

Credits and contact information are at the bottom of this sheet.

Coding and STEAM Tools for Kids, Teachers, Parents

| Kindergarten | First Grade | Second Grade | Third Grade | Fourth Grade | Fifth Grade | Middle School | High School |
|--|-------------|--------------|-------------|--------------|-------------|---------------|-------------|
| Apps | | | | | | | |
| Move the Turtle http://movetheturtle.com/ | | | | | | | |
| Daisy the Dinosaur https://itunes.apple.com/us/app/daisy-the-dinosaur/id490514278?mt=8 | | | | | | | |
| Hopscotch https://www.gethopscotch.com/ | | | | | | | |
| A.L.E.X. https://itunes.apple.com/us/app/a.l.e.x./id597040772?mt=8 | | | | | | | |
| Cargo-Bot http://twolivesleft.com/CargoBot/ | | | | | | | |
| Code with Bolt http://www.codewithbolt.com/ | | | | | | | |
| Alice http://www.alice.org/ | | | | | | | |
| Bitsbox https://bitsbox.com/ | | | | | | | |
| Codeletics http://www.codeletics.com/ | | | | | | | |
| Gamestar Mechanic http://gamestarmechanic.com/ | | | | | | | |
| Minecraft EDU http://education.minecraft.net/ | | | | | | | |
| App Inventor http://www.appinventor.org/ | | | | | | | |
| Codea http://twolivesleft.com/Codea/ | | | | | | | |
| Swift Playgrounds http://www.apple.com/swift/playgrounds/ | | | | | | | |
| Swiftly https://swiftly-app.com | | | | | | | |
| Pythonista https://itunes.apple.com/us/app/pythonista-3/id1085978097?mt=8 | | | | | | | |
| Touch Lua https://itunes.apple.com/us/app/touch-lua/id525273327?mt=8 | | | | | | | |
| Solo Learn (Java, JavaScript, Python, PHP, more https://sololearn.com) | | | | | | | |
| Board, Card, and Puzzle Games (Online and Tabletop) | | | | | | | |
| Rush Hour http://www.thinkfun.com/play-online/rush-hour/ | | | | | | | |
| Code Master http://www.thinkfun.com/products/code-master/ | | | | | | | |
| Robot Turtles http://www.robotturtles.com/ | | | | | | | |
| Botlogic http://botlogic.us/ | | | | | | | |
| Lightbot Level 1 https://lightbot.com/ | | | | | | | |
| Lightbot Levels 1-2 | | | | | | | |
| Lightbot All Levels | | | | | | | |
| Code Monkey Island http://codemonkeyplanet.com/ | | | | | | | |
| Bloxels http://www.bloxelsbuilder.com/ | | | | | | | |
| Bits & Bytes http://www.bitsandbytes.cards/ | | | | | | | |
| littleCodr http://littlecodr.com/ | | | | | | | |
| Giggle Chips http://www.gigglechips.co/ | | | | | | | |
| Notable Women in Computing http://www.notabletechnicalwomen.org/ | | | | | | | |
| Coding Farmers http://www.mathandcoding.org/codingfarmers.html | | | | | | | |
| Coding is Good (Python card game) http://www.mathandcoding.org/codingisgood.html | | | | | | | |
| The Foos http://thefoos.com/ | | | | | | | |
| Tynker https://www.tynker.com/ | | | | | | | |

Credits and contact information are at the bottom of this sheet.

Coding and STEAM Tools for Kids, Teachers, Parents

| Kindergarten | First Grade | Second Grade | Third Grade | Fourth Grade | Fifth Grade | Middle School | High School |
|--------------|---|--------------|-------------|--------------|---|---------------|-------------|
| | Run Marco! http://marco.allcancode.com/ | | | | | | |
| | Erase All Kittens https://eraseallkittens.com/ | | | | | | |
| | | | | | Code Warriors http://www.codewarriorsgame.com/ | | |

Block/Visual Languages

| | | | | | | | |
|--|--|--|--|--|--|--|--|
| | Turtle Art http://turtleart.org/ | | | | | | |
| | Turtle Academy http://www.turtleacademy.com/ | | | | | | |
| | Scratch Jr. https://www.scratchjr.org/ | | | | | | |
| | | Scratch https://scratch.mit.edu/ | | | | | |
| | | Blockly https://developers.google.com/blockly/ | | | | | |
| | | Snap http://snap.berkeley.edu/ | | | | | |
| | | Stencyl http://stencyl.com/ | | | | | |
| | | mblock http://www.mblock.cc/ | | | | | |
| | | Ardublock http://blog.ardublock.com/ | | | | | |
| | | CREATE Lab Visual Programmer http://www.hummingbirdkit.com/learning/using-visual-programmer | | | | | |

Circuit Board Computers

| | | | | | | | |
|--|--|--|--|--|--|--|--|
| | | | | Arduino https://www.arduino.cc/ | | | |
| | | | | Beagle Board https://beagleboard.org/ | | | |
| | | | | Raspberry Pi https://www.raspberrypi.org/ | | | |
| | | | | micro:bit https://www.microbit.co.uk/ | | | |
| | | | | CHIP https://nextthing.co/ | | | |
| | | | | cubit http://cubit.cc/ | | | |
| | | | | Intel Edison https://www-ssl.intel.com/content/www/us/en/do-it-yourself/edison.html | | | |
| | | | | Onion Omega https://onion.io/product/omega/ | | | |
| | | | | Curiosity Development Board http://www.microchip.com/promo/curiosity | | | |
| | | | | Minnow Board http://www.minnowboard.org/ | | | |
| | | | | Table of Boards http://makezine.com/comparison/boards/ | | | |

Circuit Board Kits (Plug and Play)

| | | | | | | | |
|--|---|--|--|--|--|--|--|
| | LightUp http://www.lightup.io/ | | | | | | |
| | littleBits http://littlebits.cc/ | | | | | | |
| | Makey Makey http://makeymakey.com/ | | | | | | |
| | SAM Labs https://www.samlabs.com/ | | | | | | |
| | Snap Circuits http://www.snapcircuits.net/ | | | | | | |
| | Microduino https://www.microduino.cc/ | | | | | | |
| | Kano https://kano.me | | | | | | |
| | Piper https://playpiper.com/ | | | | | | |

Credits and contact information are at the bottom of this sheet.

Coding and STEAM Tools for Kids, Teachers, Parents

| Kindergarten | First Grade | Second Grade | Third Grade | Fourth Grade | Fifth Grade | Middle School | High School | |
|--|--|---|--|--------------|-------------|---------------|-------------|--|
| Circuits, Electronics, Jewelry, and Fabrics | | | | | | | | |
| | Chibitronics http://chibitronics.com | | | | | | | |
| | | | Jewelbots http://jewelbots.com/ (friendship bracelet teaches coding) | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| Curriculum | | | | | | | | |
| Kodable https://www.kodable.com/ | | | | | | | | |
| K12CS https://k12cs.org/ | | | | | | | | |
| CSTA https://csta.acm.org/Curriculum/sub/CurrResources.html | | | | | | | | |
| Code.org https://code.org/ | | | | | | | | |
| Computing at School https://www.computingschool.org.uk/ | | | | | | | | |
| ISTE http://www.iste.org/standards/tools-resources/essential-conditions/curriculum-framework | | | | | | | | |
| C-STEM http://c-stem.ucdavis.edu/curriculum/ | | | | | | | | |
| Creative Coding through Games and Apps (Microsoft) https://mva.microsoft.com/en-US/training-courses/creative-coding-through-games-and-apps-12533 | | | | | | | | |
| Code for Life https://www.codeforlife.education/ | | | | | | | | |
| | | Cambridge GCSE Computing Online http://www.cambridgegcsecomputing.org/ | | | | | | |
| Common Sense Media Digital Citizenship https://www.common Sense Media.org/educators/scope-and-sequence | | | | | | | | |
| Computer Science Unplugged http://csunplugged.org/ | | | | | | | | |
| Barefoot Computing http://barefootcas.org.uk/ | | | | | | | | |
| | | | | | | | | |
| Robots | | | | | | | | |
| Bee-Bot https://www.bee-bot.us/ | | | | | | | | |
| Blue-Bot https://www.bee-bot.us/bluebot.html | | | | | | | | |
| Code-a-pillar http://fisher-price.com/en_US/brands/think-and-learn/index.html | | | | | | | | |
| Cubetto https://www.primotoys.com/ | | | | | | | | |
| Coding by Osmo https://www.playosmo.com/en/coding/ | | | | | | | | |
| Cubelets http://www.modrobotics.com/cubelets/ | | | | | | | | |
| Puzzlets https://www.digitaldreamlabs.com/puzzlets/ | | | | | | | | |
| Vortex Robot http://www.drobot.com/vortex/ | | | | | | | | |
| Dash and Dot https://www.makewonder.com/ | | | | | | | | |
| Finch http://www.finchrobot.com/ | | | | | | | | |
| Hummingbird http://hummingbirdkit.com | | | | | | | | |
| Kibo http://kinderlabrobotics.com/ | | | | | | | | |
| | Sparki http://arcbotics.com/products/sparki/ | | | | | | | |
| | Thymio https://www.thymio.org/ | | | | | | | |
| | | Tickle https://tickleapp.com/ | | | | | | |
| | Sphero http://www.sphero.com/ | | | | | | | |
| | | Little Robot Friends http://www.littlerobotfriends.com/ | | | | | | |
| | | mBot http://learn.makeblock.cc/mbot/ | | | | | | |
| | | Ozo http://ozobot.com/ | | | | | | |

Credits and contact information are at the bottom of this sheet.

Coding and STEAM Tools for Kids, Teachers, Parents

| Kindergarten | First Grade | Second Grade | Third Grade | Fourth Grade | Fifth Grade | Middle School | High School |
|--------------|-------------|---|-------------|---|-------------|---------------|-------------|
| | | UB Tech http://www.ubtrobot.com/ | | | | | |
| | | | | Meccanoid http://www.meccano.com/meccanoid-about | | | |
| | | | | LEGO Mindstorms http://www.lego.com/en-us/mindstorms/products/mindstorms-ev3-31313 | | | |

Text Programming Languages

| | | | | | | | |
|--|--|--|--|--|--|--|--|
| | | | | Try Ruby http://tryruby.org/ | | | |
| | | | | Python Shell/Emulator https://www.python.org/shell/ | | | |
| | | | | Swift Shell/Emulator http://swift-lang.org/tryswift/ | | | |

Programming Clubs

| | | | | | | | |
|--|--|--|--|--|--|--|--|
| | | | Black Girls Code http://www.blackgirlscode.com/ | | | | |
| | | | Coder Dojo https://coderdojo.com/ | | | | |
| | | | Girls Who Code https://girlswhocode.com/ | | | | |
| | | | Google CS First https://www.cs-first.com/ | | | | |
| | | | STEM Scouts https://stemscouts.org | | | | |

Online Courses (Computer Science, Programming)

| | | | | | | | |
|--|--|--|--|--|--|---|--|
| | | | | Codecademy https://www.codecademy.com/ | | | |
| | | | | | | Code HS https://codehs.com/ | |
| | | | | Khan Academy https://www.khanacademy.org/computing | | | |

Adapted and expanded from Nikolas Chatzopoulos' chart: <https://twitter.com/chatzopoulosn/status/742509403258130433>

This sheet created by Tim Slavin, publisher of Kids, Code, and Computer Science Magazine <https://KidsCodeCS.com> using links/resources at that site

version 1.1.0 / 2 October 2016

Got changes? Corrections? Please contact Tim Slavin at hello@KidsCodeCS.com. Thank you!