

We Are Doing It!

Early Intervention

From age 8 to 14, girls' self-confidence falls by 30 percent. Initial engagement in middle school and high school is **simply too late**; at this point those participating in STEM activities have already self-selected to seek an opportunity at a time when others in their peer group are losing interest. Our goal is to **provide meaningful engagement with STEM before the drop-off point** rather than during it. Children can enroll in Rosie Riveters beginning at age 4 and programs currently extend through middle school; this structure is designed to get young women excited about and interested in STEM well before they encounter barriers discouraging their participation.

Innovative Programing

When students sit and listen passively in a lecture-style environment, they retain 20 percent of the information. When they are given the chance to practice what they have just learned, that percentage increases to 75 percent.

Our projects don't come with a set of instructions. Instead we equip girls with the knowledge they need to navigate and understand a STEM concept. Using a completed example and a set of objectives, girls design and independently build their own projects.

Life Long Skills Building

Through every program and every project, we use STEM skills to engage and ingrain in girls that failure is valuable. That **the bumps and bruises of learning and life are what will ultimately help them to succeed.** For many it can be a very emotional journey, getting it wrong can be frustrating and hard. In fact, the words we hear the most when we begin a session are "this is hard" and "it's not fair." But by the time we're done, everyone has completed a project- they've succeeded and have gained an understanding of **the power that comes from learning when you just jump in and try.** Our participants walk away not only with an **increased confidence in their abilities** but a road map on how to use those abilities in a highly competitive marketplace and in life.

Commitment to Continued Engagement

Our goal is to provide at least one 4-week program per year in each market, supplemented by quarterly Saturday "reunion" sessions that allow previous participants to return and build upon their skills. These programs have a proven track record of positive participant re-engagement. We firmly believe that **early and repeated engagement - the key component of our programming structure- is crucial to shifting the representation of women in STEM.**

Rosie Riveters' 2020 programs certainly did not proceed as planned. Because we enjoy strong working relationships with our community partners, however, pivoting to STEM Kit delivery and online content distribution was less of a barrier than anticipated. We began by reaching out to our partners and accessing their needs. We then designed a range of virtual activities to support at-home learning and developed a hybrid model of a STEM Kit accompanied by virtual instruction in order to continue to offer our programs virtually.

This shift required a host of adjustments: every single material required to complete a STEM project had to be included in each kit as items typically found in a classroom environment - scissors, pencils, rulers, paper - had to be individually accounted for; digital lessons and building guides had to be created in order to support students and parents alike; and instruction had to be modified to suit a virtual environment while still providing the opportunity to develop the critical-thinking and problem-solving skills that are so fundamental to our programs.

Overall, this was a much more demanding and labor-intensive logistical process than that necessary to support in-person programs. But our organization's commitment to reaching populations that have difficulty accessing STEM programs by offering accessible opportunities that adapt to a range of community needs and partnerships provided us with the flexibility and experience necessary to meet this challenge head on. Although in a different format than anticipated, Rosie Riveters still provided engaging hands-on STEM learning for more than **810 students** in grade K-8th grade across **1485 individual STEM Kits** and synchronous virtual lessons and/or check-ins. Moreover, we were able to collaborate with all of our existing community partners (APS, FCPS, APAH, Fairfax County (NCS), APL) and expanded to include new partners as well (AHC Inc, DCPS, ACPS, Bridges to Independence, Blue Star Families, and Mount Olive).

Rosie Riveters is incredibly proud of the distance-learning programs we created in response to the COVID-19 pandemic and we are excited about the long term opportunities these programs will provide to our participants new and old.

Rosie Riveters community programs are open to the public and are completely free of charge; there are no financial barriers to access. As an organization, we are committed to reaching populations that have difficulty accessing after-school STEM programming and our partnerships with a range of community serving organizations enable us to provide accessible opportunities that meet and adapt accordingly to a range of community needs. These needs range from transportation restrictions and food scarcity to limited after-school availability and sibling childcare responsibilities.

2020 COMMUNITY PARTNERS



Public School Districts

- [Arlington County](#)
- [Fairfax County](#)
- [District of Columbia](#)



Affordable Housing Organizations

- [Arlington Partnership for Affordable Housing \(APAH\)](#)
- [Arlington Housing Corporation \(AHC Inc\)](#)



Community Services

- [Blue Star Families](#)
- [Fairfax Department of Neighborhood and Community Services](#)
- [Arlington Public Libraries](#)

Learning looked a lot different in 2020, and Rosie Riveters created STEM Kits to supplement distance and virtual learning. Based on our immensely popular weekend and after-school STEM sessions, the curricula recreates our in-person programming experience on a smaller scale. We focus on hands-on learning, productive challenges, and critical thinking!

1485

FREE STEM KITS DELIVERED IN 2020

Each STEM Kit provided:

- all the materials needed to build each project,
- written step-by-step instructions and guides,
- access to on-demand project video builds,
- access to synchronous (live) virtual instruction,
- and access to virtual office hours for one-on-one project build support.



DIGITAL STEM CONTENT

Rosie Riveters has built a suite of digital sub brands to support distance-learning. These programs have expanded Rosie Riveters program reach by utilizing accessible tools and resources for parents and educators to utilize from home.



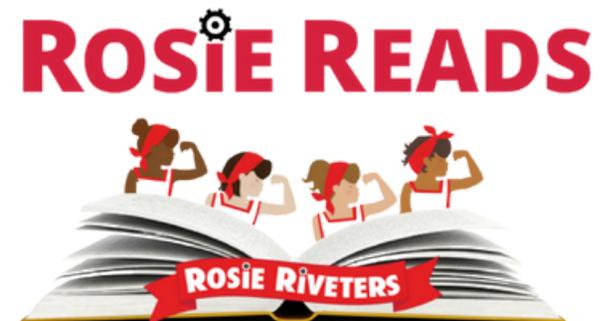
MINI STEM LESSONS ON EVERYTHING FROM CHEMICAL REACTIONS TO THE FIBONACCI SEQUENCE.



MENTOR FOCUSED INTERVIEWS WHERE OUR PARTICIPANTS (AGES 6 AND UP) INTERVIEW REAL WOMEN IN STEM.



WEEKLY STEM PROJECTS FAMILIES COULD COMPLETE AT HOME.



THEMED READ-ALOUNDS AND ACTIVITIES



"It helped me improve my science grade." - 8th grader

"Looking forward to more STEM learning soon! My daughter has really gotten very interested in science and technology since your program. She is hungry for more!"

"I started a business with binary code jewelry!" - Kindergartener

"My daughter... struggles sometimes with science but Rosie Riveters is the program that makes her love science and enjoy it and really want to do it."

"Rosie Riveters makes me feel smart cause no one I know knows what [sic] parabolic arc is :)" - 4th grade

"Rosie Riveters inspired me to enjoy STEAM more." -6th grader

"I just want to say thank you for this wonderful program. My daughter has loved it and now has a new interest in STEM thanks to you."

"Rosie Riveters has truly allowed my daughter to feel confident and brave in standing out, and I'm incredibly grateful for the opportunity to be part of such an incredible organization."



"I have learned so much and have been participating in it for about 5 years." - 6th grader

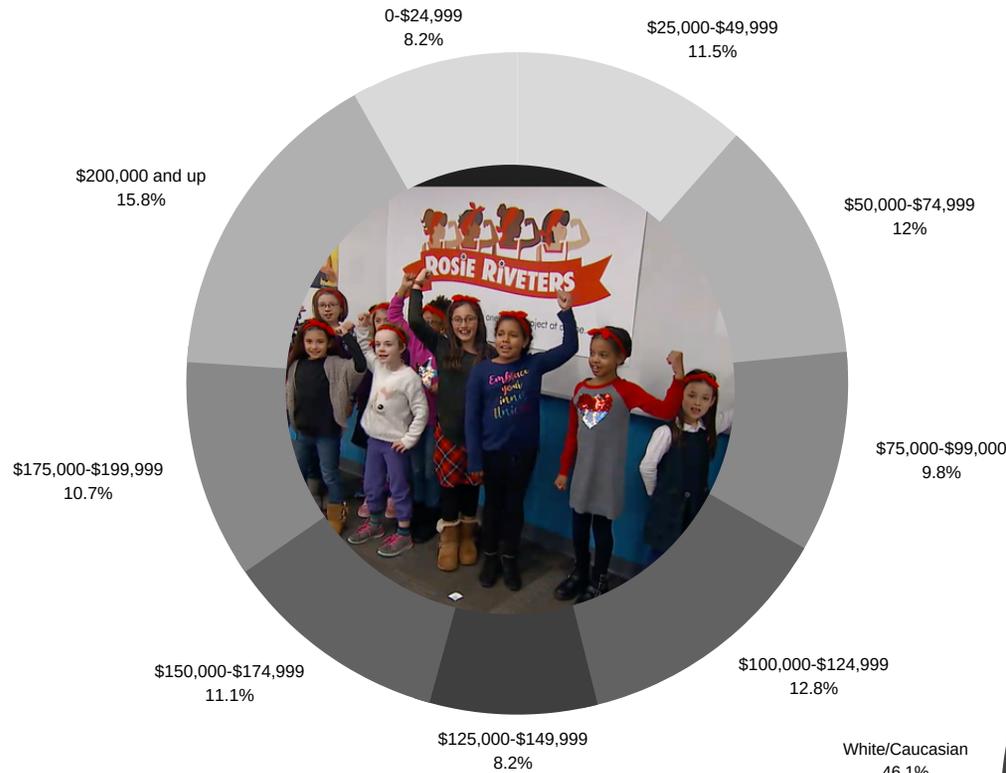
I really like everything [about the] program. I just wish that you could get more fund, and you can make longer programs for more kids! THANK YOU ALL!

"I wish it was a longer program, more classes. To the staff: just want to thank you for inspiring girls to be more interested in STEM programs from a young age. Looking forward to the next Rosie program."

"I believe that it is vitally important that little kids (especially young girls) be introduced to science at a young age before they get under the impression that science isn't "cool."" - 6th grader

Cumulative Demographics

Average Household Income

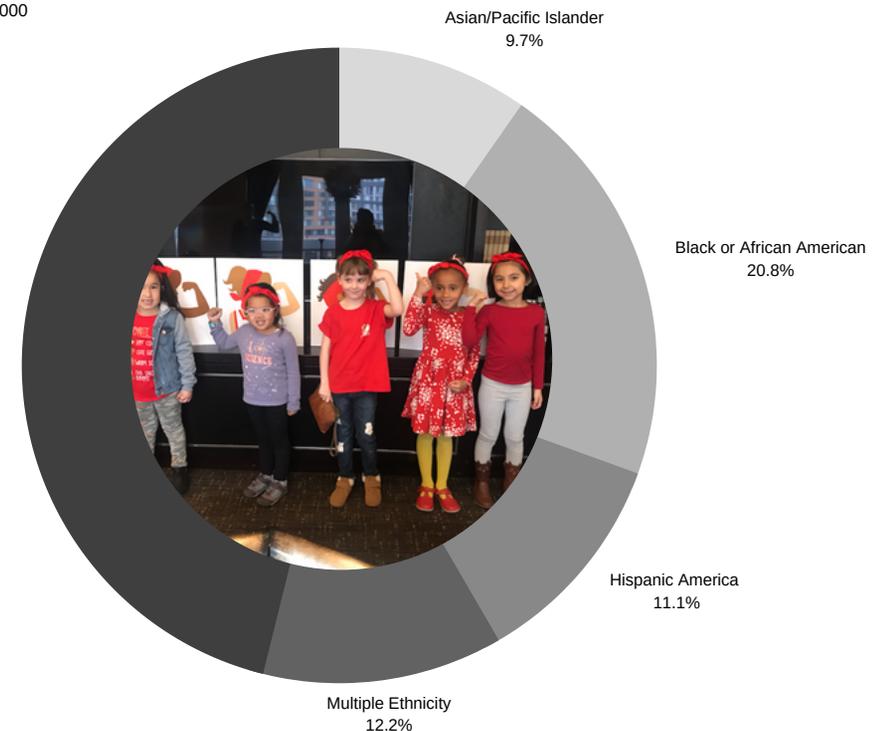


50% of Rosie Riveters participants have a household income under \$75K. According to the Economic Policy Institute, it costs about \$9,493 per month for a couple with two children to have a "modest yet adequate" standard of living in Arlington, or just over \$113,915 per year.

812

STUDENTS SERVED IN 2020

Ethnicity



Participants Agree or Strongly Agree that...

I FEEL ROSIE RIVETERS PROJECTS ARE INTERESTING.

100%

I ENJOYED COMING TO ROSIE RIVETERS PROJECTS.

100%

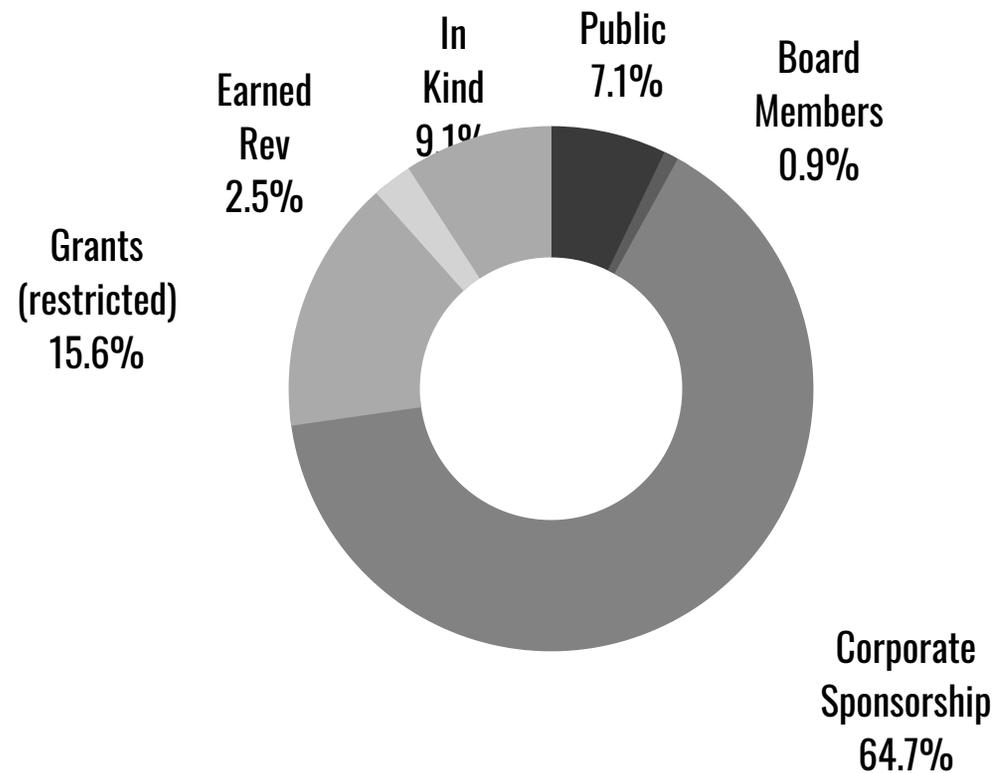
**THE ROSIE RIVETERS PROGRAM HAS INSPIRED THEM TO
FURTHER EXPLORE SOME OR ALL OF THE FIELDS OF SCIENCE,
TECHNOLOGY, ENGINEERING AND MATH.**

88%

**THE ROSIE RIVETERS INSTRUCTORS EXPLAINED
SCIENTIFIC CONCEPTS CLEARLY.**

96%

SOURCES OF FUNDING



Total Income
\$ 246,186

Total Expenses

\$ 107,901

- **Program Expenses** \$ 92,540
- **Fundraising Expenses** \$ 9,379
- **General Expenses** \$ 5,982

Corporate Sponsorship
64.7%

2020 Top Funders

- Heath and Alison Bumgardner \$7,500
- Boeing \$159,075
- Business Women's Giving Circle \$19,148
- AFCEA \$8,500
- Society for Science and the Public \$5,000
- Micron \$5,000

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