MICRO:BIT FOR ALL!

Boolean Girl a local non-profit that promotes STEM education, teamed up with Virginia Tech Thinkabit Labs K-20 STEM Education and Workforce Development Programs to **get a micro:bit kit in the hands of every 5th grader in the DMV** (District Virginia, Maryland). 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 first in the classroom then at home. Students work with hardware and software together to design, build, and prototype physical gadgets. They work to iteratively improve a solution along the way making and learning as they create.

Base kits will be distributed to schools. Schools that can afford them might purchase them, at cost. Other schools will receive them as part or a grant or donation from corporations, individuals, and foundations that support STEM education for younger learners.

Once kits are received by the schools, teachers can use them in a wide variety of subject-area activities and experiences . After using them in school, students will get to take them home and keep coding and building.

The Kits

The Base Kit, collaboratively designed (developed) with the Virginia Tech Thinkabit Labs K-20 STEM Education and Workforce Development Programs, includes a micro:bit microcontroller and components to connect devices like lights and motors via the GPIO pins.

A sensor kit and motion kit are also being added. The sensor kit will extend the projects students can complete by adding additional sensors for measuring distance and light as well as devices like a joystick, potentiometers and buzzers. The motion kit will add motors and building blocks so students can create things that move and roll.

Educator Support

Classroom teachers and other educators will receive training and support as part of the donation so they can introduce the kids to the micro:bit base kits. Additional support is available as a service or at numerous local and online events supported by Boolean Girl and Virginia Tech's Thinkabit Labs.

Free curricula will be provided so students can learn at their own pace. They will also be encouraged to attend numerous local and online events supported by Boolean Girl and Virginia Tech's Thinkabit Lab.

Distribution

Rather than foot the entire bill for thousands of micro:bit kits, Virginia Tech's Thinkabit Labs and Boolean Girl will partner with supporting companies and organizations.

Donors, backers, supporters will be encouraged to donate to a general fund that will be used to supply kits to schools that request them. Corporate donors will be encouraged to donate to the general fund or to support distribution to a single school or across a district or region. A single school can be supported for as little as $5000.

To accelerate the rollout, kits will also be available for sale individually or in group batches at cost. Students, schools, clubs and nonprofits will have the ability to purchase their own kits, and custom logo support will be available.

About Boolean Girl

Boolean Girl's mission is to diversify STEM (science, technology, engineering and math) by teaching girls, under-represented groups and low-income kids how to code and build engineering projects. We engage children in grades three through eight with meaningful, hands-on instruction and sustained exposure to computer science and engineering in a collaborative and welcoming environment. With in-person and virtual programs, along with mentorship from STEM professionals, we have a lasting impact on students as they grow, thereby reversing the gender gap and inequities in STEM and diversifying the industries of tomorrow. https://booleangirl.org/