

# Community Engagement Challenge





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](http://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, awards, leadership, community, and download our flyers at, [www.swenext.swe.org](http://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 2020 – San Diego, Buffalo, and Des Moines.

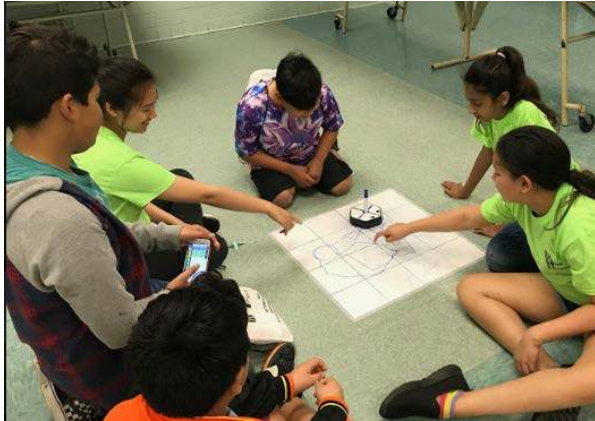
During this event Student will have the opportunity to experience mentor opportunities, anti-bias literacy training, and role model training. Students will tour the WE Local career fair, be recognized by women engineers at the WE Local social event and present the DesignLab Challenge Design Outline Presentation for a chance to win \$1000!



# DesignLab Challenge

High School *team* to design a hands-on engineering *activity* that addresses a specific environmental or economic community need. The *activity* must engage local elementary and/or middle school *participants* using a proposed \$1000 budget.

# Benefits of Participation



- ★ A chance to win \$1000 to Implement Team Proposal
- ★ Engage with Women Engineers
- ★ Gain Project Planning and Management Experience
- ★ Use Engineering to Help Your Community
- ★ Gain Grant Proposal Writing Experience
- ★ Receive Anti-Bias Literacy Training
- ★ Receive Role Model Training
- ★ Serve as a Role Model for the Next Generation
- ★ Gain Professional Presentation Experience
- ★ Invitation to the SWENext DesignLab

# Participation Requirements

- ★ *Team* must submit an **Entry Form** to join the *Challenge*
- ★ *Team* must submit a **Participation Confirmation Form** with community issue and team roster
- ★ *Team* must submit a **Design Outline Presentation** to Present at DesignLab
- ★ *Team* must follow Team Requirements
- ★ Attendance Requirement,
  - *Team* must attend one orientation webinar session provided by SWE or watch the online recording.
  - *Team* is required to meet with *SWE Challenge Mentor* at least 1 time prior to the *Design Outline* submission.
  - The entire *Team* should attend their designated DesignLab at WE Local, however 1-5 student(s) are required to be in attendance to present the *Team Design Outline* at DesignLab.
- ★ The *Participants* outlined in proposed *Activity* must be middle and/or elementary school students.
- ★ Winning *Teams* must agree to implement their *Activity* and submit the Final Submission Materials by August 1<sup>st</sup>, 2020 or forfeit the prize.

# Team Requirements

- ★ *Team* must consist of high school students and one *Adult Advocate*.
- ★ *Team* must indicate 1-2 student leaders for the *Team*
  - Student Leader(s) will be the main contact for the team and will be responsible for assisting with communicating information to the rest of the *Team* and responding to requests from SWE HQ.
- ★ At least 75% of the *Team* and presentation group at DesignLab must identify as female.
- ★ The *SWE Challenge Mentor* will review and provide feedback on *Team* content. The *Mentor* will also assist with connecting the *Team* with SWE resources and contacts. The *Mentor* can be a SWENext Club Advisor, otherwise a *Mentor* will be assigned after the *Entry Form* is submitted.
- ★ *Adult Advocate* will assist the *Team* with *Team* organization and project research. The *Adult Advocate* will also be a point of contact for the *Team*.



# Challenge Steps



## Entry Phase

- Assemble Team
- Assign Student Leaders
- Meet to Discuss Community Issue
- Submit **Entry Form**
- Connect with SWE Challenge Mentor



## Development Phase

- Review Design Outline Requirements
- Meet with Team and SWE Challenge Mentor to Research the Community Issue and Develop an Appropriate Activity
- **Confirm Participation, Student Roster, and Topic with SWE HQ**



## Submission Phase

- Meet with Team to Finalize Design Outline Content
- Verify Design Outline Content Satisfies the Challenge Requirements
- Connect with SWE Challenge Mentor for Review
- Submit **Design Outline Presentation**



## Presentation Phase

- **Register Team for the DesignLab Event**
- Meet with Team to Prepare for the Design Outline Presentation
- **Attend DesignLab and Present Design Outline**



# Key Objectives



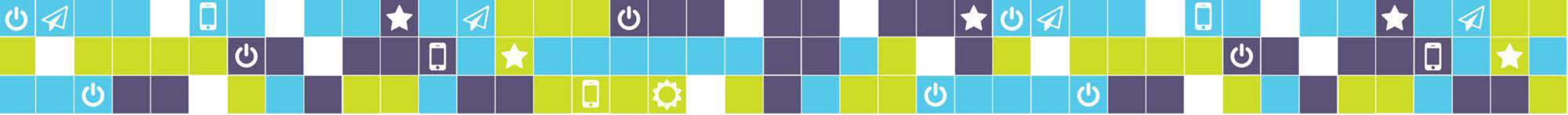
- ★ Design a hands on *Activity* that addresses a specific community need using engineering. This *Activity* should,
  - Engage elementary and/or middle school students in a way that will introduce them to engineering through a hands-on *Activity* where they will have the chance to create and test their designs to make an impact on the community.
  - Introduce the *Participants* to women in engineering.
  - Familiarize the *Participants* with SWE and SWENext.
  - Demonstrate plans to engage SWE professional and/or collegiate members in *Activity* and/or *Service Project*.
  - Familiarize the *Participants* with SWE and SWENext.
  - Show why it is important for women to be in engineering
  - 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 Challenge Mentor*) designs an *Activity* where local elementary school *Participants* build mechanical arms to help pick up litter in park. Prior to the activity the *Team* invites SWE members to event to speak with the students about careers in engineering. *Team* also plans an anti-bias literacy session for attendees.
- ★ *Team* and *Participants* go out to park to test out their designs and pick up litter.

See last years winners at [www.tinyurl.com/designlab19videos](http://www.tinyurl.com/designlab19videos)



# Deliverables

- ★ **Entry Form:** To enter the *Challenge* and be matched to a *SWE Challenge Mentor*, the *Team* must submit an *Entry Form* with contact information for the *Team*.
- ★ **Confirmation Form:** To confirm participation the *Confirmation Form* will be used to submit the selected community issue and team roster.
- ★ **Design Outline Presentation:** To present at DesignLab, the *Team* must submit the *Design Outline* presentation that will provide all details for the *activity* and how it plans to satisfy all project objectives.
- ★ **DesignLab Presentation:** The *Team* will be given 7 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 5 minutes for questions after each Presentation.



# Challenge Timeline



## San Diego

- Entry Form Due: 11/1/19
- Confirmation Form Due: 11/18/19
- Design Outline Presentation Due: 1/18/20
- DesignLab Event: 2/1/20



## Buffalo

- Entry Form Due: 1/12/20
- Confirmation Form Due: 1/26/20
- Design Outline Presentation Due: 3/8/20
- DesignLab Event: 3/28/20



## Des Moines

- Entry Form Due: 1/26/20
- Confirmation Form Due: 2/9/20
- Design Outline Presentation Due: 3/29/20
- DesignLab Event: 4/18/20





# Competition

## 1st Round: SWENext DesignLab at WE Local

Each *Team* to present their *Design Outline* for 7 minutes to a panel of women engineers. The panel will be given 5 minutes to ask questions following each presentation.

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

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

- *Team Trophy*
- Individual Certificates
- \$1000 to implement the *Design Outline* proposal
- Invitation to 2nd round competition.
- A chance to win an all expenses paid trip to New Orleans, LA for the SWE Annual Conference (WE20) for 4 *Team* members and one chaperone.

All winning *Teams* required to implement and document *Activity* and *Service Project* by August 1<sup>st</sup>, 2020.

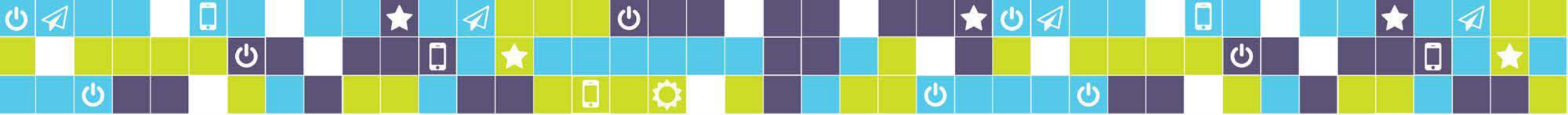
## 2nd Round: Virtual Round Up

The top 3 *Teams* from each DesignLab to create a 7-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 and 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 (WE20) in New Orleans, LA for 4 students and one chaperone.
- Be recognized at the SWE Annual Conference (WE20)
- Be invited to present the project and findings at the WE20 SWENext High School Leadership Academy and facilitate outreach discussion session.
- Present workshop at SWE Annual Conference (WE20).



Learn more and access all submission forms at  
[www.tinyurl.com/designlab20](http://www.tinyurl.com/designlab20)



# Contact Info

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