Child's Play

KinderLab robotics

Newsletter

Dear Reader,

Hello, and welcome to the December 2016 issue of Child's Play!

We're so happy to be celebrating another end-of-year and holiday season with you. We are busy filling holiday orders, and there is still time to order a KIBO if you're thinking of giving one as a gift. KIBO is perfect for exploring programming concepts at home during a snowy end-of-year break!

The holidays are a time to reflect and to express gratitude. We at KinderLab are so thankful for the amazing, inspiring stories that teachers, parents, and kids have shared with us about their experiences with KIBO. To everyone from our earliest Kickstarter backers to our newest customers, thank you!

Our first units shipped to Kickstarter customers in late 2014. Now, two years later, KIBO is in use in schools and homes in 48 states of the US and in 43 countries worldwide! In that time, we've continued to improve and expand KIBO, introducing our new Expression Module to enhance the creative possibilities with KIBO. And the R&D has continued, with some exciting new add-ons we'll be announcing very soon *(hint: what if KIBO could speak with your voice?)*. We're grateful that we'll get to share this ongoing journey with all of you.

As always, thank you for reading and don't forget to stay in touch on Twitter (@KinderLabRobot) and Facebook (Facebook.com/KinderLabRobotics).

Mitch Rosenberg
Co-founder and CEO, KinderLab Robotics

Singapore's PlayMaker Program: An Update

In recent years, Singapore has increased its national emphasis on technology and engineering in early childhood education. Their ongoing "PlayMaker" initiative, organized by the Singapore government's Infocomm Media Development Authority, focuses on teaching robotics and coding in preschool settings. Under the PlayMaker program, 160 preschool centers across Singapore received coding and robotics technology tools, including technical support, curriculum guidance, and training for educators. The goal of the Playmaker Program is to provide young children (ages 4-7) with digital tools to have fun, practice problem solving, and build confidence and creativity in a developmentally appropriate way. PlayMaker's focus on the expressive and positive developmental aspects of technology dovetails perfectly with the design thinking behind KIBO, so we were naturally excited and pleased when Singapore IMDA chose to include KIBO in the program. (We wrote about this in our March 2016 newsletter.)

KinderLab's own Dr. Marina Bers and Dr. Amanda Sullivan traveled to Singapore earlier this year to research the effectiveness of KIBO within the program. In particular, they studied the Singapore schools' implementation of the "Dances from Around the World" curriculum. Their soon to be published study found that kids using KIBO within the PlayMaker program "were highly successful at mastering foundational programming concepts. Additionally, teachers were successful at promoting a collaborative and creative environment."

Dr. Sullivan shared with us some observations from her visit. In particular, she was impressed with the way the students were encouraged to explore the cultural history and heritage of different groups within the population of Singapore. The Dances from Around the World unit "was really very culturally immersive. Singapore is a melting pot, culturally, with Malay, South Asian, East Asian, and European influences. The music and dances the kids explored were very rooted in Singapore's diverse cultural history. The kids even dressed up in traditional dress and danced along with their robots."

Adeline Yeo (Manager, Education / Sector Innovation at IMDA), an administrator of

the PlayMaker program, shared with us her excitement at visiting a recent showcase of work done in the PlayMaker program by My First Skool, a preschool provider in Singapore. "It was a very impressive showcase of the children's and teachers' effort in the PlayMaker classroom," she told us via email. She was particularly excited about the role of the program in encouraging professional development and learning by the teachers. "The teachers tried different programs to have KIBO to go round and round like a carousel. In the end, they removed the wheels and programmed it to turn left forever. Great problem solving and collaboration involved. We are turning teachers into engineers!"

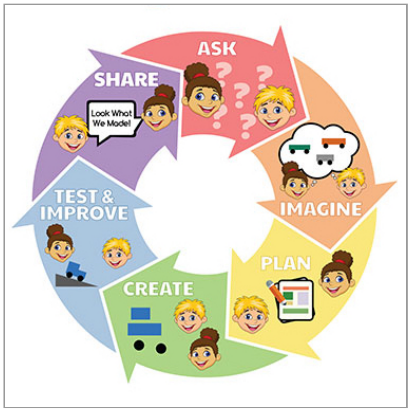
The PlayMaker Program has now run for a year, and IMDA is working on analyzing the data they've collected from the participating centers. Tze Hui Low, another Manager at IMDA, told us that "from the preliminary results, we see very encouraging comments from the principals and teachers on how PlayMaker has benefitted the students and even the teachers themselves!" The program is an inspiring example of how a forward-looking government can support research-driven educational improvements, and we applaud IMDA's work.

Views from the Classroom: Exploring the Engineering Curriculum

The official KIBO curriculum is based in part on the Engineering Design Process, a simple way of describing the work engineers do to create solutions. The curriculum leads kids through an understanding of the cycle of asking, imagining, planning, creating, testing, improving and sharing. Kids can think about their building and programming with KIBO in these terms, but the engineering design process can be applied to a wide range of other creative curricula.

Recently, Rahel Grebler, a teacher at Yavneh Academy in Paramus, NJ, shared with

us a wonderful description of her work helping kids approach the story of Noah's Ark from an engineering design perspective.



"As the first graders in my class at Yavneh Academy studied the biblical story of Noah and the ark, we integrated the introductory lesson of engineering from KinderLab," she wrote. "They were exposed to different objects that have been engineered. They compared objects that were

created to others that are found in nature. We discussed the process of engineering while observing the objects. For example, we looked at a glue stick, scissors, crayons and a desk. These were all objects that were relatable to the students. The question was asked: Why were these invented? What was the need to create these items?"

The unit went on to apply these kinds of questions to the construction of the Ark, as the students tested different materials and designs to create working miniature boats, test them, and refine them. You can read Ms. Grebler's full story at our KIBO Resources website.

Note from KinderLab: The Engineering Design Process is central to the KIBO curriculum, and it applies to lots of different activities. You can purchase KIBO Engineering Design Journals and a beautiful Engineering Design Process classroom poster from our shop!

Where's KIBO?

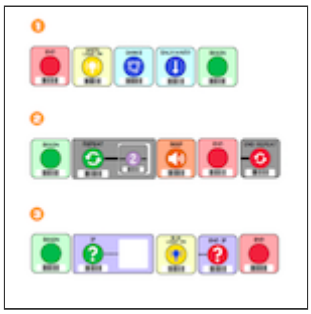
- It's not too late to order a KIBO as a holiday gift! Our web store is open and always taking orders. Shipping within the US is via UPS ground and takes between 2 and 5 days depending on your location. Browse our store at shop.kinderlabrobotics.com.

- In November, KIBO visited with kids at Tufts DevTech Research Group for a robotics and literacy workshop, featuring our new Expression Module. It was great to see story book characters come to life!

- Tufts Observer magazine's Fall 2016 issue featured an article about KIBO, and an interesting interview with Dr. Amanda Sullivan of the DevTech Research Group. Read Robotics and Rugrats: Incorporating Technology Into Early Childhood Curriculum at the Tufts Observer website.

- Last week, December 5 - 11, was Computer Science Education Week! In celebration, Tufts DevTech Research Group put together a series of short videos highlighting computer science concepts with KIBO and ScratchJr.

Did You Know?



The KinderLab store has a variety of curriculum and teaching materials available for sale, including Engineering Journals for project planning and Assessment Workbooks for gauging students' gain in programming knowledge. Students can use the block stickers in the Assessment Workbooks to solve KIBO programming challenges!