Module 3: Library of Things

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When I first began to put together my Library of Things, I went back to my February 2021 community survey, where I identified homework and technology help and resources for independent learning as key ways the Brookland library should be supporting its students. In my March 2021 collection survey, I identified Brookland's current lack of accreditation and underperformance in SOL tests (VDOE, n.d.a.) as evidence that the students are underserved. In the same collection survey, I also outlined ways in which the Brookland library is failing to meet the HCPS Libraries' mission statement, which states that the library should empower students to "harness curiosity, model responsibility, inspire exploration, promote creativity, and deepen understanding." (HCPS Libraries, n.d.). Therefore, I wanted every item in this selection to either support specific curricular standards, or to promote creative exploration and student-driven learning. I also needed every item to be usable by 6th-8th grade students alone, without adult direction or supervision, as this was a need identified in my community survey.

Identifying these goals led to practical criteria. First, every item must be completely safe to use. As an example, I selected air-dry clay for the At-Home Clay Studio rather than oven-bake polymer clay, because I was concerned that students would need supervision or adult permission to use the oven safely. Safety allows for maximum independence, which enables maximum accessibility. Secondly, I wanted each kit or item to be fully self-contained, without relying on any home resources. For the Fashion Design Studio, I needed even the most basic pencil, paper and scissors to be included, so students wouldn't be hindered if they couldn't find any items at home.

My third consideration was the greatest challenge. Because my community survey revealed that 14% of area residents do not have internet at home, I wanted to include coding,

robotics and digital design resources that didn't require the internet to function. But not only was it nearly impossible to find such resources at an appropriate intellectual and interest level, but I found few STEM toys that were broadly accessible. Nearly all seemed to assume adult oversight and guidance, and many required not only internet access but also very recent technology systems. Some require recurring payments and individual student accounts. Ultimately, I selected the LEGO BOOST set because as long as we can include a tablet, we can circulate the kit regardless of students' home setup. I selected the Code Rocket because it is compatible with students' school-issued laptops, and although it requires an internet connection to download the app, it needs nothing else for students to use it independently.

Altogether, this Library of Things meets these practical criteria and satisfies Brookland's community needs. The final collection is comprised of:

CD Player Audiobook Set

Take-Home Pottery Studio

Origami Adventure Kit

Fashion Design Studio

Geology Excavation Experience

Dismantle and Rebuild Kits

GraviTrax Marble Race

Snap Circuits Electronics Lab

Code Rocket!

Vernie the Robot

Format: CD Player Audiobook Set

Items: Portable CD player boombox, headphones

Target Audience: 6th - 8th grade students who want to check out our audiobooks on CD but don't have a CD player at home, or who need a speaker for streaming audiobooks from our web app

Justification: In my collection plan, I emphasized increasing access to audiobooks already in our collection, in order to maximize use of relevant resources and to support students with diverse abilities and learning styles. For students who are interested in audiobook access but lack a CD drive (school-issued laptops don't include one), I would like to circulate a small portable CD-compatible boombox. The model I selected also has Bluetooth connection, so students can use it to listen to e-audiobooks from the county's Sora app by connecting their school-issued laptops. It has a wall plug-in power system, so replenishing batteries is not an issue. An included pair of headphones ensures maximum accessibility for students of diverse hearing ability and home setups.

Jensen CD-555 Portable Music System. https://www.amazon.com/Jensen-Bluetooth-Boombox-Portable-Headphone/dp/B076Y2FRFQ/ref=sr_1_15?dchild=1&keywords=cd%2Bplayer&qid=1619128267&sr=8-15&th=1

Format: Take-Home Pottery Studio

Items: Individual project kits consisting of:

- A pre-measured amount of white air-dry clay
- Written instructions for pinch pots or ring dishes with pictures and a URL for an instructional video

- Pre-measured acrylic paint in different colors, with 2-inch flat paintbrush and ¼-inch round paintbrush
- Waxed paper to protect surfaces and serve as a paint palette.

A central circulating collection would comprise different colors of air-dry clay, as well as a set of clay tools (clay knife, clay awl, rolling tool, sponge to add texture and scouring pad to remove texture) and extra paint and plastic palettes for students who want to check them out to create their own projects.

Target Audience: 6th and 7th grade students who are creative or like to work with their hands, but who may not have experience with or interest in visual arts.

Justification: This project supports HCPS' mission statement by promoting creativity and inspiring exploration (HCPS Libraries, n.d.). As envisioned, the Take-Home Clay Studio will introduce students to clay crafting with a curated project kit that details accurate steps to complete one successful project. After students have success with that project, they return any leftover materials to the library, and have the option to check out more and different-colored clay, tools for experimentation, and books with relevant ideas. This progression sets them up for success in their experimentation but allows for self-directed learning. I can rely on my own authority to create accompanying instructional videos and make sure all projects are of an appropriate interest level.

Crayola. *Model Magic 2lb bucket.* https://www.dickblick.com/products/crayola-model-magic/

Sculpey. *Bake Shop® Modeling Tools 4 pc.* https://www.sculpey.com/products/sculpey-modeling-tools-4-pc

Format: Origami Adventure Kit

Items: 10 Sheets of multicolored origami paper, written/diagram instruction sheet for two of six total projects (a basic project and a challenge project), URL for instructional videos for each project

Target Audience: 6th-8th grade students who have tried origami in the library and enjoyed it, who would prefer to practice new skills at home, or who want to teach themselves something new and fun

Justification: Origami is already a very popular activity station in the Brookland library. One of my goals in the collection plan was to provide a more accessible option for Brookland's existing collection of things, and origami kits are the most valuable place to start.
They are appropriate for the broad emotional and intellectual levels of BMS students, are already relevant to them and are likely to circulate well. In addition, I have origami experience, and can lean on my own authority to create the accompanying instructional videos. They meet the other criteria I set for this library of things, specifically enabling students' independent learning and supporting HCPS Libraries' mission statement.

Format: Fashion Design Studio

Items: Basic kit includes

- Sketch paper, pencil, and eraser
- 12" dressmaker's form
- Miniature measuring tape
- Pincushion, pins, safety pins, small clothespins, thimble and sewing needles
- Black or white thread

- Scissors
- Fabric samples and trims
- Instructional and idea manual with safety guide

The library will hold a collection of fabric samples, trims and embellishments, patterns, and full-sized sewing tools for students to check out if they want to continue designing once they return this kit.

Target Audience: 7th- and 8th-grade students who are interested in fashion, illustration, or crafts

Justification: The fashion design studio offers a practical, high-interest way for students to practice geometry concepts required by the 7th-grade Mathematics SOL (7.5 and 7.6). Since circulating a full-sized sewing machine is not an accessible option for our students to practice skills independently, starting with doll-sized clothes and hand-sewing is a relevant way for students to practice design, pattern-reading and sewing skills. I would also like to create a physical and virtual display of students' finished pieces, which will add interest and increase circulation.

HearthSong. *50-piece fashion design studio kit with mannequin.* https://www.hearthsong.com/en/50-piece-fashion-design-studio-kit/p/716841

Format: Geology Excavation Experience

Items: Box of 15 rock and 15 mineral samples (and one fake gold pirate coin) in sand, laminated reference sheet with color photos, sorted sample box for ID, brush, tweezers, streak plate, hand lens, safety glasses, and recommended further reading list

Target Audience: Earth Science students who want hands-on experience with rock identification at their own pace

Justification: This PASCO rock and mineral identification kit comes with all types of minerals students will need to be familiar with for the SOLs (SOL ES.4 & ES.5) from a reputable and authoritative science education supplier. It will be a valuable addition to the collection because it is directly relevant to Earth Science students, and brings the technical quality of the classic geology ID exercise to students' homes, where they can explore at their own pace. Students who are not taking Earth Science will still have an interest in this as a fun weekend activity. It is also accessible for ELL students and students of diverse reading levels.

PASCO. *Basic Rock and Mineral Kit - PS-2347*. https://www.pasco.com/products/lab-apparatus/earth-and-environmental/ps-2347#desc-panel

Format: Dismantle and Rebuild Kits

Items: Each kit has a different piece of old tech: landline phone, keyboard, or analog alarm clock. 1 Phillips- and 1 flathead screwdriver, pliers, headlamp, and safety goggles are included in each kit, along with a diagram of each item.

Target Audience: 7th- and 8th-grade students who have an interest in mechanics, how things work, or jigsaw puzzles

Justification: These projects support the HCPS Libraries' motto to harness creativity and promote understanding (HCPS Libraries, n.d.). These items are safe for students to tinker with independently, since they have no batteries, electrical current, or chemically hazardous parts, but are simple enough that students will be able to independently figure out the function of

some of the parts as they disassemble. By trying to reassemble, students will also gain experience interpreting diagrams. The combination of activities, together with the high middle school interest in disassembling off-limits tech, make these kits valuable to Brookland's collection. This kit could be utilized by students (and families) regardless of English proficiency, and are appropriate for a spectrum of intellectual levels. Students will be reminded that they can return kits even if they don't reassemble them, which will encourage self-directed exploration and experimentation and increase circulation.

Format: GraviTrax Marble Race

Items: GraviTrax XXL Starter Set and instructional guide. GraviTrax is a marble run made of hexagonal stacking pieces on a grid, and in addition to gravitational force, also uses magnetism, a trampoline, and other forces to propel marbles through the track.

Target Audience: 6th-8th grade students who are kinesthetic learners, or Physical Science students who learn by doing

Justification: The GraviTrax system requires more spatial planning and forethought than competitors' marble runs, reflecting developer Ravensburger's authoritative puzzle-development reputation. This makes GraviTrax intellectually appropriate for middle school students, rather than elementary. Because of the necessary reasoning component, this kit is the best selection to support students' mastery of the physical science SOL (PS.10). In addition to providing relevant hands-on experience with force and motion, this kit will have a high interest factor.

Ravensburger. (n.d.). *GraviTrax XXL.* https://www.amazon.com/dp/B07DP21JWT/ref=twister_B08BQP9GWT?_encoding=UTF8&th=1

Format: Snap Circuits Electronics Lab

Items: Snap Circuit Jr. Select kit with instructional book, extra batteries. The Snap Circuit system involves using wire pieces encased in plastic blocks to perform traditional circuitry experiments with lights and buzzers, but safely and without broken wires.

Target Audience: 7th and 8th grade students who want to play with circuitry, light effects and electrical experiments

Justification: The BMS library needs a circuitry kit to support students' self-driven mastery of electronics (SOL PS.11). The Snap Circuit Jr. Select set has the authority of parent company Elenco's forty-year history in the educational toy business, and Snap Circuit systems have won multiple toy awards since the 1990s (Snap Circuits Jr. Select, n.d.). This authority gives this kit an advantage over newer kits from other brands. It is intellectually appropriate for students ages 11+ to use without adult supervision. Of the Snap Circuit kits, this one is an approachable size for first-time users to find success without becoming overwhelmed. The provided projects are at an appropriate interest level for upper middle school students, so they won't get bored. All parts and project guides can be replaced, and manuals are available in Spanish, French and English.

Elenco. *Snap Circuits Jr. Select.* https://shop.elenco.com/consumers/snap-circuits-jr-select.html

Format: Code Rocket!

Items: Code Rocket kit, instructional sheet for downloading the accompanying app to the student's school computer, wifi hotspot on request. The Code Rocket is a cardboard and metal toy that connects to a laptop with an included USB cable, and uses its own coding app to make the rocket light up and make different sounds.

Target Audience: 6th and 7th grade students who are interested in coding, but want to try it out before they commit to Coder's Club

Justification: Brookland has two separate, elective coding clubs, and both are extremely popular. Having separate, independent coding activities are necessary to serve students who are intimidated to join a club because they don't fit in with the other group members or don't have coding experience, students who wanted to participate but were turned away because of a full roster, and students who enrolled mid-year. The Code Rocket is intellectually appropriate for middle-school beginners to learn alone and is compatible with school-issued laptops. The physical light and sound effects make it more interesting than many online coding programs. It teaches students a real coding language (C++) that will be relevant to BMS students, as they can use it with other programs as they progress. And unlike other coding toys, it can be used with multiple students, making it a valuable choice for circulation.

INSPIRE Research Institute for Pre-College Engineering. (n.d.). *Code Rocket.* https://engineering.purdue.edu/INSPIRE/EngineeringGiftGuide/2020Reviews/toys/code-rocket

Let's Start Coding. *Code Rocket details.* https://www.letsstartcoding.com/rocket-product-detail

Format: Vernie the Robot

Items: LEGO BOOST Creative Toolbox robot-builder kit, tablet with pre-installed instructional app, extra batteries. The BOOST kit is a LEGO kit that begins as individual pieces, but can be built and coded at the same time following the instructions in the app. Once built, Vernie can play games and perform actions based on code commands.

Target Audience: 7th and 8th grade students who have progressed past basic coding, and want to approach coding for robotics

Justification: Like the Code Rocket, this kit is relevant to students who want to explore coding independently and at their own pace. Building and coding Vernie the Robot will give students real-time feedback and a practical application for their coding skills, offering a hands-on learning experience that will appeal to a more diverse set of learning styles than online-only coding programs. LEGO is an authority in engineering toys, and the BOOST kit is the most intellectually appropriate robotics kit for middle school students to use independently. Building Vernie also appeals to an appropriate interest level, since it is more fun than comparable robotics kits. The app-based creation guide offers accessibility to an appropriate range of reading levels and English language skills.

Lego. *BOOST Creative Toolbox.*

https://www.lego.com/en-us/product/boost-creative-toolbox-17101

Samsung. *Galaxy Tab A.*

https://www.amazon.com/Samsung-Lightweight-Android-Long-Lasting-Battery/dp/B08QQTQNDC/ref=sr_1_1_sspa?dchild=1&keywords=Samsung+Tablets&qid=1619623836&sr=8-1-spons&psc=1&spLa=ZW5jcnlwdGVkUXVhbGlmaWVyPUExSzk3MFFaRUhOUVVYJmVuY3J5cHRlZElkPUEwMDMzMzAzMlNLS0lKQzhHN0JBUCZlbmNyeX

B0ZWRBZElkPUEwMzE3Njk1V0VZTUVGOEcxVDFDJndpZGdldE5hbWU9c3BfYX

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Virginia Department of Education. (n.d.). *Science standards of learning resources.* https://www.doe.virginia.gov/testing/sol/standards_docs/science/index.shtml#2018