




ANNUAL REPORT 2023

 booleangirl.org

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 #SmartGirlsCode

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The status quo in STEM is unacceptable.

Girls, students of color and low-income children are not getting the STEM education they deserve. While some progress has been made in diversifying the sciences, an alarming lack of diversity persists, particularly in computer science. Girls make up 56% of students who take AP exams, but only 19% of those that take the computer science AP exam. Simultaneously, students of color are more likely than their white counterparts to transfer out of STEM education into other pursuits. And 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.

But it is not inevitable.

Because the research shows that early engagement prevents attrition, Boolean Girl centers our approach around inspiring kids before they reach the vulnerable age of dropping out. Starting with third-graders, we teach coding and engineering in a fun, welcoming environment, reversing the inequity that has plagued STEM for so long.

We are determined to build somethign better.

As parents and engineers, educators and nonprofit leaders, our passion inspires us, and our teamwork propels us. If you are dedicated to promoting equity, if you believe in your power to effect change, if you want to create something transformative, then we need you.



Will you join us?



// Our Story

Boolean Girl got its start in 2014, teaching coding and engineering to girls at an elementary school in Arlington, Virginia. What began as a passion project soon caught on, and one thing became clear: we had hit upon an approach that was highly effective, with our impact expanding every year. We grew from reaching just 49 girls in 2014 to reaching thousands of girls each year.

In 2017, we formed a nonprofit with an ambitious mission: to remake the face of the future workforce by empowering disadvantaged groups with in-demand skills.

Our stats and awards tell the rest of the story:

- We've reached over 24,000 girls since our founding, 20% of whom came from low-income families.
- 96% of girls at our camps say they would take another coding class with us and recommend us to a friend.
- The average number of programs that our students attend is five. We are not a "one-and-done" organization.
- We were named "Best STEM Camp" by Northern Virginia Magazine six years in a row.
- We were named "Best STEM Nonprofit" by the STEM Symposium in 2018.

Despite this success, there is so much more work to do, and that is where you come in.



// Why Boolean Girl



EARLY ENGAGEMENT IS KEY

ALL GIRLS

**66% INTERESTED
AGES 6-9**

**32% INTERESTED
AGES 13-17**

**4% INTERESTED
IN COLLEGE**

According to the Girl Scout research Institute, girls become interested in STEM at age 11 but lose interest by age 15.

THE TOP REASONS:

Lack of Female Mentors

Not enough practical, hands on
experience with STEM subjects

Gender inequity in STEM jobs

Fewer than 1 in 5 computer science graduates are women, and the numbers are getting worse.

-Bureau of Labor Statistics

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DIVERSITY → SUCCESS

Study after study shows that diversity drives innovation, leads to better problem-solving, expands the talent pool and is important for long-term economic growth. Startups led by women return a 35% higher ROI and generate 12% more revenue than male-run startups.

// Programs

SUMMER CAMPS

At Summer Camp, Girls and non-binary individuals learn to code and build electronics based on our core curriculum. Camps are offered at multiple locations around the DC metro area and online. At our summer camps young learners really get to code, build, invent and animate. They can get started with beginning coding classes in Scratch, learn to code in Python, create DIY gadgets with electronic circuits, sensors, and motors using legos and other craft supplies. Boolean Girl is always adding new offerings, in the past two years robotics, wearables, and AI courses have been added.

Each summer 100's of girls participate in our summer camps. Many girls participate in more than one camp.

Boolean Girl charges a market competitive fee for the camps but scholarships are available to anyone in need. Any excess funds from summer camps are used to cover our corporate overhead so that 100% of donations go to the target program.

We measure the success of our camps by tracking the number of campers, the number of campers that take more than one camp and the number of campers that participate in other activities.



“ Boolean Girl coding camp is the only camp my daughter has begged me to go back to. She had such a great time and couldn't stop talking about all that she learned. ”



HOURLY OF CODE

During the school year Boolean Girl offers free Hour of Code events three times each month. The content varies each week but is aligned with our core curriculum. Young learners can engage in HOC in Scratch, Python, AI, and electronics. The HOC events are also a great way for Girl Scouts to earn their Coding for Good badges. Attend the age appropriate HOC and an Ambassador event to earn the rank appropriate badge.



AMBASSADOR PROGRAM

Designed to introduce girls to careers in STEM, the ambassador program is a virtual event monthly during the school year. Each month we host a women in STEM who shares her path to career success in STEM.

“ My daughter loves everything about Boolean Girl. She can't wait to go back next weekend! ”

SATURDAY CLUBHOUSE

Clubhouse happens on weekends during the school year. Girls and non-binary individuals learn to code and build electronics in a fun, collaborative setting.

At Clubhouse, young learners receive coding and electronics instruction, get hands-on time to develop their own creative projects, and receive a lesson in "digital wellness" to promote responsible choices on computing devices.

Clubhouse is for ages 8-13 and all experience levels. It is the perfect way for young learners to continue to pursue their interest in STEM. The lessons align with the summer camp curriculum and are a great next step after attending a free Hour of Code event.

Clubhouse enrollment is limited so the groups are small and each participant has lots of one on one support from our faculty. Each season 100's of girls participate and get started or continue learning to code, build, invent, and animate.

We measure the success of our clubhouse by tracking the number of participants, the number of participants that come for multiple weeks, and the number of participants that participate in other activities.





MICRO:BIT FOR ALL

In 2022 Boolean Girl started the *micro:bit for ALL* program to bring coding and engineering into elementary school classroom. The goal of the program is to spark an interest in technology, computer science and engineering. Starting in school then at home, young learners get hands-on experience and make a connection between abstract ideas of coding and real world outcomes in hardware. The STEM kits designed in concert with the Virginia Tech Thinkabit Labs are distributed to schools. Teachers can use them in a wide variety of subject-area activities and experiences across all grades. After using them in school, 5th grade students take them home and keep coding and building. Next year, new kits are provided to the school.

In addition to providing kits, Boolean Girl supports teachers with live professional development, lesson plans and in classroom support.

Find out more at micro.bitkit.com

“ My daughter loved the 1 on 1 attention from the instructor and the engaging way the class was taught. ”

FACTS ABOUT BOOLEAN PROGRAMS

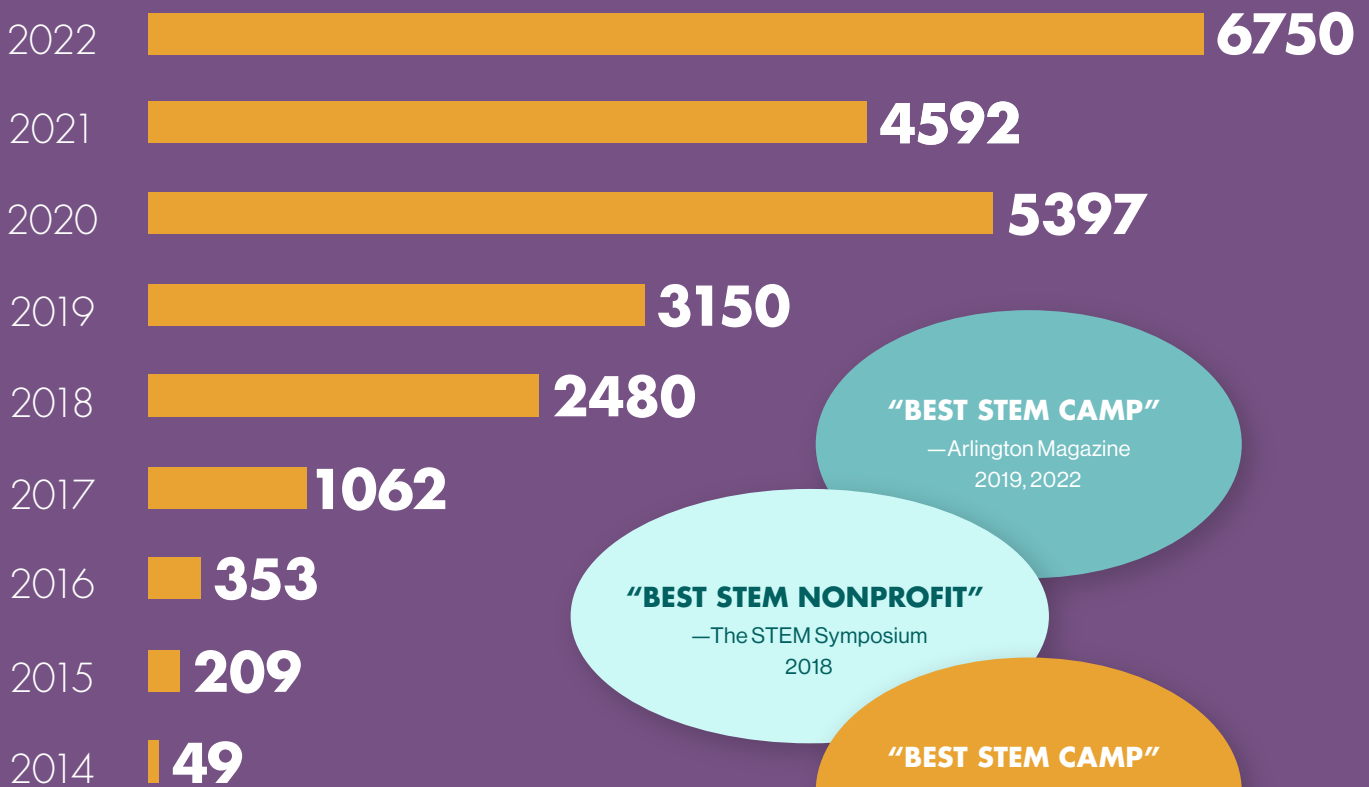
- We have professional curriculum developers create our content.
- Content is designed to be cross subject so girls learn to program, and strengthen their skills in math, history, science, and english.
- Our curriculum and the educational programs are assessed by an outside organization, the Professional and Graduate Education Programs at Mount Holyoke College.
- Our courses are always free online for students at Boolean University or for teachers at the Ed Resources page.
- The courses are the same whether you take them online with an instructor, at a camp or other in person event, or at your own pace on Boolean University.
- We have a progressive curriculum where courses build on each other.

What is **OUR IMPACT?**

96% of girls would take another coding class and recommend it to a friend
Over 20% of students on Boolean Girl Scholarships

NUMBER OF GIRLS REACHED

20% FROM LOW INCOME HOUSEHOLDS



"BEST STEM CAMP"

—Arlington Magazine
2019, 2022

"BEST STEM NONPROFIT"

—The STEM Symposium
2018

"BEST STEM CAMP"

—Northern Virginia Magazine
2017-2022, 6 years in a row!

Our mission is teaching coding and technology to girls through innovative camps, classes and Boolean University.

// The Numbers

We are a lean operation, the overhead rate is approximately 10%. Profits from summer camps pay the overhead and 100% of grants and donations go to impactful programs.

REVENUE

EARNED REVENUE	\$178,304
DIRECT PUBLIC SUPPORT	\$196,696
TOTAL INCOME	\$375,000

EXPENSES

GENERAL OPERATION	\$18,833
PROGRAMS	\$301,454
FUNDRAISING	\$15,387
TOTAL EXPENSES	\$335,674

712
SUPPORTERS

31
INSTRUCTORS

19
AMBASSADORS

14
SCHOOLS

6750
CODERS

This is you!

// Partners

Boolean Girl would like to thank all our partners for their support!



// Board And Advisors



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SWETA SINHA



JENNIFER IVES



ZOE KANTZ



CATHY BURTON



REGINA RIDGLEY