

# STEM Activities

## K-12 STEM Literacy

Region 2 Spring Meeting  
April 22, 2017  
Jeff Friedhoffer

# Discovere

- Discovere - formerly known as Engineers Week
  - Supported by and Coordinates with Engineering Professional Societies
  - Engineers Week
  - Girl Day
  - Global Day of the Engineer
  - Global Marathon
  - New Faces of Engineering
  - Future City
  - Dream Big
  - Hands onActivities

<http://discovere.org>

# Discovere 2

The screenshot shows the Discover website interface. At the top, there is a navigation menu with the following items: "Our Programs", "Discover Engineering", "Online Training", "Cool Content & Activities", "Resources & Downloads", "About Us", and "Our Shop". The main banner features a group of six women, with text on the left that reads "DISCOVER GIRL DAY FEBRUARY 23, 2017". A green call-to-action box on the right contains the text "Speakers at the 2017 Girl Day Capitol Hill Briefing. [Introduce a girl to engineering!](#)". The Discover logo and tagline "LET'S MAKE A DIFFERENCE" are visible in the top left corner of the banner area.

# Discover 4

iPad 10:58 AM discovere.org 92%

## Our Quick Picks

### Get some answers

- ? [What is engineering?](#)
- ? [What jobs are there?](#)
- ? [How do I become an engineer?](#)


### Hands-on Activities

- [Seismic Shake-Up!](#)
- [Emergency Shelter](#)
- [Helping Hand](#)

### Newsletter Signup


[▶](#)

### Feature of the Week



Meet IEEE-USA's 2017 New Face of Engineering - College Edition: Katelyn Brinker is Science Team Lead and Development Team Lead for the Mars Rover Design Team (MRDT) at Missouri S&T. [Learn more.](#)

### Upcoming Events

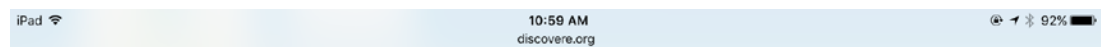


- APR 20 [Family Engineer Night](#)  
Port Orchard, WA
- APR 20 [Engineering report-writing workshop](#)  
Melbourne, OTHER

[Search our calendar for more events](#)

[Promote Your Event](#)

# Discovere 3



[←Back to All Awards & Recognition](#)

## Katelyn Brinker: College Edition Award

Share on social networks: [f](#) [t](#) [i](#)



### Katelyn Brinker

Katelyn joined her school's Mars Rover Design Team in her freshman year. During her four years with the team, she has done every job from Outreach and PR to Chief Technology Officer to Science Team Lead and Development Team Lead. Being part of a team of passionate engineers and taking on so many different roles has helped Katelyn develop and strengthen her technical, leadership and interpersonal skills. These will hold her in good stead as she pursues a career designing the next generation of technology to be used in space exploration and inspiring more students to explore engineering.

### About:

**Award Year:** 2017  
**College:** Missouri University of Science and Technology  
**Nominated By:** IEEE- USA  
**College:** Electrical Engineering

### About DiscoverE

Join our volunteer community to celebrate and engage students in engineering.

### Sign Up for Updates

Enter Your Email

### Latest News & Blog Posts

April 5  
Sixth Annual New Faces of

# Summary Of Section STEM actions

- Science Fairs – Judges, Cash Awards
- EE related Demonstrations – Reach upward of 100's of students
- Run Projects/Challenges – e.g. Robot Challenges
- Classes – e.g. EE related Science Olympiad, Android APP Development
- Clubs – FIRST Robotics, Future City, mentors and \$
- Usually only a Few Members involved
  - The usual suspects who do everything

# Baltimore

- Robot Challenge
- Supported \$ & Mentor FIRST Robotics Competition (FRC) Team
- Build a Circuit – Flashing LED
  - Engineers Week – Event at National Electronics Museum
  - Easy as Pi event – Engineers Club – Middle School
  - STEM Festival
- Judges for FIRST & VEX Robotics Competitions
- Judges & Advisors – Project Lead the Way
- Support eMeritBadge at National Scout Jamboree

# Central Pennsylvania

- Science Fair
  - Judges
  - Awards
- Whitaker Science Center
  - Table Top Circuit Demos
  - 100's of attendees
- Robotics Competition for High Schools
  - Supplied Kits & Challenges
  - ~60 students



# Cleveland

- Science & Engineering Fairs
  - Judges
  - Awards for 1&2<sup>nd</sup> place IEEE Related
    - 7/8
    - 9/10
    - 11/12
- Support eMeritBadge at National Scout Jamboree
- Picnic for High School and College Students
- Interns at John Glenn NASA mid summer ?

# Dayton

- ▣ Science Fair Judges
- ▣ Cash Awards at Science Fairs – 3 IEEE related projects

# Delaware Bay

- Delaware Science Olympiad – Middle & High School
- Teach Classes on electrical subjects
- Create EE problem set for Delaware Science Olympiad
- Reach upward of 100 students
- Willing to provide a detailed slide set used for class
  - <http://delawarescienceolympiad.com/study.html>
  - Under IEEE Wonders ...
    - Click on Study Guide
    - Click on Workshop

DIVISION B AND C RESOURCE

[ROCKS AND MINERALS STUDY GUIDE](#)

IEEE WONDERS OF ELECTRICITY

[STUDY GUIDE](#)

[WORKSHOP](#)

# Johnstown

- Support 1-2 Robotics Teams
  - Middle and High School
- Tried Another program with High Schools that did not catch on
- Small Section – Limited number of Volunteers
- Concentrate on Local Engineer College

# Lehigh Valley

- Sponsor Awards

- Pennsylvania Junior Academy of Sciences Competition
- Lehigh Valley Science and Engineering Fair

# NoVA

- Science Fairs
  - Judges
  - Award up to \$2K for IEEE related projects
  - Winners invited to display at Capitol Area Awards Banquet
- Sponsor Needs based Scholarship to Camp Invention
  - 1 week summer camp, elementary school students
- Plan to meet with local school districts to explore STEM interaction

# Philadelphia

- Teaching Java for Android to High School Students
  - High School Students
  - Adults in conjunction with Church – Underserved population
    - Great Attendance, total of 60 Adults
    - Adults now teaching High School Students
- Summer Camp Kids 10-13 at Same Church
  - Arduino
  - 3D printing
  - Other electronics projects
- Science Fair Judging

# Pittsburgh

- EE Demo - Carnegie Science Center – Eng Week – Hundreds
- Robot Car Race – Middle School –Lego NXP
- Run Judge Pittsburgh Regional Science Fair
- Students Chapters involved in K-12 Outreach
  - High School Career Fair
  - FIRST Lego League
  - Boy/Girl Scout event, Merit Badge University
  - Outreach events for their colleges
- Mentors for SeaPerch & Future City



# Southern New Jersey

- High School Career Day – 100 students
- Ocean City Observatory – 396 attendees on New Years Eve
- Middle School Girls
  - Tween Tech workshop & Breakfast
  - STEM Camp – one day & one week
- Science Fair Judges
- Robot Challenge for High School Students
- Aviation STEM day – IEEE members participate
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# Washington

- Washington
  - Family Day at National Building Museum
  - USA Science Festival
  - Maryland Day at UMd
  - FIRST FRC team support \$ and Mentor
  - Partner with Washington Academy of Science
    - Makerspace – Multiple Robotics Team, DC, MD NoVa
  - Inspire Middle School Students to look at STEM
  
  - Natural Language processing & Smart Home Environment ?  
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