

	Resources	Summary
1	Excellence in Computer Programming	
2	http://ai2.appinventor.mit.edu	MIT App Inventor is a blocks-based programming tool that allows everyone, even novices, to start programming and build fully functional apps for Android devices.
3	http://appinventor.mit.edu/explore/	App Inventor for Android. Blocks-based programming tool for creating Android Apps.
4	http://blog.ardublock.com/	Ardublock is a graphical programming environment to make programming physical computing with Arduino as easy as drag and drop.
5	http://blog.minibloq.org/	miniBloq is an open source graphical programming environment for Multiplo™, Arduino™, physical
6	http://blog.minibloq.org/p/download.html	MiniBloq. An open source graphical programming environment for Multiplo™, Arduino™, physical computing devices and robots.
7	http://botlogic.us/#sthash.QRHYww0R.dpbs	BotLogic. An educational puzzle game, teaches programming concepts, logic.
8	http://byob.berkeley.edu	SNAP! Formerly Build Your Own Blocks, drag and drop programming, an extended reimplementaion of Scratch.
9	http://code.org/educate/3rdparty	More resources to learn coding
10	http://code.org/educate/curriculum	Overview of curriculum (all free) K-5, Middle, and High School
11	http://code.org/educate/districts	District partnerships, need 30 teachers who will teach courses, code.org pays half of professional development costs.
12	http://code.org/learn	Code.org Hour of Code
13	http://codecombat.com	Code Combat. Online game that teaches programming, offers educator support, monthly subscription is optional.
14	http://codemonkeyplanet.com/	Code Monkey Island is the most exciting educational board game in the world. It teaches kids how to use and master the fundamentals of computer science,
15	http://coderbyte.com/CodingArea/Challenges/	Coding challenge for those who know a language.
16	http://courseweb.stthomas.edu/apthomas/SquishyCircuits/	Squishy Circuits. University of St. Thomas, clear basic explanations, videos, classroom guide, and how-tos for using squishy circuits with kids.
17	http://csunplugged.org	Computer Science Unplugged, games and activities that teach programming concepts without a computer
18	http://developer.android.com/training/basics/firstapp/index.html?hl=p	Building Your First App. A site for building Android Apps.
19	http://fantasticcontraption.com	Fantastic Contraption. Uses problem solving skills to create design.
20	http://gamestarmechanic.com/	Gamestar Mechanic is a game and community designed to teach kids the principles of game design and systems thinking in a highly engaging environment. It is designed for 7- to 14-year-olds but is open to everyone. We've included features in Gamestar that make it useful for kids playing the game on their own or with family members at home, as well as in moderated and educational settings. Paid Resource.
21	http://gettingsmart.com/2014/12/experts-weigh-in-on-k-12-coding-cs-resources/	Experts weigh in on the best coding resources.
22	http://globaloria.com	Globaloria. \$75/per student, courses teach students to code educational games.
23	http://hackety.com	Hackety Hack. Teaches the basics of programming.
24	http://hspt.ucfprogrammingteam.org	University of Central Florida online programming contest. Modeled after ICPC.
25	http://icpc.baylor.edu/	
26	http://inventwithpython.com	Invent With Python. A collection of books available.
27	http://journal.ahima.org/2014/10/24/him-frontlines-taking-the-grow-your-own-coder-movement-to-high-school/	Kansas community college offering credentials for coding to high school students
28	http://kidsruby.com	Ruby on Rails for kids.
29	http://ladieslearningcode.com/making-makers/	Kids Learning Code. (Ladies Learning Code). Curriculum materials for educators.
30	http://learncodethehardway.org	Learn Code The Hard Way. Free/ \$29 option, for self-motivated learners, walk novices through steps to learn code.
31	http://lightbot.com/index.html	Lightbot, \$3.00-5.00 per device, programming puzzle game
32	http://littlebits.cc	Littlebits. Modules for creating easy circuits, meets students at the intersection of STEM and Makerspaces.
33	http://makerfaire.com	Maker Faire: A family-friendly showcase of invention, creativity, resourcefulness.

	Resources	Summary
34	http://makezine.com	Make: magazine/site. Projects, how-tos, and inspiration from geeks, makers, and hackers
35	http://movetheturtle.com	Move The Turtle. \$2.99, teaches the basics of programming, iPhone or iPad.
36	http://ocw.mit.edu/index.htm	MIT OpenCourseWare. Free online course materials in various subject areas.
37	http://phrogram.com	Phrogram. \$35/person, 30 day free trial, simple programming using source code, .NET-based, resources include online tutorials, an ebook, PC.
38	http://guides.rubyonrails.org/getting_started.html	Ruby on Rails. Open source web framework for programming.
39	http://scratched.gse.harvard.edu	ScratchEd is a teacher resource for scratch implementation. Thousands of activity links are provided.
40	http://see.stanford.edu	Stanford Engineering Everywhere. Free online courses offered, currently being updated, will be back online Aug 2015.
41	http://shop.lego.com/en-US/LEGO-MINDSTORMS-EV3-31313	Lego Mindstorms EV3. \$350, kit for purchase, create and command robots
42	http://soinc.org	Science Olympiad. Science competition.
43	http://stackoverflow.com/search?q=overfl	Stack Overflow. A database of questions and answers on coding and programming.
44	http://stencyl.com	Stencyl. Drag and drop game creator, also writing code.
45	http://thefoos.com	The Foos. An app that teaches programming through problem solving.
46	http://turtleacademy.com	Turtle Academy. Learn logo programming, basic programming logic.
47	http://tutsplus.com	Tuts+. Monthly or yearly fee \$15-\$360, offers courses in numerous subject areas including coding and web design, also offers free tutorials.
48	http://twolivesleft.com/CargoBot/	CargoBot. Game programmed entirely on an iPad.
49	http://twolivesleft.com/Codea/	Codea. \$15 per device, an app that teaches coding and programming by creating games and simulations
50	http://www.acm.org/chapters/stu/hscontests.html	University Chapters that hold High School computing contests
51	http://www.alice.org/index.php	Alice. An educational software that teaches students computer programming in a 3D environment.
52	http://www.arduino.cc	Arduino. Electronic platform, simple computing board, users can write software for the board, kits available
53	http://www.arduino.cc/en/Tutorial/BareMinimum	
54	http://www.arduino.cc/en/Tutorial/HomePage	
55	http://www.bebraschallenge.org	Logic Thinking Challenges for kids 5-18 - no previous coding necessary
56	http://www.bfoit.org http://www.bbc.com/news/technology-20764273	Berkeley Foundation for Opportunities in Information Technology. Berkeley university providing courses/camps for middle and high school students.
57	http://www.blackgirlscode.com/what-we-do.html	Black Girls Code. An example of an organization that provides coding instruction in after school programs and camps.
58	http://www.bootstrapworld.org	Platform used by code.org, Bootstrap is a module for students ages 12-16, which teaches algebraic and geometric concepts through computer programming. Common Core math standards. Full course and materials are free for teachers.
59	http://www.bootstrapworld.org/materials/Spring2014/courses/bs1/resources/teachers/	I signed up for Bootstrap's Teacher Resources. The username is bootstrap and the password is teacher if anyone wants to share with Math teachers. http://www.bootstrapworld.org/materials/Spring2014/courses/bs1/resources/teachers/
60	http://www.code.org	Code.org. Drag and drop coding games for K-12 graders. Free curriculum/professional development for teachers. Teacher portal tracks student progress. This is really easy to use. Try the hour of code to see how it works! Great promotional video clips as well. Lots of celebrities, even President Obama, have gotten behind code.org http://code.org/about
61	http://www.codeavengers.com	Code Avengers. Free introductory courses, \$29-\$39 for level 2-3, courses in JavaScript, HTML5, and CSS3.
62	http://www.codecademy.com	Code Academy. Interactive learning, HTML, Python, Ruby, CSS, PHP, JavaScript.
63	http://www.codecademy.com/courses/hour-of-code/0/1	Codecademy hour of Code

Resources	Summary
64 http://www.codecademy.com/learn	Created by Zach Sims, The goal of Codecademy is to give people the ability to become intermediate programmers. You can learn the top programming languages, and how to build a website, apps, or animations. It is a step by step guide to creation, which is pretty cool. This is totally free and it teaches people viable workforce skills. The website has served 24 million people, but it not targeted at schools like some of the other resources. In fact, codecademy would like to stay away from working with school districts and stick with "organic growth" i.e. for people who want to learn on their own. Although, they will send educators a starter kit if you want to start your own after school program. You can learn Ruby, Python, Java, Rails, html/cs, PHP, JQuery, or build your own website. On the surface, this isn't as user-friendly for K-12 students, yet it is more realistic to actual coding, as opposed to gaming, and has the capability to teach you programming skills or programs that professionals use. They have a section for people who have used their website to land jobs, create their own businesses, and other success stories: http://www.codecademy.com/stories
65 http://www.codecademy.com/schools/curriculum	What Codecademy offers to teachers. Click on the resources page to view the curriculum. Again, all free! This is also scaffolded, so students will be able to incorporate what they have previously learned in order to fulfill the next tasks. No video, or gaming, but this is engaging nonetheless. Users are awarded badges and your progress is tracked on your profile, so teachers can view student progress, and students can be given permission to view peer progress.
66 http://www.codechef.com	Global competitions each month, algorithmic coding, leveled difficulty but must know C, C++, or Java language
67 http://www.codechef.com/getting-started	Getting started with coding. Provides resources for coding/algorithms
68 http://www.codechef.com/problems/school	Codechef's attempt at attracting middle/high school students...still too difficult for me! Hold "lunchtime" contests.
69 http://www.codechef.com/school/goforgold	"Go for Gold" describes how India plans to develop the best coder in the world. Includes incentives, guaranteed employment, scholarships, and a grand prize to be given out to the first student from India who wins the International Olympiads in Informatics. The \$\$\$ will increase each year it has not been won by an Indian student. Code Chef has partnered with Directi, an IBM equivalent, to provide funding.
70 http://www.cprogramming.com	C Programming.com. Resources for learning C and C++.
71 http://www.creativebloq.com/web-design/online-coding-courses-11513890	16 Coding courses online for free
72 http://www.crunchzilla.com/code-monster	Crunchzilla Code Monster. Interactive tutorial, immediate results in code changes, lessons for educators, JavaScript.
73 http://www.cs-first.com/	Empowering all students to create with technology through free computer science clubs. CS First provides free, easy-to-use computer science (CS) enrichment materials that target and engage a diverse student population. Create Clubs, Materials and Guidance at no cost.
74 http://www.cs.sbu.edu/contest/	St. Bonaventure Programming Competition for high school students. Has been running for 27 years.
75 http://www.ct4me.net/math_resources_4.htm	List of high school Math competitions and lots of math resources.
76 http://www.ecogiochi.it/giochi-gratis-online/puzzle/magic-pen/	Magic Pen. Uses problem solving skills to create design.
77 http://www.gosphero.com/	We create connected toys - but that's not all. By fusing technology with robotics, our toys are teaching and inspiring tomorrow's inventors and innovators. Programming isn't easy, but you don't need to be a rocket scientist to give kids a strong foundation. All you need is a Sphero. We created the SPRK program because we believe play is a powerful teacher. Whether you're an educator or a parent, SPRK lessons give kids a fun crash course in programming while sharpening their skills in math and science.
78 http://www.howstuffworks.com/c.htm	The Basics of C Programming. Site with basic instruction.
79 http://www.html5rocks.com/en/	HTML5 Rocks. A supplement for educators, tutorials.
80 http://www.hummingbirdkit.com/	The Hummingbird Robotics Kit is a spin-off product of Carnegie Mellon's CREATE lab. Hummingbird is designed to enable engineering and robotics activities for ages 13 and up (8 with adult supervision) that involve the making of robots, kinetic sculptures, and animatronics built out of a combination of kit parts and crafting materials.
81 http://www.jsdares.com	JS Dares. Learn JavaScript programming while making games.
82 http://www.jshs.org	Junior Science and Humanities Symposia
83 http://www.kano.me/	Kano is a complete system for learning and making with computing and code. Prepare your students for the future with step-by-step challenges and playful, project-focused pedagogy

	Resources	Summary
84	http://www.kodugamelab.com/about	Kodu. Allows students to create games on PC (free) and xbox (about \$5), simple visual programming language.
85	http://www.kuatostudios.com/games/hakitzu-elite/	Hakitzu. Teaches fundamentals of JavaScript through gaming.
86	http://www.lockheedmartin.com/us/aeronautics/community-relations/codequest.html	Code Quest, presented by Lockheed Martin, is a high school competition for both novice and advanced coders.
87	http://www.lynda.com	Lynda.com. \$25-37.50/month, video tutorials teach various subjects.
88	http://www.makeymakey.com	Makey Makey. Simple invention kit for beginners and experts.
89	http://www.mathcounts.org/	<i>For math, but a model for Middle School Competition State Website</i> http://www.sdes.org/page-1369780
90	http://www.microsoft.com/about/corporatecitizenship/en-us/youthspark/youthsparkhub/hourofcode/	Microsoft Touchdevelop = Geico (so easy a caveman can do it).
91	http://www.microsoft.com/en-us/diversity/programs/digigirlz/	DigiGirlz. Courses and information for computer science teachers and girls interested in technology.
92	http://www.modrobotics.com/cubelets/	Cubelets. Robotic Interlocking Cubes, Legos can be attached.
93	http://www.motherjones.com/media/2014/06/computer-science-programming-code-diversity-sexism-education	Is Coding The New Literacy? Article describing the necessity for students to study code.
94	http://www.puzzleschool.com	Puzzle School. Training in JavaScript and HTML.
95	http://www.realworlddesignchallenge.org/overview.php?menu=about-sub	Real World Design STEM contest. Win a state 'Governor's Cup' and get a trip to DC to compete at the national level. Free to participate. All resources/training provided.
96	http://www.reddit.com/r/programmingforkids/comments/2mww7e/cs_computing_and_programming_competitions_for/	Reddit's list of competitions for middle and high school students
97	http://www.sciencethrillers.com/2014/top-25-science-stem-contests-for-kids-2014/	A top 25 list of STEM contests for kids.
98	http://www.scratchjr.org	ScratchJr for K-2 Ipad/android app can create their own stories, animations, and games. About Scratch Jr. 4:00 http://www.scratchjr.org/about.html
99	http://www.siemens-foundation.org	Siemens Foundation STEM Competition
100	http://www.spoj.com/problems/classical/	Sphere Online Judge - rankings, competitions, and a pile of practice problems.
101	http://www.taipeitimes.com/News/biz/archives/2014/12/08/2003606207	<i>Taiwan's aim at getting 1 million to do the hour of code</i>
102	http://www.theodinproject.com	The Odin Project. Instruction on web development, geared towards professionals, but good resources
103	http://www.thinkfun.com/robotturtles/	Robot Turtles. \$25, a board game for very young programmers.
104	http://www.thoughtstem.com/home	ThoughtSTEM. After school and summer coding clubs, CA only.
105	http://www.troyhigh.com/apps/pages/index.jsp?uREC_ID=57261&type=u&pREC_ID=47822	Southern California High School Programming competition that uses Stipulator to automatically grade submissions. Annual competition that is over a decade in.
106	http://www.usaco.org/index.php?page=resources	USA Computing Olympiad website prepares students with training and resources to win a position on team USA.
107	http://www.usd.edu/arts-and-sciences/computer-science/hs-robotic-programming-contest	USD's robotics challenge. Housing stipends to placers to USD.
108	http://www.utdallas.edu/k12/	University of Texas at Dallas. Summer camps, workshops, and outreach for High School Students. Example competition http://www.utdallas.edu/k12/app-contest/
109	http://www.w3schools.com/	W3Schools has tutorials for all kinds of learners starting with newbies and moving progressively in difficulty to advanced learners. It also has an editor where you can try out your codes and see how they would look like when you use them on your blog or website.
110	http://www.zachtronics.com/spacechem/	Take on the role of a Reactor Engineer working for SpaceChem, the leading chemical synthesizer for frontier colonies. Construct elaborate factories to transform raw materials into valuable chemical products! Streamline your designs to meet production quotas and survive encounters with the sinister threats that plague SpaceChem.
111	http://yearofcode.org	The UK has implemented a plan to introduce everyone in primary and secondary education to coding, dubbing 2014 the "year of code."
112	https://blockly-games.appspot.com/	Blockly Games. A series of educational games that teach programming. It is designed for children who have not had prior experience with computer programming. By the end of these games, players are ready to use conventional text-based languages

	Resources	Summary
113	https://codecombat.com	Coding through fighting robots. Play first, learn later approach.
114	https://codehs.com	Code HS. Free-\$25-75/month, learn JavaScript.
115	https://coderdojo.com/	CoderDojo is a global movement of free, volunteer-led, community based programming clubs for young people. At a Dojo, young people, between 7 and 17, learn how to code, develop websites, apps, programs, games and explore technology in an informal and creative environment. In addition to learning to code attendees meet like minded people and are exposed to the possibilities of technology. Within the CoderDojo Movement there is a focus on community, peer learning, youth mentoring and self led learning, with an emphasis on showing how coding is a force for change in the world.
116	https://developer.apple.com/library/ios/referencelibrary/GettingStarted/RoadMapiOS/index.html	Start Developing iOS Apps Today. A site with tutorials, steps.
117	https://docs.google.com/document/d/1cvMudyG5m1atoumEf46zjKj6hmHZrSdJ1TRVenmfo4/edit?usp=s	Qualifications
118	https://docs.google.com/document/d/1UoSV-	Top Resources
119	https://girlswhocode.com/clubs/	Girls Who Code. A program that teaches girls in grade 6-12 a wide range of skills. Projects include app development, graphic design, video game design, cryptography.
120	https://hourofcode.com/us	Hour of Code
121	https://itunes.apple.com/us/app/catos-hike-programming-logic/id574335479?mt=8	Cato's Hike. \$5.00 per device, is an app that teaches programming as a puzzle game.
122	https://itunes.apple.com/us/app/daisy-the-dinosaur/id490514278	Daisy the Dinosaur. Drag and drop commands to move Daisy.
123	https://itunes.apple.com/us/app/my-robot-friend/id555121423?mt=8	My Robot Friend. A game using using logic, puzzle solving and math skills. Program a sequence of instructions for your robot to follow, and earn all 3 ribbons per level by creating efficient programs and collecting all the coins.
124	https://itunes.apple.com/us/app/robo-logic/id300025550?mt=8	Robo Logic. 99 cents, iPad app, players program a robot to move by dragging commands to the memory board.
125	https://learn.adafruit.com	A place online for learning electronics and making the best designed products for makers of all ages and skill levels.
126	https://learn.sparkfun.com	SparkFun Electronics Department of Education views electronics as more than just a fun hobby or a career path, but as a creative medium for changing the face of education. Our curriculum, resources and products are designed specifically as hands-on learning tools to help today's students learn 21st century skills like critical thinking, collaboration, communication and more.
127	https://nclab.com/karel/	Karel Programming Course. Up to 10 free accounts, \$5 per student thereafter, self-paced online programming course.
128	https://onemonth.com	One Month. \$99, choose a code to learn in one month, includes 8 hours of videos and samples
129	https://penjee.com	Penjee.com. Simple way to teach Python code.
130	https://processing.org/	Processing is a programming language, development environment, and online community. Since 2001, Processing has promoted software literacy within the visual arts and visual literacy within technology. Initially created to serve as a software sketchbook and to teach computer programming fundamentals within a visual context, Processing evolved into a development tool for professionals. Today, there are tens of thousands of students, artists, designers, researchers, and hobbyists who use Processing for learning, prototyping, and production.
131	https://projecteuler.net	Very popular math problems site that incorporates the use of computing. These problems are tough, but hundreds of thousands of people have subscribed to the site. Login is required, but an email address is not.
132	https://sdstem.wikispaces.com/Competitions	South Dakota's STEM wiki website
133	https://student.societyforscience.org/intel-isef	Intel ISEF. Student society for science.
134	https://teamtreehouse.com	Tree House. \$25-50/month, interactive courses on programming, web design, business.
135	https://thimble.webmaker.org/en-US/ https://webmaker.org/en-US	Mozilla Webmaker Thimble. Instruction on building sites and apps, students practice changing variables to change look of site.
136	https://www.allcancode.com/web	Run Marco. A free App. Players create a code to make Marco run and collect treasure in order to continue in the game.
137	https://www.codeschool.com	Code School. \$29/month, courses in JavaScript, HTML, Ruby, iOS, CSS.

	Resources	Summary
138	https://www.coursera.org	Coursera. Courses in JavaScript, Python, SQL and general computer science. Also offers higher level logic courses in topics like Data Science, Artificial Intelligence, and Computational Neuroscience.
139	https://www.edsurge.com/guide/teaching-kids-to-code	Teaching Kids to Code. A page on the EdSurge website with resources for getting started, tools, and articles.
140	https://www.edx.org	EdX offers interactive online classes and MOOCs from the world's best universities, colleges and organizations. Currently 52 courses in coding.
141	https://www.gethopscotch.com/	Hopscotch teaches kids to code using simple, intuitive building blocks. Kids can create games, animations and other programs in this colorful, interactive environment. Program your characters to move, draw, and collide with each other, and use shaking, tilting, or even shouting at the iPad to control them. Hopscotch was inspired by MIT's Scratch and gives kids a creative way to learn the fundamentals of computer programming.
142	https://www.google-science-fair.com/en/?phase=2	Google Science Fair.
143	https://www.graphite.org/top-picks/best-apps-and-websites-for-learning-programming-and-coding#	25 Apps and websites to learning computer programming
144	https://www.hackerearth.com	Site that has competitions for programming. Advertise that companies hire programmers who compete on their website.
145	https://www.khanacademy.org/computing/computer-programming	Kahn Academy has lots of information on STEM and tutorials. This is less hands on than Codecademy, but there is also more variance which might come in handy down the road. Video, hands-on activities, scaffolding, and quizzes are included in the program. They show what the code looks like and what it looks like when things are changed or manipulated. The huge advantage Kahn academy has is its courses that are developed for teachers to deliver to their students.
146	https://www.khanacademy.org/hourofcode	Khan Academy Hour of Code
147	https://www.kodable.com/	Kodable is designed to provide everything you need to teach the fundamentals of programming. Paid Resource. The Kodable Learning Guides make it possible to teach programming without any programming experience. There is a guide for each of the three "worlds" in Kodable. The guides explain key programming concepts, how they work in real programming, lesson ideas, reflection questions, and extra activities. Free trail for up to 30 students, fee for unlimited students.
148	https://www.madewithcode.com/resources	Online help for future coders, parents, and teachers. Focus is on girls.
149	https://www.makewonder.com	Dash and Dot. \$170.00 and up, products for purchase from Apple, students program robots using a smartphone
150	https://www.makewonder.com/	Dash & Dot help students learn fundamental processes relevant for all 21st century skills. Students send commands to the robots to move them, light them up, and have them detect the world around them using 4 free coding applications available on iPad and Android tablets.
151	https://www.ncwit.org/project/aspireit-k-12-outreach-program	AspireIT. Resources for teachers of computer science.
152	https://www.parallax.com/product/27207?SortField=ProductName%25252cProductName	Basic Stamp Discovery Kit. \$160, USB, robot kit, site sells numerous products for robotics needs.
153	https://www.pltw.org/our-programs/pltw-launch	PLTW (Project Lead the Way) K-12 STEM curriculum. \$6 million partnership between Gateway and Chevron. Grant opportunities typically targeted at high need schools (70% free and reduced lunch). Curriculum here: https://www.pltw.org/our-programs/pltw-gateway/pltw-gateway-curriculum
154	https://www.pluralsight.com/kids	PluralSight. Free coding courses for kids.
155	https://www.quora.com/	A community for asking questions and getting help from others.
156	https://www.raspberrypi.org	Raspberry Pi. Small computer that, along with a standard computer, enables users to engage in coding, kits available
157	https://www.raspberrypi.org/resources/	Free resources to teach, learn and make with Raspberry Pi
158	https://www.reddit.com/r/dailyprogrammer	Discussion board for programmers that includes programming problems and challenges
159	https://www.thinkful.com	Thinkful. \$300-\$500/month, online courses with individual support/mentor.
160	https://www.topcoder.com	Premier coding challenges for \$
161	https://www.tynker.com	Tynker. Designed for teachers to use in the classroom, Tynker offers free lesson plans and activities, but if you want a full blown curriculum/class, it is going to cost you \$50 for a summer course, \$399 for a 16 week course (30 students) or \$2,000 for full school implementation. Aligned with Common Core Standards.

	Resources	Summary
162	https://www.tynker.com/hour-of-code/	Tynker Hour of Code
163	https://www.udacity.com	Udacity. Online courses, coding, programming, web design, app design.
164	https://www.udemy.com	Udemy. \$50/lesson, a number of programming courses offered.
165	https://www.yoyogames.com/studio	GameMaker: Studio (YoYo Games), provides projects, lessons, tutorials, how-tos, for using GameMaker in the classroom, free or fee
166	scratch.mit.edu	Scratch Drag and drop Coding program designed for ages 8-16. You create everything within the program, as opposed to a default map/characters like code.org, Tynker, and Bootstrap. It has explicit instructions for students to use, but it you don't get the result as quickly. This is for students who are either too young to comprehend other drag and drop programs, or for advanced students who are ready to create their own content.
167	BOOKS AND ARTICLES	
168	<i>3D Game Programming For Kids: Create Interactive Worlds With JavaScript</i>	3D Game Programming For Kids: Create Interactive Worlds With JavaScript by Chris Strom. 2013. Pragmatic Bookshelf.
169	<i>A New Culture of Coding</i>	A New Culture of Coding. Gow, Peter. "A New Culture Of Coding." Independent School 74.2 (2015): 64-70. Professional Development Collection. Web. 12 June 2015. Looks at the emerging culture of teaching computer programming in schools: the approach to teaching computer coding, development of interest in programming, and response of schools to perceived pressure to add coding to the curriculum.
170	<i>Arduino Workshop: A Hands-On Introduction With 65 Project</i>	Arduino Workshop: A Hands-On Introduction With 65 Project by John Boxall. 2014. No Starch Press.
171	<i>Coding Club Level 1 Python Basics</i>	Coding Club Level 1 Python Basics by Chris Roffey. 2012. Cambridge University Press.
172	<i>Coding Club Level 2 Python: Next Steps</i>	Coding Club Level 2 Python: Next Steps by Chris Roffey. 2013. Cambridge University Press.
173	<i>Coding Club Level 3 Python: Building BIG Apps</i>	Coding Club Level 3 Python: Building BIG Apps by Chris Roffey. 2013. Cambridge University Press.
174	<i>Coding For Kids For Dummies</i>	Coding For Kids For Dummies by Camille McCue. 2014. For Dummies.
175	<i>Coding For Middle Schoolers</i>	Coding For Middle Schoolers. Pierce, Margo. "Coding For Middle Schoolers." T H E Journal 40.5 (2013): 20-23. Professional Development Collection. Web. 12 June 2015. Discusses developments related to teaching middle school students computer programming in the U.S. as of May 2013. Topics discussed include how the development of the Logo programming language made it easier for children to learn computer programming,
176	<i>Coding: A Pathway To 21st-Century Skills</i>	Coding: A Pathway To 21st-Century Skills. Schombs, Jamie-Lee. "Coding: A Pathway To 21St-Century Skills." Independent School 74.4 (2015): 9. Professional Development Collection. Web. 12 June 2015. The article focuses on the annual Hour of Code event by the Code.org held in the U.S. from December 8-14, 2014.
177	<i>Computer Programming Goes Back To School</i>	Computer Programming Goes Back To School. Kafai, Yasmin B., and Quinn Burke. "Computer Programming Goes Back To School." Phi Delta Kappan 95.1 (2013): 61-65. ERIC. Web. 12 June 2015. Explores the re-emergence of programming in K-12 schools.
178	<i>Connected Code: Why Children Need To Learn Programming</i>	Connected Code: Why Children Need To Learn Programming by Yasmin Kafai. 2014. MIT Press.
179	<i>Getting To Know Alice</i>	Getting To Know Alice by Nagle, Jeanne. 2015. Rosen Publishing.
180	<i>Getting To Know Arduino</i>	Getting To Know Arduino by Niver, Heather Moore. 2015. Rosen Publishing.
181	<i>Getting To Know Hackety Hack</i>	Getting To Know Hackety Hack by Rauf, Don. 2015. Rosen Publishing.
182	<i>Getting To Know Lego Mindstorms</i>	Getting To Know Lego Mindstorms by Shea, Therese. 2015. Rosen Publishing.
183	<i>Getting To Know Python</i>	Getting To Know Python by Payment, Simone. 2015. Rosen Publishing.
184	<i>Getting To Know Ruby</i>	Getting To Know Ruby by Niver, Heather Moore. 2015. Rosen Publishing.
185	<i>Getting To Know Scratch</i>	Getting To Know Scratch by Nagle, Jeanne. 2015. Rosen Publishing.
186	<i>Getting To Know The Raspberry Pi</i>	Getting To Know The Raspberry Pi by Petrikowski, Nicki Peter. 2015. Rosen Publishing.
187	<i>Hello App Inventor! Android Programming For Kids And The Rest Of Us</i>	Hello App Inventor! Android Programming For Kids And The Rest Of Us by Paula Beer and Carl Simmons. 2014. Manning Publications.
188	<i>Hello World! Computer Programming For Kids And Other Beginners</i>	Hello World! Computer Programming For Kids And Other Beginners by Warren Sande. 2013. Manning Publications.

	Resources	Summary
189	<i>Help Your Kids With Computer Coding</i>	Help Your Kids With Computer Coding. 2014. DK Publishing.
190	<i>How Programming Fits With Technology Education Curriculum</i>	How Programming Fits With Technology Education Curriculum. Wright, Geoffrey A., Peter Rich, and Keith R. Leatham. "How Programming Fits With Technology Education Curriculum." <i>Technology & Engineering Teacher</i> 71.7 (2012): 3-9. Professional Development Collection. Web. 12 June 2015. Discusses the need to support programming literacy in schools in the U.S. and how it fits the framework of the International Technology and Engineering Educators Association (ITEEA)'s Standards for Technological Literacy (STL).
191	<i>Introduce Programming In A Fun, Creative Way</i>	Introduce Programming In A Fun, Creative Way. Flanagan, Sandra. "Introduce Programming In A Fun, Creative Way." <i>Tech Directions</i> 74.6 (2015): 18-20. Professional Development Collection. Web. 12 June 2015. Discusses computer programming language Scratch.
192	<i>Invent To Learn: Making, Tinkering, and Engineering in the Classroom</i>	<i>Invent To Learn: Making, Tinkering, and Engineering in the Classroom</i> , by Sylvia Libow Martinez. 2013. Constructing Modern Knowledge Press.
193	<i>Java Programming For Kids</i>	<i>Java Programming For Kids</i> by R. Chandler Thompson. 2014. Create Space Publishing Platform.
194	<i>JavaScript For Kids: A Playful Introduction To Programming</i>	<i>JavaScript For Kids: A Playful Introduction To Programming</i> by Nick Morgan. 2014. No Starch Press.
195	<i>Kodu For Kids: The Official Guide To Creating Your Own Video Games</i>	<i>Kodu For Kids: The Official Guide To Creating Your Own Video Games</i> by James Floyd Kelly. 2013. Que Publishing.
196	<i>Learn To Program With Scratch</i>	<i>Learn To Program With Scratch</i> by Majed Marji. 2014. No Starch Press.
197	<i>Library Programming With LEGO MINDSTORMS, Scratch, And Picocricquet: Analysis Of Best Practices For Public Libraries</i>	<i>Library Programming With LEGO MINDSTORMS, Scratch, And Picocricquet: Analysis Of Best Practices For Public Libraries</i> . Romero, Juan Suarez. "Library Programming With LEGO MINDSTORMS, Scratch, And Picocricquet: Analysis Of Best Practices For Public Libraries." <i>Computers In Libraries</i> 30.1 (2010): 16-19. ERIC. Web. 12 June 2015. Discusses the advantages of these technologies, evaluates how they have performed, and provides some guidelines to consider for successfully putting them into action.
198	<i>Life With Raspberry Pi</i>	<i>Life With Raspberry Pi</i> . Sansing, Chad. "Life With Raspberry Pi." <i>School Library Journal</i> 59.8 (2013): 34. Professional Development Collection. Web. 12 June 2015. The article reviews the Raspberry Pi (RPi) computer.
199	<i>Ode To Code</i>	<i>Ode To Code</i> . 2015. Sansing, Chad. <i>School Library Journal</i> , 61, 5. P. 42-47. Journal article providing introductory information on coding, what, why, and how.
200	<i>Python For Kids: A Playful Introduction To Programming</i>	<i>Python For Kids: A Playful Introduction To Programming</i> by Jason R. Briggs. 2012. No Starch Press.
201	<i>Raspberry Pi</i>	<i>Raspberry Pi</i> . Toth-Chernin, Jan. "Raspberry Pi." <i>Knowledge Quest</i> 43.3 (2015): 74-75. Professional Development Collection. Web. 12 June 2015. Journal article describing a librarian's experience with Raspberry Pi. Applicable to classrooms. Includes basic information.
202	<i>Raspberry Pi Projects For Kids</i>	<i>Raspberry Pi Projects For Kids</i> by Daniel Bates. 2014. Packt Publishing.
203	<i>Ready To Learn?</i>	<i>Ready To Learn?</i> Staff. "Ready To Learn?." <i>School Library Journal</i> 61.5 (2015): 43. Professional Development Collection. Web. 12 June 2015. Discusses coding in computer programming. It notes that coding could give all children the chance to understand and interact with technologies, including the social ones, in their lives. Cites several sites that offer free, online, self-paced lessons that can help in learning text-based codes, including Codecademy, Treehouse and Khan Academy.
204	<i>Ruby Wizardry: An Introduction To Programming For Kids</i>	<i>Ruby Wizardry: An Introduction To Programming For Kids</i> by Eric Weinstein. 2015. No Starch Press.
205	<i>Scratch 2.0 Programming For Teens</i>	<i>Scratch 2.0 Programming For Teens</i> by Jerry Lee Ford, Jr. 2014. Cengage Learning.
206	<i>Scratch For Kids For Dummies</i>	<i>Scratch For Kids For Dummies</i> by Derek Breen. 2015. For Dummies.
207	<i>Scratch Programming in Easy Steps: Covers versions 1.4 And 2.0</i>	<i>Scratch Programming in Easy Steps: Covers versions 1.4 And 2.0</i> by Sean McManus. 2013. In Easy Steps Ltd.
208	<i>Scratch: Computer Programming For 21st Century Learners</i>	<i>Scratch: Computer Programming For 21st Century Learners</i> . Lamb, Annette, and Larry Johnson. "Scratch: Computer Programming For 21St Century Learners." <i>Teacher Librarian</i> 38.4 (2011): 64-68. Professional Development Collection. Web. 12 June 2015. Describes Scratch, a tool designed by the Massachusetts Institute of Technology (MIT) to help students learn how to do basic computer programming.
209	<i>Scratch: Multimedia Programming Environment For Young Gifted Learners</i>	<i>Scratch: Multimedia Programming Environment For Young Gifted Learners</i> . Lee, Young-Jin. "Scratch: Multimedia Programming Environment For Young Gifted Learners." <i>Gifted Child Today</i> 34.2 (2011): 26-31. ERIC. Web. 12 June 2015. Describes how Scratch is different from conventional text-based programming languages such as BASIC, Java, or C++, and how it can be used as a creative medium for gifted and talented students to facilitate their learning. (Contains 1 table, 5 figures and 1 footnote.)

	Resources	Summary
210	<i>Super Scratch Programming Adventure: Learn To Program By Making Cool Games!</i>	Super Scratch Programming Adventure: Learn To Program By Making Cool Games! by The LEAD Project. 2014. No Starch Press.
211	<i>Teach Your Kids To Code: A Parent-Friendly Guide To Python Programmin</i>	Teach Your Kids To Code: A Parent-Friendly Guide To Python Programming by Bryson Payne. 2015. No Starch Press.
212	<i>Teaching With Scratch</i>	Teaching With Scratch. Staff. "Teaching With Scratch." School Library Journal 61.5 (2015): 47. Professional Development Collection. Web. 12 June 2015. Discusses how a teacher can teach coding to students using the platform Scratch.
213	<i>The Kindergarten Coders</i>	The Kindergarten Coders. Reilly, Michael. "The Kindergarten Coders." New Scientist 219.2927 (2013): 21. Science Reference Center. Web. 12 June 2015. Discusses computer programming by children using graphics-based coding language.
214	<i>The Maker Movement Connects To The Classroom</i>	The Maker Movement Connects To The Classroom. THOMPSON, GREG. "The Maker Movement Connects To The Classroom." Education Digest 80.3 (2014): 34-37. Professional Development Collection. Web. 12 June 2015. Discusses how to integrate Science, Technology, Engineering and Math (STEM) education with the maker movement. Topics addressed include the connections between project-based learning and standardized testing, trends in the embracing of maker spaces in higher education, and examples of maker clubs at the secondary level.
215	<i>The Not-So-Secret Code</i>	The Not-So-Secret Code. FREDRICK, KATHY. "The Not-So-Secret Code." School Library Monthly 31.6 (2015): 23-24. Professional Development Collection. Web. 12 June 2015. The article reviews several free websites for coding in school.
216	<i>We Can Code!</i>	We Can Code! Heussner, K. M. (2015). We Can Code!. Scholastic Parent & Child, 22(7), 22-26. Discusses how coding benefits kids, including helping them develop important school smarts like problem solving, critical thinking, and the ability to collaborate with peers, the role of parents and teachers in educating the kids about coding, and products which can help a child embrace her inner geek, including the Robot Turtle, Lightbot robot, and the Kano computer.
217	<i>What Happens When A Robotics Class Starts The Year With No Robots?</i>	What Happens When A Robotics Class Starts The Year With No Robots? Dobo, Nichole. "What Happens When A Robotics Class Starts The Year With No Robots?." Tech Directions 74.8 (2015): 18-19. Professional Development Collection. Web. 12 June 2015. Discusses using graphing calculators to teach students the fundamentals of algorithmic thinking to build and program a robot. It highlights an approach to teaching students to learn to how to write a simple code.