTAA partners with faith-based organizations, corporations with a strong community presence, small businesses, resource centers, such as schools and libraries, and city and state government agencies. By bringing together all these entities to focus on finding solutions, BFTAA hopes to create models of success that will close the digital divide that threatens to perpetuate educational, financial, and social inequality in America. Its BFTAA "Youth Technology Club" features STEM opportunities around robotics and broadcasting for elementary through high school students. More info [HERE](#).

**EVERY** student **EVERY** school **EVERY** day

## Connecting to Computer Science: A Resource for Afterschool Practitioners

[http://afterschoolalliance.org/documents/AfterschoolCS\\_ResourceGuide\\_2017.pdf](http://afterschoolalliance.org/documents/AfterschoolCS_ResourceGuide_2017.pdf)

**The Connectory** This free online collaboration tool gives STEM program providers a chance to find partners based on interests as well as a platform to showcase STEM opportunities to families. Families, in turn, have a free, go-to resource to connect the children in their lives to STEM learning opportunities in their community. <http://www.theconnectory.org/>

**Edutopia – 12 Inspiring STEM Books for Girls** Science, technology, engineering, and math are more important than ever, so we've put together a list of books to encourage girls to persevere in these subjects. Click here [STEM Books for Girls](#)

**1<sup>st</sup> MakerSpace** Read about the key lessons learned from a STEM summer camp failure [Click Here](#)

**Girls Who Code** the national non-profit dedicated to closing the gender gap in technology. Technology is changing everything about the way we live and work. Computing skills are the most sought-after in the US job market, with demand growing 3X the national average - but girls across the US are being left behind. Today, less than a quarter of computing jobs are held by women, and that number is declining. Clubs are free after-school programs for 6-12th grade girls to use computer science to impact their community and join our sisterhood of supportive peers and role models. They can be hosted in schools, universities, libraries, community centers, faith-based organizations, or nonprofits. There's ZERO fee to start a Club. <https://girlswhocode.com>

**Indiana Department of Education STEM School Certification Program** For details on the process to earn the IDOE designation of a STEM School, follow [THIS LINK](#) Note that, to be certified as an IDOE STEM school, a school must offer an afterschool program in STEM.

**The Indiana State Museum** The museum offers free admission to groups of 10 or more K-12 students visiting from 21st Century Community Learning Centers during school breaks. ISM can help K-12 students meet Indiana Academic Standards in physical science, earth science, life science and STEM-related standards. Research shows that

encounters with original artifacts, performances, and hands-on activities, all available at the Indiana State Museum, reach children who do not respond well to traditional teaching methods. Research further demonstrates that children who visit museums have higher achievement in math, reading and science. Please contact Sarah Rapp-Johnson at

[SRappjohnson@indianamuseum.org](mailto:SRappjohnson@indianamuseum.org) for more information, or visit

<https://www.surveymonkey.com/r/ISM21stCentury> to register for a free field trip.

**Indianapolis Zoo** Offers professional development and kits to educators. Learn More [HERE](#).

**Matific** Takes a unique approach to teaching K to 6 math using hands-on and interactive mini-games called episodes. These immersive bite-sized apps for tablets and personal computers are based on a modular and progressive spiral learning system. For a free 30-day Matific trial, click here and register: [www.matific.com](http://www.matific.com). To schedule a free webinar to learn how Matific can be customized to serve your program, click here to request a webinar demo: <http://meetme.so/SeanTiernan>

**Minecraft Hour of Code - Microsoft Store Indianapolis** This is a free, 90-minute workshop that goes behind the scenes to learn how to code, program, and play in the own gaming world. Participants will use fun, interactive coding to learn how creativity and problem solving come together to make something all their own. The workshop is designed for ages 8 and older. Participants should bring a set of headphones or earbuds. Contact [ayanac@microsoft.com](mailto:ayanac@microsoft.com) to schedule a private event. More info on this and other workshops [HERE](#).

**Next Generation Science Standards: A primer and resource guide for afterschool educators** The Next Generation Science Standards (NGSS) offer a powerful new vision for American science education for the 21st century. NGSS has already been adopted by 17 states, as well as many more individual schools and districts. This resource will help you learn what's relevant for afterschool providers, and help you develop a strategy for engaging with the new standards. More info [HERE](#).

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**Public Broadcasting Service (PBS)** For out-of-school time program leaders looking to get students outside more, it might seem counter-intuitive to introduce digital media into their programming. After all, don't kids already spend too much time in front of screens? Why use digital media when what you really want to do is get kids outdoors?

**PLUM LANDING** The innovative PBS KIDS multimedia project that encourages children to explore the outdoors, has an answer to that question: Because digital media can actually enhance kids' exploration of nature! Learn more [HERE](#).

**WFYI** the Indianapolis PBS affiliate, has been piloting a project at Liberty Park Elementary School, Warren Township, Indianapolis, to provide high quality STEM curriculum to that school's out-of-school time programs. Click here to view a video about that project [vimeo.com/238204082](https://vimeo.com/238204082)

**STEM Ready America** A collection of articles, including one authored by Indiana Education STEM Taskforce members Bob Abrams, Paul Ainslie, and Reginald McGregor, highlights how young people are developing STEM knowledge and skills that will prepare them to be successful in school today and the workforce tomorrow. Developed by STEM Next, with support from the Charles Stewart Mott Foundation, this compendium provides persuasive evidence and real-world examples to help bring quality STEM learning to children and youth across the nation. Check out the [STEM Ready America](#) website or find a summary of the findings on Afterschool Alliance's website here. <http://stemreadyamerica.org>

**Teacher Preparation in Science** Articles (submitted by Joe Bellina, Ph.D, Co-Director, Northern Indiana Science, Mathematics, and Engineering Collaborative (NISMEC):

- "Organizing physics teacher professional education around productive habit development: A way to meet reform challenges" [Click Here](#)
- "The past and future of physics education reform"

<https://www.dropbox.com/s/7lidp7vs4qbaguk/The%20past%20and%20future%20of%20physics%20education%20reform%20Physics%20Today%20Vol%2070%20No%205.pdf?dl=0>

-  "The Data Science Education Revolution" [Click Here](#)

**Teen Science Cafe Network** Teen Science Café out-of-school programs are a free, fun way for teens to explore the big advances in science and technology affecting their lives. Teens and STEM experts engage in lively conversations and activities to explore a topic deeply. <https://teensciencecafe.org/>

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**About the STEM-IN' Newsletter** This newsletter is published 12 times per year by the I-STEM Resource Network and the Indiana Afterschool Network. For inquiries and news contributions please email: [istem@istemnetwork.org](mailto:istem@istemnetwork.org).

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