

# STEM-IN'

Indiana STEM News

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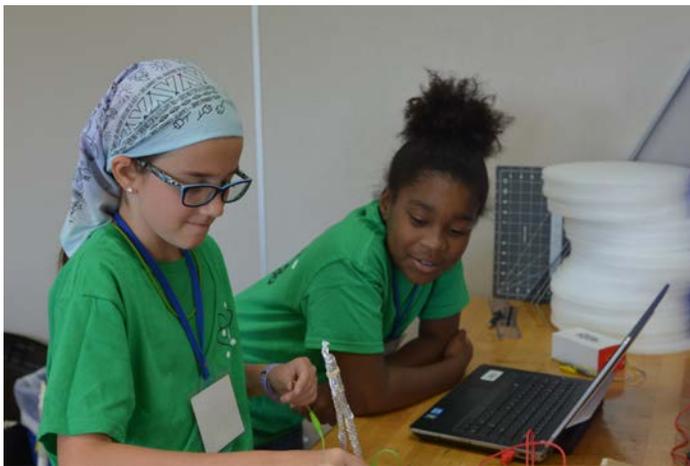
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**Girl Scouts Add 10 New STEM Badges** Girl Scouts has had a long history with STEM and is building on that history by ensuring that girls have access to STEM badges and curriculum at all program age levels. Diverse curriculum exists at all program age levels with a goal to embrace and celebrate scientific discovery in their lives. This year, Girl Scouts launched several new STEM badges to enhance the existing portfolio.

Existing badges include:

- **Naturalist** badges invite girls to explore the outdoors.
- **Digital Art** badges help girls build valuable technology and computer skills.
- **Science and Technology** badges connect girls to favorite science topics like video game development, the physics of roller coasters, and the technology used to create new fabrics.
- **Innovation** badges encourage problem solving using scientific methods from fields like anthropology, engineering, graphic design, and business.
- **Financial Literacy** badges prepare girls for a financially sound future.



New Programming Options include:

- **Mechanical Engineering** badge invites girls to build a race car and build and test a Leap Bot to learn about gravity, engineering, and force.
- **Think Like a Citizen Scientist** programming options encourage girls to sharpen their observation and take field notes. Girls will use these observations and data collections to learn about analyzing data over time.

- **Think Like a Programmer** programming options introduce girls to programming and creating algorithms, abstractions, functions and variables to address real-world needs.
- **Think Like an Engineer** programming options teach girls to use the Design Thinking Process to solve problems and do a hands-on Design Challenge activity to address real-world problems and challenges.
- **Robotics** programming options explore artificial intelligence, create models and prototypes, and brainstorm and create solutions to real-world problems.

No matter the interest, there is Girl Scout programming options available to foster that interest. <https://www.girlscoutsindiana.org/>

## **Bring Afterschool STEM to Your Lights On Celebration!**

Afterschool programs provide a unique opportunity to connect kids to science, engineering, technology, and math (STEM) learning in fun, informal ways—which is why we're excited to celebrate STEM education as one of our [themes](#) for *Lights On Afterschool*!

From fireworks to field trips, from science experiments to math crafts, the possibilities for bringing STEM into your *Lights On Afterschool* event are limitless. Check out [this blog](#) to see how other programs are planning to add STEM learning to their celebrations.

This week, there will be **FOUR** giveaway winners! [Register your event by Thursday, October 12](#), and you'll be entered to win one of our STEM giveaway packages:

- **3D Printer Package:** [M3D Micro 3D printer pack](#) + 10 free posters
- **Codable Robot Package:** [Wonder Workshop Dash & Dot](#) robots, [Snap Circuits LIGHT](#) audio and light show + 10 free posters
- **Bluetooth Robot Package:** [MAGFORMERS Light Show Set](#), [Makeblock MBot V1.1 STEM Educational Robot Kit \(Bluetooth Version\)](#) + 10 free posters
- **Rolling Robot Package:** [Makeblock Starter Robot Kit](#), [LittleBits CloudBit Starter Kit](#)+ 10 free posters

Looking for exciting ways to get kids moving in the great outdoors? Check out the [PLUM LANDING Explore Outdoors Toolkit](#) from PBS Kids! This set of outdoor STEM materials

is designed for programs serving youth 6- to 9-years-old and will get kids, especially those in urban areas, moving, playing, and learning outside

### **Ten80 Education: Access to High-Quality STEM Education**

Named one of four Exemplary and Ready-to-Scale Initiatives by Change the Equation & STEMWorks, Ten80 is framing a new way of thinking about STEM Education. Implemented in classrooms and clubs in 41 states, Ten80 helps students and educators grow from beginners to experts in the process of creative inquiry and data-driven design, keys to thriving in a world of constant innovation.

Through Ten80's STEM Innovators-in-Training Tour, sponsored by the U.S. Army, over 10,000 students from diverse socio-economic backgrounds and interests engage in team-oriented STEM activities. Sixty percent of all participants broadened their understanding of STEM as something that isn't isolated to future engineers, technicians and scientists. Forty percent left feeling for the FIRST time that STEM is relevant to their lives.



This new and renewed excitement about STEM translates into long-term learning through professional development, curriculum and support. Ten80's secondary curriculum is organized around team-oriented challenges and a defined process of innovation. These Student STEM Challenges invite students to own businesses specializing in racing, robotics, energy, or technologies/innovations that emerge through integration of hardware and software.

Students also have the option to collaborate and compete in the National STEM League (NSL). Teams upload work to an online dashboard to earn points. This site serves as a portal for remote mentoring as Ten80's team reviews submissions and provides feedback. Face-to-Face competitions are hosted in a growing number of cities.

To help strengthen STEM ecosystems across the country, Ten80 brings community members from all industry sectors together to maximize our collective impact. To help support

these hubs of STEM activity, Ten80 seeks funds to support professional development opportunities for educators, mentors to student teams, hosts for local events, and sponsors for student teams.

*Individuals interested in joining these Steering Committees should contact Beverly Simmons, Chair of [Ten80 Foundation](http://Ten80Foundation.org) at [bsimmons@ten80foundation.org](mailto:bsimmons@ten80foundation.org). For more information regarding Ten80's programs and events, visit [www.Ten80Education.com](http://www.Ten80Education.com).*

**Indiana STEM Advisory Council** The Indiana STEM Advisory Council was formed over the summer under the direction of the Indiana Department of Education. This work is a key part of the STEM Alignment Fund goals as provided in the state's biannual budget. The Council is chaired by the governor and includes leaders from the Department of Workforce Development, the Commission for Higher Education, the Department of Education, and the Indiana Chamber of Commerce. Purdue and Ivy Tech are on the Council, as are representatives from Lilly, Rolls-Royce and Cummins. Rep. Todd Huston and Sen. Jeff Raatz are members, as well as school representatives and others.

The main tasks for the Council are:

- Develop a cross-agency, cross-sector policy plan for integrated K-12 STEM education in Indiana
- Bring the plan to the Indiana General Assembly for the 2019 legislative session
- Develop a focused and targeted roadmap for philanthropic and private sector engagement

The first council meeting was September 14, and was facilitated by Patrick McAlister and Jenn Watts from the policy group at IDOE. Much of this first meeting covered background to help level the understanding of the Council. The group then broke into smaller groups to discuss one of the key issues: What are the major barriers to implementing STEM policy in Indiana? The discussion ranged from "not enough time" to "lack of teacher training and resources" to "not a priority". The DOE will summarize the inputs to share with the Council.

The next Council meeting will be in January 2018.

**Save the Date! Statewide STEM Taskforce Meeting November 13 10:00AM ET to 3:00PM ET at the Children's Museum. Watch for further details and registration coming soon!**

**About STEM-IN'** 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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**EVERY** student **EVERY** school **EVERY** day