

St. Joan of Arc STEM Family Newsletter

February 2019



Welcome

We welcome you to our monthly STEM newsletter! You'll find that it is filled with news about STEM happenings at SJA, upcoming events, educational information, ideas for home STEM activities, and postings of local STEM events. We want this newsletter to be valuable for you so please share your feedback and suggestions to help us improve.

Recent Happenings

6th grade worked with Mrs. Tokarski and Mrs. Sabo to create stop animation videos of Moon Phases.

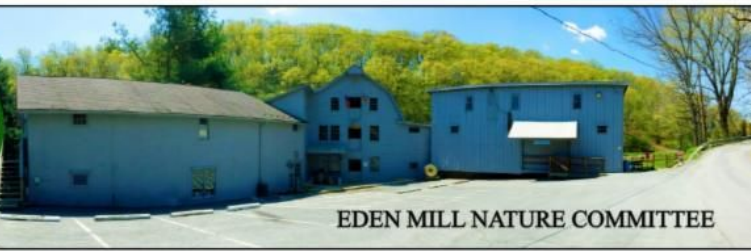



In December, 8th and 1st grade buddy classes worked together on a project related to their studies on electricity. They made paper circuit cards to give to Havre de Grace Activity Center for the Golden Age . 7th and 8th graders also made paper circuit cards to bring with them to the VA hospital for Veteran's Day.




Middle school students are participating in Tower of Power. We are joining 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.

STEM Opportunities in the Community



EDEN MILL NATURE COMMITTEE

Nature Storybook Art



Nature Storybook Art allows children to become more aware of book illustration by experiencing hands-on techniques as part of easy art projects. The wide variety of activities require no prior expertise. Each activity builds new awareness about books, illustrators, and their art techniques. Each illustrator is paired with a book, and presented to the child artist for an art activity of creative value. Children will see a relationship of book illustrations to their own art explorations. Art techniques include: drawing, painting, collage, crafting/constructing.

Dates: Wednesdays:
Session One - December 5, 12 & 19
Session Two - January 9, 16 & 23
Session Three - February 6, 13 & 20

Time: 12:30 – 2:30p.m.


Ages: 6 – 12 without an adult

Fee: \$42/member or \$44/non-member for each session

Pre-registration is required! Call 410-836-3050, email edenmillnaturecenter@gmail.com, or use the pre-registration link on the Programs page of our website: <https://goo.gl/forms/ixqAK8OC1nAvSrai2>
Office hours are Monday-Friday from 9:00am—2:00pm Registration closes 24 hours in advance of programs
Weekend program registration closes at 12:00 on the prior Friday

EDEN MILL NATURE COMMITTEE, a 501(c)3 non-profit organization
1617 Eden Mill Road Pylesville, MD 21132
410-836-3050 www.edenmill.org

Berry Glasman, Harford County Executive



Other Eden Mill Programs

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.

Snake Board Saturday, Feb. 9 at 9:30am Ages: 5 & up (minors must be accomp. by registered adult) Fee: Free Help Eden Mill build a snake board for our corn snakes to get some exercise! Must pre-register by Jan. 26!

Mill Tour Monday Monday, Feb. 11 at 10:00am or 2:00pm. Ages: all ages (minors must be accomp. by a paying adult) Fee: \$3 Learn about Eden Mill's Historic Grist Mill through a guided tour. Must pre-register 24 hours in advance!

Be My Valentine Tuesday, February 12 at 4:30pm Ages: 6 & up (minors must be accomp. by paying adult) Fee: \$8 Make a valentine for someone special and ice a pair of cookies for you and your Valentine. Must pre-register by Jan. 29!

Skull Detectives Friday, Feb. 15 at 3:00pm Ages: 5 & up (minors must be accomp. by registered adult) Fee: \$5 Come and learn about animal phrenology, or the study of skulls! Learn how to identify predator from prey and discover the many uses of teeth! Must pre-register 24 hours in advance!

Winter Hiking Series: Nature Journalist Wednesday, Feb. 20 at 3:30pm Ages: all ages (minors must be accomp. by paying adult) Fee: \$3 Create a drawn or written journal entry as we hike to see what wildlife we can find here at Eden Mill during the winter. Must pre-register 24 hours in advance!

Nature's Sweet Treat Thursday, Feb. 21 at 10:30 Ages: 6 & up (minors must be accomp. by paying adult) Fee: \$5 Maple Syrup, to some, is liquid gold. Join us as we learn how maple syrup is harvested and made, what the weather has to do with its production, and how to make a sweet winter treat. Must pre-register 24 hours in advance!

Paracord Crafts Saturday, Feb. 23 at 9:30am Ages: 5 & up (minors must be accomp. by registered adult) Fee: \$6 Learn how to create different types of survival crafts with paracord! Make your own keychain, bracelet and monkey's fist out of this awesome rope! Must pre-register by Feb. 9!

Cabin Fever Hike Thursday, Feb. 28 at 10:30am Ages: 6 & up (minors must be accomp. by paying adult) Fee: \$8 Tired of being cooped up inside all winter? Spring is nearly upon us! Join us for a short hike and learn how the trees are preparing for Spring. We will learn what is going on inside that bark and learn how trees know when to bloom their leaves. Must pre-register 24 hours in advance!

Find their Spring Flyer here:

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

At Notre Dame of Maryland University

Oh the Places You'll Go with STEM: From Aeronautics to Technology & Beyond

- Thursday, February 28, 2019
- 7:00pm to 9:30pm Notre Dame of Maryland University - LeClerc Auditorium
- FREE

Notre Dame of Maryland University School of Education Speaker Series: Each spring, NDMU brings high-profile educators and researchers to campus to challenge and inspire students, teachers and administrators. Our renowned speakers, who have included Ian Jukes and H. Samy Alim, share their expertise, discuss the latest educational trends and pedagogies, and spark discussions that continue in classrooms across the state. This popular, critically acclaimed program draws more than 600 attendees annually.

This year we welcome Danielle Feinberg, Director of Photography for Lighting at Pixar Animation Studios, and Emily Calandrelli, producer and an Emmy nominated host of FOX's "Xploration Outer Space".

Danielle Feinberg began her career at Pixar Animation Studios in February 1997. As she worked her way from an entry level, technical job to one of the top creative positions, she crewed many of Pixar's feature films including Toy Story 2, Monsters, Inc., Finding Nemo and The Incredibles.

Emily Calandrelli is also a chief correspondent on Netflix's show "Bill Nye Saves The World." Emily is a contributing writer at TechCrunch and has written and spoken on the topics of space exploration, scientific literacy and equality.

For more info and to RSVP:

https://ndm.edu/news-and-events/events/oh-places-you%E2%80%99ll-go-stem-aeronautics-technology-beyond?fbclid=IwAR3CECV6gDnRpYjTyZwiD098v-fmc6QOXIXrPp7D7Pyf_bIjXJsffHDfm44

Joint Science and Technology Institute

The **Joint Science and Technology Institute for Middle School Students (JSTI-MS)** is a one-week, fully-funded, residential science, technology, engineering and math (STEM) research program that provides middle school students the opportunity to solve and complete STEM challenges and projects. The hands-on projects provide students with opportunities to develop problem-solving and collaboration skills. The purpose of the program is to provide students with an opportunity to solve STEM challenges while working as a member of a small team and to inspire them to become lifelong STEM learners. Current 8th graders who will be entering the 9th grade in 2019-2020 academic year are not eligible. Please apply next year in the spring of 2020 for the high school program.

The **Joint Science and Technology Institute for Students (JSTI-HS)** is a two-week, fully-funded, residential STEM research program for current high school students in the United States and Department of Defense schools around the world. Students will participate in research projects mentored by Department of Defense research scientists and other subject matter experts. The purpose of the program is to inspire and encourage students to pursue careers in science, technology, engineering and math (STEM) fields, increase STEM literacy, and expose students to the importance of STEM through hands-on, relevant research.

For additional information or to apply to the 2019 JSTI summer program, please visit their website at: <https://orise.orau.gov/jsti/default.htm>

Girl Power

This is a hands-on, high energy STEM Expo for elementary and middle school students. Visitors get a chance to learn about STEM careers from APL and community STEM professionals.

Date: Sunday, March 10th, 2019

Time: 2:00 PM - 5:00 PM

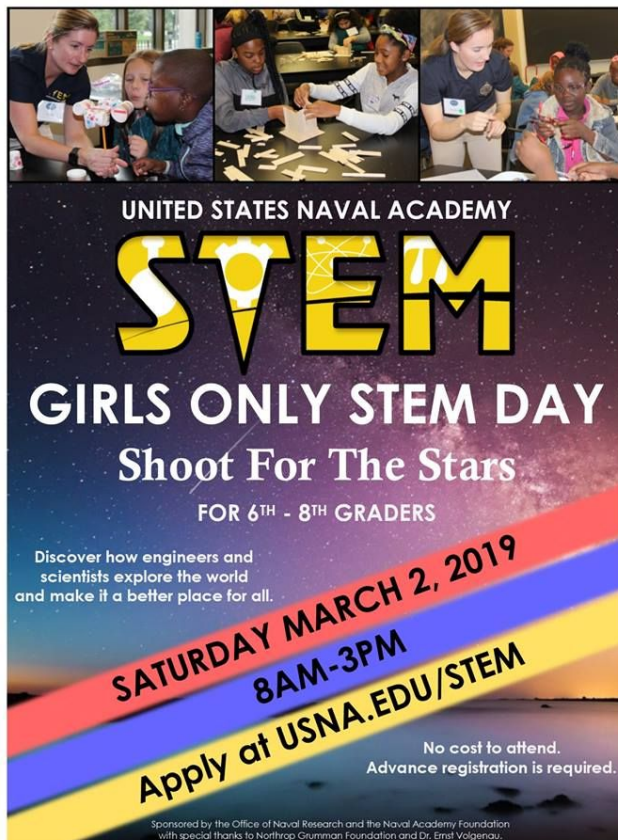
Location: Johns Hopkins University Applied Physics Lab, 11100 Johns Hopkins Rd. Laurel, MD 20723

E-Mail [Elise Buckley](#) or click [HERE](#) for more information

Girls Only STEM Day

The STEM Center at the United States Naval Academy in Annapolis, MD is hosting a Girls Only STEM Day on Saturday, March 2, 2019 from 8 AM - 3 PM. Advance registration is required. A hands-on workshop, "Shoot for the Stars", is offered for MIDDLE SCHOOL GIRLS interested in expanding their education in Science, Technology, Engineering, and Mathematics. You will meet women faculty & college students working with exciting technologies in a wide range of science and engineering careers. Discover how engineers and scientists explore the world and make it a better place for all.

REGISTRATION DEADLINE IS FEBRUARY 15 OR WHEN ALL SPACES ARE FILLED. Sign up on here: www.usna.edu/STEM



Exciting News

SJA is proud to announce that we will be offering a STEM Camp from July 15th - July 19th 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.

For High School Students

JHU Engineering Innovation

Engineering Innovation is an exciting college-level summer program for motivated high school students with an aptitude in math and science and an interest in (or curiosity about) engineering. Students learn to think and problem-solve like engineers and have the opportunity to earn Johns Hopkins University (JHU) credit.

1st Application Deadline: Friday, February 15th, 2019

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.

Research and Engineering Apprenticeship Program

The Hopkins Extreme Materials Institute at Johns Hopkins University hosts the Research and Engineering Apprenticeship Program (REAP) created by the US Army Educational Outreach Program (AEOP). REAP is a summer Science, Technology, Engineering and Math (STEM) program that places talented high-school students from groups historically under-represented and underserved in research apprenticeships at U.S. colleges and universities. REAP apprentices work on a hands-on research project under the direct supervision of a mentor, exposing them to the real world of research and allowing them to learn about education and career opportunities in STEM.

Deadline: Thursday, February 28, 2019

Location: Johns Hopkins University

Contact [Dr. Victor Nakano](#) for more information or click [HERE](#) to apply.

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

RIISING 9TH GRADERS JUNE 3 - 8

RIISING 10TH GRADERS JUNE 10 - 15

RIISING 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)

Further information

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

Interesting Article

An article in EdScoop details the importance of a STEM Education.

"The landscape of the workforce is changing so rapidly that the ability to break a huge problem down into smaller chunks, use data analysis to come up with [solutions], evaluate those results and iterate will be crucial no matter what students go into in the future," said Ji Soo Song, policy analyst for the International Society for Technology in Education.

You can read the entire article here:

<https://edscoop.com/partnerships-key-in-federal-5-year-plan-for-stem-workforce/>

Interesting Fact

STEM Education Today

Top 10 Skills in 2015 were:

1. Complex problem solving
2. Coordinating with others
3. People management
4. Critical thinking
5. Negotiation
6. Quality control
7. Service orientation
8. Judgment and decision-making
9. Active listening
10. Creativity

Top 10 Skills in 2020 will be:

1. Complex problem solving
2. Critical thinking
3. Creativity
4. People management
5. Coordinating with others
6. Emotional intelligence
7. Judgment and decision-making
8. Service orientation
9. Negotiation
10. Cognitive flexibility

Help Needed

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.