Greetings!

Happy New Year! We've highlighted lots of different STEM events in and around Baltimore to help you get 2014 off to a great start!

Enjoy,
The Center for Educational Outreach

Upcoming Events

**1st Year Anniversary Showcase**

Digital Harbor Foundation celebrates their one-year anniversary. The evening will feature youth projects, a short program, and a look forward to the next year. Help celebrate all of these great accomplishments!

Register for the event [here](#).

**Date:** Thursday, January 16, 2014  
**Time:** 6:00 - 8:00 p.m.  
**Location:** Digital Harbor Foundation Tech Center 1045 Light St Baltimore, MD 21230

**MATHEMAGICS NIGHT!**

Are you a middle or high school student, or a math enthusiast? Join us for a night of mental math, magic, and fun! Dr. Arthur Benjamin, "America's Best Math Whiz," and a "lightning calculator," will demonstrate and explain the secrets behind rapid mental math calculations and tricks.

**Date:** Thursday, January 30th, 2014  
**Time:** 6:15 pm  
**Location:** The Homewood Campus of Johns Hopkins University, Hodson Hall, Room 110  
**RSVP:** [Here](#) with your contact information in case there are any changes!

**Maryland Science Olympiad**

Maryland Science Olympiad is an exciting tournament with a variety of science events.

**Middle School Regional Tournament**  
**Registration Deadline:** January 31, 2014  
**Elementary School Program starts on:** February 17, 2014

**For more information:**  
Visit [marylandscienceolympiad.org](http://marylandscienceolympiad.org), or contact Kate McGuire at kate_m_mcguire@ymail.com.

**Girl Power**

Girl Power is a day for middle and high school girls to explore STEM. This
event will feature special presentations on women working in aerospace, cyber-situational awareness, as well as college and career presentations and hands-on activities and challenges. The event is free and open to middle and high school girls. No registration is required. More information will be posted [here](#).

**Date:** Sunday March 9, 2014  
**Time:** 2:00 - 5:00 pm  
**Location:** Kossiakoff Center JHU Applied Physics Laboratory, 11100 Johns Hopkins Road, Laurel, MD 20723

### Classroom Opportunities and Beyond

#### Tower of Power in your Classroom!

Join Johns Hopkins University's Whiting School of Engineering in celebrating National Engineers Week (February 16-22, 2014) by building a tower from spaghetti and marshmallows. The tallest freestanding tower wins!

The winning middle school team will be invited to JHU's Tower of Power competition on February 19, 2014 to build their tower again and compete with undergraduate students, alumni, and faculty teams.

[Download](#) the registration form and be sure to return it by **January 31, 2014**!  
Entries due **February 7, 2014**.

#### After School Programs

Digital Harbor Foundation has two after school programs starting this month.

**Maker Foundations** is a program for students in grades 7 - 12 that introduces the students to 3D Design & Printing, Graphic Design, Web & Game Development, Circuitry and much more.  
[Application](#) deadline is January 17th!

**FutureMakers** is a program for students in grades 1 - 8 where young makers with big ideas can build, experiment, take creative risks and purposefully play.  
[Enrollment](#) is open throughout the spring.

#### Family Make Nights

The [Digital Harbor Foundation](#) is excited to present a series of family-focused workshops at the Tech Center. These evening workshops are designed for a family team of up to 4 people (including at least one adult) to work together on a project. In the first workshop, you will learn about vinyl design and vinyl cutting.  
Register [here](#).

**Date:** Tuesday January 21 and Tuesday February 11, 2014.  
**Time:** 6:30 - 8:00 p.m.  
**Location:** Digital Harbor Foundation Tech Center 1045 Light St. Baltimore, MD 21230
Volunteer for FIRST Robotics Competitions
First Lego League (ages 9-14) and First Tech Challenge (ages 12-18) provide students with the opportunity to build and program robots while developing their problem solving, creativity, analytical thinking, and engineering skills. You can register to volunteer here.
If you have questions, contact Jenny Beatty. Find more information about Maryland's FIRST program on their website.

**Dates:** Check out the [calendar](#) for the list of dates of upcoming competitions

**Time:** 8am - 5pm

**Location:** variety of locations in Central Maryland

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## Engineering Innovation

**A Summer Program for High School Students**

**Students Have the Chance to Earn JHU College Credit!**

The Johns Hopkins Engineering Innovation Summer Program will be held June 30 - July 25, 2014 at five local sites (Baltimore, Elkridge, Rockville, DC & Frederick) as well as locations in PA & CA. During this four-week introductory engineering course, students will complete hands-on activities in chemical, electrical, mechanical and civil engineering, material science and robotics. Students who earn an A or B in the course earn three JHU college credits. The online application will be available [February 1, 2014](#). Visit the Engineering Innovation [website](#) for more information.

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We hope to see you at some of these events!

**Sincerely,**

Margaret Hart
Center for Educational Outreach
Greetings!

Happy Spring!

We were busy here at the Center, preparing for some cool STEM events this spring. We just redesigned our website so it has a brand new look, check it out. Below are some of the events to look forward to this spring.

Enjoy,
The Center for Educational Outreach

Upcoming Events

Pi Day!
March 14th is Pi Day (3/14)! Pi is a mathematical constant that defines the ratio of a circle's circumference to its diameter. Pi's value is infinite, but here's some of the digits: 3.1415926535. Pi day is commonly celebrated by enjoying the dessert pie! Measure your own pies and calculate pi!

JHU Hosts Maryland Science Olympiad State Tournament
On March 29th, middle and high school teams from all over Maryland will come to Hopkins to compete for a spot at the National Tournament. We are especially excited for this year's State Tournament because our own Charm City Science League, a local middle-school team mentored by JHU undergraduates, won second place in the Baltimore City Science Olympiad, which qualified them to compete at the State Tournament. Come join us as we cheer them on! For more information about the tournament, visit marylandscienceolympiad.org, or contact Kate McGuire at: kate_m_mcguire@ymail.com

Hopkins Robotics Cup
The Center for Educational Outreach will be hosting its 2nd Annual Hopkins Robotics Cup on April 5, 2014. This is the championship for all VEX teams in Baltimore City Public Schools. Teams will be placed into the middle school or high school division and compete for the honor of being called the "Hopkins Robotics Cup Champions"! For more information, visit the CEO Website.
USA Science and Engineering Festival
The USA Science and Engineering Festival will be April 26-27, 2014 at the Walter E. Washington Convention Center in Washington, DC. The festival is an interactive program where visitors can hear speakers in science and engineering fields, see exhibits and performances, and develop an interest for science and engineering in the next generation of scientists and engineering for FREE! For more information and to register visit the festival's website.

Classroom Opportunities and Beyond

College Prep Program at APL
The application for the College Prep Program at APL (JHU Applied Physics Laboratory in Laurel, MD) is available now. Current high school students are eligible to apply for this program to learn about colleges, prepare for the SAT, and many more college relevant topics. The application process is FREE and due (postmarked) by March 18, 2014. For more information visit the CPP's website.

Engineering Innovation
A Summer Program for High School Students

Students Have the Chance to Earn College Credit
Know students who love engineering and are not sure what to do this summer? Tell them to apply for Engineering Innovation! There are 4 MD-area sites still accepting applications.

- Tuscarora High School in Frederick, MD
- The University of the District of Columbia in Washington, DC
- JHU-Montgomery Campus in Rockville, MD
- JHU-Elkridge in Elkridge, MD.

During this four-week introductory engineering course, students will complete hands-on activities in chemical, electrical, mechanical and civil engineering, material science and robotics. And students who earn an A or B in the course earn three JHU college credits!

Successful Start for SABES
STEM Achievement in Baltimore Elementary Schools (SABES) is well underway in its first year of implementation. We are currently piloting our new STEM in school curriculum at three Baltimore elementary/middle schools. Additionally, students are working on engineering projects during
their afterschool program. Our 5th grade afterschool students are currently working together to make their own pinball machines. Meanwhile some 4th grade students are working to create an automated sweeper to collect trash. See the pinball machines and many more engineering projects at our upcoming STEM Recognition event on Tuesday, April 29, 2014 from 5:30 - 8:00 PM. Additional information will be available on our website soon!

Remember to check out our NEW website for more information and other events happening around Baltimore this spring. We hope to see you at some of the events listed here!

Sincerely,

Margaret Hart
Center for Educational Outreach
Greetings!

Summer is almost here! What are you doing this summer? What are your students doing this summer? Don't know the answer yet? Read about all the great STEM activities happening around town this summer.

Enjoy,
The Center for Educational Outreach

Summer Camps for Youth

Reinvent Summer Fun!
Camp Invention's week-long experience immerses elementary school children in hands-on activities that reinvent summer fun. Children spend their time building original prototypes, creating a personalized motor-powered vehicle and taking apart electronics to construct a pinball machine. The camp takes place at various locations around Baltimore. More information about how to register can be found on their website.

Science Camp at MSC
The Maryland Science Center is offering five sessions of week-long full day and half day programs for students ages 4-13 starting June 30th. Lunch provided in full day programs, snack provided in half day programs. More information about all the various camps and how to register can be found on the Maryland Science Center website.

YMCA Summer Robotics
Enter the world of robotics with a hands-on approach to programming. Assemble LEGO NXT MINDSTORM® robots with a partner or small team, program the robots to navigate an obstacle course, carry out small missions and more! Programs, assembly and missions become more advanced with each level.

Who: Grades 3 - 6
When: Monday - Thursday, 4pm - 6pm
How: Sign up online or visit one of the following locations to get a discount on the cost!
Weinberg Family Center Y May 19th, 5pm-8pm
Parkville Family Center Y May 20th, 4pm-7pm
Hill Family Center Y May 21st, 4pm-7pm

Summer Learning
The BELL Summer program is a full-day learning experience that combines academic instruction with fun and hands-on enrichment activities, field trips, and service projects. The program is designed to help
scholars gain new academic skills and prepare to enter school in the fall ready to excel. Get more information from their website.

Professional Development Opportunities

**Earth Science PD for MD Teachers**

Improve your knowledge and teaching of Earth Science with hands-on activities and supervised lesson planning in Plate Tectonics & Rock Cycle, Natural Disasters, Earth History & Fossil Record, and the Global Climate System taught by JHU Earth and Planetary Sciences faculty and researchers. Earn MSDE & Baltimore City AU approved 3 credits, Lunches and parking provided.

**Who** - Maryland teachers, K-12 (no science or math prerequisites)

**When** - Monday, July 7 - Wednesday, July 16, 2014; 9:30am - 4:30pm weekdays

**Where** - Olin Hall, Johns Hopkins University

**Cost:** - Free for Maryland teachers

**Deadline:** June 30 - Space is limited. *Baltimore City and County teachers should sign up through their respective school systems.* Other MD teachers, please contact Teresa Healy to register.

More info at [http://openearthsystems.org/course/](http://openearthsystems.org/course/)

Stay cool this summer and we'll see you in August!

Sincerely,

Margaret Hart
Center for Educational Outreach
Greetings!

Summer is almost over and the first day of school is just around the corner. Are you excited? We are! Looking for ideas for a field trip? Check out some of the STEM outing ideas we found below.

Enjoy,
The Center for Educational Outreach

Field Trip Ideas

Maryland Science Center
The Maryland Science Center offers FREE admission to exhibit halls to ALL Maryland K-12 students and chaperones. If you can't get there, they also have a Traveling Science Program that brings cool science to your classroom! More information about how to schedule either of these options can be found here. Programs are scheduled on a first-come first-serve basis, book early to make sure the dates and times you want are available.

Masonville Cove
Explore a variety of habitats found on 52 acres of urban wilderness and experiment in college-level labs! Masonville Cove strives to provide hands-on instruction that will supplement and enhance the needs of your K-12 students. All programs are aligned with national and state standards and provide a hands-on approach to learning.

To schedule a field trip for your group, please contact Christine Redline, Education Supervisor at (410) 246-0669, extension 103 or by e-mail at credline@livingclassrooms.org.

Banneker Planetarium
Interested in Investigating Earth and Space? Plan a trip to the Banneker Planetarium to see the show. Group shows are Tuesday, Wednesday, Thursday, and Friday at 10:15 am. Email Angie Black at ablack@ccbcmd.edu to schedule a show, or you may call 443-840-5939. The Banneker Planetarium is located on the CCBC - Catonsville Campus Laboratory Building, Rm. LABB-003 800 S. Rolling Road Catonsville, MD 21228

National Aquarium

Who We Are
The Center for Educational Outreach is part of the Whiting School of Engineering at Johns Hopkins University. Our mission is to inspire and prepare youth, particularly those underrepresented in STEM, to pursue STEM education and careers.

In This Issue
Maryland Science Center
Masonville Cove
Planetarium
Career Discovery Day
Programming & Play in Pre-K
Battle of Baltimore
3D Printing Workshops
Making Neuroscience Fun
Certificate in Biotech Ed
Maryland Science Olympiad

Quick Links
Check out more local organizations for other possible STEM opportunities!

Baltimore Museum of Industry
Admission to the Aquarium for Maryland students in grades Pre-K-12 is **FREE** from **September 1, 2014 - February 27, 2015**. In addition, the Aquarium's education programs are **FREE** to the first 3,000 Maryland school students with a reservation. In order to make a reservation, teachers need to attend an [orientation](#). More information about how to book field trips can be found [here](#).

### STEM Saturdays

#### Career Discovery Day

**Date:** Saturday September 6, 2014  
**Time:** 8:15am - 3:15pm  
**Location:** The School of the Sciences at Stevenson University  
**What:** Expanding Your Horizons Career Discovery Day for middle school girls. Each girl will participate in three hands-on workshops at the event. Upon online registration, girls get to select their two favorite trios of three workshops that they are interested in. They will be placed in one of the trios. There are a range of workshops including biology, chemistry, psychology, medical sciences, architecture, and more! Pre-registration is required.

For additional information, please email (STEM@stevenson.edu) OR phone: Ms. Michelle Schwartz (443) 334-2134

#### Programming & Play in Pre-K

**Date:** Saturday, September 13, 2014  
**Time:** 10:00am - 4:00pm  
**Location:** Baltimore City Robotics Center (1001 W. Pratt St. Second Floor Baltimore MD 21223)  
**What:** A physical programming experience for early childhood educators, children and families

More information can be found on the [Baltimore Innovation Week](#) website.

#### Battle O' Baltimore

**Date:** Saturday September 20, 2014  
**Time:** 9:00am - 5:00pm  
**Location:** McDonogh School, Owings Mills, MD  
**What:** Battle O' Baltimore FIRST Robotics Competition  
The atmosphere is part rock concert - part sporting competition - part NASCAR with 150-lb robots passing exercise balls and scoring high and low goals with the help of their human players and robot alliance partners. There will also be demos of the other FIRST programs: Jr. FIRST LEGO League, ages 6-9; FIRST LEGO League, ages 9-14 & FIRST Tech Challenge, grades 7-12. Come meet the high school teams and their robots! Register for a free 30 minute tour [here](#). More information about the event can be found on the [website](#).

#### 3D Printing Workshops

[FutureMakers](#) presents 3D Printing! Master 3-D design fundamentals, create prototypes, model and render on your own workstation, and prepare files to print your creations using 3-D printers! For upper elementary and middle school students. Free! See below for the schedule of workshops in the Baltimore area.

**Date:** Saturday, September 20, 2014
Classroom Opportunities

Making Neuroscience Fun
Making Neuroscience Fun (MNF) is a community outreach program at JHU, which brings age-appropriate interactive presentations about the brain, to students' grades pre-kindergarten through grade 5. The program is an upbeat creative effort, aimed at fostering appreciation for general science, in addition to emphasizing the importance of the brain and the nervous system in everyday life. The mission of MNF is to enhance the science curriculum in Baltimore's City and County elementary schools, by engaging students with a realistic, comprehensive and enjoyable approach to science. Download information on how to get MNF in your classroom.

Professional Development Opportunities

Certificate in Biotechnology Education
JHU's Advanced Academic Programs invites grade 6-12 school science teachers to apply to the Certificate in Biotechnology Education. This 20 credit graduate certificate is designed to strengthen bioscience content knowledge and pedagogic techniques. Students may take additional courses offered by the MS in Biotechnology Program. Students who complete the Certificate are also eligible to count the science course credits toward an MS in Biotechnology. Maryland teachers are eligible to apply for a financial assistance grant through the BD Diagnostics Biotechnology Education Scholarship Fund (email Dr. Patrick Cummings for more information about the scholarship). To learn more about the Certificate and how to apply, visit their website.

Maryland Science Olympiad
Want to try hands-on, Next Generation practices in a supported setting? Join the New Coach Cohort for Baltimore middle school afterschool
Maryland Science Olympiad teams. The cohort includes a learning collaborative, mentoring from STEM professionals, stipends and starter kits. Students prepare in a broad array of science and engineering activities culminating in a STEM tournament in March, 2015. Sign up is 9/1 to 10/17 at marylandscienceolympiad.org. For more information, contact Kate McGuire.

Enjoy the beginning of the school year!

Sincerely,

Margaret Hart
Center for Educational Outreach
Greetings!

School is underway and autumn is here! As the weather gets colder, fall into some fantastic STEM events in the area!

Enjoy,
The Center for Educational Outreach

Upcoming Events

**4-H National Youth Science Day: Rockets to the Rescue!**

**Date:** Wednesday, October 8, 2014  
**Time:** 6:30PM  
**Location:** University of Maryland Extension, Baltimore County  
1114 Shawan Rd. Cockeysville, MD 21030  

**What:**  
4-H aerospace engineers to the rescue!  
Join students across the world in building rockets to transport food to an island devastated by a natural disaster. Learn about aerodynamics, engineering, nutrition, and food safety and security while integrating science topics from school curriculum. As young aerospace engineers, this is your chance to solve this urgent problem! **This activity is geared for students grade 4 and above.**

For additional information, visit the 4-H National Youth Science Day Website.

**Sew into Flight**

**Date:** Sunday, October 19, 2014  
**Time:** 12:30pm - 5pm  
**Location:** Montgomery Libraries  

**What:** FutureMakers presents Sew Into Flight: Design, fabricate and launch nylon kites, parachutes and lighter than-air craft - with a sewing machine! Boys and girls are introduced to hand and machine sewing, follow patterns and create original designs using flight-ready technical fabrics. Sewing is perfect for rapidly prototyping ideas and problem solving. For tweens and teens, registration required. **Click here for more details and to register.** Be sure to visit the FutureMakers website for other cool STEM events like this one!

**Ready, Set, Design!**

**Date:** Saturday November 8, 2014  
**Time:** 10:00am - 1:00pm  
**Location:** Homewood Campus, Glass Pavilion  

**ReadySetDesign!** aims to provide introductory engineering experiences for middle and elementary school girls in the Baltimore area. The JHU program hosts four events per year (two for middle school girls and two for elementary school girls) at Homewood Campus. During these events, girls are introduced to the engineering design process through
collaborative, non-competitive design challenges that require creativity and teamwork. From start to finish, the girls are mentored through their design challenges by women engineering students currently studying at Johns Hopkins University. **The event on November 8th is for 3rd, 4th, & 5th grade girls.**

For details or to register, click [here](#).

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**Howard County Math Festival**

**Date:** Tuesday, November 18, 2014  
**Time:** 6:30pm - 9:00pm  
**Location:** Centennial High School at 4300 Centennial Lane in Ellicott City (21042)  
**What:** The second annual Howard County (HoCo) Math Festival will show that math is fun and enjoyable. The one night only event features math magicians, rappers, dancers, the Baltimore Orioles, the Peabody Institute, the US Air Force and so much more!

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**Total Lunar Eclipse**

**Date:** Wednesday, October 8, 2014  
**Time:** 5:00AM - 7:00AM  
**Location:** The Maryland Science Center  
**What:** Witness the Total Lunar Eclipse at the Maryland Science Center during the predawn hours in the Observatory. The planet Uranus will also be visible!

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**Saturday Morning Science: Designing Spacesuits**

**Date:** Saturday, October 11, 2014  
**Time:** 10AM & 12PM  
**Location:** Towson University, Smith Hall, Room 326  
**What:** Come hear from ILC Dover about their experiences with spacesuit design for the NASA astronauts and designs for the future.

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**Public Star Party**

**Date:** Saturday, November 1, 2014  
**Time:** 7:00PM - 10:00PM  
**Location:** Alpha Ridge Park 11685 Old Frederick Rd Marriottsville, MD 21104  
**What:** Howard Astronomical League (HAL) invites anyone interested in the night sky to come out and view the stars in a casual, relaxed setting. For more details, visit HAL’s [website](#).

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**The Dome Theater**

Bring the Dome Theater to your school! The dome theater is a mobile theater experience provided innovative and engaging educational programs to you and your school. It is designed for students from **Pre-Kindergarten to the 8th grade**. The videos cover a wide range of topics with titles such as "Passport to the Universe", "Cosmic Collisions", "The Dinosaur Prophecy" opportunities!
For more information on the Dome Theater and how to bring it to your school, visit their website. Click here for pricing details.

**Maryland Space Grant Observatory Open Houses**  
**Date:** Every Clear Friday Night  
**Time:** 8:00PM - Midnight  
**Location:** Johns Hopkins Bloomberg Center for Physics and Astronomy - 3701 San Martin Drive  
**What:** The MDSGO is open every Friday evening to the public. At the observatory, you can look through our telescope to see planets, stars, star clusters, galaxies, and more! Admission and parking are free to the public.

If you are interested in a private event, please call 410-516-6525 to schedule.

**Friday Night Star Gazing and Saturday Sungazing**  
**Date:** Every Friday Night and Saturday afternoon  
**Time:** 7:00PM - 10:30PM; 1:00PM - 4:00PM  
**Location:** The Observatory at Maryland Science Center  
**What:** Come see the Moon, planets, and stars through the historic, computer controlled Alvan Clark & Sons 8 inch refracting telescope at the Maryland Science Center.

The observatory is free to the public. (The Saturday sungazing event is not free, but is included in museum admission. Click here for details)

**Banneker Planetarium**  
Interested in Investigating Earth and Space? Plan a trip to the Banneker Planetarium to see the show. Group shows are Tuesday, Wednesday, Thursday, and Friday at 10:15 am. Email Angie Black at ablack@ccbcmd.edu to schedule a show, or you may call 443-840-5939. The Banneker Planetarium is located on the CCBC - Catonsville Campus Laboratory Building, Rm. LABB-003 800 S. Rolling Road Catonsville, MD 21228

**Professional Development**  
**Coaches Clinic at JHU**  
**Date:** Saturday October 18, 2014  
**Time:** 8:30 am  
**Location:** Hodson Hall, JHU Homewood Campus, 3400 N. Charles St. Baltimore, MD 21218

Join MSO for hands-on training at the Baltimore MSO coaches clinic which is targeted toward new Baltimore coaches, but is open to any interested non-
It will have elementary and middle school tracks (no high school). Middle school topics might include team start up, Crimebusters and Can't Judge a Powder, Bottle Rockets, Gliders, test events, Picture This, and more. Free kits are available for Baltimore coaches. Cost is $15 for non-Baltimore-teacher participants and free to Baltimore coaches and collegiate volunteers. Lunch is included for all registered participants.

Register here. Any questions, contact Kate McGuire.

BioEYES: ES Teacher Training in Science

Date: Saturday November 22, 2014
Time: 9 am - 2 pm
Location: Carnegie Institution for Science, 3520 San Martin Drive, Baltimore, MD 21218

Project BioEYES is a one-week, K-12 science outreach program that provides resources, in-class co-teaching with a science outreach educator, and curriculum that uses live fish as subjects. This workshop, for 2nd/3rd and 5th grade teachers in Baltimore City Public Schools, will build your competence and comfort-level in teaching hands-on science using a student-centered approach to education.

To register, contact Rob Vary at vary@ciwemb.edu (space is limited).

For more information about BioEYES, visit the website.

JHU Physics and Astronomy Graduate Students (PAGS) Outreach Program

PAGS Outreach visits local schools to show physics and astronomy demonstrations and describe life as a graduate student and scientist. At our disposal we have physics demos most appropriate for high school students and a portable planetarium with shows most appropriate for elementary school students. We are looking for schools interested in having us visit classrooms or afterschool programs on a semester timescale or more frequently. If you are interested please contact pags.outreach@gmail.com for more information or visit their website.

We hope you enjoy some of these great events and opportunities.

Sincerely,

Margaret Hart
Center for Educational Outreach
Greetings!

As the holidays approach, we want to wish you a Happy Thanksgiving! Here are some STEM events to gobble up this season.

Enjoy,
The Center for Educational Outreach

Upcoming Events

Science for Kids
**Date:** Tuesday, November 25, 2014  
**Time:** 4:00 PM - 4:45 PM  
**Location:** Enoch Pratt Free Library, Cherry Hill Branch  
**What:** Learn fun facts and demonstrate basic scientific principles through simple experiments and hands-on activities. (Continues every other Tuesday, visit website for exact dates)

For more information, visit the Enoch Pratt Library website.

Saturday Morning Science
**Date:** Saturday December 6, 2014  
**Time:** 10:00 AM  
**Location:** Towson University, Smith Hall, Room 326  
**What:** Towson University presents Saturday Morning Science, a free public event that presents scientific concepts and content in exciting ways suitable for all ages. These programs cover a variety of topics, including the work of scientist Albert Einstein and current NASA projects.

For more information, visit the Saturday Morning Science page on Towson's website.

Dollar Days at the Maryland Science Center and the National Aquarium
**Date:** Saturday, December 6 & Sunday, December 7, 2014  
**Location:** Maryland Science Center and the National Aquarium

**What:** The Maryland Science Center is once again participating in Dollar Days on December 6 and 7. Admission is just $1.00 to see our permanent exhibit halls, a planetarium show, demo stage, and the Observatory (weather permitting, Saturday only). IMAX is not included. For more details about Dollar Days at the Aquarium and around Baltimore, view the flyer here.

For more information, visit the Maryland Science Center website.

Science Alive for Kids Under Five: Let it Snow!
**Date:** Saturday, December 13, 2014  
**Time:** 9:30 AM & 11:00 AM
Location: Masonville Cove Environmental Education Center
What: Children from ages 2 to 5 are invited to explore the wonderful world of winter. Through games, crafts and activities, they will get to investigate water in its very frozen state.

For more information, visit the Masonville Cove website.

Classroom or Extra-Curricular Opportunities

JHU RoboChallenge Training Session
Date: Saturday, January 24, 2015
Registration Deadline: January 14, 2015
Time: 9:00 AM - 12:30 PM (BoE-Bot), 1:30 PM - 5:00 PM (Arduino robot)

Location: Hackerman Hall room B17, Johns Hopkins Homewood Campus
What: The JHU Robotics Challenge is an event for students in grades 6-12 where teams build a robot that can autonomously navigate a maze, create a robot dance, or be used for an innovative application. The Laboratory for Computational Sensing and Robotics offer a training session for teachers, parents, and students to get started with the most common robot kits. In the morning they will teach the basics of the Basic Stamp BoE bot and in the afternoon they will teach using the Arduino robot.

Register on their website

Puzzles, Pizza & Prizes!
The North American Computational Linguistics Olympiad (NACLO) is a competition for students in grades 6-12, focused on solving linguistic puzzles. The first round competition is tentatively scheduled for Thursday January 29th, 2015.

Come learn about computational linguistics (and how it's used in cool research at major tech companies) at Puzzles, Pizza, and Prizes
When: Saturday January 10th, 2015
Time: 10:00 AM - 12:00 PM
Where: Center of Excellence, 810 Wyman Park Dr (Stieff Building), Baltimore, MD 21211

Students will learn new ways to solve problems and puzzles, work together with other students, and earn prizes. Anyone is welcome to come to the practice session even if they can't make it to the competition!

School Visits:
We are also offering to visit schools who have students interested in the NACLO competition in the Baltimore area. Interested teachers should email jhu.naclo@gmail.com by December 5th to schedule.

Tower of Power
Location: Johns Hopkins University - Homewood Campus
Participation Deadline: January 30, 2015
Entry Deadline: February 6, 2015
What: Join Johns Hopkins University's Whiting School of Engineering in celebrating National Engineers Week (February 22-28, 2015) by building a tower from spaghetti and marshmallows. The middle school team that builds the tallest freestanding tower wins and will be invited to recreate their winning tower at National Engineering Week in Baltimore.
For more information, visit the Tower of Power page on the CEO website.

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### Programs

#### MERIT Scholar

**MERIT** (Medical Education Resources Initiative for Teens) transforms Baltimore City high school students into health care leaders by preparing them for success in college and beyond. MERIT Scholars receive three levels of support for three years including 1) weekly Saturday sessions focused on SAT prep, college admissions guidance, leadership development, and health care disparities, 2) paid summer internships working in hospitals and laboratories, and 3) longitudinal mentoring. MERIT is a competitive program, and **20 sophomores from across Baltimore City will be accepted this year.**

**Application Deadline: Friday, December 19, 2014**

More information and the application can be found on the [MERIT website](#) or contact Leadership@meritbaltimore.org

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#### Girls Who Code Summer Immersion Program

**Application Opens:** January 15, 2015

**What:** Girls Who Code is excited to bring their [free](#) 7-week Summer Immersion Program to Washington, DC this summer! In the program, rising juniors and seniors are embedded inside a technology company each day. Here, young women get hands-on experience in computing concepts, mobile app development, robotics, web development and design. Daily classroom instruction is paired with talks and workshops led by female entrepreneurs, CEOs, developers, designers, and computer science majors that serve as mentors and role models throughout the program. Field trips to leading technology companies allow young women to envision a future for themselves and begin networking with those in the field.

For more information, view the [Girls Who Code video](#) and fill out the interest form to be alerted when the application is available.

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### Volunteer Opportunities

#### Healthy Minds Math Teaching Program
Date: Now through March 2015
Location: Commodore John Rodgers Elementary and Middle School
What: Healthy Minds is a JHU student group dedicated to helping young men and women develop a stronger foundation in math specifically, and STEM education more broadly. Volunteer with Healthy Minds for the opportunity to teach 4th - 8th grade students in small groups at nearby Commodore John Rodgers Elementary and Middle School. This turnaround school provides volunteers with a wonderful chance to explore the world of teaching and math with bright, motivated young minds.

For more information, email Healthy Minds at healthy minds.jhu@gmail.com

FIRST Robotics Competitions

There will be 30+ FIRST robotics competitions around the state for ages 6 - 18 starting in Dec. All events are free and open to the public. Consider volunteering for a day and joining the community of 1500+ event volunteers helping this year. Visit our Calendar of Events to see all the dates, locations and programs with links to how to volunteer.

We hope to see you at some of these wonderful events. Happy Holidays and we’ll see you in January!

Sincerely,

Margaret Hart
Center for Educational Outreach