

Maryland Association for Environmental and Outdoor Education



St. Joan of Arc STEM Family Newsletter

April 2019

Recent Happenings

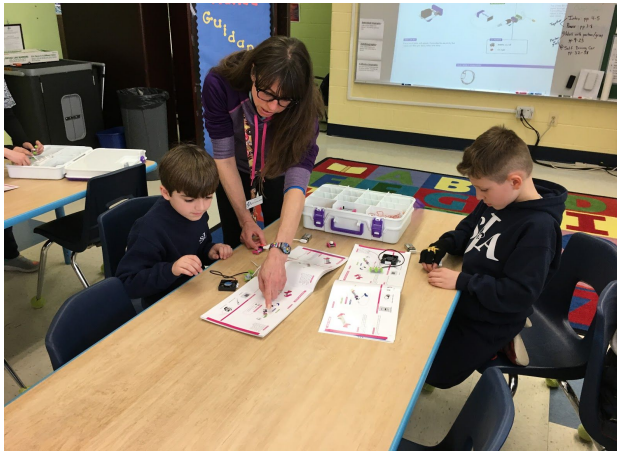
*Third grade students completed the creation of their own island for Nim and Jack from the novel *Nim's Island*. Students were able to apply their knowledge of landforms, map skills, and information from *Nim's Island* in order to create their own island. Students had to plan out their island by creating a map with a map key and compass. Students then created a 3D model of their island using a variety of materials. Finally, students learned to evaluate their work and had to further their understanding of others by compromising and collaborating in a group.

*Many third grade students participated in the annual Science Night by researching and developing a habitat for an endangered species. Students researched the endangered species' size, food, predators, lifespan, and reason for endangerment.

*SJA received the Silver People Loving and Nurturing Trees Award for 2019. It officially recognized our hard work in tree planting and care throughout 2018.



*The SJA Tech Team continued to work with circuits in their last meeting. Students had the opportunity to work with LittleBits to create a project of their choice.



STEM Opportunities in the Community

John Carroll Middle School Engineering Challenge

This is a great opportunity and our students have been successful at it in the past. Please let me know if your child would like to enter.

Middle School Engineering Challenge May 1st 4:30 – 8:30 PM

Join us and compete in three different engineering design challenges. Bring your problem solving and critical thinking skills and go head to head against your middle school friends and rivals.

- Teams of 2 – 4 members can enter, schools may enter up to two teams.
- Cost: Free - All tools and building materials will be provided
- Teams: Open to all 6th, 7th, and 8th-grade students, teams may mix grades
- Format: Round Robin of 3 different design challenges of approximately 45 min. each

1) Para Drop (Think hang time and accuracy)

2) Bridging the gap (Design and build a structure to span an imaginary valley)

3) Prototype design challenge (Concept design drawing and prototype model)

- Teams will be judged on creativity, following instructions, and successful execution of each challenge
- Trophies will be awarded for 1st, 2nd, and 3rd place teams, team members will also receive individual medals

Johns Hopkins 16th Annual Physics Fair - April 27, 2019

This is designed to demonstrate to students that science and physics can be both challenging and fun. Some of the included activities are:

- The Science Bowl – team competitions
- Demonstrations
- The Science Challenge – individual competitions
- Two (2) Professor Extraordinaire Shows
- 200 hands-on physics demonstrations
- Water rockets
- Scavenger hunt
- and much more!

Johns Hopkins University
Department of Physics & Astronomy
16th ANNUAL PHYSICS FAIR
SATURDAY, APRIL 27, 2019
11 am - 5:30 pm
Activities for ALL AGES

THE SCIENCE BOWL
Team Competitions

DEMONSTRATIONS
Hands-on physics

THE SCIENCE CHALLENGE
Individual Competitions

2 PROFESSOR EXTRAORDINAIRE SHOWS

HOPKINS HIGH-RISE
Construction Building Contest

MARYLAND SPACE GRANT OBSERVATORY
View Sunspots

SCAVENGER HUNT

FREE AND OPEN TO THE PUBLIC

The Bloomberg Center, 2nd Floor Rotunda Area
3701 San Martin Drive, Baltimore, MD 21218

More information: contact Pam at 410-516-7346/pcarmen1@jhu.edu
<http://physics-astronomy.jhu.edu/events/annual-physics-fair/>

Sponsored by:
Maryland Space Grant Consortium &
The Henry A. Rowland Department of Physics and Astronomy

16th ANNUAL PHYSICS FAIR

11:00 Doors Open – start with the Scavenger Hunt's list of questions to help you navigate throughout the Fair. There will be over 200 "don't miss" demonstrations running throughout the entire day.

timed events

11:30	ALL CHALLENGE CONTESTS
GRADE	Prize amount awarded in Gift Card
1 – 4 room 361	1 st Place \$80 – 2 nd Place \$55 – 3 rd Place \$30
5 – 8 room 475	1 st Place \$90 – 2 nd Place \$65 – 3 rd Place \$40
9 – 12 room 464	1 st Place \$100 – 2 nd Place \$75 – 3 rd Place \$50

professor extraordinaire show 1 @ 12:15

ALL BOWL CONTESTS ARE IN THE AUDITORIUM ROOM 272	
1:30	Science Bowl Contest & Awards Grades 1 – 4
2:15	Science Bowl Contest & Awards Grades 5 – 8
3:00	Science Bowl Contest & Awards Grades 9 – 12
Trophies awarded to all 1 st , 2 nd & 3 rd Place Team Participants.	
1 st Place team Participants also awarded \$25 Gift Card.	

ALL CHALLENGE AND BOWL PARTICIPANTS AWARDED A CERTIFICATE OF PARTICIPATION AND A BOOK OF THEIR CHOOSING.

3:45 HOPKINS HIGH-RISE CONSTRUCTION PROJECT – prizes awarded

professor extraordinaire show 2 @ 4:30

5:30 Doors close --

SEE YOU NEXT YEAR. WE HOPE YOU ENJOYED YOUR DAY!

See <https://physics-astronomy.jhu.edu/events/annual-physics-fair/> for more information.

If anyone is interested in registering a team of up to 4 members (in grades K-12) for the Physics Bowl or Science bowl, please let me know. ttokarski@stjoanarc.org

Individuals can enter the Physics Challenge and/or Science Challenge at the event and compete for cash prizes.

APG Discovery Center

APG is building a world class science and technology center. It will be a place where all students will

Have the opportunity to explore, discover, learn, innovate and play. It is being completed in phases:

Phase I -The Discovery Preview Center will open in Aberdeen, Maryland in late 2019. This 1200-SF facility will feature several small-scale exhibits similar to what will be found in the permanent Discovery Center.

Phase II - A 10,000-SF facility will open in 2022 featuring 12-15 hands-on exhibits, an Imax auditorium, flex space, large classroom, and a small store.

Phase III -The APG Discovery Center will double in size and be able to accommodate over 100,000 visitors a year.

Aberdeen Proving Ground Discovery Fest

An all day (10 a.m. – 5 p.m.) family fun festival event at APG on May 4th. There will be activities for kids, exhibits by APG technical staff, displays of Army equipment, job fair, food, music. Show driver's license at gate for entry. This event is FREE and open to the public! You can find more information here: [Aberdeen Proving Ground Discovery Fest](#)



The poster features a dark background with a stylized atomic symbol in blue and orange. The text 'Aberdeen Proving Ground' is at the top, followed by 'DISCOVERY WEEK' in large white letters. Below that, 'Coming Soon!' is written in green. A black banner contains the dates 'APRIL 30 – MAY 4, 2019' and the location 'C5ISR Discovery Point | 6555 Surveillance Loop | APG, MD'. The main body of the poster lists seven events with their dates and descriptions, each preceded by a green dot. At the bottom right is the 'DISCOVERY FEST' logo, and at the bottom left is a Facebook link.

Aberdeen Proving Ground
DISCOVERY WEEK
Coming Soon!

APRIL 30 – MAY 4, 2019
C5ISR Discovery Point | 6555 Surveillance Loop | APG, MD

Tech Expo
April 30-May 1
Industry partners will showcase their latest products and emerging technologies that will empower future mission success for the Army.

A.P.B.I.
April 30-May 2
APG tenant organizations will highlight technical objectives, challenges, and opportunities for industry partners to help them support our Soldiers.

CECOM Hall of Fame
May 1
The CECOM community will recognize and memorialize the trusted professionals who have made exemplary contributions to the command, the Army, and the Nation.

PEO IEW&S Change of Charter
May 2
Major General Kirk F. Vollmecke to transfer authority to Colonel (P) Robert M. Collins.

Rock Out Sexual Harassment and Sexual Assault
May 3
This concert will raise awareness about sexual harassment and sexual assault prevention as well as promote the safety and well-being of all APG teammates.

APG Job Fair
May 4
Whether you are a senior-level professional or just beginning your career, this event will help match your skills with APG's needs. Bring your résumé!

APG Discovery Fest
May 4
A family-friendly community event that allows everyone to come discover APG. Enjoy food, live music, hands-on science activities, military displays, and a kids' zone.

DISCOVERY FEST

Stay tuned for additional details at <https://www.facebook.com/APGMd/>

Eden Mill Programs

Canoe Trips are being offered:

Children ages 2-5 (accompanied by an adult)

Preschool Nature Series - spring - select Tuesdays

Children ages 6-12 (accompanied by an adult where noted)

Nature Storybook Art for Homeschoolers - spring- three Wednesdays per session

***NEW PROGRAM** - Nature Storybook Art for Homeschoolers - Native American theme - three Wednesdays in the session

Family/ages as noted (minors must be accompanied by an adult)

Child and Adult Paint Afternoon - March - ages 5-10 w/participating adult

Child and Adult Paint Afternoon - April- ages 5-10 w/participating adult

Child and Adult Paint Afternoon - May- ages 5-10 w/participating adult

Fly Tying for Fly Fishing - ages 8 and over

Hunting the Haunted - ages 10 and over

Spring Blooms - all ages

Sunrise Sunset Canoe Trips - ages 6 and over (no exceptions!)

Adults (18 and over)

Educating with Art: Creating Informative Illustration

For additional information about our programs, please visit:

<http://www.edenmill.org/Programs.html>

On-line preregistration is now available! Just click the link: [Preregistration](#). We will respond with an email confirmation.

Pre-registration is required for all programs. Please call 410-836-3050 during office hours, Monday – Friday from 9am - 2pm or email edenmillnaturecenter@gmail.com.

Pre-registration is also available on-line: <https://goo.gl/forms/ixqAK8OC1nAvSrai2>

Registration closes 24 hours in advance of programs. Weekend program registration closes at 12:00 on the prior Friday.

Find their Spring Flyer here:

<https://files.constantcontact.com/10008d3c301/74c587c3-e82d-48cd-8b89-5bed88294bb3.pdf>

Harford County Library Programs

The libraries in Harford County do a great job of offering STEM programs for all ages. STEM programs are free and open to the public and lead by skilled library staff and/or experts in the field.

Please be sure to visit <https://hcplonline.org/leaprograms.php> to look at the programs with your student(s).



Support Your Library— *Donate during National Library Week!*

Harford County Public Library changes lives by providing innovative programs that foster creativity and a love of reading for all ages. Support our efforts to continue offering digital access, educational and workforce development resources, early literacy, Summer and Winter Reading, STREAM (STEM plus Reading and Art!), author discussions, and more!

Please consider donating to Harford County Public Library by giving to the Foundation and know that 100% of your donation will help fund programs that are so vital to the Harford County community.

Havre de Grace Library Tuesday, April 9th 7:00-7:45 pm

Pajama Story Time

All Ages | Wear your pajamas and bring your favorite stuffed animal and enjoy stories, rhymes and songs. Supported by the Havre de Grace Friends of HCPL

Aberdeen Library Wednesday, April 10th 5:30-6:30 pm

Science Club: Recycling

Grades K-5 | A sweater made from recycled milk jugs? See what else you can make from recyclables and create something special! Supported by the Aberdeen Friends of HCPL.
[Registration required](mailto:registrationaberdeen@hcplonline.org) registrationaberdeen@hcplonline.org

Exciting News

SJA is proud to announce that we will be offering a STEM Camp from July 15th - July 19th from 9am-3:30pm for incoming grades K-6. There is also a Leaders-in-Training (LIT) program for incoming 7th-9th graders. LITs will gain mentoring and collaboration skills while helping guide campers throughout the week! Camp will be run by our very own Mrs. Barberry! See below for details. If you would like to help at this camp, please email Mrs. Tokarski to let her know (ttokarski@stjoanarc.org).

Unmask your child's creativity this summer in the all-new Camp Invention® program, Supercharged, where children build confidence, learn to collaborate and transform their wild imaginations into epic creations. Campers in grades K-6 will learn creative problem-solving skills while coding and programming futuristic robots, uncovering ancient fossils, designing high-tech superhero gadgets and exploring radio frequencies. Local educators will lead this action-packed program featuring exhilarating, hands-on STEM activities teaching children to question, explore, break through obstacles and embrace failure! Early registration discounts are available! Register and find current promotions at invent.org/camp or call 800.968.4332.

The new Camp Invention® program, Supercharged™, allows campers to experience real-world problem solving and creative thinking! From robots and high-tech farms to superhero gadgets, campers will invent the future! SJA is hosting Camp Invention from 7/15 to 7/19. Visit invent.org/camp or call 800-968-4332 to register! Use **A15CAMPEVENT to save \$15 when registering before May 10. Calling all students entering grades 7-9!!!**

Want to be a part of STEM camp, but disappointed that it is for campers up to 6th grade? Would you like to earn volunteer hours/experience at SJA's STEM Camp (July 15th - July 19th from 9am-3:30pm) and work with Mrs. Barberry and Mrs. Smith? You will build leadership skills and gain mentorship experience as you help them lead a week of creativity! The cost for the week is \$130. If you are interested, register here: <https://www.invent.org/programs/leaders-in-training>

For High School Students

Internship available at SJA's Summer STEM Camp

Leadership Interns will work closely with Mrs. Barberry and Mrs. Smith and Camp Invention® and Invention Project® participants to help them explore STEM concepts and become creative thinkers who can invent a better tomorrow. (SJA's STEM Camp will run July 15th - July 19th from 9am-3:30pm.) You will get at least 40 volunteer hours. If interested, you can apply here: <https://www.invent.org/programs/leadership-intern>

Summer STEM Program at USNA

The STEM Center and the Office of Admissions host this success oriented, project-based curriculum for rising 9th, 10th and 11th graders. Three week-long camp sessions are held in June, with over 280 students per session. Students from diverse backgrounds and from around the country stay on campus at Bancroft Hall during this residential program. USNA faculty and staff with support from midshipmen present a wide range of activities under the theme "Land, Air and Sea: Exploring Navy Technology on All Fronts", including: optimizing hull design, building circuits, cyber security, 3D simulation, storm chasing, the physics of light, robotics, and much more.

Thinking of a career as a coder, game developer, designer, or robotics engineer? Then start with the experience of a world-class program like the Naval Academy's Summer STEM Program.

STEM is all about exploring, creating, building, and making things better, and at our Summer STEM Program, you'll do just that. You'll work with students from all over the country as you test your problem-solving, creativity, and collaboration skills.

2019 SESSION DATES

RISING 9TH GRADERS JUNE 3 - 8
RISING 10TH GRADERS JUNE 10 - 15
RISING 11TH GRADERS JUNE 17 – 21

Top 5 Reasons to Attend Summer STEM

5. A Field Trip to the Nation's Capital
4. Build Cool Things
3. Live on Campus
2. Meet New Friends
1. Experience STEM at the #1 Top Public College in the Country (Forbes) and #5 "Best Undergraduate Engineering Program" in the Country (U.S. News & World Report)

Applications will close on April 15, 2019

https://www.usna.edu/Admissions/_files/STEMmerged.pdf

35 STEM Books for Kids

<https://www.vivifystem.com/blog/2018/6/17/engaging-stem-books>

Free Passes!








The National Park Foundation is offering passes for free admission to national parks, national forests, and national wildlife refuges to fourth-grade students and their families. The admission passes are good from September 1, 2018 through August. 31, 2019.

<https://www.everykidinapark.gov/>

Interesting Article

Bees can do basic math! https://www.eurekaalert.org/pub_releases/2019-02/ru-bhb020319.php

Interesting Facts

7 AWESOME FACTS ABOUT STEM EDUCATION	
1. At Present Number of unfilled STEM vacancies are higher than qualified candidates.	
2. Salary The average Payout of STEM jobs is 70% more than the national average.	
3. Requirement Kansas and Missouri will need 185,000 additional people with STEM Education by 2018.	
4. Growth The department of commerce predicts; between 2008 to 2018 STEM Jobs will grow twice than other Jobs.	
5. Wanted 8 out of 10 most wanted employees listed by US Department of Labor were the ones with STEM education.	
6. Future The U.S. Bureau of Statistics says; next 20 years, 80% of jobs will require technical skill.	
7. Reality STEM employees are in charge of building communities and moving the nation forward.	

Source: Biocom.org, ed.gov

In the News

New NASA-funded program to train K-12 students in STEM fields

<https://news.ucr.edu/articles/2019/04/08/new-nasa-funded-program-train-k-12-students-stem-fields>



As part of our STEM school status, we need to have an active Parent STEM Committee. Responsibilities may include helping with STEM project ideas, after school activities, securing speakers/presenters from various STEM careers. We are seeking members and a chairperson for this committee. The committee can set their own meeting times/locations. Please e-mail Mrs. Tokarski (ttokarski@stjoanarc.org) and/or Mrs. Bahr (vbahr@stjoanarc.org) if interested.

Parent STEM Committee Mission Statement:

The Parent STEM Committee provides enrichment by sharing career and achievements through learning experiences which expand student interest in STEM careers. The committee will actively participate in providing teachers and students with STEM learning opportunities both inside and outside of the school day.

Goals:

- Facilitate an after-school STEM Club's bi-weekly or monthly meetings to engage students in STEM activities/projects.

- Solicit qualified presenters who will engage students in various STEM experiments, projects, and explorations during the school day.

Committee Chair's Responsibilities:

- Ensure that meeting minutes are submitted to SJA admin.
- Arrange meetings as needed



Did you know... Bay Plates helped pay for your child's outdoor experience?

Your child's outdoor learning experience was funded in part by the Chesapeake Bay Trust, a nonprofit organization that provides grants to schools so that children like yours can learn in their natural world. The Trust is funded by sales of Maryland's Protect the Chesapeake license plate which each year allows more than 80,000 Maryland students to get outside and learn through hands-on experiences. To find out more about the Bay plate, please visit www.bayplate.org. Bay plates only cost \$20 and you can change to a Bay plate anytime to help support additional field trips for Maryland students.

Chesapeake Bay Trust bayplate.org cbtrust.org 410-974-2941