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Coming Events of Interest For STEM Educators

LIGHTS ON 2017 is October 26th! JOIN IN THE CELEBRATION OF AFTERSCHOOL! #LightsOnAfterschool is the only nationwide event celebrating afterschool programs and their important role in the lives of children, families and communities. What are you working on to join in and send a powerful message that millions more kids need quality afterschool programs? <http://www.afterschoolalliance.org/loa.cfm>

The STEM Connection offers a variety of programming to help both students and teachers develop their STEM skills. Three of our most popular programs for schools are field trips, STEM Challenge Clubs, and Family STEM Nights — click on the links below for more information:

[Field Trips](#)

1. Year-round opportunities to connect children to the natural world and gain new experiences in Indianapolis.
2. Standards-based activities allow children to engage content in ways that cannot be done in traditional classroom settings.
3. We will come to you in the event of unsafe, severe weather.

[STEM Challenge Club Train the Facilitator Program](#)

1. A way to equip school and out-of-school staff members with knowledge, lessons, and supplies in order to offer quality, content-based out-of-school time STEM experiences at your location.
2. Provides trained facilitators relevant professional development opportunities and continued support using the Dimensions of Success (DoS) evaluation tool.
3. Once facilitators are trained, your location will have everything it needs to offer children out-of-school STEM activities that connect to the school day are enriching and fun!

[Family STEM Night](#)

1. Gives families a way to learn and have fun together!
2. We provide the STEM activities, supplies, and training for volunteers.
3. A great way to build community and foster positive school-family relationships.

Please visit our [website](#) for additional information about these programs and other opportunities, and don't hesitate to contact us with questions.

Environmental Education Association of Indiana Annual Conference – October 13-15, 2017 The Environmental Education Association of Indiana - <http://www.eeai.org>, has a mission "to work cooperatively to promote opportunities that will educate, motivate, and inspire the citizens of Indiana to conserve natural resources and meet the needs of our society while maintaining a healthy environment now and in the future." If you want to take part in that mission, please consider joining this statewide organization this fall in Brown County Indiana.

Event: 2017 EEAI annual conference: Seeing the Forest and the Trees: <http://eeai.org/2017-Conference>

Dates: October 13-15, 2017

Location: Waycross Camp and Conference Center:

<http://www.waycrosscenter.org/lodging>

4879 Richards Road, Morgantown, IN 46160

Registration: <http://eeai.org/2017-Register>

Keynote Speaker: Rue Mapp, founder of Outdoor Afro, see <http://eeai.org/2017-Keynote-speaker>

Here is a flyer to print up and share. [EEAI 2017 conference flyer.pdf](#)

The National STEM Education Research and Practice Summit, Purdue University, October 16-17, 2017

Nationally there has been incredible progress in the areas of STEM and STEM education over the past decade. This

event is designed as a forum for STEM education researchers, as well as those enacting best practice in STEM education K-20 to come together and share their collective knowledge and experiences. The Summit will start on the evening of October 16th at 6 p.m. with an opening reception. The second day of the conference (October 17) will begin with sessions starting at 9 a.m. and running through the day with an approximate end time of 4 p.m. EST.

There are three strands in the National STEM Education Research and Practice Summit:

- Strand 1: STEM Education Research
- Strand 2: Best-practice in K-20 STEM Education
- Strand 3: Resources for STEM Education

The schedule of presenters and sessions is available online now. Registration slots are filling up quickly. Please register soon to attend the event.

<http://www.cvent.com/events/national-stem-education-research-and-practice-summit/event-summary-f666e56740cb478aa7963f7728df20d5.aspx>

Grant Opportunities for STEM Educators

Advancing Informal STEM Learning This National Science Foundation program seeks to advance new approaches to and evidence-based understanding of the design and development of STEM learning opportunities for the public in informal environments; provide multiple pathways for broadening access to and engagement in STEM learning experiences; and advance innovative research on and assessment of STEM learning in informal environments.

Deadline: November 6, 2017. Available: Maximum of \$3,000,000 over a period of up to five years. Number of awards: 60 to 85. Link to RFP:

<https://www.nsf.gov/pubs/2017/nsf17573/nsf17573.pdf>

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

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>

DWD Offers \$20 Million In Grants The Indiana Department of Workforce Development (DWD) announced \$20 million in grants through its Skill UP Indiana! Program to fund employer-led "innovation networks," which will develop solutions to in-demand talent needs across Indiana.

Innovation networks are partnerships among local employers, educators, community organizations, and workforce and economic development partners, all working in collaboration to align community education resources (K-12, career and technical education, adult education, higher education, and incumbent worker training programs) with the skill and talent needs of the area's industries.

To learn more about the grant program and how to apply, click here: <http://www.in.gov/dwd/skillup.htm>

FLEET (Future Leaders in Experience-based Engineering and Technology) FLEET is an innovative, web-based naval engineering/ship design competition for high school students. Administered by the American Society of Naval Engineers (ASNE), developed by Navatek Ltd, with support from the Office of Naval Research (ONR), FLEET uses the youth-friendly model of gamification to introduce students to the STEM fields of naval architecture and engineering. Students are challenged to make realistic ship design decisions for naval vessels to conduct a search and rescue mission. Mini-grants are available to offset the cost of technology, staffing, or supplies and materials at the

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teacher's discretion (up to \$500). Check it out at www.fleetengineering.org

Lockheed Martin: Grants for Education Lockheed Martin provides grants for K-16 Science, Technology, Engineering and Math (STEM) Education. This includes Lockheed Martin's K-12 STEM Education Initiative, Engineers in the Classroom, as well as STEM-focused curricular and extracurricular programs that provide employee engagement opportunities in a community in which Lockheed Martin has employees or business interests. Maximum award: varies. Eligibility: 501(c)(3) organizations that deliver standards-based science, technology, engineering and math (STEM) education to students in K-16. Amount: Varies Deadline: Rolling. More [HERE](#).

Science Everywhere Innovation Challenge The Overdeck Family Foundation and the Simons Foundation announce the launch of Science Everywhere, an initiative to catalyze math and science learning beyond school walls, in partnership with DonorsChoose.org. The foundations are providing nearly half a million dollars to match donations from the public to support creative, hands-on project ideas submitted by educators to the DonorsChoose.org platform. At the end of the challenge, a panel of judges led by astronaut Leland Melvin will award five \$5,000 prizes to the best ideas. More info [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/) Inquiries may be directed to RobotGrant@TechPointYouth.org. Follow us on [Twitter](#) and [Facebook](#) for the most current updates on the State Robotics Grant!

The Toshiba America Foundation Accepting grant applications from K-5 grade school teachers for innovative science or math projects in their own classroom. The foundation awards individual grants of up to \$1,000 to K-5 teachers in public or private nonprofit schools in support of hands-on science or math education projects. The funds are for project-related materials only. The foundation strongly encourages projects planned and led by individual teachers or teams of teachers for their own classrooms. <http://www.toshiba.com/taf/k5.jsp>

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

Black Girls Code Introducing programming and technology to a new generation of coders who will become

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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](#).

Connecting to Computer Science: A Resource for Afterschool Practitioners

<http://afterschoolalliance.org/documents/AfterschoolCSResourceGuide2017.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 – https://www.edutopia.org/article/12-inspiring-stem-books-girls-emelina-minero?utm_source=Edutopia%20News&utm_campaign=e4b42d4703-EMAIL_CAMPAIGN_053117_enews_inspiringstembooks_mc&utm_medium=email&utm_term=0_29295b4c8b-e4b42d4703-51793103

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

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 . To

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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 to schedule a private event. More info on this and other workshops [HERE](#).

National Girls Collaborative

The *Playing with Data* research project is currently recruiting 7th and 8th grade science teachers for a classroom-based study beginning in late September/early October 2017! The National Science Foundation-funded project is investigating how teachers use data from video gameplay for formative assessment. Participating teachers will agree to use a mini-unit created to develop students' basic skills in argumentation. The supplemental mini-unit includes an iPad-based game—*Mars Generation One*—designed to build argumentation skills through gameplay. The mini-unit also includes comprehensive lesson plans and classroom activities, which will be implemented during teachers' regular units on energy. The mini-unit includes a capstone project for classroom debate. The length of implementation is approximately 3 weeks. Participants will be expected to spend approximately 10 hours beyond their regular teaching time completing study requirements (e.g., completing surveys and participating in interviews). Teachers will receive a \$500.00 stipend at the end of the study.

If you are interested in participating, or for more information, please email Heather Kim, Researcher, at hkim@edc.org, or call her at 212.807.4225. More information about the study can be found at <http://playingwithdata.edc.org/> and to learn more about the game, go to:

<http://www.glasslabgames.org/games/AA-1>

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](#).

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"
<https://www.dropbox.com/s/cpig29478qiotzh/PhysRevPhysEducRes.13.010107.pdf?dl=0>
- "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>

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/>

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.

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