

# 1st Maryland STEM Festival Summary Report

Bringing STEM to You.

November 6 - 15, 2015

The Maryland STEM Festival Planning Committee consists of members from diverse STEM organizations across the state:

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Host Co-Chair

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Time (MOST) Network

**Phil Rogofsky**

Director & Logistics Chair

STEMulating Minds

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Girls and STEM

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Maryland STEM Festival would like to thank our sponsors:

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## We Bring the Festival to You.

The Maryland STEM Festival provides inspirational, educational, and accessible programming in Science, Technology, Engineering, and Mathematics (STEM) throughout Maryland. The Festival looks to create a Culture of STEM in Maryland.

With ten days of collaborative, interactive, and dynamic events and activities throughout the state, the Festival displays Maryland's STEM success and further connects the current and future leaders in STEM. Event hosts include libraries, schools, universities and colleges, businesses, and museums.

The Festival provides STEM opportunities to all of Maryland without requiring them to travel significant distances. The Festival is open to all students regardless of ethnic or economic background or experience.

The U.S. is shifting focus to STEM job creation and the educational backbone needed to support these job markets. Maryland, with its unique placement near the Federal government and major metropolitan areas, has a particularly robust STEM environment.

The Festival is made possible through the generous support from funding and funding partners and through the participation of dozens of events hosted across the state.

**WE WILL INSPIRE THE NEXT GENERATION OF STEM LEADERS.**



## Festival Kickoff.

The Festival kicked off on November 5 at the John Hopkins University Applied Physics Laboratory in Laurel, Maryland. Dwight Car, Gina Ellrich and the APL team put together an amazing program. Speakers included Congressman John Sarbanes, APL Director Dr. Ralph Semmel, Festival Director Phil Rogofsky, Lockheed Martin's Stephanie Hill, Astronaut Paul Richards, and Renee Cohen from Senator Cardin's Office. The Festival Gold and Founding Sponsors had displays and activities for the 250 + attendees. Students from across Maryland attended the Kick-Off Event.

# Featured Events.



- STEM Open Play.

Chevy Chase Library

- Robot Pumpkin Smash.

Eldersburg Branch Library

- The Third HoCo Math Festival.

STEMulating Minds

- Exploring Light.

University of MD Department of Physics

- Café Groove: Maker Space.

PG County Department of Recreation and Parks

- Let's Get STEMulated.

The IBSS Education Team

- The St. Mary's County STEM Festival.

St. Mary's Public Schools

- Third Annual STEM Expo.

Morgan State University

# Statistics.



over  
**50,000**  
attendees



**200**  
different venues.



**22**  
counties.



**330**  
separate events.



**1**  
spectacular festival.

University of Maryland Department of Physics presents

# Exploring Light.

The program celebrated the International Year of Light by educating and entertaining visitors with activities involving the dynamic nature of light as both a wave and a particle. Highlights included writing with light on the “glow wall” using high energy photons given off by violet LEDs or black lights, exploring optical illusions, and the mesmerizing patterns created by a moving magnet in a mixture of ferrofluid and glow stick fluid.



Eldersburg Branch Library presents

# Robot Pumpkin Smash.

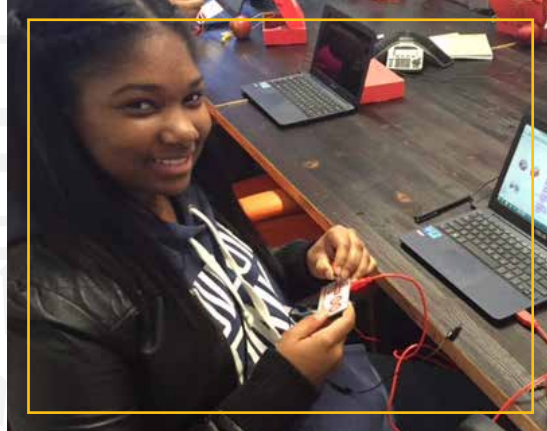
The Robo-Lions, a group of teens, brought their 6-foot-high metal machine built for this year’s FIRST Robotics Competition game Recycle Rush. The robot was outfitted with a special platform that raised pumpkins into the air and dropped them onto a bed of long screws. One hundred and fifty-nine children, teens, and adults squealed, laughed, and applauded as each pumpkin was reduced to an ex-pumpkin!



Girls and STEM presents

# Girls and STEM Summit.

2015 marked the 4th year of a Girls and STEM Summit. Minority middle and high school girls from various Baltimore City schools participated in a day-long hands-on summit where they learned how to extract DNA from a strawberry in the Monsanto Science session, learned to make a food app, maneuvered wearable technology used by the Dept. of Defense, and engaged in exhibitor booths. Each year the summit has a unique subtheme under the core “STEM is Everywhere” theme. Under Armour, CG, KIND bars, Let’s Move, and others provided items or information to support this year’s “STEM in Healthy Living” theme.



STEMulating Minds presents

# The Third HoCo Math Festival.

Over 1,000 attendees explored how much fun math really is at Howard County’s “Party for Math”. The party included balloons, dragons, cheerleaders, magic and Jedi Knights. Students learned how math is involved in video games, cooking, sports, cryptography, cars, medicine and more.



St. Mary's Public School presents

# The St. Mary's County STEM Festival and Expo.

This all-day event reached out to under-represented population. The event had over 35 different vendors, including Raytheon, Patuxent River Naval Air Station, Mathnasium, and a STEM Academy. Most vendors provided some kind of hands-on experience for the participants, while some were there to promote their company or organization. The estimated attendance of 250 was exceeded by 120.



Chevy Chase Library presents

# STEM Open Play.

Staff led the pre-schoolers in a variety of activities while others explored on their own. Staff-led activities included a few experiments: Magic Milk (milk, liquid food colors and dishwashing liquid), Ocean in a Bottle (oil and colored water), and Swimming Spaghetti (baking soda and vinegar made strands of spaghetti “dance” in container of water).



PG County Department of Parks and Recreation presents

# Café Groove: Maker Space.

Café Groove: Maker Space merged the Arts with STEM, and presented STEAM projects for all to enjoy. Participants explored these STEAM projects, and discovered new ways to create in the process. Youth and their families took part in six activities: Light Painting with LED paintbrushes, a Conductive Button Sound Station that created sound through touch, engineering Drawing Machines that draw by themselves, Beat Making, construction with Build-It! Disks, and Button Making. One team teen said “that the event felt more like a party than something educational.”



Morgan State University presents

# The Third Annual STEM Expo.

The EXPO attracted over 50 exhibitors from STEM fields that included: the NASA Goddard Space Flight Center, the Space Telescope Science Institute, the National Security Agency, and Fox 45 Weather Van. Over 450 students attended from Baltimore City and County, Anne Arundel County, Montgomery and Howard County public schools.



# Join us November 4 - 13, 2016 for the 2nd Maryland STEM Festival

Step into the world of  
**Science, Technology, Engineering, and Math.**

## Be a Sponsor.

We need your financial support to make the Festival happen. Join a growing list of the state's leading corporations, educational institutions, and charitable foundations that all support efforts to further STEM. They recognize the remarkable impact of STEM on our state's economy and the quality of life for Marylanders.

## Be a Host.

It's easy and it's fun. Almost any organization can host any event! Just run an event that focuses on explaining or showing the joy of an Science, Technology, Engineering or Mathematics element.

## Be a Participant.

With over 300 events independently hosted across the state, there is something for everyone. Check out as many events as you can. Most of them are free!

For more information e-mail us at [mdstemfest@gmail.com](mailto:mdstemfest@gmail.com).

