**Gadgets & Kits to Teach Code**

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| **Name** | **Description** |
| **Bitsbox**  <https://bitsbox.com/>  https://upload.wikimedia.org/wikipedia/commons/f/f3/BitsboxProduct.jpg | **Type:** Text-based  **Level:** 3rd grade and up  **Cost:** $20/month or $150+ for kits  Bitsbox teaches kids how to create apps using simplified JavaScript. While their website is 100% free, to get the most out of it you really do need to purchase either one of their classroom/library kits or a couple of their month subscriptions. If you are looking for the next step after block coding, Bitsbox is one of my highest recommendations. After students have an understanding of the different commands, they can start designing their own apps.  Bitsbox is great for those who are ready for a new challenge after mastering block coding but maybe aren’t ready for something like Codecademy. It is very elementary and middle school friendly. |
| **Sphero SPRK**  <http://www.sphero.com/sphero>  https://c2.staticflickr.com/6/5573/14844329475_e6e2c72f0a_b.jpg | **Type:** Block & Text-based  **Level:** 3rd grade and up  **Cost:** $79.99+  Spheros are round robots that you can program using a tablet and a variety of apps. To get the most our of your Sphero, I would recommend using the [SPRK Lighting Lab](https://itunes.apple.com/us/app/sprk-lightning-lab-programming-for-sphero-robots/id1017847674?mt=8) app. You can create teacher and student accounts through the app as well as share your work publicly. The app does give three different options for programing (drawing, block, and text). In addition to learning to program, there are lots of great STEM and STEAM activities you can do with Spheros.  If you are looking for a device with wide appeal, I would recommend Spheros. Younger students can use the draw or block coding options within the Lighting Lab app. Teens and adults can program the Sphero using the text options. |
| **Bee-Bots**  <https://www.bee-bot.us/>  http://www.publicdomainpictures.net/pictures/150000/velka/bee-bot.jpg | **Type:** Block  **Level:** Pre K - Early Elementary  **Cost:** $89.95+  Bee-Bot allow you to introduce coding and sequencing to even some of your smallest library users. You can program up to 40 commands at a time. Bee-Bots now also makes a version that can be coded with an app as well as directly on the device.  If you are looking at introducing coding with very young learners, Bee-Bots is a great way to go. It addes a more hands-on element that you can’t get with Code.org. They are also very durable and easy to clean. |
| **Ozobots**  <http://ozobot.com/> | **Type:** Color  **Level:** Early Elementary and up  **Cost:** $54+  With Ozobot Bit, all you need to learn to code is the robot, markers, and paper. By reading the color-coded sequences you create, the ozobot will spin, change color and speed, and navigate across the paper. Ozobots have a wide appeal from young kids to teens and adults. If you are looking for something a step up you can now purchase Ozobot Evo. Evos can be programed using an iPad app.  I would recommend Ozobots if you are looking for something with wide appeal that can be used as passive programming as well. |
| **Dot & Dash**  <https://www.makewonder.com/> | **Type:** Block  **Level:** Elementary  **Cost:** $50-$150+  Both Dot and Dash can be programed using the Blockly app (similar to Scratch). Dot is smaller and doesn’t move around. Dash (pictured to the left) is larger and can be programed to move. Both have been highly reviewed as a great first robot for kids.  If you are looking for a gadget to circulate at your library, I think Dot and Dash have real possibilities. Both seem durable and easy to use, and Wonder has several well-designed apps that can help kids get started. |
| **Lego Mindstorm EV3**  <https://www.lego.com/en-us/mindstorms/products/mindstorms-ev3-31313> | **Type:** Block  **Level:** Elementary and up  **Cost:**  $349.99  There are two parts to Lego Mindstorm EV3: building the robot and then coding it. If you are looking for a more hands-on approach to coding, this may be your answer. If you have an established Lego club, it would fit right in. You can find all the information you need about programming your Mindstorm creation on their [website](https://www.lego.com/en-us/mindstorms/learn-to-program).  Lego Mindstorm is great for hands-on learners. It does take some time to build and program so it would be a better fit if you are doing a longer program or a club over a couple of weeks. |