



SWENext DesignLab Community Engagement Challenge Proposal Brief





The Society of Women Engineers (SWE), founded in 1950, is the world's largest advocate and catalyst for change for women in engineering and technology. The not-for-profit educational and service organization is the driving force that establishes engineering as a highly desirable career aspiration for women.

To ensure SWE members reach their full potential as engineers and leaders, the Society offers unique opportunities to network, provides professional development, shapes public policy and provides recognition for the life-changing contributions and achievements of women engineers. As a champion of diversity, SWE empowers women to succeed and advance in their personal and professional lives.

For more information about the Society, please visit www.swe.org



SWENext is a way to become part of the Society of Women Engineers as a student through the age of 18. Become part of SWE and #BeThatEngineer!

SWENext Clubs are a way to connect with SWE members and other SWENexters in your area. Your **SWENext** club can be any size with students in grades K-12.

Learn more about **SWENext** membership, **SWENext** Clubs, access to scholarships and awards, leadership, community, and download our flyers at, www.swenext.swe.org





WE Local is a Society of Women Engineers (SWE) program that was developed to bring the excitement and energy of SWE's annual conference — on a smaller scale — to our members' backyards around the globe through local conferences. WE Local brings together participants in all stages of their professional journeys.



SWENext DesignLab is an Outreach event taking place at three WE Local conferences in 2019 - Baltimore, St. Louis and Denver. Outreach events are an important part of programming at the Society of Women Engineers. In order to foster a diverse engineering workplace in the future, we must inspire young generations today to pursue their interests in STEM.



Challenge

High School *team* to design a *service project* that addresses a specific environmental or economic community need using a hands-on engineering *activity*. The *activity* and *service project* must engage local elementary and/or middle school *participants* using a proposed \$1,000 budget.



Benefits of Participation



- ★ Engagement with Women in Engineering
- ★ Community Engagement Opportunity
- ★ Invitation to DesignLab
- ★ Grant Proposal Writing Experience
- ★ Project Implementation Experience
- ★ Leadership Experience
- ★ Exposure to Bias Literacy Training
- ★ Role Model Training
- ★ Professional Presentation Experience

Participation Requirements

- ★ *Team* must consist of high school students and one *Faculty Advocate*. At least 50% of the *Team* and presentation group at DesignLab must identify as female.
- ★ Recommended 5-15 students per *Team*. Any team outside that recommendation is subject to approval.
- ★ The entire *Team* is invited to attend their designated DesignLab at WE Local, however 1-5 student(s) must be able to present the *Team Design Outline*. No registration fee for attendance. Travel expenses are not covered.
- ★ *Team* must attend one orientation webinar session provided by SWE or watch the online recording.
- ★ *Team* must involve their assigned *SWE Advisor* in some capacity.
- ★ The projected *Participants* engaged by the *Team* must be middle and/or elementary school students.
- ★ Winning *Teams* must agree to implement their *Activity and Service Project* by June 30, 2019 or forfeit the prize.

Key Objectives



- ★ Design a *Service Project* that addresses a specific economic or environmental community need using engineering.
- ★ Outline a proposal to engage elementary and/or middle school students in a way that will introduce them to engineering through a hands-on *Activity* followed by a *Service Project* to test the *Participant's* designs.
- ★ Demonstrate plans to engage SWE professional and/or collegiate members in *Activity* and/or *Service Project*.
- ★ In addition, the *Team* should,
 - Introduce the *Participants* to women in engineering.
 - Familiarize the *Participants* with SWE and SWENext.
 - Show why it is important for women to be in the field by clearly demonstrating key facts to *Participants* (e.g. only 13% of engineers are women).
 - Be mindful of bias literacy research and if possible, include some aspect of this training in the *Activity*.



Proposal Example

- ★ *Team* aims to address issues with littering at local park.
- ★ *Team* (working with *SWE Advisor*) designs an *Activity* where local elementary school *Participants* build mechanical arms to help pick up litter in park.
- ★ *Team* and *Participants* go out to park for their *Service Project* to test out their designs and pick up litter in local park.

Deliverables

- ★ **Entry Proposal:** To enter the *Challenge* and be matched to a *SWE Advisor*, the *Team* must submit a basic description of the community issue the project will address and brief ideas of what the *Team* wants to accomplish. Template to be provided.
- ★ **Design Outline:** To present at WE Local, the *Team* must submit the full project *Design Outline* that will provide all details for the *Service Project* and how the accompanying *Activity* will satisfy all project objectives. Template to be provided.
- ★ **Design Outline Presentation:** The *Team* will be given 5 minutes at DesignLab to present their *Design Outline* to a panel of women engineers and program sponsors. Presentation can be in any format. Panel will be given 2 minutes for questions after each Presentation.
- ★ **Implementation:** Winning *Teams* must implement their *Design Outline* using the award money.
- ★ **Post Implementation Report:** Implementing *Teams* will report their findings and submit a video of their *Activity* and *Service Project* to enter to win an all expenses paid trip, including travel and lodging expenses, for 5 *Team* members and one chaperone to the SWE Annual Conference (WE19) in Anaheim, California.



Challenge Timeline

November	December	January	February	March	April	May	June
Challenge Launch November 13	Entry Proposal Baltimore: Due 12/23 St. Louis: 1/23 Denver: 2/23		Design Outline Due Baltimore: 2/1 St. Louis: 2/15 Denver: 3/10	WE Local St. Louis DesignLab Hilton at Ballpark Downtown 9:00am – 3:45pm March 2			
Work on Entry Proposal	Orientation Webinar December 14 th at 6:00pm CT		WE Local Baltimore DesignLab Baltimore Convention Center 9:00am – 3:45pm February 9	WE Local Denver DesignLab Renaissance Denver Stapleton 9:00am – 3:45pm March 16			
	Connection to SWE Advisor						
	Work on Design Outline	Challenge Winners Only: Deadline to implement activity/service project June 30, 2019					

Resources



- ★ SWENext DesignLab Community Engagement Challenge *Proposal Brief*
- ★ *Entry Proposal Template*
- ★ *Design Outline Template*
- ★ SWE will connect each *Team* with a *SWE Advisor*, unless *Team* requests to work with established *SWE Advisor*. This member will serve in an advisory role to help the *Team* think creatively and implement an *Activity* that provides accurate engineering insights.
- ★ SWE will host an orientation webinar in December for all *Teams* to review the program objectives and information regarding SWE and SWENext.
- ★ Provide SWE branded materials, primer on bias literacy, outreach toolkit and training.
- ★ Scorecard for a panel of women engineers and program sponsors to use during DesignLab.

Competition

1st Round: SWENext DesignLab at WE Local

Each *Team* to present their *Design Outline* for 5 minutes to a panel of women in engineering and program sponsors.* The panel will be given 2 minutes to ask questions following each presentation.

Panel will use scorecard to grade and award the top 3 *Teams*.

SWE will award the following to the top 3 *Teams*,

- *Team Trophy*
- Individual Certificates
- \$1000 to implement the *Activity* and *Service Project*.
- Invitation to 2nd round competition.
- A chance to win an all expenses paid trip to Anaheim, California for the SWE Annual Conference (WE19) for 5 *Team* members and one chaperone.

All winning *Teams* required to implement and document *Activity* and *Service Project* by June 30, 2019.

*If we receive more than 15 submissions SWE will select top 15 *Teams* to present at DesignLab.

2nd Round: Virtual DesignLab Challenge Round Up

The top 3 *Teams* from each DesignLab to create a 5 minute video and report that will:

- Discuss the background (needs & objectives) of the *Activity* and *Service Project*, results from implementation, implementation issues and how they were resolved, needs for future sustainability of overall project, etc.

A panel of women engineers will review all videos and the top voted *Team* will:

- Receive an all expenses paid trip to the SWE Annual Conference (WE19) in Anaheim, California for 5 students and one chaperone.
- Be recognized at the SWE Annual Conference (WE19)
- Be invited to present the project and findings at the WE19 SWENext High School Leadership Academy and facilitate outreach discussion session.
- Present workshop at SWE Annual Conference (WE19).



Enter Now!

[Submit your Entry Proposal: www.tinyurl.com/designlabentry](http://www.tinyurl.com/designlabentry)

[Submit your Design Outline: www.tinyurl.com/designlab19outline](http://www.tinyurl.com/designlab19outline)



Contact Info

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Glossary



- ★ **SWE:** Society of Women Engineers, organization designed to empower women to achieve full potential in careers as engineers and leaders, expand the image of the engineering and technology professions as a positive force in improving the quality of life, and demonstrate the value of diversity and inclusion.
- ★ **SWENext:** A way to become part of the Society of Women Engineers as a student through the age of 18.
- ★ **SWENext Clubs:** A way to connect with SWE members and other SWENexters in your area. Your SWENext club can be any size with students in grades K-12.
- ★ **WE Local:** WE Local is a Society of Women Engineers (SWE) program that was developed to bring the excitement and energy of SWE's annual conference - on a smaller scale – to our members' backyards around the globe through local conferences.
- ★ **DesignLab:** SWENext DesignLab is a student programs event taking place at three WE Local conferences in 2019 - Baltimore, St. Louis and Denver.
- ★ **Faculty Advocate:** Faculty member at the high school that is able to support the Team. Can be parent, troop leader, team adult coach.
- ★ **SWE Advisor:** Society of Women Engineers adult or collegiate member that will serve in an advisory role to the team. SWE Advisor will be assigned once Entry Proposal is received.
- ★ **Team:** High school students designing Activity and Service Project. Recommended 5-15 students per team.
- ★ **Presentation Team:** 1-5 students from Team that will present 5 minute Design Outline presentation.
- ★ **Participants:** Middle and/or Elementary school students the Activity and Service Project is designed to impact and engage.
- ★ **Activity:** Hands-on activity that will engage the Participants in engineering.
- ★ **Service Project:** Going out into the community and testing out designs from the hands-on Activity.
- ★ **DesignLab Community Engagement Challenge Proposal Brief:** Overview of Challenge requirements and instructions.
- ★ **Entry Proposal:** Basic initial outline of the needs in community and ideas of how the Team can address them. Must submit to be entered into the Challenge and be assigned SWE Advisor.
- ★ **Design Outline:** Outline of Service Project and Activity proposal. Should provide all details of what the project aims to do and how the Team will accomplish these goals. Must submit to be considered to present at DesignLab.