

Impact Report: K-12 STEM Kits

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BEF's Building STEAM 4 All Initiative Overview

BEF's Building STEAM 4 All Initiative integrates and expands availability of and access to hands-on, experiential learning opportunities in science, technology, engineering, art, and math (STEAM) for the 38,000 students in Beaverton public schools. The initiative focuses on addressing academic disparities among marginalized student populations in core academics including math and science; boosting critical thinking skills by providing access to tech tool learning that both make school fun and reinforce classroom lessons, and helping all students see themselves as scientists, especially those who tend to be underrepresented in the sciences--girls, low-income students, and students of color.

ADI Impact on Beaverton Schools

2025-26 Overall Accomplishments



Served all 5 Title I
Elementary Schools
with new STEM Kits



STEM Kits engaged
2,523 low-income
and multilingual
students



Additional
investment in the
Lending Library
reached 18,000

ADI-BEF Charitable Partnership, 2025-26

Objectives were to equip Title I elementary schools with hands-on, learning kits to support STEM education for low-income students and to provide professional development opportunities for the Tech Instructors who engage all elementary school students across Beaverton schools to build skills around hands-on learning.

Hands-on learning:

Equipping Title I Elementary Schools

Barnes ES

Barnes used the ADI funds to support an in-house lending library so classroom teachers at Barnes could have more access to hands-on learning tools in the everyday classroom. Funds also helped equip a Makerspace that supported students' creativity during Tech Specials, a weekly class. Barnes is a Dual Language School, English/Spanish, serving 432 students.

Beaver Acres ES

While some Tech Classrooms have a fair amount of space and storage, the one at Beaver Acres does not, despite being a large Title I school with 761 students.

Beaver Acres' TIA therefore had to be strategic about which tech tools could be used by multiple grades and could be easily taken out and stored away. He selected two types of coding robots that could be used for progressively higher skill levels so that students could find many interesting uses for them. He specifically wanted his students to find more ways to learn block coding.



"The Makerspace is a treasured part of Barnes. It helped having new materials for students to use. It also provided leadership opportunities, for example, fourth graders learned to put together the new mBots so that other students could use them."
~ **Teresa Roque, TIA**

"In the Makerspace, we make our dreams come true." ~ **4th grade Makerspace Club participant**

"After the investment, students were able to complete coding challenges in a way we had never tried before," shared Steven Senteney. "It was fantastic to see the students working together to solve problems and take ideas they had and express them through the Edison or Dash bots. Many students said, 'This is cool!' or 'Can we do this next time?'"

One of the exciting things to come out of Beaver Acres has been a plan from four of their teachers to teach an afterschool science club next school year for their 4th and

5th graders so that all 180 students would get a robust experience in basic science concepts this fall.

BEF provided a Kids Count Grant to Beaver Acres to expand science programming this fall. We're excited to see the interest keep growing.

Chehalem ES

This school was the first to try out the new mBots, with a set that had been put together by employees at KLA on a volunteer day. It was a real learning curve to figure out how to program them, get them connected to the iPads in the Tech Classroom, but quickly the TIA and her older students were figuring out lots of ways the mBots could be used.

Students came up with their own experiments: navigating roads and bridges, adding Legos so that the mBots could carry items. Joan Pape, the TIA, was one of the TIAs who shared what she learned with her peers so that they too could use these new robots in their own classes. Chehalem is a Title I school with an enrollment of around 400 students.

William Walker ES

This school was the first to try out the new Beebots, a robot geared more toward younger students and English Language Learners as it does not require reading or writing in English to operate. Having these robots in the classroom provided new opportunities in this Dual Language School that enrolls 523 students. The TIA developed lots of fun ways to integrate literacy activities into the use of these robots, and shared his curriculum with his peers at the January 2026 professional development day.

In this school, older students (grades 3-5) spend a month working through a STEAM related concept such as Engineering, Coding, or Electricity & Magnets, etc. The grant



We set up a town for students to navigate with the mBot, coding each turn. Here we're experimenting about what it takes to get the robot to go over a bridge. A challenge the student came up with themselves to try to solve." ~ **Joan Pape, TIA Chehalem.**



Soccer tournaments with the mBots were a fan favorite." – **Jonathan Cortez, TIA William Walker**

funds expanded these units to include 3D modeling, aerodynamics, biology. After working on the lessons, students have time to go to stations around the room where they can continue working on projects based on their interests. K-2 students come in and spend 15 minutes practicing typing, then spend the rest of the class time also working in small groups at stations.

Adding to the Innovation Lending Library

The Innovation Lending Library has been a strategy BEF has used to sustainably invest in tech learning tools that also create equity in access to these tools. The Library is managed by the district's Digital Curriculum Team that maintains and upkeep the inventory. They also manage a check out process so that library materials can be shared among schools. This school year, 35 instructors checked out tools from the library, which is estimated to have reached some 18,000 students across elementary and middle schools. One of the highlights of the year was how the Lending Library supported inclusive STEM education, providing opportunities for students with disabilities to also enjoy hands-on learning activities.

For the 2025-2026 school year, and with the ADI investment, objectives were 1) diversifying what was available in the library's inventory, 2) prioritizing hands-on equipment over traditional screens-on digital tools, and 3) creating a more versatile catalog of items available for check out including items with low barrier for use so as to increase participation among district educators.

One of the most popular additions to the Library was the introduction of **ChompSaws**. These are kid-friendly power tools that support cardboard construction. While we expected to see a lot of interest among elementary schools, the district staff were pleased to see interest among middle schools as well.

"Specialized tools like ChompSaws empowered my SPED students to participate more fully in hands-on learning." ~ **Anna Vallee, Oak Hills Elementary**



TIAs learning to use ChompSaws at the Professional Development Day in January

Another unexpected success of the year was the integration of **Indi Robots** into Special Education classrooms, a student population that hadn't been served previously. These robots provided highly engaging, screen-free coding opportunities that could be used by students with disabilities. Educators shared that their students found the tools exceptionally accessible to use.

SPED Educator Cassie Sementelli who supports non-verbal students across district schools reported that her "students were super excited to use the equipment and found the Indi Robots much easier to navigate than traditional tech." Her plan to utilize even more of our inventory this summer and next school year is a testament to the value of the program for all students.

"Providing a multitude of options in the Lending Library isn't just about variety; it's also about equity. A more versatile inventory has empowered more educators to utilize the Innovation Library, giving new students opportunities to use tech tools for the first time." ~

Carrie Sutton, Digital Curriculum Specialist

Conclusion

We believe this project serves as a successful blueprint for inclusive STEM education. This year, we saw a growth in participation in the Lending Library, as well as diversification of the audiences using the library. Thanks, Analog Devices, Inc. for helping expand equitable K-12 STEM education in Beaverton Schools.

About the Beaverton Education Foundation

Since 1988, our mission is to mobilize community resources to ensure that Beaverton public school students have equitable opportunities to reach their brightest future. We believe in every student's right to an equitable education, growing high-quality solutions for student success, and the power of bottom-up transformation. Objectives are to improve and elevate the experiences of the 38,000 students attending Beaverton public schools by investing in core academics; experiential, hands-on and career-connected learning; and responding proactively to emerging needs. We create impact through supporting classroom needs, facilitating extended school day/year learning, addressing disparities and barriers to equitable education, and filling gaps in available school funding.

Contacts:

Lauren Garrett, Executive Director, Beaverton Education Foundation,
laureng@beavertonedfoundation.org

Holly Van Houten, Director of Grants and Programs, Beaverton Education Foundation,
hollyvh@beavertonedfoundation.org



The Beaverton Education Foundation has been supporting students and teachers in BSD since 1988.

We raise money to provide hands-on, innovative, academic programs and projects. These innovations go beyond normal school funding to ensure students have an opportunity to learn, thrive, and reach their highest potential.

www.BeavertonEdFoundation.org