February 2018 STEM Newsletter

Greetings!

This edition of the JHU STEM Newsletter covers events and program deadlines from February through April and outlines opportunities for Maryland K-12 students and educators. Continue on to our Success Story section for local media coverage on last week's Hopkins Robotics Cup Tournament.

Enjoy,

Center for Educational Outreach Team

Upcoming Programs and Events

Orioles Baseball Analytics Night at JHU

The Johns Hopkins Sports Analytics club in conjunction with the Hopkins Undergraduate Society for Applied Mathematicians (HUSAM) is hosting three baseball analysts from the Baltimore Orioles to give a presentation on their fields. This is a unique opportunity to meet Johns Hopkins students and faculty along with professionals in the sports analytics realm.

Date: Wednesday, February 7, 2018 (refreshments at 7:00 PM)
Time: starts at 7:30 PM
Location: JHU Homewood campus, Bloomberg Hall, room 272

Click HERE for more information and to RSVP.

Tower of Power in Your Classroom!

Join Johns Hopkins University's Whiting School of Engineering in celebrating National Engineers Week (February 18-24, 2018) by building a tower from spaghetti and marshmallows. The tallest freestanding tower wins!

The top five winning middle school teams will be invited to JHU's Tower of Power competition on Tuesday, February 20, 2018 to build their tower again and compete with undergraduate students, alumni, and faculty teams.

Entries are due February 9, 2018.

Click HERE for complete details or email JHU STEM for more information.
ASPIRE High School Internship Program

The ASPIRE high school internship summer program gives rising juniors and seniors the opportunity to explore STEM careers by working onsite at JHU APL with a staff mentor on a technical project for 25 hours a week for six weeks. This is an unpaid learning opportunity. The ASPIRE program is a competitive program that is looking for STEM interested students who show the ability to collaborate, self-motivate, and overcome obstacles.

**Deadline to Apply:** Thursday, February 15, 2018  
**Date Range:** June - August 2018  
**Time:** Flexible between 8:30 AM - 6:00 PM  
**Location:** JHU Applied Physics Laboratory, 11100 Johns Hopkins Rd, Laurel, MD 20723

Click [HERE](#) to read more and apply or email [ASPIRE](#) for additional information.

JHU Engineering Innovation

Engineering Innovation is a four week summer program course for high school students interested in learning more about a career in the field of engineering.

**Upcoming Deadlines:** Feb. 15 for Baltimore City Public School students interested in participating as part of the Johns Hopkins Summer Jobs Program; Feb. 15 is the deadline for Carroll County students interested in applying for a scholarship from the Carroll County (MD) Benevolent & Protective Order of the Elks; Other deadlines may be found on the [EI website](#).

**Maryland Sites:** Johns Hopkins Homewood Campus, Loyola University, Johns Hopkins Applied Physics Laboratory, Johns Hopkins Montgomery County Campus, and Hood College. There are a total of thirteen locations across the country - Click [HERE](#) for a full list

Click [APPLY](#) or visit the EI website for more details.

Verizon Innovative Learning Program for Minority Males

Morgan State University's School of Engineering and Verizon are offering a free Saturday program to engage minority males in STEM learning. Students will get hands-on experience with advanced technology, including coding, 3-D design and printing, robotics, virtual reality and more! They'll be paired with undergraduate college students who will serve as year-round mentors as the program will also continue during the summer. Applications are currently open to Baltimore City Public Middle School males. FREE LUNCH IS PROVIDED!

**Dates:** February 24, March 10, April 14, 2018  
**Time:** 10:00 AM - 5:00 PM  
**Location:** MSU School of Engineering

Click [HERE](#) to apply.

Research and Engineering Apprenticeship Program

Johns Hopkins University is pleased to host the Research & Engineering Apprenticeship Program (REAP) this summer! REAP is a STEM program that places talented high school students, from groups historically under-represented and underserved in STEM, in research apprenticeships at area colleges and universities. REAP apprentices work under the direct supervision of a mentor on a hands-on research project. REAP apprentices are exposed to
the real world of research, they gain valuable mentorship, and they learn about education and career opportunities in STEM. REAP apprenticeships are 5-8 weeks in length and the student apprentice receives a financial stipend.

**Deadline to Apply**: Wednesday, February 28, 2018  
**Location**: Johns Hopkins University Homewood campus  
**Date Range**: Summer 2018

Click **APPLY** to start the process or call Bess Bieluczyk at 410-516-7794 for more information.

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**Young Scholars Program**

The Cooke Young Scholars Program is a selective 5-year pre-college scholarship for high-performing 7th grade students with financial need. It provides comprehensive academic and college advising, as well as financial support for school, Cooke-sponsored summer programming, internships, and other learning enrichment opportunities that may benefit students during their high school years.

**Deadline to Apply**: Wednesday, March 21, 2018

Click **APPLY** to start the process.

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**Visiting Engineer for High School Classrooms**

Invite an engineer to share his/her experiences with your high school students. Introduce them to the variety of exciting career opportunities available in the field of engineering and provide them with information about how to prepare in high school for an engineering career. Presentations can be modified to last 20 - 70 minutes.

Engineers are available September through March 2018 and cover Maryland, Northern Virginia, District of Columbia, and Harrisburg, PA area.

Contact Suzanne Kantt at 410-516-6224 or via [email](mailto:).  

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**Professional Development Opportunities**

**BioEYES 7th Grade Teacher Training**

Project BioEYES is a week-long, hands-on science outreach program using zebrafish to teach biology, genetics, and the scientific method. Live zebrafish are brought into your classroom, where students mate the fish and raise the resulting embryos until they hatch out as free-swimming larvae with beating hearts visible under our microscopes.

We will be holding one more training for 7th grade teachers this school year. All teachers new to BioEYES must attend the training to participate.

**Date**: Saturday, February 10, 2018  
**Location**: The Carnegie Institution for Science, 3520 San Martin Drive, Baltimore, MD 21218  
**Time**: 9:00 AM - 12:30 PM

Click **HERE** for more information.

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**Makey Makey Workshop for Educators**

In this hands-on, one day workshop, at Digital Harbor Foundation, you will learn how to use the Makey Makey to teach basic circuitry and make beginner and advanced level projects using recyclable or easily accessible supplies. Includes a Makey Makey Starter Kit! Attendees will receive a certificate from Makey Makey as a trained educator.
Making for Educators

What is a Makerspace? Why is making important to youth? Where do I start?

In DHF’s 2 day workshop, we introduce the ideas and concepts to educators on how they can create an immersive, hands-on learning environment through making. We discuss the maker’s mindset, project ideas and templates, and tips on how to build your own makerspace. You will leave with your own kit of supplies in the Makerspace Starter Kit.

Date: Friday & Saturday March 16-17, 2018
Location: Digital Harbor Foundation, 1045 Light St., Baltimore, MD 21230
Time: Friday 5:00 PM - 9:00 PM and Saturday 10:00 AM - 5:00 PM

Click the MAKING website to register or email Brooke.

3D Printing for Educators

DHS wants to share our years of experiences, failures, and successes 3D printing with youth in our multi-day workshop for educators. In one of our most popular workshops, you will learn how to get started with 3D printing in your learning space as well as our 3D printing teaching philosophy and hands on practice with the hardware and software. Plus, it includes a 3D printer and starter kit!

Date: Thursday-Saturday, April 12 - 14, 2018
Location: Digital Harbor Foundation, 1045 Light St., Baltimore, MD 21230
Time: Thursday 5:00 PM - 9:00 PM, Friday & Saturday 10:00 AM - 5:00 PM
Cost: see PRINTING website for details

For more information email Brooke or visit PRINTING to register.

Research Experiences for STEM Educators and Teachers (RESET)

RESET reinforces teachers' content knowledge through research experiences and interactions with Army and Department of Defense scientists and engineers. Selected teachers will participate in online learning as a cohort, with a subset of the cohort selected to conduct research on-site with a mentor Army scientist or engineer. Teachers will be able to translate this knowledge and experience into enhanced science, technology, engineering and math research curricula and enriched learning for their students.

Deadline to Apply: February 15, 2018
Dates: April - August 2018
Location: Online and on-site at participating Army laboratories
Commitment: 60 hours of PD time for Level I, 220 hours for Level II

Click RESET to apply and learn more about the program.

Success Story

Hopkins Robotics Cup Event Recap
More than 50 Baltimore City Public School student teams...
competed in the annual Hopkins Robotics Cup Tournament on January 27, 2018 at the JHU Homewood Campus. The event was featured in a Baltimore Sun news article.

Click HERE to read the article and watch the video.

A record number of winning Baltimore City VEX and VEX IQ teams are going on to compete at the State Finals in February and March.
April 2018 STEM Newsletter

Greetings!

Welcome back to those educators who just finished their spring break! This edition of the JHU STEM Newsletter covers student events and program deadlines from April to May, outlines opportunities for Maryland K-12 educators, and details a community volunteer opportunity.

Enjoy,

Center for Educational Outreach Team

Upcoming Programs and Events

Mathemagics Night!

HUSAM is sponsoring an evening show with Dr. Art Benjamin - the legendary performer and entertainer. Dr. Benjamin is a "mathemagician" who has been featured in 3 TED talks and named by the Reader's Digest as "America's Best Math Whiz". Local students of all levels would especially enjoy this night of mathematics and magic!

Date: Monday, April 9, 2018
Time: refreshments at 7:00 PM, performance starts at 7:30 PM
Location: JHU Homewood Campus, Hodson Hall, room 110

Click HERE for more information and to RSVP.

Women in Science and Engineering (WISE)

Fall 2018 applications are now available. Baltimore City Public School high school female juniors and seniors who are interested in pursuing STEM majors in college are urged to apply to the WISE program. WISE offers a unique opportunity to work one-on-one after school alongside a graduate student mentor in a JHU engineering and research laboratory. Visit the website below for details on eligibility and to start the application.

Dates: October 2018 - January 2019 (varying number of spots available each semester)
Location: Homewood Campus, 3400 N. Charles Street
Website: JHU-WISE
SABES STEM Showcase

It's time for the annual Spring STEM Showcase for Baltimore City elementary students to share their projects and learning from throughout the year. Families and community members are invited to join the event and celebrate our students!

**Date:** Tuesday, May 15, 2018  
**Time:** 5:00 PM - 8:00 PM  
**Location:** Baltimore Polytechnic Institute, 1400 W. Cold Spring Ln, Baltimore, MD 21209

Click [HERE](#) for flyer details and to RSVP or contact [William Lyoo](#) for more information.

JHU Engineering Innovation

Engineering Innovation is still accepting applications. For more information about course content, locations, dates(times), and costs, please visit [EI Details](#). The upcoming deadlines are listed below. EI will continue to accept applications until June 1st or until a specific site fills.

- April 15, 2018 - Fifth Deadline - International Students must apply by this date!  
- May 1, 2018 - Sixth Deadline  
- May 15, 2018 - Seventh Deadline  
- June 1, 2018 - Final Deadline

Contact our office at 410-516-6224 for more information.

Professional Development Opportunities

**After School Works 2018 Conference**

Join us for an engaging, working conference centered around creating supportive pathways from after-school engagement to workforce opportunities. This half-day event will provide innovative strategies and best practices for those already working in the out of school time field, as well as, ample inspiration for those seeking to launch new programs. While this no-cost conference that is open to the public, the target audience includes program providers, parents, educators, funders, and policy makers. A wide range of workshop topics will be offered, as well as, opportunities for networking and partnership development. Breakfast and lunch will be served.

**Date:** Friday, April 27, 2018  
**Time:** 8:30 AM - 2:30 PM  
**Location:** Chesapeake College, 1000 College Circle, Wye Mills, MD 21679

Contact [Elyse Preston](#) for more information or click [HERE](#) to register for the event.

**BioEYES 7th Grade Teacher Workshops**

We invite 7th grade teachers from Baltimore City Public Schools to learn about BioEYES - a week-long, outreach program that uses an amazing fish species to teach genetics and life science to students. More than 30,000 Baltimore City students have participated in this engaging program. A training workshop with stipend will be offered and is required for teachers new to BioEYES. Contact us to learn how you can bring BioEYES into your classroom free of charge.

We will be holding one more training for 7th grade teachers this school year. All teachers new to BioEYES must attend the training to participate.
Volunteer Opportunity

**SABES STEM Showcase Volunteers Needed**

STEM Achievement in Baltimore Elementary Schools (SABES) is looking for volunteers to assist with the Spring Showcase event! Please complete the link below to register and sign up for specific duties and time slots.

Click **HERE** to register as a volunteer.

**Date:** Tuesday, May 15, 2018  
**Time:** 2:00 - 9:00 PM  
**Location:** Baltimore Polytechnic Institute, 1400 W. Cold Spring Ln, Baltimore, MD 21209
Greetings!

As you gear up for the end of another school year, we invite K-12 students and educators to take advantage of these upcoming events and professional development opportunities. See our Special Invitation section for information on getting your students to our SABES STEM Showcase.

Enjoy,

Center for Educational Outreach Team

Upcoming Programs and Events

**SABES STEM Showcase**

It's time for the annual Spring STEM Showcase for Baltimore City elementary students to share their projects and learning from throughout the year. Families and community members are invited to join the event and celebrate our students!

- **Date:** Tuesday, May 15, 2018
- **Time:** 5:00 PM - 8:00 PM
- **Location:** Baltimore Polytechnic Institute, 1400 W. Cold Spring Ln, Baltimore, MD 21209

Click [HERE](#) for flyer details and to RSVP or contact [William Lyoo](#) for more information.

**The Ingenuity Project Math & Science Research Symposium**

The Ingenuity Research Curriculum is a three-year program spanning the sophomore to senior years, serving as an incubator for future scientists, engineers, and mathematicians. During the Research Practicum experience, students work with mentors at local colleges, universities, and other research institutions to develop independent research projects. Students submit their work to national pre-college competitions. Each year, the students organize this research symposium for students who have participated in research to showcase their work and present their findings to peers, faculty, staff, and parents. It is a highly anticipated event and draws a large crowd from the Baltimore scientific and math research community.

- **Date:** Wednesday, May 23, 2018
- **Time:** 5:00 PM - 8:00 PM
- **Location:** Baltimore Polytechnic Institute (1400 W. Cold Spring Ln, Baltimore, MD 21209)
JHU Engineering Innovation

The Johns Hopkins Engineering Innovation summer program is still accepting applications for this summer at many of our locations. Please visit our [EI website](#) for more details.

**FINAL APPLICATION DEADLINE - June 1st!**

**Available Locations:**
- Loyola University of Maryland,
- The University of the District of Columbia,
- JHU Montgomery County Campus,
- Hood College in Frederick, MD

Contact our office at 410-516-6224 for more information.

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**Designing Solutions for Health Challenges in Humanitarian Crises**

Join us for a US-GAZA Humanitarian Health Design Hackathon with students, faculty, and experts based in Baltimore and Gaza. Participants will be expected to attend the hackathon in person on June 23, 24, 30 and July 1, 2018. Click [HERE](#) for program details and to register.

**Dates:** June 23-July 1, 2018  
**Time:** 8:00 AM - 6:00 PM  
**Location:** Design Studio, 2nd floor of Clark Hall, Homewood Campus, 3400 N. Charles Street

Contact Sofia for more information.

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**Professional Development Opportunities**

**Makey Makey for Educators**

Makey Makey is an invention tool that gives youth of all ages the power to create computer-based inventions with everyday objects. In this hands-on, one day workshop, you will learn how to use the Makey Makey to teach basic circuitry and make projects using recyclable or easily accessible supplies. This workshop includes a Makey Makey Starter Kit and upon completion you will receive a Certificate of Completion toward Continuing Education Credits.

**Date:** Saturday, June 2, 2018  
**Time:** 10:00 AM - 5:00 PM  
**Location:** 1045 Light St, Baltimore, MD 21230

Contact Digital Harbor for more information or click [HERE](#) for program details.

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**Making for Educators**

In this two-day workshop you will gain hands-on experience with basic makerspace tools and projects. After the workshop you will have the knowledge and confidence to start your own makerspace or integrate making into your existing curriculum. In addition, you will receive a kit of key makerspace supplies that you can use to jump start your program as soon as you return home.

**Date:** Monday-Tuesday, July 23-24, 2018  
**Time:** 10:00 AM - 3:00 PM (both days)  
**Location:** 1045 Light St, Baltimore, MD 21230
**Beginner Game Development for Educators**

Game Development is a rapidly developing field that exists in the intersection of storytelling and computer programming, where designers shape and construct new gaming experiences. Game Development offers opportunities to use creative thinking and practice problem solving, iteration, and the design process. This workshop introduces Scratch as a platform for beginner game development. You will learn the basics of programming in Scratch, how to create basic game mechanics, and how to teach youth these skills.

**Date:** Thursday-Friday, July 26-27, 2018  
**Time:** 10:00 AM - 3:00 PM (both days)  
**Location:** 1045 Light St, Baltimore, MD 21230

Contact Digital Harbor for more information or click HERE for program details.

**Family Make Night Facilitator Workshop**

This family-focused DHF signature program has an emphasis on students and their families working together on fun and engaging hands-on projects. Family Make Nights are a great way to engage and build relationships with families in your community. In this one-day workshop attendees will learn how to plan, organize, and facilitate Family Make Nights. The workshop includes hands-on instruction for seven projects and a kit of materials for bringing these activities back to your program.

**Date:** Monday, August 13, 2018  
**Time:** 10:00 AM - 5:00 PM  
**Location:** 1045 Light St, Baltimore, MD 21230

Contact Digital Harbor for more information or click HERE for program details.

**3D Printing for Educators**

Want to get started with 3D printing, but aren't sure where to begin? Take this multi-day intensive workshop and learn everything you need to know to comfortably control a 3D printer and incorporate 3D printing into your own curriculum. In this workshop you will receive your own 3D printer and gain hands-on experience with it throughout the workshop.

**Date:** Wednesday-Friday, August 15-17, 2018  
**Time:** 10:00 AM - 4:00 PM (all three days)  
**Location:** 1045 Light St, Baltimore, MD 21230

Contact Digital Harbor for more information or click HERE for program details.

**FREE STEM Program for Elementary School Students and Families**

Johns Hopkins University in partnership with City Schools is hosting our FREE annual SABES STEM Showcase. We would love for you to bring a group of students and families to attend the event on Tuesday, May 15, 2018 from 5:00 - 8:00 PM at Baltimore Polytechnic Institute & Western High School. This year, we are pleased to feature Barrington Irving, the youngest and first African-American to fly around the world solo! Additionally, we will feature over 50 interactive demonstrations for students and families including drones presentations by Global Air Media, a portable planetarium from the Physics & Astronomy Graduate Students of Johns Hopkins University, 3D printing and...
laser cutting with Open Works and an oyster filtration system with the Chesapeake Bay
Foundation. As if that is not enough, students from nine City Schools will present their STEM-
related lessons and original work! You and your families do not want to miss this!

A limited number of buses may be available for City Schools who have registered 30-44 people.

Please email SABES or contact Alisha Sparks at 410.516.0493 or William Lyoo at
410.396.7968 to register your students.
Greetings!

As a new year begins, we invite Maryland K-12 students and educators to take advantage of these upcoming events and professional development opportunities.

Enjoy,

Center for Educational Outreach Team

Upcoming Programs and Events

Maryland Science Olympiad

The after school STEM program Maryland Science Olympiad (MSO) season kicked off registration 9/5! It is a great opportunity for you as teachers, students and schools to get students excited about science. Watch last year's MS tourney video at Morgan - MSO B video! MSO is a great program in which students prepare to compete at a tournament in their choice of science & engineering events such as building towers or gliders, solving chemistry forensics, or competing in anatomy or ecology.

Date: Register now  
Time: Now until state tournament
Location: After school with location of your choice

Click HERE to see the MSO website and to register or contact Kate McGuire for more information.

Code in the Schools 6th Annual Game Jam

In this free one day event, aspiring video game developers in 6th through 12th grade come together in teams to rapidly create a game based on a theme revealed the day of the event. The 2017 game jam attracted over 70 youth from around the city, and provided them t-shirts, three meals, and prizes at the end of the event.

Application Opens: October 1st, 2018  
Deadline: October 27th, 2018  
Event Date: Saturday, November 10, 2018  
Time: All-day event
Maryland STEM Career Fair for Girls

A STEM-outreach event for girls in grades 8-12 across Maryland, where they will meet with women from various businesses who work in STEM. Keynote speak is Ava Marie, WBAL meteorologist. Still seeking new organizations to participate.

Date: Saturday, October 13th, 2018
Time: 9:30 AM - 2:00 PM
Location: The Bryn Mawr School, 109 W. Melrose Ave, Baltimore, MD 21210

Contact Dr. Eric Elton for more information or click HERE for program details.

Ready, Set, Design!

The Ready Set Design! program provides introductory engineering experiences for elementary and middle school girls in the Baltimore area, through half-day weekend programs on the Johns Hopkins University campus. The girls will brainstorm, build, and present their prototype solutions to themed, real-world engineering problems in groups. JHU students act as mentors for the girls. The October date is designated for middle school girls and the November date is for elementary school girls.

Dates: October 13th & November 10th
Time: 10:00 AM - 1:00 PM
Location: First date - Charles Common, Salon A; Second date - Glass Pavilion - Homewood Campus

Contact Ready, Set, Design! for more information.

FIRST LEGO League Challenge Model BUILD DAY for Maryland Events

Volunteers will work together in teams to construct the LEGO models for the competition table-top playing fields. Dozens of LEGO models need to be constructed to be used throughout the state at competitions. LEGO building instructions will be provided. NOTE: Minimum age is 9 years old to volunteer for this "FLL BUILD DAY". A Volunteer Packet with all the details will be sent to all registered.

Date: Saturday, October 13, 2018
Time: 10:00 AM - 2:00 PM (Partial shifts available)
Location: UMBC in Catonsville, MD

Contact Jenny Beatty for more information or click HERE for program details.

Ingenuity Project Applications for 2019-20

The Ingenuity Project is seeking motivated 5th grade students ready for an accelerated math and science middle school experience. This comprehensive 3-year program is hosted at three Baltimore City middle schools (Hamilton, Mount Royal and Roland Park). Applications for 2018-19 are due December 19. Go to our website for important information, open houses, and deadlines.

Date: November 1st - December 19th, 2018
Time: See website for all dates
Location: St. John's Church, 2640 St. Paul Street, Baltimore, MD 21218
Army Educational Outreach Program (AEOP)

AEOP offers our nation's youth and teachers opportunities for meaningful, real-world STEM experiences, competitions and paid internships. Johns Hopkins University along with several other universities in Maryland and nation wide actively participate in AEOP activities. Check out the AEOP website! Applications for internships and other programs will open in the coming months.

Come check out AEOP!

Professional Development Opportunities

Johns Hopkins School of Education Fall 2018 Open House

The Johns Hopkins School of Education provides educators with the best practices for classroom success. Learn more about our graduate programs for aspiring and advancing teachers at our 2018 Fall Open House.

This two-hour event will provide a comprehensive look at the school's programs. Presentations and faculty-led discussions about program requirements and career pathways will be available. Representatives from the Offices of Admissions, Financial Aid, Career Services and Alumni will be on hand to answer questions. Please RSVP to reserve your space.

Date: Saturday, October 27th, 2018
Time: 9:30 AM - 11:30 AM
Location: Johns Hopkins School of Education, 2800 North Charles Street, Baltimore, MD, 21218

Click HERE for more information.
Greetings!

As we head into winter, we invite Maryland K-12 students and educators to take advantage of these upcoming events and professional development opportunities.

Enjoy,

Center for Educational Outreach Team

Upcoming Programs and Events

Maryland Science Olympiad

The after school STEM program Maryland Science Olympiad (MSO) season kicked off registration 9/5! It is a great opportunity for you as teachers, students and schools to get students excited about science. Watch last year's MS tourney video at Morgan - MSO B video! MSO is a great program in which students prepare to compete at a tournament in their choice of science & engineering events such as building towers or gliders, solving chemistry forensics, or competing in anatomy or ecology. Register your team today and find out preparation resources available to you!

**Deadline:** Wednesday, December 12, 2018  
**Event Date:** Friday, March 9, 2019  
**Time:** All day  
**Location:** Morgan State University, 1700 E. Cold Spring Ln, Baltimore, MD 21251

Click [HERE](#) to see the MSO website and to register or contact [Kate McGuire](#) for more information.

Ingenuity Project Applications for 2019-20

Attention current 5th and 8th graders! Ingenuity is a good fit for students with a history of strong performance and interest in math and science, complex and logical thinking, persistence, and the ability to grasp new material and concepts quickly. The program is committed to identifying a cohort of diverse students that reflects the ethnicity, gender and income of Baltimore City residents. Common entry points are 6th and 9th grades. This comprehensive program is hosted at four Baltimore City middle schools (Hamilton, Mount Royal, Roland Park, and James McHenry) and one Baltimore City high school (Baltimore Polytechnic Institute). Go to our website for important information, open houses, and deadlines.
Deadline: Thursday, December 20, 2018
Time: See website for all dates

Click HERE for the application or contact Jocelyn Harris for more information.

### JHU Engineering Innovation

Engineering Innovation (EI) is a college-level summer program for high school students interested in engineering. It is a survey course covering a number of engineering disciplines.

**Application Opens:** Thursday, December 15, 2018  
**Program Dates:** Monday, June 24, 2019 - Friday, July 19, 2019  
**Time:** 9:00 AM - 3:00 PM in most locations  
**Location:** Multiple - including JHU-Homewood, JHU-APL, and JHU-Montgomery County

Contact Suzanne Kantt for more information or click HERE for program details.

### Tower of Power in Your Classroom!

Join Johns Hopkins University's Whiting School of Engineering in celebrating National Engineers Week (February 17-23, 2019) by building a tower from spaghetti and marshmallows. The tallest freestanding tower wins!

The top five winning middle school teams will be invited to JHU's Tower of Power competition on Tuesday, February 19, 2019 to build their tower again and compete with undergraduate students, alumni, and faculty teams.

Email STEM Outreach to submit your intent to participate by Friday, January 18, 2019!

Entries are due Friday, February 8, 2019.

Click HERE for complete details.

### FIRST LEGO LEAGUE

Girls Scouts of Central MD qualifier

Robots and Kids! Judges needed for the FIRST LEGO League competition at the Girl Scouts of Central MD. Both technical and non-technical judge roles available. Judging roles for project (space theme this year), teamwork and robot design/programming. Training provided. Many other events/dates also available. See links on flyer.

**Date:** Sunday, January 20, 2019  
**Time:** 8:00 AM - 2:00 PM  
**Location:** Girl Scouts of Central MD, 4806 Seton Dr, Baltimore, MD 21215

Contact Jenny Beatty for more information or click HERE to volunteer.

### Army Educational Outreach Program (AEOP)

AEOP offers our nation's youth and teachers opportunities for meaningful, real-world STEM experiences, competitions and paid internships. Johns Hopkins University along with several other universities in Maryland and nation wide actively participate in AEOP activities. Check out the AEOP website! Applications for internships and other programs will open in the coming months.
Come check out AEOP!

Women in Science and Engineering WISE

Spring 2019 applications are now available. Baltimore City Public School high school female juniors and seniors who are interested in pursuing STEM majors in college are urged to apply to the WISE program. WISE offers a unique opportunity to work one-on-one after school alongside a graduate student mentor in a JHU engineering and research laboratory. Visit the website below for details on eligibility and to start the application.

**Dates:** February 2019 - June 2019 (varying number of spots available each semester)

**Location:** Homewood Campus, 3400 N. Charles Street, Baltimore, MD 21218

**Website:** JHU-WISE

Contact Ruby Holder for more information.

Professional Development Opportunity

FutureMakers: Teacher Gym

FutureMakers hosts a monthly STEAM "teacher gym" and happy hour on the first floor of the Motor House in Baltimore. It's a drop-in experience for educators who want to experiment with tested tools and materials to bring more making into their classrooms. Registration is free, space is limited.

**Event Date:**
Thursday, December 13, 2018

**Time:** 4:00 PM - 6:00 PM

**Location:** The Showroom, 120 W. North Ave., Baltimore, MD 21201

Contact Future Makers for more information or click HERE to register.

Volunteer Opportunities

Hopkins Robotics Cup Volunteers Needed

Volunteers for a variety of positions are needed for the 7th annual Hopkins Robotics Cup. There will be two divisions, one for the VEX IQ Challenge (elem/mid school students) and the second for the VEX Robotics Competition (mid/high school students). Please fill out the Volunteer Form to participate. No experience necessary! Training will be provided. Come volunteer and support STEM in Baltimore City!

**Set-Up Day:** Friday, January 11, 2019

**Competition Day:** Saturday, January 12, 2019

**Location:** Newton White Athletic Center on the JHU Homewood Campus, 3400 N. Charles St. Baltimore, MD 21218

**Commitment:** Choose set-up day or competition day or both!

Contact Margaret Strong with questions.

Become a SABES Mentor

SABES (STEM Achievement in Baltimore Elementary Schools) is looking for Mentors to work in our afterschool program. Mentors will assist in the classroom as students complete engaging STEM projects. Our afterschool program provides students with opportunities to grow their
knowledge and curiosity, and lead inquiry-based projects related to their community’s needs. If you have a background or interest in STEM and want to mentor 3rd - 5th grade students, please consider becoming a STEM Achievement in Baltimore Elementary Schools (SABES) mentor!

**Requirements:** Must pass a background check and have reliable transportation

**Dates:** Ongoing - throughout the school year

**Current Locations:** Baltimore City elementary schools

**Frequency:** 1-2 visits per month. Programs run between 3:00 PM - 5:00 PM Mon - Thurs

Click [HERE](#) to sign up or email [Erin Burk](mailto:erin.burk@baltimorecityschools.org) for more information.