



19 WEBSITES
That Teach <Coding/>

FOR KIDS

CODING KIDS

WE'VE ALL HEARD THAT OUR KIDS NEED TO LEARN HOW TO CODE.

We're surrounded by tech. Our children need to understand how tech works so that they are more than just consumers. And, coding is where the jobs will be.

But the question remains, how to make sure our children learn coding.

One path is to use a website that teaches coding or computer science. But, which one?

Here's a list of sites that teach coding for kids to give you some ideas.

FOR ELEMENTARY

SCHOOL STUDENTS



1. Blockly

<https://blockly-games.appspot.com/>

For ages 8+. Free.

Blockly teaches programming principles and introduces JavaScript using a block-based programming approach.

blocklyPuzzle pieces appear on the screen. Each puzzle piece represents a block of code, which is kind of like a paragraph in a story. The child drags-and-drops the puzzle pieces to create a sequence of code to complete the “story” that makes up the software program. Then the child runs the program and sees the results, which can be an animation of a person moving through a maze or a bird flying toward its nest.

Blockly’s games require the child be able to read and some of the games include using the number of degrees to define the direction an object moves. So, it’s not for really little kids despite it using a gamification approach and simple graphics.

Overall, Blockly is designed for children who don’t have any experience with coding. It’s aim is to make them ready to learn conventional text-based computer programming languages.



2. Code Combat

<https://codecombat.com/>

For ages 5-17. Core levels are free. Monthly subscription for additional levels.

Code Combat is an online game that teaches Python and/or JavaScript coding using text-based programming.

Kids play through different levels of an RPG (role playing game), learning the Python or JavaScript programming language along the way.

The first world that players visit is called Dungeons of Kithgard and the hero is a Medieval warrior called Anya. The player directs Anya down a path toward a gem and away from the spikes along the way in the first game. The player tells Anya where to go by typing lines of code into the screen then running the program.

After successfully completing a level, the player moves up to more complex tasks and coding. Once all the challenges are completed in this world, the player moves on to another world and a new, more complicated set of challenges.

Code Combat requires the player be able to read and type, though some code can be chosen by clicking on it in a drop-down menu.

Code Combat developers help teachers use it in their classrooms by providing course guides and wikis. A Course-in-a-Box containing a semester's course content is promised in future.



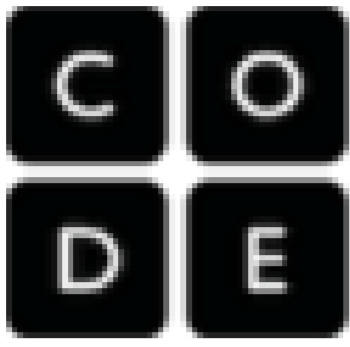
3. Code Monkey

<https://www.playcodemonkey.com/>

For ages 9+. Annual subscription fee.

Code Monkey teaches computer program through online games. Starting with helping a monkey gather bananas, the player works through a series of challenges and eventually learns enough code to be able to build his or her own game. Using a text-based editor, the player learns CoffeeScript, a language that uses a syntax that is similar to written English but compiles into JavaScript.

The teacher's subscription includes access to 32 lesson plans, three challenge workshops, and access to an online Google group.



4. Code.org Studio

<https://studio.code.org/>

For ages 4-14. Free.

Code.org Studio presents a series of four courses that teach computer science fundamentals. At the end of each course, students are able to create interactive games or stories for sharing online.

Each course is made up of a series of puzzles, videos, and activities that teach the principles behind computer science. Course 1 is for early readers (age 4-6) and can be skipped if your child is already reading proficiently.

Even though the later courses use the block-based approach for programming activities, students can choose to see the text-based code that is generated. Taken together, this series of four courses make up a curriculum that has been organized for use in the classroom and is aligned with ISTE standards



5. Kodable

<https://www.kodable.com/>

For ages 4-11. The basic curriculum is free. A parent plan, available for a flat fee, includes an advanced curriculum and access on any device.

Kodable teaches computer science fundamentals through a kid-friendly, self-directed lessons.

Starting with games at the Kindergarten level, the student progresses to reading and writing JavaScript. Organized as a classroom curriculum, each unit includes a teacher's script, an unplugged activity, an independent practice activity, and some kind of assessment or quiz. The lessons are designed to take about 30 minutes to complete.



6. Scratch

<https://scratch.mit.edu/>

For ages 8-16. Free.

Scratch is a programming language used to create stories, games, and animations. Kids learn Scratch by building projects and sharing them in the Scratch online community.

Scratch was developed by the Lifelong Kindergarten Group at the MIT Media Lab. Even though it was designed to be a stepping stone to more advanced programming languages, students have used Scratch to create animations for classroom projects in science and math.

Inside the Scratch website there's a step-by-step guide to help those starting out. And the help page includes links to the printable Get Started Guide, video tutorials, and starter projects.

For those who want to use Scratch offline, an offline editor can be downloaded and installed on your computer.



7. Tynker

<https://www.tynker.com/>

For ages 4-14. A sampling of coding lessons is available at Tynker for free. Access to the complete library and a private Minecraft server requires a monthly subscription.

Tynker is a self-paced online programming course for kids. Kids can learn to build their own games and apps, as well as learn how to program Minecraft mods.

The programming courses are game-based and space-themed with space aliens and rocket ships. Kids progress through three levels of games/classes for the track that matches their age.

A collection of courses related to the popular Minecraft game teaches kids about mods and skins, how to create mods, and how to build multi-player Minecraft games. With a paid subscription, kids have access to their own private Minecraft server, providing a safe environment for them to build mods and then play online with their invited friends.

FOR MIDDLE

SCHOOL STUDENTS



8. App Inventor

<http://www.appinventor.org/>

For ages 13+. Free.

The App Inventor site provides access to and tutorials for App Inventor, a visual programming language used to create Android apps.

Originally created by Google, App Inventor makes it possible to program Android apps by moving objects around the screen. This approach is similar to block-based programming.

MIT now hosts App Inventor online, making it available for free. Additionally, the tutorials have been refined for use by teachers and gathered into a Course-in-a-Box that includes video and text-based lessons. The course begins with setting up App Inventor and moves through building progressively more complex Android apps.



9. Code Avengers

<https://www.codeavengers.com/>

For ages 12+. A limited-time free trial or a monthly subscription is available.

Code Avengers presents self-paced, mostly text-based courses. The courses include introduction to coding, introduction to web development, and coding in Python, HTML & CSS, or JavaScript.

Kids work through the lessons, debugging code, and completing challenges before moving to the next lesson. When they hit a snag, kids have access to limited online support. If they still have questions after searching the online support, kids can email technical support for help.



10. Code Monster

<http://www.crunchzilla.com/code-monster>

For ages 13+. Free.

Code Monster is an interactive game that gives kids a place to practice writing JavaScript. It assumes that the user already knows some JavaScript and just needs a place to practice syntax.

Minimal instruction is available on this site. There's a How to Play page, About page, and a FAQ. That's it. The FAQ encourages the student to search for JavaScript tutorials and textbooks elsewhere. The purpose of Code Monster is to provide a fun, immersive platform to practice syntax.



11. CodeWizardsHQ

<http://www.codewizardshq.com/>

For ages 11+. Monthly fee.

CodeWizardsHQ teaches coding principles and practices using a combination of small, teacher-led classes delivered via the internet and student build-as-you-learn projects.

By completing its comprehensive 12-part curriculum students are introduced to HTML & CSS, JavaScript, WordPress, Responsive Design, App Development, Python, MySQL, and Git. Each part takes three months to complete.

Classes meet online weekly for an hour and students work independently or in groups on projects and assignments. Students demonstrate their understanding of coding through building-as-you-learn projects that can be easily shared in the CodeWizardsHQ online community. And every student has direct access to an instructor who is an experienced coder.

Because the instruction and projects are internet-based, students attend CodeWizard from anywhere there is a reliable internet connection. There is no need to drive the student somewhere to attend classes. And students can continue making progress even during holiday travel.



12. GameBlox

<https://gameblox.org/>

For ages 13+. Free.

GameBlox is a block-based programming site for making computer games.

The “Make a Game” button takes the student straight to the code editing screen. Once there, click on the “Help” button at the top of the screen and links to five getting started tutorials appear. Beyond this, the site doesn’t offer any instruction. There is an online forum on the site where questions can be posted. And some video tutorials can be found on YouTube.

The games students make can be played online at the GameBlox site or on a mobile device using the GameBlox app. The app is available for both Android and iOS.



13. Thimble by Mozilla

<https://thimble.mozilla.org/en-US/>

For ages 13+. Free.

Thimble by Mozilla is an online code editor for HTML, CSS, and JavaScript.

Kids learn by doing on Thimble. Lessons are organized into projects. The kids choose between starting a new project or remixing (i.e., making changes to) an existing project.

Once in the project, the screen is split horizontally showing both a preview of the webpage and the code behind it. As the kids update the HTML, CSS, or JavaScript code, they see its effect in the preview screen for the web page. This is the process used to demonstrate how the code works. Projects can also be previewed as they would appear on a desktop screen or a smartphone, adding the concept of responsiveness to the experience. Once complete, a project can be shared online.

Canned remix projects have tutorials embedded in them. Kids can toggle the screen between the project and a tutorial for these project remixes. Otherwise, there is just single FAQ page available as help.

FOR HIGH

SCHOOL STUDENTS



14. Codecademy

<https://www.codecademy.com/>

For ages 13+. Free courses. A PRO track is available for a monthly subscription.

Codecademy offers a comprehensive set of text-based courses on web development and related programming languages.

Aimed at those interested in working as coders, Codecademy courses cover how to make a website and a whole slew of related coding languages, including HTML & CSS, Ruby on Rails, Python, JavaScript, jQuery, SQL, PHP, and more.

For those looking to get their first job as a coder, the final project in the paid PRO track covers how to build an professional online portfolio.

Access to Codecademy courses is free. The paid PRO track adds a personalized learning plan, quizzes, projects, and access to live advisors.



15. Code HS

<https://codehs.com/>

For ages 13+. Limited free trial. Three paid levels.

Code HS delivers a blended learning approach to high school computer science classes.

Using video lessons, coding exercises, and live tutors, Code HS blends online, self-paced classes, quizzes to assess subject mastery, and (with a paid version) access to live tutors.

Courses include two Intro to Computer Science classes, one in JavaScript and the other in Python. The catalog also lists two AP classes: AP Computer Science Principles and AP Computer Science in Java.

A limited free level is available. The three paid levels add quizzes, handouts, lesson plans, various dashboards, and access to live tutors.



16. Code School

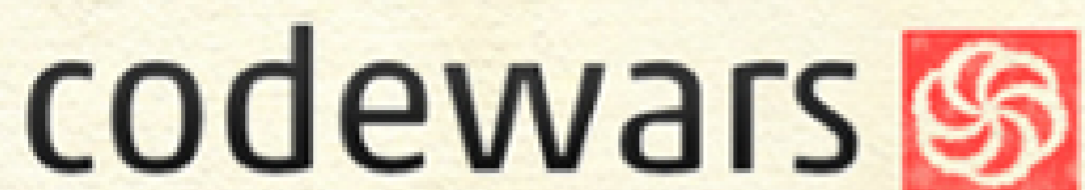
<https://www.codeschool.com/>

For ages 14+. Monthly subscription.

Code School offers one of the largest selections of coding courses online for new and aspiring developers.

Over 50 separate courses are organized into seven paths. Each path covers the fundamentals of a single coding language or topic. The following is a sampling of the courses offered by Code School: Ruby, JavaScript, HTML & CSS, iOS, and databases.

Each course is built around a storyline that gamifies the material taught. Instruction is delivered via video and reinforced through coding challenges. An online community forum addresses students' questions.



17. Code Wars

<https://www.codewars.com/>

For ages 14+. Free.

Code Wars challenges trained coders to pursue mastery by completing coding challenges that are delivered online. Coding challenges are available for CoffeeScript, JavaScript, Python, Ruby, Java, Clojure, Haskell, and C# (Csharp).

In an approach based on the Japanese martial arts practice of kata, the first step in Code Wars is to choose a language and prove your skills. Based on this initial challenge, the coder is ranked and given a challenge. The challenges get progressively more difficult. Honor points are earned for each challenge successfully completed. Earn enough honor points and the coder levels up.

Once a challenge is successfully completed the coder has access to the solutions of other coders who've completed the same challenge. By studying other people's approach new insight into how the code works is gained.



18. Khan Academy – Computer Programming

<https://www.khanacademy.org/computing/computer-programming>

Ages 13+. Free.

Khan Academy – Computer Programming has courses in JavaScript, ProcessingJS, HTML & CSS, HTML & JavaScript and SQL.

Each of these courses presents a comprehensive introduction aimed at building a base for professional level skills. There’s also a section called “Meet the Professional” which contains interviews with 11 computer programmers from around the world working in a variety of industries.

Normally Khan Academy presents its courses via video. For its programming courses it uses “talk-throughs” which are more interactive than a normal video. With a talk-through the student can pause the video and “play” with the code listed on the screen. Talk-throughs are followed by step-by-step coding challenges and projects, both designed as coding practice. Finally, there’s a community programs area (i.e., online forum) where students can share projects, leave comments, and ask questions.

Khan Academy estimates each course will take between 15 and 40 hours to complete. The computer programming courses are most appropriate for high school students and adults, but a tech savvy middle schooler could probably work through them with some mentoring.



19. Vidcode

<http://www.vidcode.io/>

For ages 11+. Limited free access. Tiered annual subscriptions.

Vidcode is a video coding platform aimed primarily at teen girls who want to learn how to code.

Using JavaScript, students learn coding as they produce videos and motion graphics. As they work, students see a thumbnail of the video and code behind it side-by-side. As they make changes to the code they can see the effect in the thumbnail. Once done, video projects can be shared in the Vidcode online community or via social media.

Free access to Vidcode gives access to the software, some beginning tutorials, and an online community. Tiered for-pay annual subscriptions also give access to projects, lesson plans, and curriculum.

ARE YOU READY?

As you can see there are many options when looking for websites that teach coding for kids. Depending on our child's age and interests, the choice is yours..

But you need to consider this also - Does my child have what it takes to learn how to code through online self-study?
Download our checklist and use it to make sure your child has what's needed to succeed at learning to code through online self-study.

CONTACT US

FOR INSTRUCTOR-LED STRUCTURED
CODING CLASSES FOR KIDS

hello@codewizardshq.com

