

- **WHAT CAN PARENTS DO?**

You can pave a path toward success for your young girl.

1. **Teach her that intelligence grows.** If she struggles in math and science, give praise for her effort, not for the end grade. Teach her the brain is a muscle that needs exercise to grow. Being smart is a process.
2. **Discuss stereotype threat.** Elementary school children know the stereotype that “girls are not as good as boys in math,” and this affects performance. However, simply making her aware of the stereotype can help her overcome its power. Expose her to female role models in all fields and remind her that math and science skills are not innate.
3. **Remind her that Bs and Cs are OK.** A Stanford University study shows that girls tend to be harder on themselves in courses that they believe men are innately better at. If she does not get straight As, she is likely to give up, seeing the grade as confirmation of her inability to compete. Remind her that tests are fair, and ask teachers to set clear standards. Let her know what grades mean about her understanding. An 80% shows that she has a solid grasp on a unit; it is not a reflection on her innate intelligence.
4. **Encourage her to develop spatial skills.** Spatial orientation and

5. visualization remain the sole cognitive skill in which boys consistently outperform girls. These skills enhance performance in the STEM fields, and they are easily improved. Girls can develop spatial skills (mental rotation) in many creative activities, whether it is building with construction toys, playing videogames, painting, designing, or doing other hands-on-activities.
6. **Expose her to women working in science.** It’s hard for a girl to imagine a career in a field where she does not see women. Point out women in the media; explore the *Sally Ride Science Camps* and the *Girl Scouts* which offer strong programs and resources for girls interested in science. Check Community and School resources.

Resources for Parents

Kay, Katty and Claire Shipmann, et. al. *The Confidence Code for Girls: Taking Risks, Messing Up, & Becoming Your Amazingly Imperfect, Totally Powerful Self.* New York: Harper Collins, 2018. Reading age 8-12, Grade level: 3-7

Kiwilog. “Your Daughter: Rocket Scientist?” Online. <https://www.kiwico.com>
Creative, hands-on projects that encourage confidence and help kids explore, create, and learn with hands-on kits.

SMILE Online. <http://www.howtosmile.org>.
(Funded by NSF - downloadable games, Hands-on activities, how-to demos – FREE)
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A Parents’ Guide to Raising STEM Daughters



AAUW advances gender equity for women and girls through research, education, and advocacy.

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AAUW Ballwin-Chesterfield

AAUW B-C is a 10-Star Branch of AAUW-MO and a multiple Galaxy Award Winner for its community outreach programs promoting the mission of AAUW.

You are welcome to attend our meetings with special programs: second Thursdays, 8:45 AM, Trinity Lutheran Church at Clayton and 141.

Dear Parents,

Do you tell your girls that they can grow up and be whatever their hearts desire?

Unfortunately, many of them still don't believe it, especially when it comes to STEM careers. Since 1881, the AAUW has encouraged women to study and work in the areas of Science, Technology, Engineering, and Mathematics (STEM).

After WW I in 1919, Madame Marie Curie's ground-breaking research had come to a halt due to lack of funds. However, AAUW members from Maine to California helped raise an astonishing \$156,413, enabling Madame Curie to purchase one gram of radium and continue her experiments. They helped her create the field of nuclear chemistry and forever change the course of science.

“Nothing in life is to be feared, it is only to be understood. Now is the time to understand more, so that we may fear less.”
Marie Curie

- **WHAT IS A STEM GIRL?**

A STEM girl is enthusiastically curious about the world and how it works. Properly nurtured, this interest may lead her into a successful career in one of the STEM fields. However, research shows that somewhere along the line,

girls start losing confidence in their ability to learn math and science. Why do so few continue?

- **WHY SO FEW?**

The National Science Foundation selected the AAUW to conduct a study of women's under representation in the STEM fields. The study tackles this puzzling question and presents practical ways that family, schools, and communities can create an environment of encouragement for our girls.

- **WHAT TREND DOES THE RESEARCH SHOW?**

The U.S. Department of Labor projects that 9 out of 10 of the fastest-growing occupations that require college degrees also require a focus in science and math. Will your daughter stick with it? Probably not! In elementary and secondary school, as many girls as boys take math and science and plan to pursue science and engineering majors in college. But by graduation, women have fallen out of the STEM fields. As few as 20% graduate with engineering, physics, or computer technology degrees, thus creating not only a gender gap but also an instant pay gap.

- **WHAT WE KNOW**

Girls' achievements and interests in math and science are shaped by the environment around them.

We can diversify the STEM fields by encouraging more girls and women to enter these vital fields.

Reference

Hill, Catherine, Ph.D., Christianne Corbett and Andresse St. Rose, Ed.D. *Why So Few? Women in Science, Technology, Engineering, and Mathematics*. Washington, DC: AAUW, 2010.