

Boolean Girl

— 2025 —

Annual Report

Looking Forward to Another 10 Years

As we head into 2026, I want to extend my heartfelt thanks to all of our supporters and donors. While 2025 was a challenging year for many nonprofits, including Boolean Girl, our community showed up in meaningful ways to keep us strong and moving forward. Looking ahead, 2026 will be an important year of growth and transition. In January, we were excited to welcome Lauren Bell as our Associate Executive Director. After more than 11 years, I will be retiring in December 2026, and Lauren will step into the role of Executive Director. Please join me in warmly welcoming Lauren to the Boolean Girl team and supporting her as she leads us into our next chapter.



Boolean Girl Co-Founder &
Executive Director



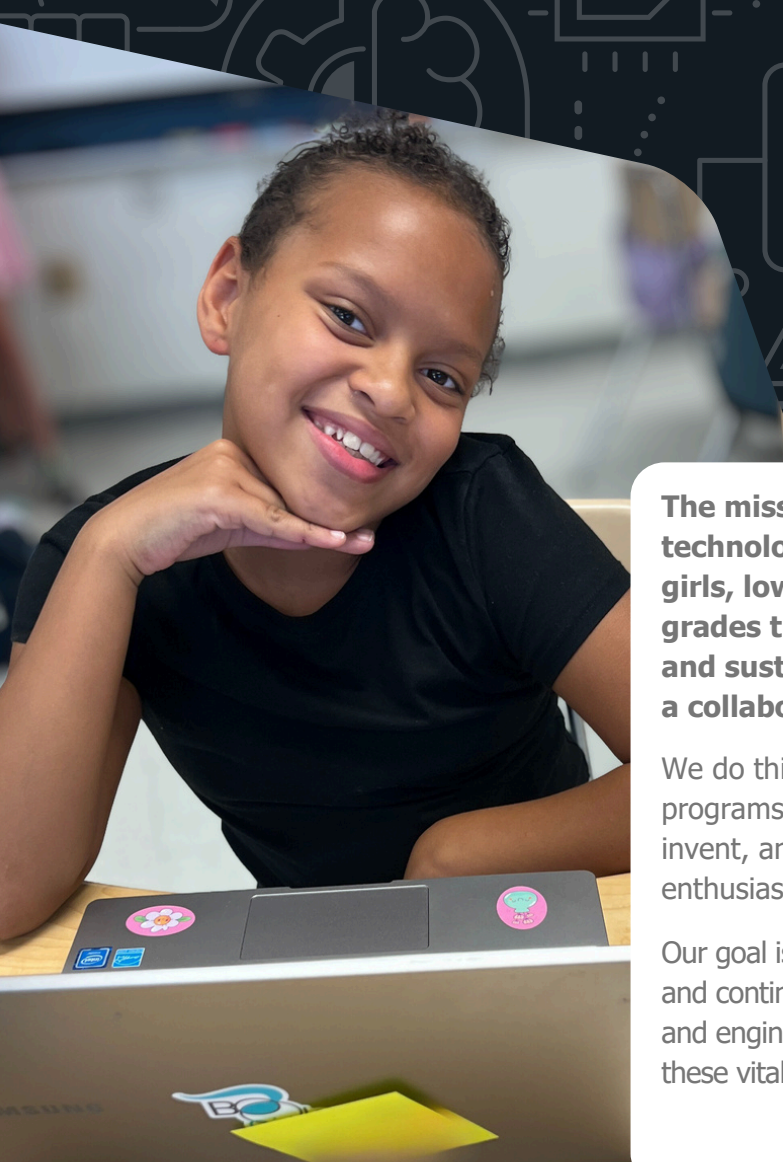
Lauren & Brian

Mission

The mission of Boolean Girl is to diversify STEM (science, technology, engineering and math) by teaching and inspiring girls, low-income students, and underrepresented youth in grades three to eight through meaningful, hands-on instruction and sustained exposure to computer science and engineering in a collaborative and welcoming environment.

We do this by teaching students in our in-school and after-school programs where they learn from rockstar instructors how to code, build, invent, and animate through unique projects, all while creating an enthusiastic STEM community with their peers.

Our goal is to inspire underrepresented kids to code with early engagement and continued programming, thereby helping the next generation of coders and engineers grow in confidence as they get older and pursue careers in these vital fields.



How it's Going

We started our journey teaching in 2014 with 49 girls in one elementary school in Arlington. In 2025, we celebrated our 10th Anniversary of Summer Camps, and we have now reached **over 60k girls and underrepresented youth** throughout the DMV (District of Columbia, Maryland, Virginia), including students reached through micro:bit Kit sales and micro:bit for All donations across the country.



60,092
students since 2014

Inspiring Students & Supporting Teachers

In 2025, we worked to raise funds for more after-school clubs at schools with high percentages of low income and underrepresented students.

These clubs support students who are inspired by the in-school STEM programs and want to do more. Led by teachers at the schools, we also frequently hire high school students to support the teachers.



Program Expansion

Our micro:bit for All program and in-school curriculum continuously open the doors of computer science and engineering to underrepresented students who previously had limited access to these subjects. For many of these students, this is only the beginning. Students who are eager for more and are ready to dive deeper need a place to grow. Our after-school programs give these young innovators the support, space, and resources they need to continue exploring, building, and thriving in STEM.

To help build this program, we developed a portal to give educators access to free trainings, videos, curriculum, and other materials. This allows us to empower educators to bring coding and engineering to their own classrooms or start up after-school programs in their districts.

Learn more about one teacher's experience working with Boolean Girl to integrate coding and engineering into her lesson plans here: <https://blog.booleangirl.org/microbit-for-all-jess-bain>



Geographic Expansion

In 2025, we focused on expanding to areas in our current geographic circle to better serve children in need.

Montgomery County Saturday School

We now partner with George B. Thomas Learning Academy's Saturday School in Montgomery County to host Clubhouse. This program began as an added hour of coding to their current Saturday School curriculum, and last year expanded to include a full two-hour Boolean Girl Saturday Clubhouse.

In Montgomery County, we added a second location for our Clubhouse at Paint Branch High School in Burtonsville, MD, and added an additional Clubhouse at our current Springbrook High School location in Silver Spring. Thanks to the generous support of the Montgomery County Community Foundation, tuition for the Clubhouse is free to students on free or reduced lunch.

Arlington County

In Arlington, we partnered with Aspire and prepared to move our Arlington Clubhouse to the Arlington Mill Community Center on Columbia Pike. Aspire aims to expand learning opportunities that help historically underserved students fulfill their potential through after-school and summer learning programs that support and connect families, schools, and communities, so Boolean Girl was a perfect fit.



Partnership Expansion

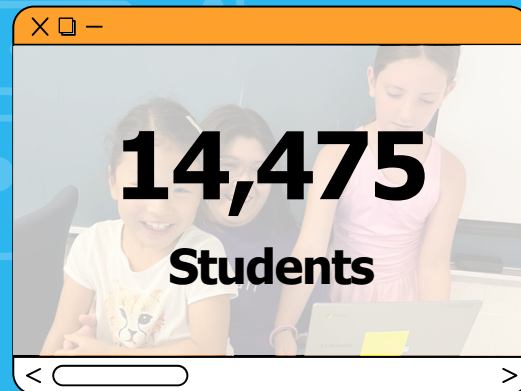
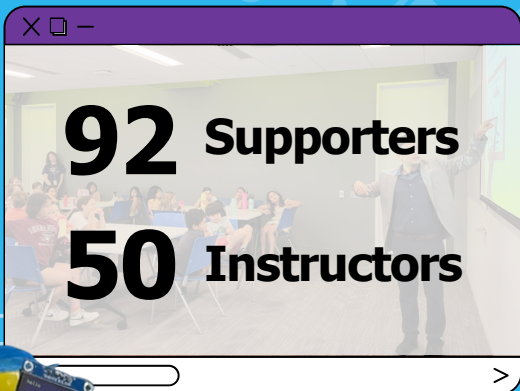
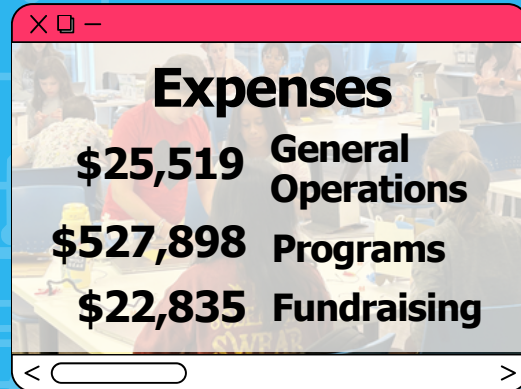
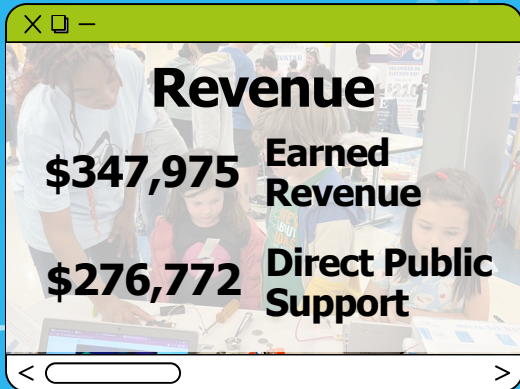
In 2024, we developed a partnership with **Sustainability Matters**, a local environmental nonprofit that cultivates community through conservation. In 2025, we hosted a game-changing program that combines environmental education with coding and engineering.

We kicked off the pilot program with 7th graders from Farmwell Middle School in Ashburn, VA, beginning with surveying plants in a meadow along the W&OD trail. After learning about the plants surveyed and how invasive species impact the environment, students built and coded a field collection device using a micro:bit. Once in the field, the device collected data including time in the field, steps taken (distance), light level, sound level, temperature, humidity, and the number of each plant in the meadow. After collecting the data, students learned how to decode it through data analysis. We charted the data, discussed the results, and drew conclusions.

You can read more about this partnership, the pilot program, and the results of the survey here: blog.booleangirl.org/eco-tech



2025 Boolean Girl by the Numbers



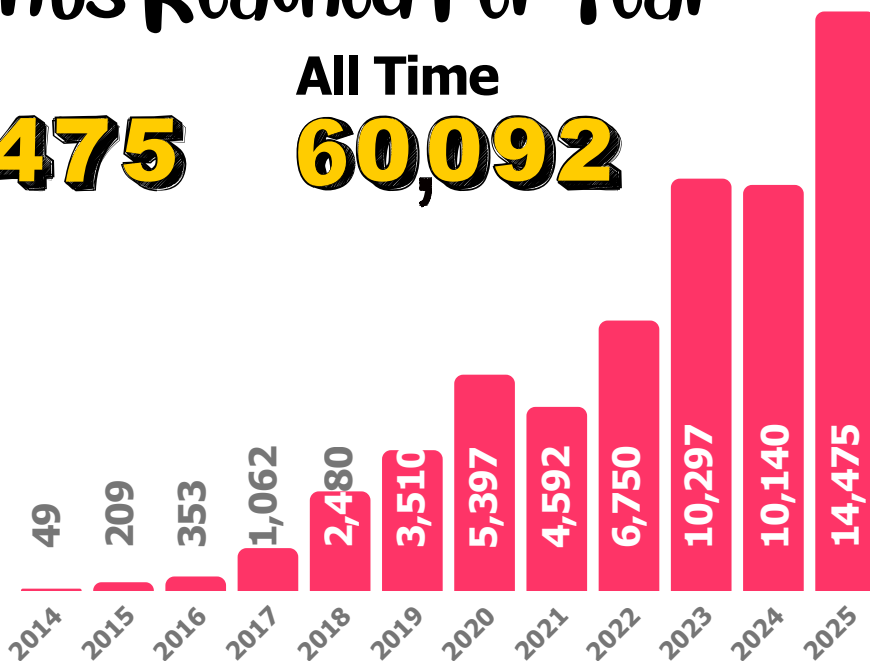
Students Reached Per Year

2025

14,475

All Time


60,092





28%

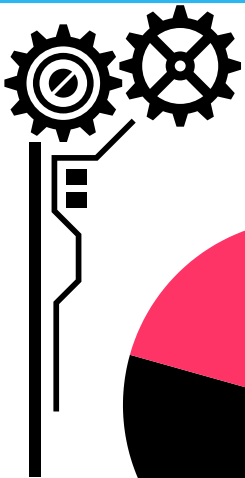
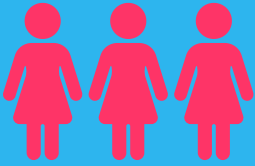
the gender gap between Gen Z men and women pursuing careers in computer science and engineering

That declines to just **24%** in the US* 

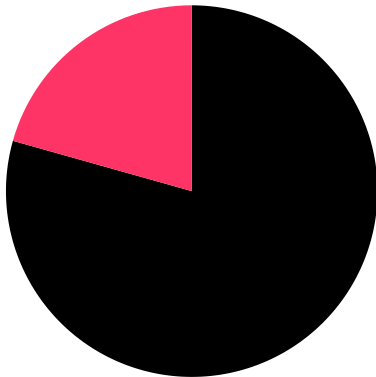


The Gender Gap in STEM

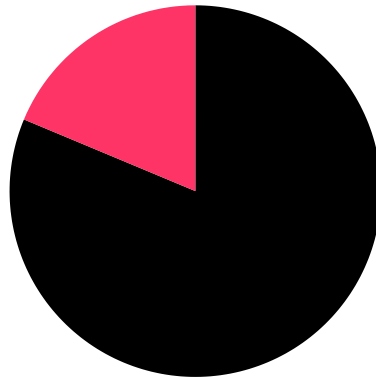
The ratio of Latinx & African-American women in science and engineering careers:



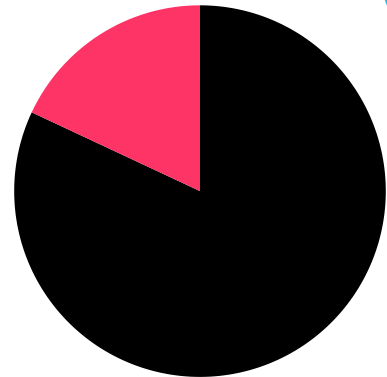
****Women constitute 48% of the total workforce but only...**



26% of computer & mathematical sciences



22% of AI professionals



16% of engineering

* Source: The Gender Gap in STEM: Still Gaping in 2023: professionalprograms.mit.edu/blog/leadership/the-gender-gap-in-stem/

**Source: State of Girls and Women in STEM 2026: ngcproject.org/resources/state-girls-and-women-stem

It's Not Just About Coding

Practicing Failure to Build Confidence

According to a 2025 report by ROX (Ruling Our Experiences), 78% of girls do everything they can to avoid messing up or failing at something.⁺ Confidence is connected to their perceptions of their skills and individual decision-making, and for many, it declines as they get older—as does their belief in their own abilities and opportunities.

Children need to practice failing. Learning to code teaches this lesson innately. Students will fail as they learn to code, but they will also learn to shake it off and try again. Testing, failing, and trying again is all part of the process.

We can help girls grow in confidence by encouraging them to try and to not be afraid of failing at first. Confidence also grows when girls feel support and belonging in their communities, which gives them the strength to try something new.

⁺[Ruling Our Experiences: Girls and STEM Impact Report](#)



My daughter started out as a camper at Boolean Girl and then became a counselor in training and is now a paid counselor. It's a fantastic program. The staffers are high school and college STEM students, the kids are very engaged in the projects and it is well run. Highly recommend it. ~ Melissa M.

The Importance of After-School Programs

Learning is not just done in the classroom between bells. According to data from Million Girls Moonshot, a movement of STEM Next Opportunity Fund, from the time they begin elementary school until they graduate high school, over 80% of children's time is spent learning outside of school. Whether they are participating in after-school programs or summer camps, or learning at museums, libraries, in their communities, or at home, learning is constant and vital to spur on educational ambitions.

The Income Factor

Because of these factors that lead to the disparity in STEM careers, we have expanded our mission to include low-income and other underserved groups.

By the sixth grade, kids from middle-income households spend 6,000 more hours in after-school and summer learning programs than their low-income peers. Rural schools, urban schools, and smaller schools are less likely to offer foundational computer science.⁺⁺



2025 Impact by Program

In-School & After-School Clubhouses

Clubhouses deliver hands-on instructions across a wide range of STEM topics for all levels of skill and experience. We run Fall and Winter Clubhouses on Saturdays in Arlington, VA, and we partner with Saturday School in Montgomery County to host free Saturday classes for MCPS students. Additionally, we work with teachers to bring Clubhouse to their schools as after-school programs.

In the Fall 2025 semester, Clubhouse was so popular, every Saturday class was waitlisted!



Absolutely loved it! Complex topics were explained in such a simple, clear way that children could understand ~ Anna D.

2,361 participated in a Clubhouse

+132%

Now an ongoing program!

Barcroft Clubhouse

Barcroft Clubhouse is in its third year, thanks to a generous Equity Grant from Arlington County. Our Barcroft Clubhouse program takes STEM education directly to Barcroft Apartments, Section 8 affordable housing in Arlington County. Through this program, we bring our STEM Clubhouse directly to low-income and underrepresented children, many of whom have limited access to after-school and weekend programs. In 2025, we saw 18-25 students per Clubhouse over 13 sessions.

In bringing Boolean Girl to low-income residences such as Barcroft Apartments, our goal is to drive greater awareness to this free program and build an interest in and passion for coding and engineering in children who often do not get the opportunities in STEM that those without financial difficulties receive.



Summer Camps

Youth in grades 3-8 learn computer science and engineering fundamentals through a series of unique projects and hands-on challenges. Our students learn coding, robotics, AI, engineering, teamwork, and digital citizenship.

In 2025 we moved our Montgomery County Summer Camps and Clubhouses from Bethesda to Silver Spring to better serve the low-income community; this has impacted attendance for Summer Camp.

Thanks to a \$30k grant from Topsoe to fund camp scholarships, we anticipate reaching more low income youth in 2026.



*"My daughter had a lot of fun in this camp and was eager to share the projects she was working on. The extended day program was also great and filled with many engaging activities."
~ Daria J.*

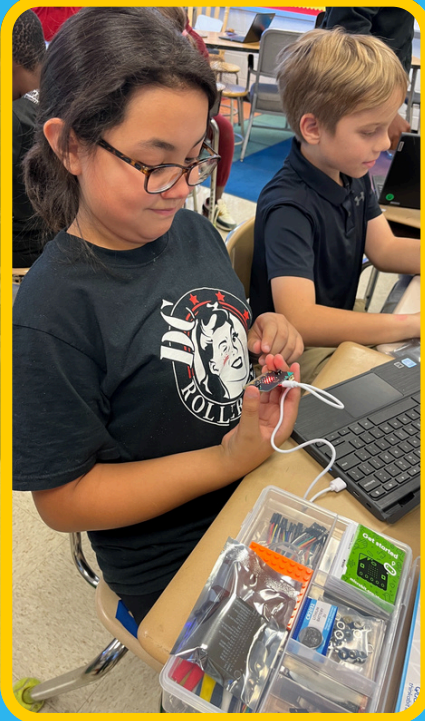
561 kids attended Summer Camp

-26%*

*Due to new Montgomery County location



micro:bit for All



We work with the Virginia Tech Thinkabit Labs K-20 STEM Education and Workforce Development Programs, along with school districts in our communities, to get a micro:bit Kit to 5th graders throughout the DMV.

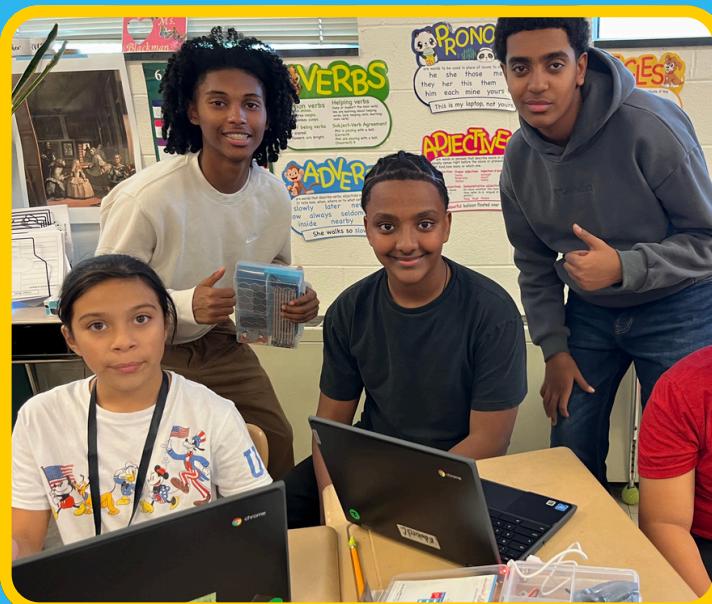
6,693 micro:bit Kits delivered to schools and individuals

+59%



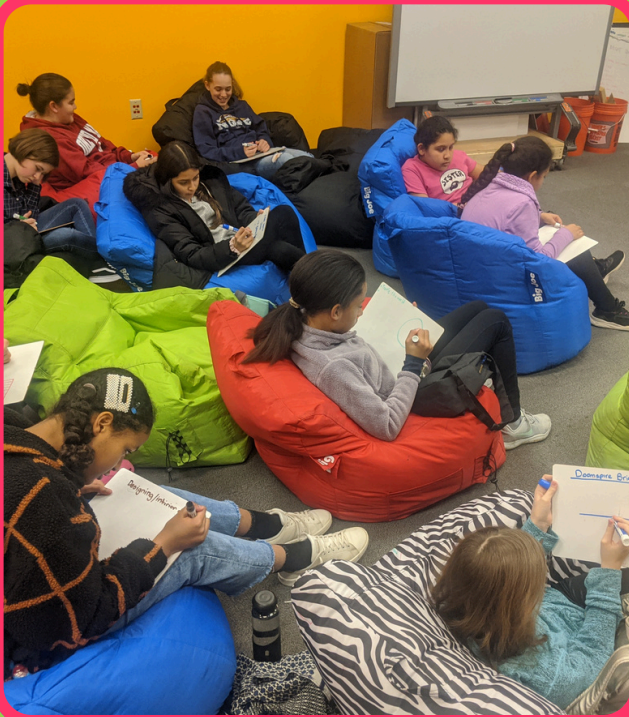
"Every time I talk about the microbit, they get excited. Most are all in and eager to play and try new things," said Ms. Bain. "They're not just messing around. They're invested in learning what it [the microbit] can do and what they can get out of it."

~Jess Bain (Teacher)



Partner Schools

We continued expanding our free curriculum, working with teachers and school districts to develop and share lesson plans for in-school STEM learning and after-school programs like Clubhouse.



91 schools

+25%



*"The teachers will help you and you don't have to wait a long time and Scratch is really fun, especially because of the activities we're doing."
~ 9-year-old student*



DMV Partner Schools

Washington, DC

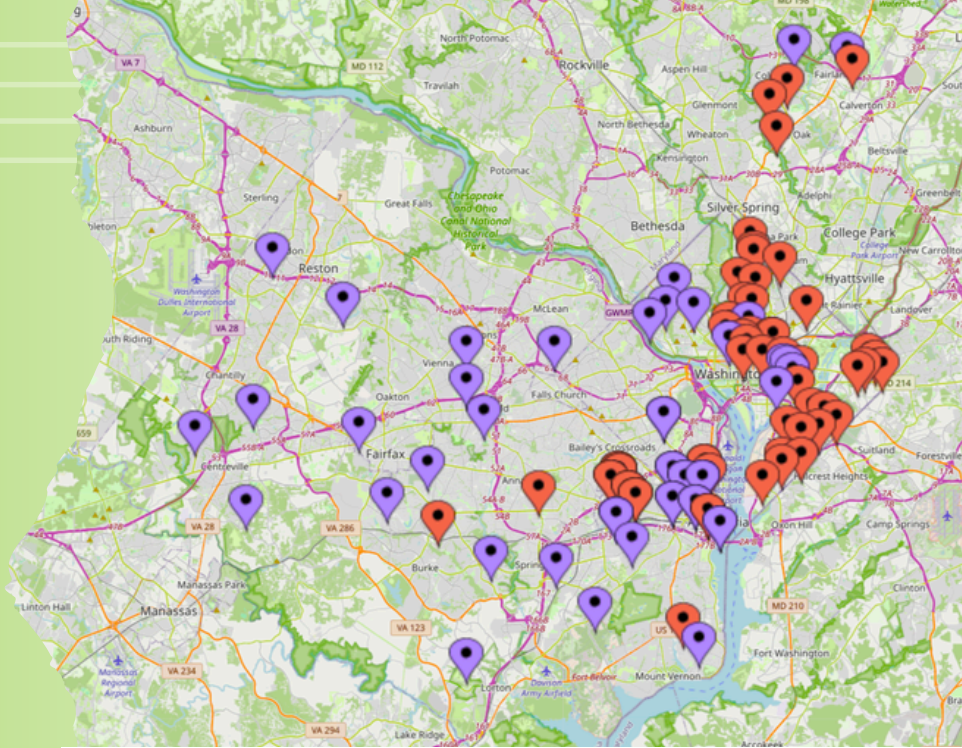
- Barnard Elementary School
- Anne Beers Elementary School
- Boone Elementary School
- Brent Elementary School
- Brightwood (Wittier) Elementary School
- Bruce-Monroe Elementary School @ Park View
- Burrville Elementary School
- Cleveland Elementary School
- Dr. Charles R. Drew Elementary School
- Eaton Elementary School
- Excel Academy Public School
- Garrison Elementary School
- Hart Middle School
- H.D. Cooke Elementary School
- Horace Mann Elementary School
- Houston Elementary School
- Ida B. Wells Middle School
- Janney Elementary School
- John Burroughs Elementary School
- John Lewis Elementary School
- J.O. Wilson Elementary School
- Key Elementary School
- Langley Elementary School
- LaSalle-Backus Elementary School
- Leckie Elementary School
- Lorraine H. Whitlock Elementary School
- Ludlow-Taylor Elementary School
- Malcolm X Elementary School
- Marie Reed Elementary School
- Martin Luther King, Jr. Elementary School
- Maury Elementary School
- McKinley Technology High School
- Miner Elementary School
- Moten Elementary School
- Payne Elementary School
- Randle Highlands Elementary School
- Raymond Elementary School
- Ross Elementary School
- School Without Walls @ Francis-Stevens
- School-Within-School @ Goding
- Seaton Elementary School
- Smothers Elementary School
- Stanton Elementary School
- Takoma Elementary School
- Thomson Elementary School
- Walker-Jones Education Campus

Alexandria, VA

- Charles Barrett Elementary School
- Cora Kelly Elementary School
- Douglas MacArthur Elementary School
- Ferdinand T. Day Elementary School
- George Mason Elementary School
- James K. Polk Elementary School
- Jefferson-Houston PreK-8 IB School
- John Adams Elementary School
- Lyles-Crouch Traditional Academy
- Mount Vernon Community School
- Naomi L. Brooks Elementary School
- Patrick Henry Elementary School
- Samuel W. Tucker Elementary School
- William Ramsay Elementary School

Arlington, VA++

- Montessori Public School of Arlington



Title 1 (Low-Income)



Non-Title 1

++ New in 2025

Fairfax, VA++

- Carl Sandburg Middle School
- Edgar Allan Poe Middle School
- Francis Scott Key Middle School
- Frost Middle School
- Glasgow Middle School
- Hayfield Secondary School
- Henry David Thoreau Middle School
- Henry Wadsworth Longfellow Middle School
- Herndon Middle School
- James W. Robinson, Jr. Secondary School
- Katherine Johnson Middle School
- Kilmer Middle School
- Lake Braddock Secondary School
- Langston Hughes Middle School
- Liberty Middle School
- Luther Jackson Middle School
- Mark Twain Middle School
- Oliver Wendell Holmes Middle School
- Ormond Stone Middle School
- Rocky Run Middle School
- South County Middle School
- Walt Whitman Middle School
- Washington Irving Middle School

58%

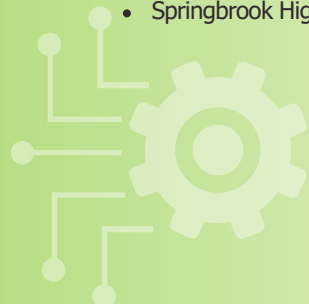
Title I (low-income) partner schools

+24%

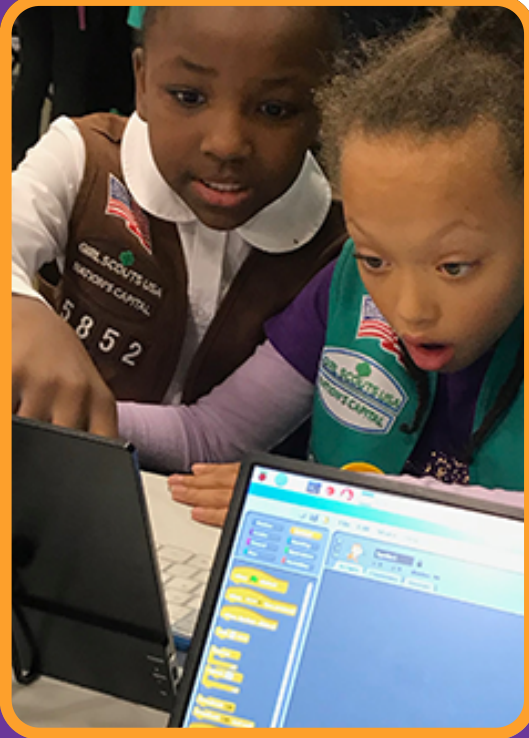
Increase of low-income kids served

Montgomery County, MD

- Burnt Mills Elementary School
- Cannon Road Elementary School
- Cresthaven Elementary School
- Drew Elementary School
- Greencastle Elementary School
- Paint Branch High School
- Springbrook High School



Girl Scouts



Our Arlington Clubhouses are always free for Girl Scouts. At Clubhouse, troops and individuals can earn certificates for completion of the Coding Basics badge. In 2025, we hosted 16 Girl Scout troops, one for every Clubhouse session in Arlington.



16 Troops
120 Girl Scouts





Booleangirl and the Girl Scouts have always been a great partnership. Girl Scouts are always invited to come to Clubhouse for free. There they can earn their Coding Basics Badge as individuals or with their troops.

In 2024, we began promoting this program to the Girl Scouts - National Capital Region troops, at which point we saw tremendous expansion in the program. It has continued to grow since.

Interested in bringing your troop? Learn more at booleangirl.org/girl-scouts or get on the list by emailing info@booleangirl.org.

In 2025, we hosted our maximum capacity: one Girl Scout troop in every Clubhouse!



"Booleangirl was so welcoming to our Girl Scout troop! They provided us with wonderful and knowledgeable instructors who really knew coding. Our troop was completely engaged in coding for the entire time. Thank you again for your flexibility with our shifting number of participants! We will be back!"

~ Victoria K.

Teacher Resources

We offer free curriculum, online training, and continuing education opportunities for teachers who wish begin their own after-school Clubhouse. Additionally, our Grant Resource Guide provides assistance to teacher seeking funding to bring micro:bit Kits to their classrooms.

We provide leadership opportunities to girls who graduate from our programs or other STEM programs and want to work for us as paid instructors.

Student Teachers



Scholarships

We offer full scholarships for any students who cannot afford to pay for Clubhouse. We also offer scholarships for our after-school programs in Title 1 schools.

This free resource provides over 25 courses at different levels inspired by our other programs to help kids code and engineer on their own.

micro:bit Challenges

Featured Programs

micro:bit for All

The goal of our micro:bit for All program is to get a micro:bit Kit in the hands of every 5th grader in the DMV to spark an interest in technology, computer science and engineering. Starting in school and then at home, young learners get hands-on experience and make a connection between abstract ideas of coding and real world outcomes in hardware. Students work to iteratively improve their gadget along the way, building and learning as they create.

Through micro:bit for All, micro:bit Base Kits are distributed to schools. Schools that can afford them might purchase them, at cost. Other schools will receive them as part of a grant or donation from corporations, individuals, and foundations that support STEM education for younger learners.

Teachers can use the kits in a wide variety of subject-area activities and experiences across all grades. After using them in school, fifth-grade students take them home and keep coding and building. New kits are provided to the schools the following year.

In 2025, Fairfax County decided to use their own funds to expand the micro:bit for All program to include middle schools due to strong interest expressed in that age group. This trend is likely to continue as we see school districts that have participated with micro:bit for All in their elementary schools request the program for their middle schools. For those schools, we provide professional development for teachers and work with them to integrate micro:bit coding into their classrooms.

Learn more about micro:bit for all and its impact on students and teachers [here](#).#

#blog.booleangirl.org/microbit-for-all-jess-bain

Artificial Intelligence

The proliferation of Artificial Intelligence has led to questions around the future of computer science careers and the students invested in them. That landscape is shifting as AI becomes more accurate and companies implement the technology instead of hiring CS professionals.

We saw the importance of AI and developed our first AI Camps in 2022, before Chatgpt became mainstream. In 2026, we will be launching an all-new advanced AI Camp with Python and micro:bit to continue expanding education as that landscape grows and changes.

AI is built on a foundation of biases

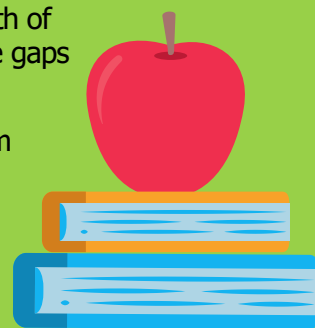
AI is only as accurate as the data that train it, and historically many data sets have excluded certain groups, inevitably resulting in biases and inequalities. This current digital world is governed by bits and bytes, not human beings and our values. We need AI engineers who can think critically to develop a framework that overcomes these shortcomings. Since coding is the building block of AI, that base knowledge is fundamental to fixing the issues of AI. We need more women, people of color, and other underrepresented groups to infuse their experiences and understanding of the world into these new technologies. Otherwise, this digital future will continue to run on these biases.

It was never just about learning to code

We teach children to code, not just for coding itself, but for all the lessons learned while coding. Coding teaches kids how to think critically, work through problems, showcase their creativity, and not be afraid of making mistakes along the way. We have also seen children grow in confidence and show determination as they work through problems and find solutions. These skills are vital in any career.

New micro:bit for All Program Results in Fairfax[^]

- ✓ Developed curriculum lessons that middle school teachers can use to engage students in hands-on learning using micro: bits and computer science to design solutions to real world problems
- ✓ All 26 FCPS middle schools received classroom micro:bit Kits. The \$8,000 worth of micro:bits and accessories that Boolean Girl provided made it possible to close gaps in access and reach full scale.
- ✓ Engaged professional learning for the educators who developed the curriculum and collaboratively designed the kits
- ✓ Engaged larger scale professional learning for teachers of middle school computer science and engineering electives



[^] Funded by VDOE Advancing Computer Science Education Grant

Sponsorships & Partnerships

When you support Boolean Girl, you transform the lives of the thousands of students, teachers and instructors in our programs. We are tremendously grateful for the support and hard work of all of our partners. They provide a diverse range of support to our mission, including:



Financial Support



Event Space



Volunteers



Guidance



Technical Support & Resources

Learn more about our sponsorship opportunities and how to get involved on our website (booleangirl.org/partner)

Thank You to Our

Sponsors



Partners



Each of these organizations contributes to further the Boolean Girl mission.

Boolean Girl Board



Sarah Eastman



Jennifer Ives



Maria Izurieta



Nell Varghese-Patil

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