# Qualcomm thinkabit lab

# Collaboration Model

Qualcomm is committed to a future where students from all cultural and socioeconomic backgrounds and geographic locations have the opportunity to learn about Science, Technology, Engineering, and Mathematics (STEM) and be captivated by the boundless possibilities it offers, both as a passion and as a career path.

Through collaborations with educational institutions, nonprofits, and beyond, Qualcomm\* Thinkabit Lab<sup>™</sup> provides students who live in various types of communities with highly engaging, handson learning experiences to inspire the next generation of inventors.

Interested in opening students' minds to the world of invention, exploration, and STEM careers? Read on to learn more about the Thinkabit Lab program and ways that your organization can get involved.



#### THINKABIT LAB FOCUS AREAS

Our projects give students a taste of what it is like to be an inventor and the excitement that can come from the process of invention and exploration. Projects include:



# Signature Experience

Students discover careers available at tech companies, engage in hands-on engineering activities, and collaborate to create an Internet of Things (IoT) inspired invention.



#### **Tech for Good**

Students learn to use Bluetooth technology and take inspiration from Qualcomm® Wireless Reach™ initiatives to invent a solution to a real-world problem.



#### Wegrable Tech

Students explore their strengths, interests and values while learning to code LED lights and Servo motors and apply these skills to create an automated wearable.



# AgTech for Good

Students in agricultural communities utilize IoT-based technology to develop innovative solutions to local problems.

#### HOW THINKABIT LAB WORKS WITH ITS COLLABORATORS

Qualcomm supports Thinkabit Lab collaborators by offering the following program implementation support:

- Teaching resources and instructor support. Qualcomm provides a comprehensive program, including instructional guidance that
  empowers collaborators to teach the Thinkabit Lab Signature Experience and guide their students through hands-on projects
  throughout the school year. During the summer, Qualcomm supports our collaborators in offering week-long summer camps for
  students, based on experience drawn from years of successful implementation.
- Engineering hardware and crafts for invention projects. Thinkabit Lab collaborators receive a one-time starter kit with necessary equipment, materials, and supplies for a group of students to complete an invention project.
- Guidance on setting up an ideal educational space. Qualcomm provides direction on how to set up and optimize the space students use to participate in Thinkabit Lab activities. This includes a list of recommended supplemental materials to be provided by educators as well as photo examples to serve as inspiration for arranging a creative and engaging learning environment.
- Metrics-driven results. The Thinkabit Lab program has established best practices to ensure results, creating data-driven benefits to
  help students and support future grant opportunities. As part of this effort, Qualcomm provides a set of common metrics to collaborators
  in advance of program implementation and asks Thinkabit Lab collaborators to collect and share these metrics at the completion of
  the program.

#### PROGRAM AT A GLANCE

The Thinkabit Lab program was designed by Qualcomm employees, educators, and engineers to provide an engaging experience for students to explore careers in STEM and design creative inventions through introductory and week-long sessions. Through these collaborations, Thinkabit Lab has:

#### **EMPOWERED...**

...over 80,000 students. As a homegrown program with its own dedicated staff, Thinkabit Lab has engaged tens of thousands of students to encourage a new-found love of innovation.

#### **ENGAGED...**

...with 22 education organizations, nationally including ten public schools, three university sites, four school districts, four non-profits, and one public library.

#### HELPED...

...students create over 20,000 of their own inventions. Students get real-world experience in the innovation and engineering design process, including the opportunity to see their ideas through to a novel invention.

#### SUPPORTED...

...over 55 educators and instructors. In addition to cultivating student interest in STEM, the Thinkabit Lab program also helps build STEM educational capacity among teachers and other instructors across elementary, middle and high schools, as well as higher education settings.

#### CREATED...

...online Learning Center for educators and others nationwide. Qualcomm has developed educational resources for students and instructors—from writing code to introductory engineering games and tools—all free and online. These materials help Thinkabit Lab collaborators and participants engage in STEM learning even outside of our formalized programs.

# **DEMONSTRATED...**

...proven results for underrepresented inventor groups. After completing the program, girls report a greater willingness to consider engineering, computer science, and other STEM fields, and students from underrepresented communities gain greater insight into potential career possibilities.

# FREQUENTLY ASKED QUESTIONS

#### 1. Does it cost anything to collaborate with Thinkabit Lab?

No, there are no fees or other charges associated with the Thinkabit Lab program.

#### 2. What type of organizations can collaborate with Thinkabit Lab?

Most any type of educational organization can participate in the program, including schools, school districts, libraries, universities and so forth. In order to help close the diversity gap in STEM, the program seeks to work with diverse schools and communities in particular, encouraging girls, students of color, and those from underrepresented backgrounds to learn more about STEM and inventing.

#### 3. What grade level is most appropriate for Thinkabit Lab?

Generally, our program is best for middle school students. However, our projects build on each other and we are also creating modules that can be added which involve more complex engineering skills and coding ability.

# 4. What does my organization need to provide to be considered to offer Thinkabit Lab program?

Educational institutions are responsible for providing the instructor, space needed to implement the program (physical or virtual), basic instructional materials, and technology (e.g., laptops). Once you are an approved site and have a signed an agreement, we provide a one-time starter kits with the core instructional materials and instructor professional development with step-by-step instructions for program implementation.

#### 5. How do you select which educational organizations to work with?

We look for educational organizations who have a broad reach and provide an inclusive learning environment—meaning, they serve a large number of students and provide space where all interested students can participate in age-appropriate activities. We also prioritize long-term, sustainable relationships with organizations who are aligned with our overall goal of empowering students from all cultural and socioeconomic backgrounds and geographic locations.

#### 6. Do you offer the program as a remote learning experience?

During the coronavirus pandemic, we continued to engage students by pivoting to a remote learning environment. In summer of 2020, we expanded student participation in weeklong camps by 300% when compared to summer of 2019. Due to the continued high number of student participation, these hands-on camps will continue to be offered during the summer of 2021 and into the foreseeable future.