



## SWENextEd Newsletter - January 2018

From space travel to fighter jets, Aerospace Engineering continues to push the limits of mankind. In this newsletter you will find ideas to help launch student curiosity in rocket science, what it feels like to break barriers, and how to get started for Engineers Week. Look for a SWENext hands-on workshop so you can launch their curiosity into orbit!



### It's Rocket Science

Everyone loves rockets. Basic rocketry, the engines and properties that make rockets fly, can introduce NGSS concepts of motion and stability through interactive micro-lessons in [Rocket Science 101](#). This exercise can be adapted to more advanced students by adding the concepts of momentum, pressure, and force. The hands-on activity in [Balloon Rocket Cars](#) can help turn rocketry into a fun and dynamic lesson of Newton's Laws of Motion.

To excite your students in real world applications, have them [watch this video](#) to see exactly what [Aerospace Engineers](#) do. NASA has several educator webinars to stay abreast of Aerospace technology from the [NEON - NASA Educators Online Network](#) or [STEM Educator Professional Development webinars](#). Happy blast off!



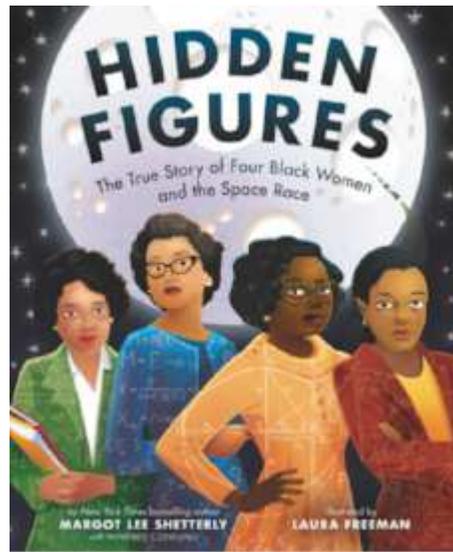
### What would you do if you were the first?

Someone has to be first. When SWE legend [Yvonne Brill](#)\* chose to go into rocket engineering in the 1940's, she was one of the first women to do so. This [Hidden Figures Techbridge Discussion Guide](#) helps educators further explore NASA's first female engineers and what being first at something may feel like.

Help your students gain the courage to change the world by delving deep into the barriers our Hidden Figures protagonists faced and what they might do to help break down barriers.

Middle schools, don't forget to **get your free Hidden Figures DVD** while supplies last. Younger students can look forward to this new **Hidden Figures children's book** anticipated for a 2018 January release.

\*Explore more of **Yvonne Brill's achievements** and what being first was like through **SWE's Oral Histories**.



## Infrastructure essay contest

The **EngineerGirl Writing Contest** is underway! This fun contest challenges students, grades 3 - 12 to creatively evaluate and identify one basic infrastructure system that can be improved in your community. The EngineerGirl Essay Contest will include a persuasive written argument that would be presented to your city or county council to make that improvement. Applications are due **February 1, 2018**.

Image: <http://investadvocate.com.ng/2017/09/11/investment-infrastructure-tool-grow-african-economy/>



## Engineers Week



“Engineering is about making things, wondering how they work, and using your curiosity to explore and touch new heights. This mindset has strengthened my ability to accept challenges and solve problems.”

Ramona Anand, Faculty Advisor, Society of Women Engineers



Inspire Wonder  
#Eweek2018

Engineers Week is right around the corner! Not sure how to engage students during Engineers Week or at any time of the year? Attend an informative "how to" webinar on **January 29, 7:00 pm ET. [Sign up for the Engineers Week Webinar "How To For Educators".](#)**



### Get ready for SWENext DesignLab

**SWENext DesignLab** is an experience designed to encourage girls to choose a career in engineering. During the half-day program, middle school students work with local SWE members to complete hands-on engineering activities. While the girls are busy having fun and

inventing new ideas, parents and educators learn about engineering careers, scholarships, college admission and resources. Participants also see how engineering can directly impact their community through presentations by award-winning high school students. Registration for these hands-on engineering events is now open! Click on the links below to register:

- [Phoenix, Arizona - February 24](#)
- [Milwaukee, Wisconsin - March 10](#)
- [Portland, Oregon - April 7](#)
- [Providence, Rhode Island - April 21](#)

### Be part of the SWE community

SWE values educators as integral to attracting and engaging the next generation of engineers. SWE has created an **Educator Membership** for only \$20/year. Benefits include access to role models, networks, magazines, training, grants, news and events. Both men and women are welcome. Find out more about why **[K-12 Educator and Engineer Christine Jackson is with SWE.](#)**



Your students can also be a part of SWE. K-12 grade girls and boys can join SWENext for free. **SWENexters** receive a monthly newsletter with cool projects, contests, SWE goodies, advice from women engineers, scholarships, events and more.



Visit our newsletter page.  
Join the **SWENextEd**  
Facebook Group



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