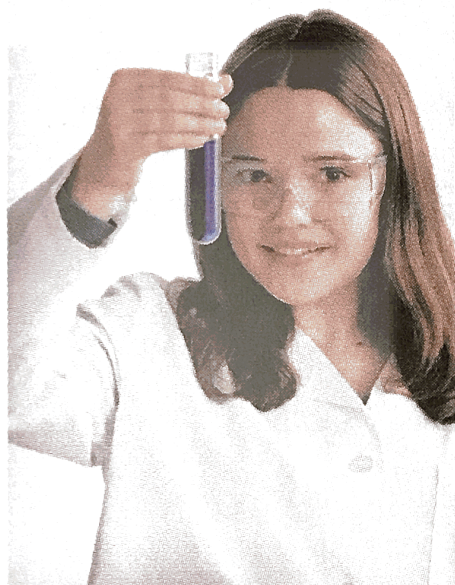


Full STEAM Ahead

Fun, engaging opportunities in Science, Technology, Engineering, Art and Math abound for San Diego families. So, grab the kids and start discovering.



Girls in STEM

Most researchers agree that a lack of exposure to STEM-related interests contributes to the problem of women being underrepresented in the STEM fields. Early exposure is important if girls are going to close the gap and benefit from these exciting and growing fields, and STEM also needs what girls bring to the table.

There was a 79% decline in the number of 1st year undergraduate women interested in a Computer Science major between 2000 and 2011. (National Center for Women & Information Technology)

Only 12% of engineers are U.S. women; 2 percent of engineers are women from underrepresented minorities. (National Science Foundation, 2009)

In 2009, women with STEM jobs earned 33% more than women in non-STEM careers. (U.S. Department of Commerce)

5 Local Opportunities for Girls

Expanding Your Horizons Network: March 7 www.eyhsandiego.org

An annual science, math and engineering conference for girls ages 11–16. Featuring workshops, talks and activities with women in the field. Fun and interactive, this conference aims to get girls interested in STEM careers.

San Diego Science Alliance BE WISE www.sdsa.org

BE WISE (Better Education for Women in Science and Engineering) gives girls in grades 7 and 8 a chance to engage in STEM learning experiences to inspire girls to pursue STEM-related careers. They also offer several multi-day academies over the summer and host dozens of alumni events throughout the year.

Reuben H. Fleet Science Center www.rhfleet.org/learn/saturday-science-club-girls

The Fleet offers a Saturday science club for girls in grades 5 through 8, featuring hands-on activities with women scientists the second Saturday of each month from 12–2 p.m. \$14 per student.

Girl Tech San Diego www.girltechsandiego.org

Provides scholarships for San Diego girls (middle and high school) to participate in computer science and coding events. Their website features an updated event calendar and news source.

Society of Women Engineers SWEet 2015 www.swesandiego.org/swe-sd-event/k-12-outreach/sweet-2015

Four exciting workshops with an engineering in space themed twist for girls grades 6–8. While the girls are engaged, parents can attend the parallel Parent Educator workshop! Offered in the spring.

Microsoft DigiGirlz High Tech Camp www.microsoft.com/en-us/diversity/programs/digigirlz/hightechcamp.aspx

A free 3-day program in July for girls ages 13 and up. Microsoft offers hands-on workshops, demonstrations and speakers in the high-tech industry.



Make Math and Science Fun!

1

Down the Drain. How much water do you use?
www.ciese.org/curriculum/drainproj/

2

Khan Academy: Intro to Programming
www.khanacademy.org/computing/computer-programming/programming

3

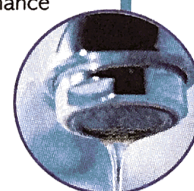
Math in Daily Life Interactives
www.learner.org/interactives/dailymath/

4

The Mint. It makes perfect cents.
www.themint.org/parents/teaching-tools.html

5

Science of Everyday Life
<http://scienceofeverydaylife.discoveryeducation.com/families/>



4 Ways to Be a Citizen Scientist

Anyone can be a citizen scientist and make a difference for the environment. Scientists rely on community volunteers to observe and report what they see in their own neighborhoods. Check out these citizen science programs that make reporting data fun and easy.

The Cornell Lab of Ornithology:
For the Birds YardMap

<http://content.yardmap.org/>

This website and software let you map the birds in your yard. Help scientists while bringing more birds to your neighborhood.

Project FeederWatch

<http://feederwatch.org/>

Put up a bird feeder in your yard and start counting. Enter your data and join thousands across the country on the participant map. There is so

much information available on this site, kids and parents alike will be birders in no time. Sign up through April 3 for this year's count.



National Wildlife Federation
Wildlife Watch

www.nwf.org/Wildlife/Wildlife-Conservation/Citizen-Science/Wildlife-Watch/About.aspx

A national program for all ages. Families can share their stories and photos to collect details on wildlife that scientists use to monitor the health and behavior of animals and plants. Become a Wildlife Watch treasure hunter!

Great World Wide Star Count

www.windows2universe.org/citizen_science/starcount/index.html

Start preparing your family for this international event to count stars October 2–16. Report your findings online to aid in collecting light pollution data. Learn the five simple steps to star counting and get your little astronomers in on the action.

Transforming STEM into STEAM

Most of us are familiar with the STEM subjects—science, technology, engineering and math—but there is a move to shift STEM to STEAM. The “A” stands for art. Leaders and educators understand that art and design are an important part of innovation. And innovation is vital for our future. Let’s also not forget the integrative connection between subjects. Research is finding that students who are regularly engaged in art score better in science and math. So, join the cause in adding art to make STEAM.



Find out more:

www.stemtosteam.org

www.steam-notstem.com

www.edutopia.org/stem-to-steam-resources

San Diego Science Festival and Expo Day

Don't miss the 7th annual San Diego Festival of Science & Engineering, featuring six days of interactive demonstrations,

hands-on activities and speakers to engage and inspire

kids (K–12th grade) and their families in science, technology, engineering and math (STEM).

Various events will be held throughout San Diego County from March 14–21. Find specific events listed in our calendar on page 56 and learn more at www.lovestemsd.org.

The festival culminates with a day-long expo at PETCO Park on Saturday, March 21. More than 130 local organizations will provide interactive exhibits and activities to young science enthusiasts. Activities are free and open to the public. ♦

Laura Pardo writes from South Park and enjoys mapping local canyons for her graduate research.

Math & Science Tips for Parents

Many parents are intimidated by math and science, often rooted in leftover feelings from their own educational experiences. But if we look at these subjects with a new twist then maybe we will gain a new appreciation for these subjects.

“If we want kids leaving school who will be the next generation of scientists and discoverers, we have to help them develop their inquisitiveness,” says Ben Krueger, 7th grade math and science teacher at High Tech High Middle in Point Loma. Could it be as easy as getting excited about everyday discoveries all around us? Going stargazing, tide pooling or rock hunting is a lot less intimidating than doing long division, but could also spark a young learner to pursue STEM subjects. It’s the interest and enthusiasm that takes hold first and parents are a pivotal piece of that.

“We have to teach them about the unknown, and let them make predictions that they may not be able to confirm, perhaps for a long time, or even in their lifetimes,” says Krueger. Working through problems—not necessarily finding the solutions—is an important part of brain muscle building. Luckily, we can build those muscles with every day activities. Think puzzles, coding, budgeting or the stock exchange!