

Impact and Overview:

The Budding Builders program aimed to empower early engineers. Our goal was to provide our early childhood (pre-K - 1st grade) students with the space, time, and materials necessary to nurture their innate curiosity. Through the Innovation Grant, the early childhood students were provided with an array of engineering materials to enhance the current STEAM program with a focus on bringing play and building into their daily experience at Brimmer.

Students engaged with these carefully curated materials to design on both a small and large-scale, as well as both inside the classroom and outdoors. The Budding Builders materials provided them with more diverse opportunities and tools to explore how things work and use their imagination to build and create.

Building with small-scale materials in the classrooms:



Building with large-scale materials on the



Many opportunities to freely explore materials indoors and outside:



Implementation:

At the beginning of the school year, we hosted a family coffee for the Early Childhood families. Our goal for this coffee was to introduce both new and old Early Childhood families to the Budding Builders materials. This coffee gave Brimmer families the chance to ask questions about the STEAM program and explore the new materials which their children would be using during the school year. The families enjoyed engaging in a design challenge with each other, and getting the opportunity to see the Innovation Grant in action.

Pre-K - Grade 2 Family Budding Builders Coffee:



We gave our Early Childhood colleagues a tour of the materials and instructions on how to check them out to use with their students during the school year. Our goal this year was to simply provide Early Childhood students and teachers with unique materials to enhance their experience and curriculum. We deemed this year as an “observational year” - one where we simply allowed teachers and students the opportunity to become familiar with the new materials by exploring and experimenting with their use in various ways.

Throughout the year, we took note of which materials each grade was using and how they were using them. We also observed which materials students chose to utilize independently. Some of our observations led to new ideas of how we could incorporate the Budding Builders materials into the Early Childhood curriculum in ways we didn’t originally think of. For instance, Pre-K was inspired by the

Budding Builders materials to set up a STEAM corner in their classroom this year. Throughout the year, they rotated through different Budding Builders materials and used them in various ways.

Pre-K designed their own schools and utilized different small-scale builders to build their schools, enhancing their current STEAM curriculum:



First grade worked on building their social-emotional skills such as teamwork, taking turns, and executing a plan using the large-scale builders on the playground:



The Future Of Our Program:

Now that teachers and students have had the opportunity to explore our wide variety of materials and experiment with various ways in which these materials are able to enhance our curriculums and the student experience, teachers will plan activities and design challenges to incorporate these materials. For instance, in Kindergarten we have now designated some of these new materials to replace old ways of engaging in our "Landmarks of the World", Great Wall of China, and Endangered Animals design challenges. In addition, we will also be expanding our Aztec and Mayan temple design challenge to include small group work using the large scale materials outdoors.

Going forward, we will touch base at the start of the year to see what design units classrooms will be working on in order to offer suggestions of ways in which the materials can help enhance their projects. In addition, we would like to offer these materials to any grade to use during their Design Lab blocks.

Materials:

With this grant, we purchased eleven small-scale building materials/manipulatives and seven large-scale building materials/manipulatives. We were able to purchase indoor storage for the small-scale materials, as well as a large, secure outdoor storage container for the large-scale materials so that the materials could be more easily utilized on the playground. Aside from these building materials and storage, we also purchased additional Kibo Robots so that more children would be able to use them at once, and Vtech cameras that the children could easily use to document their learning.

Expenses:

Purchases	Material Category	Price Per Unit	Number	Total
Small Blue Blocks (500 Set)	Small Scale	\$299.00	1	\$299.00
KEVA 200 Set	Small Scale	\$99.99	1	\$99.99
KEVA Brain Builders	Small Scale	\$16.95	1	\$16.95
Landscape Builders	Small Scale	\$55.00	1	\$55.00
Mini Bricks	Small Scale	\$89.00	2	\$178.00
IO Blocks	Small Scale	\$129.59	1	\$129.59
Tree Blocks	Small Scale	\$49.94	2	\$99.88
Brackitz	Small Scale	\$240	1	\$240
Chutes and Ramps	Small Scale	\$48.00	2	\$96.00
Wooden Blocks	Small Scale	\$180	1	\$180
Luxi Transparent Blocks	Small Scale	\$350	1	\$350.00
Notch Blocks	Large Scale	\$399.59	1	\$399.59
Medium Blue Blocks Set	Large Scale	\$525.00	1	\$525.00
Giant Octoplay	Large Scale	\$154.79	2	\$309.58
Giant Mystery Ball Race	Large Scale	\$104.00	1	\$104.00
Panelcraft Rainbow Solids	Large Scale	\$284.00	2	\$568.00
STEAM Creativity Board	Large Scale	\$189.99	1	\$189.99
Indoor/Outdoor Easel	Large Scale	\$168.44	1	\$168.44
Storage for Materials	Storage	\$375		\$375.00
Kibo 18 Kit	Technology	\$470	2	\$940.00
Vtech Kidizoom Camera	Technology	\$39.77	4	\$159.08
GEM Learning Framework	Framework	\$499.00	1	\$499.00
			Grand Total	\$5,982.09