

# STEAM Kit Collection

Novi Public Library



## STEAM Kits and Age Ranges

*Age ranges are those suggested by the kit components' manufacturers.*

Kit #1 DISCOVERY TUBES	3-6 years
Kit #2 DRAWING	7 years and up
Kit #3 SPIROGRAPH	8 years and up
Kit #4 PAPER FOLDING	8 years and up
Kit #5 FOSSILS	8 years and up
Kit #6 BIRDING	3 years and up
Kit #7 INSECTS	6 years and up
Kit #8 GRAVITY-SPACE LANDER	9 years and up
Kit #9 MAGNETIC TILES	3 years and up
Kit #10 ARCHITECTURE	4 years and up
Kit #11 SPACE- PLANETS	8 years and up
Kit #12 SPACE- PLANETARIUM	7 years and up
Kit #13 OSMO LITTLE GENIUS- iPad	3-5 years
Kit #14 MICROSCOPE	8 years and up
Kit #15 SPHERO SPRK+	8 years and up
Kit #16 SNAP CIRCUITS	8 years and up
Kit #17 OSMO-iPad	6 years and up
Kit #18 OSMO-Amazon Fire	6 years and up
Kit #19 SIMPLE MACHINES	8 years and up
Kit #20 POWER TILES CIRCUITS	6 years and up
Kit #21 MAKEY	8 years and up
Kit# 22 BIT CODING ROBOT	6 years and up
Kit #23 SPHERO MINI	8 years and up
Kit #24 VR	7 years and up
Kit #25 CODING	8 years and up
Kit #26 STEEL TONGUE DRUM	5 years and up
Kit #27 BOTLEY CODING ROBOT	5 years and up
Kit #28 CODING CATERPILLAR	3-6 years
Kit #29 CHAIN REACTION	4 years and up
Kit #30 OSMO LITTLE GENIUS AMAZON	3-5 years
Kit #31 CODING: SCRATCH JR	5 years and up
Kit #32 GRAVITY MAZE	8 years and up
Kit #33 MARBLE RUN	8 years and up

## Kit #1: DISCOVERY TUBES

This two part kit shows the properties of liquids and how primary colors make secondary colors. The kit includes four Liquid Discovery Tubes and *Many Kinds of Matter* book; three Color Discovery Tubes and *Experiments with Light and Color* book.

Replacement Cost: \$150



## Kit #2: DRAWING

Sharpen your drawing skills with this set. Included are two learn to draw books- *Art for Kids: Drawing* by Kathryn Temple and *Ed Emberley's Drawing Book of Animals* by Ed Emberley. There is also an art history book, *The School of Art* by Teal Riggs. A pencil set, paper, and colored pencils are also included to get you started.

Replacement cost: \$75.00



## Kit #3: SPIROGRAPH

Explore the classic Spirograph with this set. Use the interlocking gears and wheels to make intricate, spiraling, and elegant designs.

Replacement Cost: \$25.00



## Kit # 4: PAPER FOLDING

Learn the art of paper folding with this kit. Two books are included- *Easy Origami* and *Cool Flexagon Art*. A container with origami paper is provided to get you started.

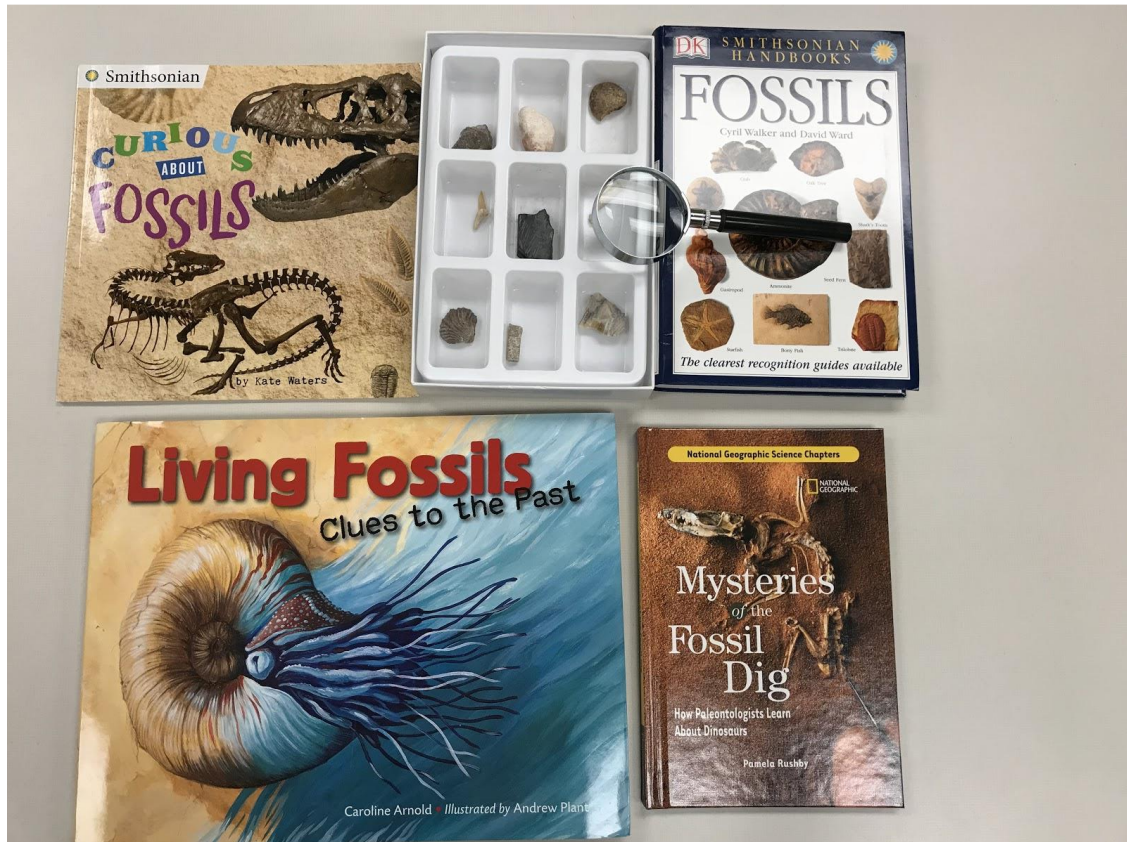
Replacement Cost: \$50.00



## Kit #5: FOSSILS

This kit will let you explore fossils. There are nine fossils to examine with a magnifying glass. Also included are four books to help you learn about fossil identification, dig sites, and living fossils.

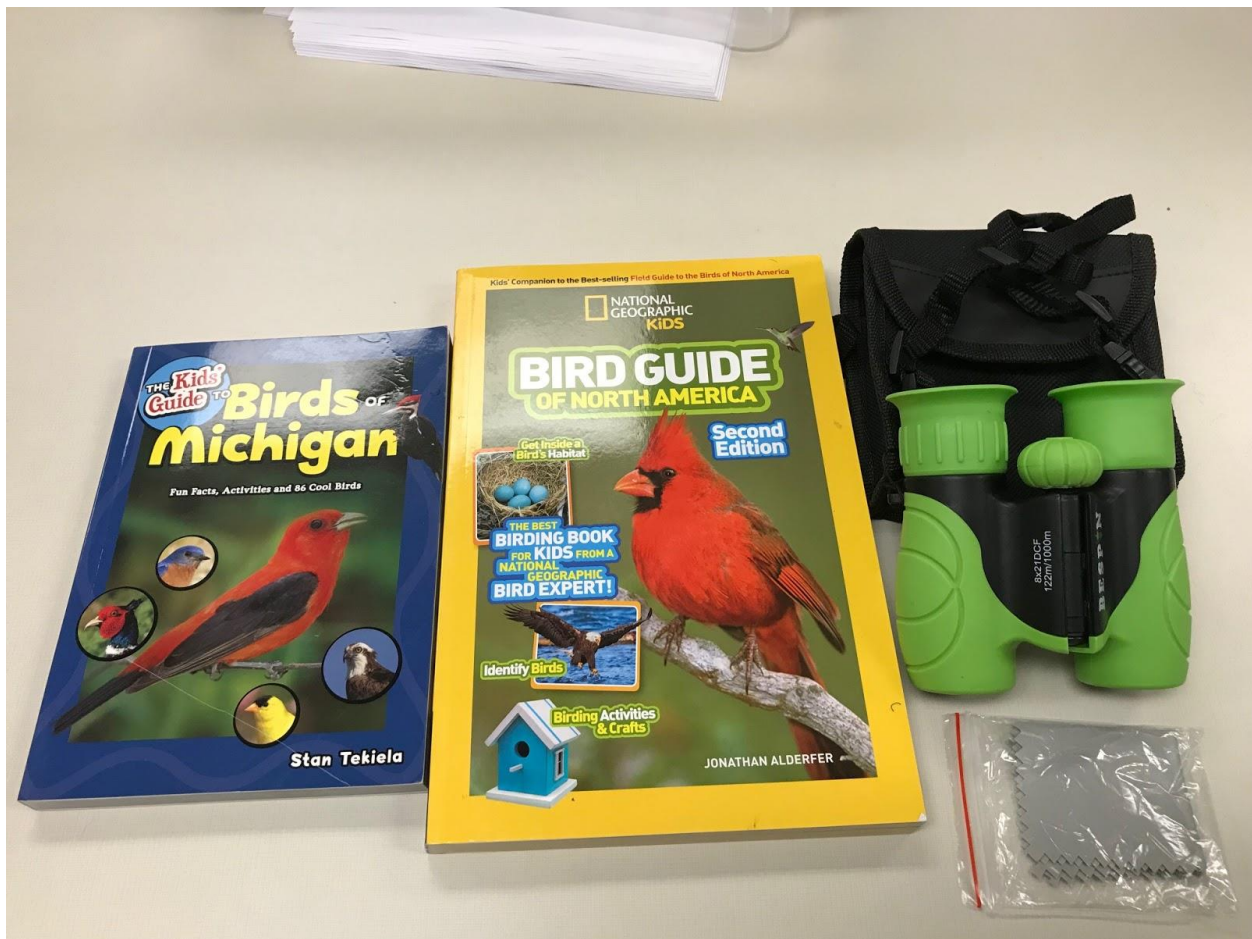
Replacement Cost: \$100.00



## Kit #6: BIRDING

Learn all about the birds of Michigan and North America with this kit. Use the binoculars to help you find birds right in your backyard. How many can you find?

Replacement Cost: \$50.00





## Kit #7: INSECTS

With this kit you will be able to inspect 10 creepy crawly insects up close! This kit contains 10 encased specimens and magnifying glass. It also includes two books: *DK Insect* with a Clip-Art CD and National Geographic's *Ultimate Bugopedia*.

Replacement Cost: \$100



## Kit #8: GRAVITY: SPACE LANDER

Learn all about Newton's laws of motion and explore how parachutes work...then create a space lander! This Lakeshore Learning kit comes with all the materials needed to complete 4 activities—from researching parachutes to testing gravity's effects on different objects!

Replacement Cost: \$70



## Kit #9: MAGNETIC TILES

Get creative with magnetic tiles. Use your imagination to build cool 3D structures with this 100 piece set. Learn about color, geometric shapes, magnetic polarity, and architecture.

Replacement Cost: \$55

**Picasso** **TILES**  
PT100



## Kit #10: ARCHITECTURE

Learn about spatial reasoning and building in three dimensions as you construct one realistic house after another! Follow the prompts on the activity cards—slotting together plastic walls, floors and roofs to create 10 different houses even professionals would be proud of.

Replacement Cost \$40



## Kit #11: SPACE- PLANETS

This kit is out of this world—watch the planets orbit our Sun! It contains a motorized Solar System and Planetarium, a National Geographic *Planets* DVD, a National Geographic *Little Kids First Big Book of Space* and an *Out of this World Planets* book.

Replacement Cost: \$100



## Kit #12: SPACE-PLANETARIUM

See the universe from the comfort of your own home with a Planetarium projector with multiple viewing slides of planets, nebulae, moons, asteroids, and other celestial bodies. This kit contains a Smithsonian Optics Room Planetarium and Dual Projector and the book *A Child's Introduction to the Night Sky*.

Replacement Cost: \$75



## Kit #13: OSMO LITTLE GENIUS KIT for iPad

Award-winning learning games let your child interact with tangible educational toys and an iPad, bringing their actions to life. A hands-on learning adventure awaits your little genius.

NOTE: iPad is not provided. For information on compatible devices, please go to [www.playosmo.com](http://www.playosmo.com). An internet connection is needed for setup, but no WiFi is necessary for game play.

Replacement cost: \$85.00







## Kit #15 SPHERO SPRK+

Sphero SPRK+ is a programmable robot ball designed to inspire creativity and curiosity through coding and play. Easily learn programming, complete hands-on activities, and share your creations with the community.

Replacement Cost: \$130



## Kit #16: SNAP CIRCUITS

Make dozens of cool electronic gadgets - all from one box! A safe and fun way to introduce children ages 8+ to the basics of electrical engineering! Build exciting projects and toys using the included colorful instruction book!

Replacement Cost: \$45



## Kit #17: OSMO GENIUS-IPAD

Use the Osmo Genius Kit with your own iPad to play games that enhance reading & vocabulary, number sense & math confidence, problem solving, as well as creativity & imagination. Use the included tangram pieces, letter tiles, and number tiles to add to the fun!

NOTE: iPad is not provided. For information on compatible devices, please go to [www.playosmo.com](http://www.playosmo.com). An internet connection is needed to use Osmo.

Replacement cost: \$100



## Kit #18: OSMO GENIUS KIT for AMAZON FIRE TABLET

Use the Osmo Genius Kit with your own Amazon Fire Tablet to play games that enhance reading & vocabulary, number sense & math confidence, problem solving, as well as creativity & imagination. Use the included tangram pieces, letter tiles, and number tiles to add to the fun!

NOTE: Amazon Fire Tablet is not provided. For information on compatible devices, please go to [www.playosmo.com](http://www.playosmo.com). An internet connection is needed to use Osmo.

Replacement cost: \$100

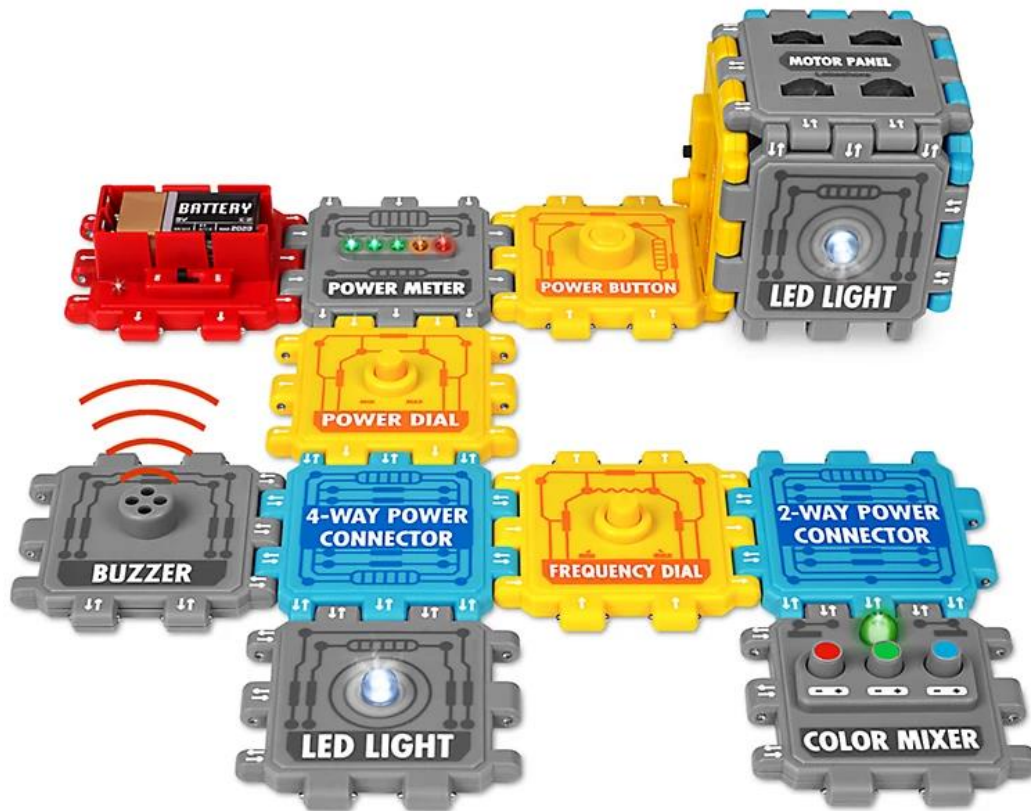




## Kit #20: POWER TILES CIRCUITS

Introduce 21st-century skills like electronics and robotics with action-filled circuits! Interchangeable circuit tiles snap together in every direction for endless exploration, and a variety of tiles let children experiment with light, sound, motion and more. Follow our guide to build 2-D and 3-D circuits—from a night-light to a beeping alarm—or let kids design their own creations!

Replacement Cost: \$130



## Kit #21: MAKEY

With this kit, you can replace your mouse and keyboard with a Makey Makey! Hook up this circuit board to your computer and visit their site, draw with paint, or use with Scratch to create any program you can think up. This kit contains a Makey Makey with alligator clips and computer cord as well as Playdoh for connecting circuits.

Replacement Cost: \$75



## Kit #22 OZOBOT CODING ROBOT

Ozobot is a pocket sized coding robot. With two ways to code, it couldn't be easier to learn coding. Use the included markers to draw commands for the Bit to follow. For more advanced coding, use the OzoBlockly online programming editor. Check out the EVO by Ozobot App in the app store for more ways to play. For printable activities, check out Ozobot.com.

Replacement Cost: \$100.00





## Kit #23: SPHERO MINI

Equipped with a gyroscope, accelerometer, and colorful LED lights, this educational robot is more than a mini robot toy. Sphero Mini is the perfect entry into robotics for beginners!

Replacement Cost: \$65.00



## Kit #24: VR

Turn a smartphone into a virtual reality experience! With this kit you can use a VR Headset to explore new worlds. Just clip your smartphone into the headset while a VR app (like Google Cardboard) is loaded. This kit contains a VR headset, instructions, cleaning cloth, a Google Cardboard Headset and Virtual Reality book.

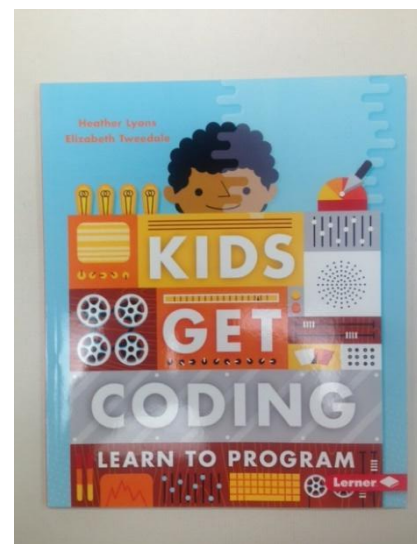
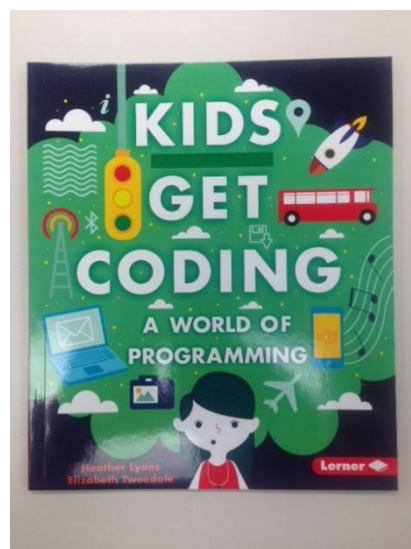
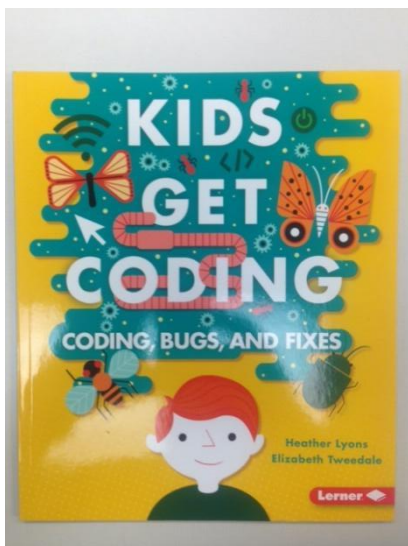
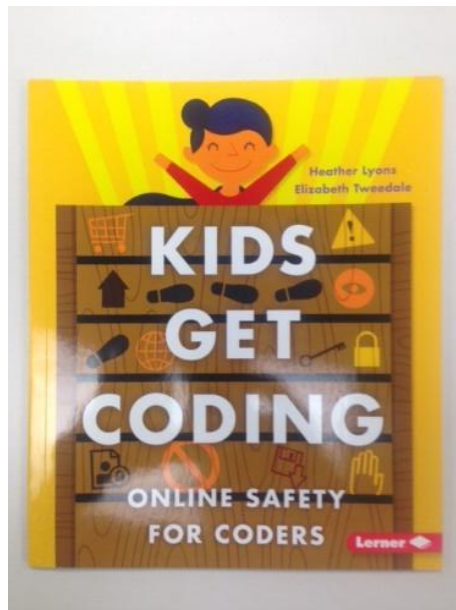
Replacement Cost: \$75



## Kit #25: CODING

Learn all about Scratch Coding with this kit! It includes information about bugs, fixes and online safety. This kit contains four different books and a set of Scratch Coding Flashcards.

Replacement Cost: \$75



## Kit #26: STEEL TONGUE DRUM

Learn how to play the Steel Tongue Drum with this set. Use the included books to make beautiful music. Steel Tongue Drums have a peaceful, soothing sound that can help calm and relax.

Replacement Cost: \$75





## Kit #28: CODING CATERPILLAR

Think & Learn Code-a-pillar Twist lets kids discover the fun of coding as they use their problem-solving and sequencing skills to code a path for their buddy to follow. Just twist the dials to program a path and watch Code-a-pillar Twist go!

Replacement Cost: \$40



## Kit #29: CHAIN REACTION

Set off a chain reaction of fun! Set up a course of ramps, pendulums, hammers, switches and more...then drop a ball onto the tracks and go for the goal box! Packed with super-durable plastic pieces, the set is perfect for open-ended building—or kids can use the leveled challenge cards to create a variety of different courses from scratch! Set comes with 37 pieces, plus 4 balls, 6 challenge cards and a guide. The tracks measure 12" in length.

Replacement Cost: \$50



## Kit #30: OSMO LITTLE GENIUS-AMAZON FIRE

Award-winning learning games let your child interact with tangible educational toys and an Amazon Fire tablet, bringing their actions to life. A hands-on learning adventure awaits your little genius.

NOTE: Amazon Fire tablet is not provided. For information on compatible devices, please go to [www.playosmo.com](http://www.playosmo.com). An internet connection is needed for setup, but no WiFi is necessary for game play.

Replacement cost: \$85.00





# Kit #31: CODING: SCRATCH JR

ScratchJr is a free, introductory computer programming language that runs on iPads, Android tablets, Amazon tablets, and Chromebooks. Derived from Scratch, the wildly popular programming language used by millions of kids worldwide, ScratchJr helps even younger children (5 to 7 years old) create their own playful animations, interactive stories, and dynamic games.

Replacement cost: \$50.00



## Kit #32: GRAVITY MAZE

Gravity Maze is a combination logic game, marble run, and STEM toy. Playing your way through the challenges builds spatial reasoning and planning skills, and is partly an engineering and building toy that provides a great stealth learning experience for young players. For ages 8 and up. It contains 60 challenges from beginner to expert, a game grid, 9 towers, 1 target piece, and 3 marbles

Replacement cost: \$30.00



## Kit #33: MARBLE RUN

The National Geographic Glow-in-the-Dark Marble Run Set is a super-fun way to explore construction, engineering, and physics! It has everything kids need to create incredible marble runs that will have their glowing marbles racing toward the finish line!

Configure the pieces in any design you'd like - the possibilities are endless! The detailed learning guide has lots of information about the physics of motion and gravity, so kids can learn while they play!

Replacement cost: \$35.00

