



Girl Scout Outreach

Science, Technology, Engineering and Math Programs

Girl Scouts San Diego



Girl Scouts San Diego launched *Girl Scout Outreach* in 1980 to empower girls with the ability and self-confidence to make positive decisions concerning their health, education and future. The comprehensive education program focuses on developing skills under the following subjects; STEM, Leadership Skills, Community Service, Life Skills, Arts and Humanities, Health/ Nutrition, Human Relations and Career Development.

In 1997, our Council added a dedicated science enrichment component to *Girl Scout Outreach* that enables girls to work on science, technology, engineering and math (STEM) projects in a supportive, hands-on, non-competitive environment. Research shows that girls and boys report the same level of confidence in math and science in elementary school, but by fifth grade, girls begin to turn away from science. Without the education necessary to work in these fields, millions of women will miss out on challenging and economically rewarding job opportunities—and San Diego will fail to reap the full benefits of a diverse, dynamic, and productive workforce.

The goals of *Girl Scout Outreach -STEM* are to enable girls to:

- advance and sustain their interest in science.
- reduce fear and intimidation concerning science.
- expand their perception of what science is, and who scientists are.
- learn in an environment that facilitates and encourages active participation.

Our Council's Program Leaders accomplish these goals through a series of interactive, hands-on activities designed to engage girls so that they perceive science, math, and technology as interesting and fun. There are over one hundred programs in STEM. Some examples of Girl Scouts' *Girl Scout Outreach—Science* curriculum includes:

How Does This Sound?

Objective: to explore how humans can hear sounds through several engaging hands-on activities through two sound deduction exercises. Girls will then conduct several experiments to investigate how sound travels. The session will end with a discussion on noise pollution and ways they can reduce noise in their homes and communities.

The Earth's Core

Objective: to discover about the inner structure of the Earth through several engaging discussion-based and hands-on activities and role-playing games. They will also learn about the movement of the continental plates through a hands-on activity and how their movement impacts our everyday lives.

The Blue Planet

Objective: to discover and connect with the importance of water on Earth. They will learn about the water cycle and water resources. Girls will conduct a water distillation experiment as well as engage in a hands-on activity about water scarcity in other parts of the world.

Shooting for the Stars!

Objective: To discover the wonders of space exploration through hands-on activities and experiments. They will also learn about successful women in astronomy.

Forces of Flight

Objective: To discover the basics of aerodynamics with hands-on experiments which involve flight followed by having groups build their own flying machines.

Lighting Up!

Objective: To explore energy; its forms and the sources. They will discover how it works, and the various ways in which it can be applied through static and circuits.

A study of the program conducted by the University of Wisconsin-Madison LEAD Center found that *Outreach* lessons like these have an important impact on the girls who participate. Girls in the LEAD study showed a greater interest in learning and in school, and developed a more positive attitude and increased confidence in science. Non-native English speakers demonstrated improved English skills. The researchers attributed these results to the programs collaborative, informal, all-girl environment that engages the girls.

4 week Outreach programs

Serving over 3900 girls throughout more than forty schools in San Diego County.

Community partners

1. The Energy Coalition (TEC) PEAK series

- Outreach staff has been trained on TEC's hands-on PEAK program.
- This curriculum is aimed to inspire girls to explore green careers and create more sustainable homes, schools and communities.

2. artFORM

- Provides arts education with creative reuse to schools and the community making recycled materials accessible for projects, helping girls discover an art form that promotes ingenuity and creative problem solving.

3. Girls On Target (GOT)

- On Target (GOT) provide young women with an opportunity to practice fitness, build confidence, increase motivation, and establish positive peer relationships. Through fitness activities such as yoga, running, plyometrics, and core work, girls will learn that embracing fitness is not only fun, but also, empowering and motivating.

4. Space and Naval Warfare Systems Command (SPAWAR)

- Teach Science and Engineering through hands on activities and experiments led by women in the field.
- Lead 4 weeks of programs throughout multiple sites served by Outreach.
- Facilitate "She and Me: Science for a Night with Girl Scouts" through hands on activities and experiments to ignite the girls interest in science, and act as role models by teaching them about new and exciting careers.

5. Center for Healthy Eating and Activity Research- UCSD

- Take part in Family Day's and She and ME events as well as programming for individual groups at multiple sites.
- Teach girls and their families about resources to maintain a healthy lifestyle

Volunteers: SDSU

- 10 SDSU students assisting our groups with multiple program deliveries.

Re-engagement Opportunities

1. Mountain Adventure Highlights

- *Description:* over one hundred girls 4th and 5th grade, spend a weekend at Girl Scouts' Whispering Oaks Program Center as a first time camping experience. Girls will learn how to overcome their fears and anxieties of being away from home for the first time. Girls will experience nature, shelter building, and going on hikes. Campers are introduced to trying camp cooked meals and learning many traditional Girl scouts camp songs and games as well as sit by the campfire as they try s'mores under the stars.

2. Discovery Day Camp - STEM

- *Description:* over seventy-five girls K – 5th grade who participate in our Outreach program are bused from schools throughout San Diego to a one-week day camp on our Balboa properties. Each day is composed of activities where girls will explore, discover and connect with STEM. Lunches and snacks are provided on a daily basis to those who do not have. Each girls receives a camp T-shirt and backpack. Community partners such as SPAWAR and Mad Science lead workshops throughout the week.
- STEM Programming; rocket launching, engineering, chemical reactions, going green, energy, sound waves, etc.

3. She and ME workshops

She & ME: Healthy Mind, Healthy Body

- *Description:* Girls and a chaperone of their choice join us for a fun and safe environment to try something new; Yoga, Zumba and building healthy snacks! Girls and their adult partner meet other peers and parents to experience fun energizing activities, learn how to make a healthy snack and receive a goodie bag filled with take home activities. Through a two hour session we will teach girls how to build their bodies; strength, balance, and flexibility as well as how to build healthy eating habits. The class will encourage the focus and concentration which girls can apply to their life.

She and ME: STEM

- *Description:* Girls and a chaperone of their choice join us for a fun and safe environment to explore the field of science. These events focus a field of STEM to provide a girls and a chaperone of her choice with an opportunity to discover, connect and take action as they participate in activities, under a specific subject; chemical reactions, energy, the environment, match, and more. All of the activities engage both the girl and adult, encouraging team work, exploration and the exchanging of ideas. Community partners such SPAWAR and MadScience are part of our special guest list. Each girl will receive a take home goodie bag filled with activities to share with other family members.

4. Family Day/ Nights

Description: Girls and a chaperone of their choice join us for a fun and safe environment to explore the field of science through a variety of activities based on STEM. Girls and their adult companion will discover, connect and take action as they participate in multiple stations where they will get a taste of what it's like to be a scientist, engineer, mathematician, and more. All of the activities engage both the girl and adult, encouraging team work, exploration and the exchanging of ideas. Community partners such SPAWAR and MadScience are part of our special guest list. Each girl will receive a take home goodie bag filled with activities to share with other family members.