



Outreach Playbook - SWE San Diego

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Girls in STEM (GIS) Inspiration Day 2022

Metrics:

Grade Level:	# of Student Participants:	Duration (hrs):	# of SWE Volunteers:	Partner orgs (if any):
3-12	100	5 hours	8	Wilson Robotics Wilson SWENext Club Poway High SWENext Club SWE Southwestern College FRC Holy Cows FTC Clueless FTC Green Greens Overall: 31 onsite volunteers

Overview of Activity

Date: May 14, 2022

Target Audience: underserved & underrepresented youth in City Heights & San Diego County

Location: Wilson Middle School, Title 1 School, low socioeconomic community, City Heights, in San Diego, CA

Time: 9:00 am to 2:00 pm

All grade 3-12 students were encouraged to register.

This event was a day of inspiration for underserved and underrepresented youth where they could meet a variety of STEM role models of all ages and do a fun interactive hands-on engineering project. Parents attended a bias literacy workshop while students completed the take-home project in the engineering workshop.



Agenda

9:05 am	Opening remarks	Mrs. Pease
	National Anthem	
	CA Assemblymember Brian Maienschein Declaration	Dr. Nguyen/ Ms. Ganzer
9:15 am	Meet the Mentors Presentation	Dr. Tracy Nguyen
10:00 am	Speed Mentoring	MPR
11:00 am	Snack & Tour of STEM Lab	Outside area
11:30 am	Engineering workshop activity / Bias Literacy	MPR / Outside
1:00 pm	Survey - Feedback	
1:15 pm	Return to Lunch area, closing remarks	Dr. Nguyen & Mrs. Pease
1:30 pm	Distribute lunch & SWAG bags	
2:00 pm	Dismissal	



Outline and Script

This event consists of several different activities that offer an opportunity for underserved youth to explore STEM with a variety of mentors, from near-peer to professional role models. Additionally, an important part of the community and STEM identity building event is reaching parents and other caregivers.

Check-in starts at 8:45 am; the event starts at 9:05 am in a theater-style venue with a stage. A student from the school is given an opportunity to sign the National Anthem in a supportive environment of their peers.

Poway Unified School District's Director of Equity and Improvements Dr. Shawntanet Jara delivered an opening Diversity, Equity, and Inclusion (DEI) message to kick off the session followed by SWE San Diego Vice President: Candace Gray's insightful connection between the Society Women Engineers & what makes an engineer an engineer.

Dr. Tracy Nguyen, the event co-organizer with Ms. Phet Pease, introduced the first mentor, and each introduced the next as they each did a three minute introduction in a "Meet the Mentors" presentation

- Wilson SWENext & Wilson Robotics first female president - Alina Nguyen
- Poway High School SWENext Club Founder & WE21 Global Innovator - Madalyn Nguyen
- Poway High School SWENext Club President - Isabel Vargas
- Poway High School SWENext Club Vice President - Avery Donaldson
- SWE Southwestern College Affiliate President - Judith Settle
- SWE San Diego Outreach Co-Chair, Mechanical Engineer, UCI new grad - Mirella Cruz
- SWE San Diego Corresponding Secretary, Design Engineer, Solar Turbines - Kiara Breadmore
- SWE San Diego Recording Secretary, Applications Engineer, Solar Turbines - Aileen Fahme
- SDSU Assistant Professor of Structural Engineering - Dr. Gloria Faraone

WE21 Global Innovator Madalyn Nguyen shared the SWENext story and after Dr. Nguyen closed the introductions session, participants were lead to the multipurpose room to split into smaller groups to complete four 10 minute Speed Mentoring sessions, one each with SWE professionals and collegiates, along with robotics mentors and SWENext affiliates.

A short break was followed by a tour of the new STEM lab at this Title I school. Ms. Phet Pease, STEM educator at Wilson led the 90 minute engineering and technology activity to design and build a paper circuit using Chibitronics. Volunteers from the local community and high schools worked directly with the students to guide them in completing the activity.

Surveys were conducted immediately using a QR code for a Google form, before wrapping, with participants and volunteers grabbing lunch donated by the local Panda Express, along with Boba drinks, which they then enjoyed while interacting more socially.

Following lunch participants received brochures and various items in their swag bag before being dismissed at 2 pm.

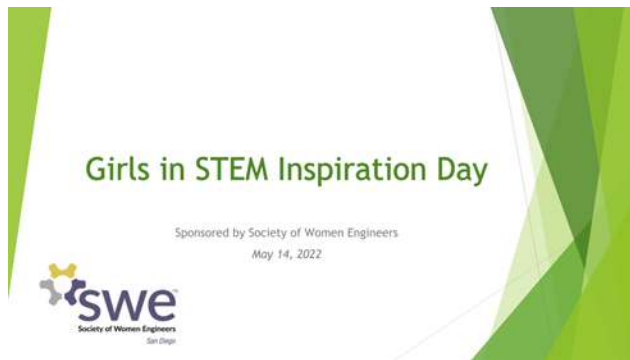


This event was sponsored by a Society of Women Engineers Program Development Grant and SWE San Diego.

Example of our presentation provided for step by step agenda:

[Girls in STEM Powerpoint Presentation](#)

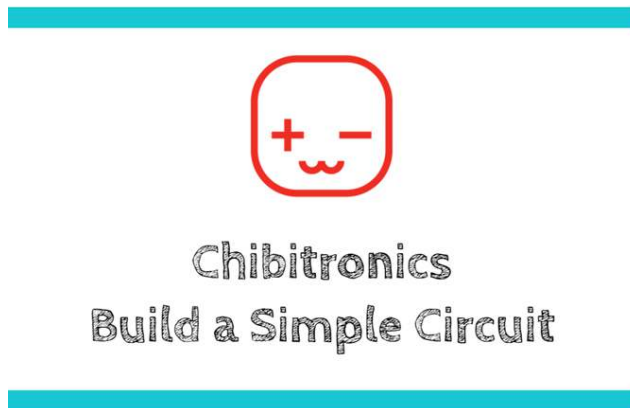
[Girls in STEM Inspiration Day2022.pptx](#)



Example of our activity: (step by step):

Link:

[Paper Circuits Basic Intro](#)





Lessons Learned

Do's

1. Advertise sooner; 2 months in advance.
2. Request in-kind donations from surrounding businesses sooner; usually requires 3 weeks advance notice; need 501(c)3 letters to show proof of non-profit.
3. Maximum 3 minutes speaker presentation - short and engaging.
4. Snack time is important; plenty of good snacks & drinks.
5. Lunch provided and boba drinks were a hit; Panda Express & boba drinks got the students excited to attend the event but the volunteers/speaker kept students engaged and inspired.
6. Do advance registration with name tags.
7. Pick activities that can span age groups.
8. Consider increasing the mentor session from 10 to 13-15 mins.

Don'ts

1. Don't **NOT** have a back-up plan for speakers, especially during Covid.
2. Under-order food; better to over order.

Accessibility Adaptations

This activity could be fairly easily adapted to a virtual setting that can accommodate both with ELL or hearing impaired.

To adapt to a virtual setting, the speakers would follow a similar agenda, only presenting from their home space along with participants from theirs. Kits could be distributed from a school or library or other readily accessible space.

During the sessions, breakout rooms could be used for both the speed mentoring and activity, while the instructor could lead from her classroom, including a virtual tour of the facility.

Mentors would be distributed to breakout rooms, with one dedicated to the parent and caregiver session on bias literacy and the remainder working on the paper circuit activity.

Depending on the native language of the ELL, one or more breakout rooms might have a dual language mentor, while the usage of closed captioning and live transcripts in hosting services such as Zoom enables hearing impaired people to participate more effectively.



Materials and Costs

Item	Quantity	Where to Buy (link if applicable)	Total Cost
Copper Foil Tape	1 roll	https://www.amazon.com/Conductive-Shielding-Repellent-Electrical-Grounding/dp/B078NP5QTZ/ref=pd_lpo_1?pd_rd_i=B078NP5QTZ&th=1	203.83
Watch batteries	1	https://www.amazon.com/LiCB-CR2032-Lithium-Battery-10-Pack/dp/B071D4DKTZ/ref=sr_1_6?crid=KGS3HXPD08FG&keywords=watch+batteries&qid=1651677815&srefix=watch+batteries%2Caps%2C124&sr=8-6	59.9
LEDs	10	https://www.amazon.com/Millimeter-Emitting-Assortment-Diffused-Indicator/dp/B07N2H23DC/ref=sr_1_5?crid=1TV9MVKGYB6BM&keywords=led%2Bdiodes&qid=1651677920&srefix=led%2Bdiodes%2Caps%2C127&sr=8-5&th=1	100.99
Pastel Colored cardstock	1 pc	https://www.amazon.com/Card-Stock-Pastel-Assortment-Colors/dp/B00DZA3CM/ref=sr_1_28_sspa?crid=2Y4QCQA13Z0LB&keywords=pastel%2Bcardstock&qid=1653406215&srefix=pastel%2Bcardstock%2Caps%2C57&sr=8-28-spons&spLa=ZW5jcnlwdGVkUXVhbGlmaWVyPUFIS1YwMEZHMVlaWlUmZW5jcnlwdGVkSWQ9QTA3OTg3ODcySTY5T1QwRUVVWS01RmVuY3J5cHRlZEFkSWQ9QTA3MTUxNzYxVVBKUDVDNEpJVTMwJn	33.9



		dpZGdlE5hbWU9c3BfbXRmJmFjdGlvbj1jbGlja1JlZGlyZW50JmRvTm90TG9nQ2xpY2s9dHJ1ZQ&th=1	
Binder clips	2	https://www.amazon.com/Mr-Binder-Clips-Small-Office/dp/B0882T9GFN/ref=sr_1_3_sspa?crid=YLY0EQ7O42XI&keywords=binder+clips&qid=1653706730&srefix=binder+clips%2Caps%2C129&sr=8-3-spons&psc=1&spLa=ZW5jcnlwdGVkUXVhbGlmaWVyPUFMNIpCSE41OVdSVUsmZW5jcnlwdGVkSWQ9QTA1MjlzNzMxU1JaSTILUIQwWFBHJmVuY3J5cHRlZEFkSWQ9QT A2MzAzOTQxUkdVWVpRVlROMkdMjndpZGdlE5hbWU9c3BfYXRmJmFjdGlvbj1jbGlja1JlZGlyZW50JmRvTm90TG9nQ2xpY2s9dHJ1ZQ==	27.98
<p>Describe any additional funding sources outside of section budget (if applicable): Panda Express donated in-kind food. Starbucks donated an in-kind beverage. Trader Joe's donated in-kind food</p>			



Welcome to
**GIRLS IN STEM
INSPIRATION
DAY**

Saturday, May 14, 2022
Wilson Middle School



Sponsored by a SWE Professional Development Grant

2:57



Done

Retake



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