

## CS & CODE in the Classroom

According to Steve Jobs, "Everybody in this country should learn to program a computer, because it teaches you how to think."

Make list of cool applications and Kahoots

PRECODE CODING unplugged

CS Fundamentals

<https://code.org/curriculum/unplugged>

Blockly

<https://developers.google.com/blockly>

<https://blockly.games>

[https://www.google.com/url?](https://www.google.com/url?sa=t&rct=j&q=&esrc=s&source=web&cd=6&ved=2ahUKEwj_d_KKS187nAh-WIT8AKHeovBw0QwqsBMAV6BAgMEAQ&url=https%3A%2F%2Fwww.youtube.com%2Fwatch%3Fv%3DwDJua9hgyZM&usq=AOvVaw3qjZW7zQrs1ZXMDLXHvWvXG)

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G Suite for Education and Teachers

[https://edu.google.com/products/gsuite-for-education/?modal\\_active=none](https://edu.google.com/products/gsuite-for-education/?modal_active=none)

Google for education:

[https://edu.google.com/why-google/k-12-solutions/?modal\\_active=none](https://edu.google.com/why-google/k-12-solutions/?modal_active=none)

Google tools for teachers:

<https://www.learnersedge.com/blog/7-secret-google-tools-for-teachers>

Grow with google

<https://grow.google/intl/europe/>

<https://github.com/t00sh/tosh-codes>

<https://tosh.blob.codes/help/guide/>

<https://codewizardshq.com/coding-games-for-kids/>

<https://appinventor.mit.edu/explore/ai2/tutorials>

<https://www.youtube.com/watch?v=99jsTm1luw4>

<https://www.youtube.com/watch?v=55On3inoVOU>

<http://www.appinventor.org/content/videosAI1/intermediate/shooter>

[https://appinventor.mit.edu/explore/sites/all/files/hourofcode/BallBounceTutorial\\_2perpage.pdf](https://appinventor.mit.edu/explore/sites/all/files/hourofcode/BallBounceTutorial_2perpage.pdf)

<https://www.codecamp.com.au/blog/8-best-programming-games-for-kids>

<https://code.org/educate/curriculum/elementary-school>

<https://www.mastersindatasience.org/blog/the-ultimate-stem-guide-for-kids-239-cool-sites-about-science-technology-engineering-and-math/>

<https://www.commonsense.org/education/top-picks/best-coding-tools-for-middle-school>

<https://www.tynker.com/support/QuickStartTeacherGuide.pdf>

<https://www.pbs.org/education/blog/bring-coding-to-your-classroom-tomorrow>

Pinterest unplugged coding games

<https://www.pinterest.com/brylar1/computer-coding-unplugged/>

<https://www.youtube.com/watch?v=zT1KeNXHQpE>

<https://www.gettingsmart.com/2013/11/teaching-students-code-powerpoint/>

<http://appinventor.mit.edu/explore/ai2/beginner-videos>

[https://www.google.it/url?](https://www.google.it/url?sa=t&rct=j&q=&esrc=s&source=web&cd=12&ved=2ahUKEwigxaCt2p7nAhXM-DuwKHW6qB-UQFjALegQIBBAB&url=https%3A%2F%2Fcode.org%2Ffiles%2Fcomputer_science_advocacy.pptx&usg=AOvVaw2y0myomFZf-JUQilLWmwKU)

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[https://www.google.it/search?client=safari&hl=en-it&ei=B\\_MqXvmQOI7Xk-wWFjZelBw&q=powerpoint+start+coding+for+the+classroom&oq=powerpoint+start+coding+for+the+classroom&gs\\_l=mobile-gws-wiz-serp.3...3661.8179..8500...1.1..0.199.1560.6j8.....0....1.....0i71j30i10.yKKCcK5Q0o8](https://www.google.it/search?client=safari&hl=en-it&ei=B_MqXvmQOI7Xk-wWFjZelBw&q=powerpoint+start+coding+for+the+classroom&oq=powerpoint+start+coding+for+the+classroom&gs_l=mobile-gws-wiz-serp.3...3661.8179..8500...1.1..0.199.1560.6j8.....0....1.....0i71j30i10.yKKCcK5Q0o8)

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<https://edu.google.com/code-with-google/>

<https://www.engadget.com/2019/07/08/code-with-google-helps-bring-coding-into-the-classroom/>

[https://edu.google.com/code-with-google/?modal\\_active=none&story-card\\_activeEl=enhance-any-subject#explore-all](https://edu.google.com/code-with-google/?modal_active=none&story-card_activeEl=enhance-any-subject#explore-all)  
<https://learn.skillcrush.com/classes/skillcrush-free-coding-camp/>

## STEM Fun for Kids Grades K-12 ↑

### Cool STEM Websites

- **Ask Dr. Universe**: Washington State University's Ask Dr. Universe allows kids to explore various STEM topics and get answers to common questions. Have a question not covered on the site? Submit it on their "Ask" page!
- **Code.org**: No one is too young (or old, I might add) to code. Learn how to build an iPhone game, write your first computer program, draw in JavaScript and much more.
- **Engineering, Go for It! (eGFI)**: Discover the nuts and bolts of engineering. This website contains advice on careers, entertaining info on all kinds of fields and links to the eGFI magazine.
- **EPA Students**: Searching for news on the environment, homework resources, info on contests or ideas for an environment-based school project? Check out this website run by the Environmental Protection Agency.
- **Exploratorium**: One of my favorites. The website of the San Francisco-based Exploratorium is jam-packed with interactive activities, videos, apps, links and more.
- **Extreme Science**: Extremely interesting. Here you'll find wild and weird facts about nature, resources for science projects and info on all kinds of world records.
- **How Stuff Works**: I visit this website every day. It has hundreds upon thousands of articles that explain the wonders of science (and almost everything else on the planet).
- **Museum of Science + Industry Chicago Online Science**: Apps and activities and videos, oh my! Play games, watch baby chicks hatching, create virtual chemical reactions or use forensic science to analyze different types of candy.
- **NASA Education for Students**: Career information, image galleries, NASA Television, features and articles ... whatever you'd like to know about aerospace, you're sure to find it here.

- **NASA Science, Engineering, Mathematics and Aerospace Academy (SEMMAA)**: SEMMAA was developed to increase the participation of historically underserved K-12 youth in STEM fields. School activities and summer sessions are held throughout the nation.
- **NOVA**: The website for PBS's popular science show is overflowing with videos and articles. Explore the wonders of evolution, nature, physics, math—practically any STEM subject that rings your bell.
- **Science Buddies**: Get stuck on science. This website has over 1,000 ideas for science fair projects, project guides, project kits and detailed profiles of STEM careers.
- **Science Channel**: Question everything. Along with a rundown on the Science Channel's TV programs, this website has plenty of videos, quizzes, games and the latest science news.
- **STEM-Works**: In addition to articles and job information, STEM-Works has stocked their site with interesting [activities](#). Test your skills in the reptile quiz. Rescue an athlete in the Bionic Games. Or, simply follow the path of great whites with the Global Shark Tracker.
- **TechRocket**: A year-round online learning destination for kids and teens. Use the promo code "MIDSFREE" to get a free first month!
- **Tynker**: A computing platform that allows children to develop programming skills through fun, creative courses. Join the millions of kids from around the country learning to code with Tynker!
- **Khan Academy**: Khan Academy breaks down complex topics on a range of subjects including programming, math, and statistics! It has learning resources in almost all STEM subjects K-12.
- **Flite Test STEM**: Flite Test provides K-12 students with a variety of easy to download, free lessons that teach students about STEM through aviation activities.
- **HOODA MATH**: HOODA MATH is a website for math games divided by subject. Students K-12 and math lovers of any age can learn about numbers while having fun.

### STEM Challenges and Contests

- **Siemen's We Can Change the World Challenge**: You have the power to save the planet. In Siemen's K-12 environmental sustainability competition, teams from across the country compete to improve their own communities. Lots of prizes.
- **Toshiba/NSTA ExploraVision**: ExploraVision is a K-12 science competition with a difference. Teams of two to four students work with a teacher to simulate the challenges of real research and development.

### STEM Awards

- **The Gloria Barron Prize for Young Heroes**: This annual prize honors 25 outstanding young leaders (age 8 to 18) who have made a significant positive difference to people and/or the environment. The top 10 winners receive a \$5,000 cash award to support their education.

- [The NEED Project's Annual Youth Awards Program for Energy Achievement](#): NEED's annual award was established to recognize K-12 students who achieve excellence in energy education in their schools or communities.
- [President's Environmental Youth Awards](#): The PEYA program celebrates K-12 students, school classes, summer camps or youth organizations that are promoting environmental stewardship. Every year, one outstanding project from each region is selected for national recognition.

### STEM Career Resources

- [Bureau of Labor Statistics K-12](#): The U.S. Department of Labor has been busy. Here you'll find charts, maps and many other resources on careers and the U.S. economy.
- [WeUseMath.org](#): Ever wondered (as I frequently did) when you're going to use math in real life? This website on math careers has more than a few answers.

### Government STEM Initiatives

- [Educate to Innovate](#): Launched in 2009, Educate to Innovate aims to move U.S. students from the middle to the top of the heap in science and math achievement. It's spawned a number of federal efforts and philanthropic initiatives (see below).
- [STEM AmeriCorps](#): This multi-year initiative is focused on placing AmeriCorps members in STEM non-profits (such as FIRST) to work in underserved communities.
- [White House Science Fair](#): At this science fair, the President serves as the host! Students are honored for innovative projects, designs and experiments while the White House streams the event live.
- [Women in STEM](#): In collaboration with the White House Council on Women and Girls, the Office of Science and Technology Policy (OSTP) has instigated a number of efforts to increase the participation of girls in STEM subjects.

### Philanthropic STEM Initiatives

- [Change the Equation](#): Led by CEOs, this nonprofit seeks to mobilize the business community to improve the quality of STEM education across the U.S.
- [Connect a Million Minds \(CMM\)](#): Sponsored by Time Warner Cable, CMM is a five-year, \$100 million philanthropic initiative that aims to inspire students to develop STEM skills.
- [US2020.org](#): The ultimate aim of this nonprofit is to mobilize one million STEM mentors annually by 2020.
- [Youth Inspired Challenge \(YIC\)](#): Created by the Association of Science-Technology Centers (ASTC), YIC is designed to expand the impact of STEM learning outside the classroom.

[STEM Fun for Elementary School Kids](#) ↑  
[Cool STEM Websites](#)

- Funology**: At Funology, science is bound to get interactive. Make a tornado with water. Build a Jurassic Park terrarium. Or, simply torment your siblings with endless jokes about bugs and insects.
- Helping Your Child Learn Mathematics**: Your parents might be interested in this. Curated by the U.S. Department of Education, this website contains math activities (to be completed at home, at the store and on the go) for preschoolers and elementary kids.
- Kids Do Ecology**: Every kid should be an ecological hero. Learn about biomes, blue whales and data collecting. You can even create your own classroom experiment. Available en Español.
- Kids.gov**: From imaginary jungles to ion experiments, Kids.gov has plenty of resources for a rainy day. Watch an animation on thunder and lightning or take a virtual field trip to the National Zoo.
- The Kids' Science Challenge (KSC)**: Hands-on science activities, games, cool videos, scavenger hunts ... this website is full of fun stuff. KSC also hosts a free, nationwide science competition for students in grades three to six.
- NASA Kids' Club**: At NASA Kids' Club, it's perfectly okay to fool around in space. You can use your science and math skills to explore Mars, construct a fleet of rockets or search for NASA spinoffs in your garage.
- NASA Space Place**: Build your own spacecraft, play space volcanoes or browse through a gallery of sun images. When you're at the Space Place, the universe is the limit.
- National Geographic Kids**: Which do you think is cuter: the puffer fish or the clown fish? On this website, you can vote in polls, take part in experiments, watch videos, play puzzles and learn amazing facts.
- Weather Wiz Kids**: Meet meteorologist Crystal Wicker. She's put together a website that explains everything about the weather. Find fun facts, games, flashcards and photos, plus get answers to your meteorological questions.
- TechRocket**: Learn programming languages, graphic design in Photoshop, and more! Use the promo code "MIDSFREE" to get a free first month!
- Carnegie Cyber Academy**: The Carnegie Cyber Academy has interactive games that teaches kids proper safety while browsing the internet.
- Wonderville**: Wonderville has it all – science experiments, comics, videos, activities on topics such as solar energy and aerial fire-fighting.
- Kinder Care Learning Center**: Kinder Care Learning Center is focused on providing continuous education to those curious minds during winter and summer break.

#### PBS Kids

- Cyberchase**: Help Jackie, Matt and Inez use math to protect the digital universe from evil. Don't worry: Cyberchase has lots of math games, videos and activities to aid you in your quest.

- **Design Squad Nation**: Design anything (!) your mind might imagine. Through Design Squad challenges, videos and tutorials, you'll discover all there is to know about engineering principles.
- **The Cat in the Hat Knows a Lot About That!**: Pre-K STEM games, activities and videos galore. The adventurous Cat in the Hat is even ready to lead you on an exotic math safari adventure
- **Lifeboat to Mars**: Explore the world of biology with this free online game. In one simulation (Microland) you control hungry microbes. In another (Ecoland), you have to balance out the space station's ecosystem.
- **Zoom**: Hot science and cool ideas. You'll find all kinds of activities and experiments on Zoom's website, including things like lemon juice rockets, crazy straw bridges and bubble cities.
- **Design Squad Global**: Want to participate in cool scientific challenges, play games and watch fun videos? Check out Design Squad Global.

#### Science Games and Apps

- **Amazing Alex App**: Amazing Alex has a lot of crazy physics challenges in need of your inventive solutions. You can even build and create your own. Brought to you by the creators of Angry Birds.
- **Angry Birds Space App**: Those whacky (and wildly successful) birds are now playing their physics puzzles in space, where gravity does some pretty strange things!
- **Every Body Has a Brain!**: Plunge headfirst into your amazing brain with songs, animations and mini-games. The complete game is available for purchase as a CD-ROM or digital download.
- **Geo Walk: 3D World Factbook App**: Geography nuts rejoice! This educational app contains pictures and facts on hundreds of places, plants and animals.
- **Kinectic City**: An amazing collection of science experiments, games, activities and challenges. You might choose to run the blood cell relay race or use a computer model to build your own interstellar slush business.
- **Max and the Magic Marker App**: In this fun physics-based game, you're in complete control of Max and his incredible magic marker. There are 15 puzzle levels, with challenges, secrets and rewards in each.
- **Move the Turtle: Programming for Kids App**: You don't have to be a computer genius to code! With this app, any kid can learn the ABCs of programming in a graphic environment.
- **Seasons! App**: Everywhere you go, always take the weather with you. In this app, you'll learn how to identify various weather situations in different seasons. For kids age 3 to 6.
- **Sid's Science Fair App**: Sid from PBS' "Sid the Science Kid" has three science games for your entertainment pleasure: Gabriela's "Collection Inspection," May's "Chart It!" and Gerald's "Time Machine." For kids age 3 to 6.

- Team Umizoomi**: The cheerful animated characters from Nick Jr.'s TV program offer lots of math games and activities for preschoolers.
- Chicago Museum of Science and Industry – Experiment**: Experience and learn science through interactive mobile apps and get hand-ons science activities you can try at home.

### Math Games and Apps

- Geometry Quest App**: Travel the world by solving geometry challenges along the way. You'll receive passport stamps for perfect quests. Covers Common Core standards 3MD, 3G, 4MD, 5G, 6G, 7G and 8G.
- Math Blaster**: Do you have what it takes to save the galaxy? You're going to need your math skills to complete your training missions in this free on-line game.
- MathBoard App**: One for the parents. This useful app walks kids through the steps to solving addition, subtraction, multiplication and division equations. There's a handy scratchboard area where kids can work problems out by hand.
- Motion Math: Pizza! App**: Pizza, pizza! In this math-based game, you buy ingredients, design signature pizzas and sell them to customers (hopefully at a profit).
- Motion Math: Questimate! App**: How fast is the world's fastest train? How many jellybeans fill up a soccer ball? In Questimate!, you get to make up your own questions.
- Mystery Math Town**: Your mission, should you choose to accept it, is to rescue the fireflies hidden in Mystery Math Town. Be warned: you'll need your math skills to unlock all the rooms and passages on your quest!
- Numbers League**: In the Numbers League, only math can save the day. You'll use everything from addition to negative numbers to assemble a team of superheroes and capture a horde of villains.
- Umigo**: Bored with everything? The crazy characters at UMIGO might have the answer. Their interactive games are just right for building math and critical thinking skills.
- Brain Pop Jr.**: Do you like mathematics? Want to be able to calculate numbers quickly? Brain Pop has all the tips and tricks to get better with numbers.
- CoolMath4Kids**: Cool4Math is a great resource for kids who love playing games. It combines education with gaming, to deliver extra mathematical fun.
- Fun Brain**: Funbrain is sorted by grade type, it's for kids in grades pre-k through 8th grade. It has every mathematical resource your kids need.

### STEM Contests

- Junior FIRST® LEGO® League**: Are you a LEGO® fiend? Then this is the contest for you. You'll use LEGO® bricks to design and build a moving model; then, you'll assemble a Show Me poster to showcase your solution. For kids age 6 to 9.



- **NSBE KidZone Elementary Science Olympiad**: Collect a team and test your science skills in 18 different events at the National Society of Black Engineers (NSBE) National Convention. Open to grades three to five. Those in kindergarten through second grade compete in a non-competitive league.
- **Perennial Math Tournaments**: A virtual math tournament (via videoconferencing) for both teams and individuals. Open to grades three to eight.

#### STEM Camps

- **Audubon Nature Camps**: Audubon offers a ton of Nature Camps throughout the country. Beginning in April, they start taking applications for [Wild Birds Pathways to Nature](#).
- **Camp Invention**: Daydreams become discoveries at this summer day camp. Created by the National Inventors Hall of Fame, Camp Invention presents essential STEM concepts through creative hands-on activities.
- **Cosmophere Camps**: To infinity and beyond! These cool flight and space adventure-themed camps take place at the Smithsonian-affiliated Kansas Cosmophere and Space Center (KAOS) in Hutchinson, Kansas.
- **Destination Science Camp**: Spend a week this summer creating robots, building a digital music system, training an electric-powered chameleon or even preparing for a mission to the moon! Held at 130 locations in six states.
- **Digital Media Academy Adventures Camp**: Digital Media's award-winning camps cover everything from cartoon creation to computer programming to advanced robotics with LEGO® EV3. For kids age 8 to 12.
- **Engineering for Kids**: Engineering for Kids is an education company for kids age 4 to 14. It offers a variety of STEM programs, including in-school field trips, birthday parties, workshops and camps.
- **iD Tech Camps**: The sky's the limit at iD Tech's day and overnight camps. Make your own video game, program your own app or even code in Java.
- **KinderCare® Summer Camps**: From the wacky wet science of water to the basics of surviving in the wilderness, KinderCare offers a variety of programs for pre-K through school-age kids.
- **Science Explorers**: Sharks and submarines, potions and slime, castles and catapults .. whatever you love, these science summer camps have just the activity for you. Offered in Pennsylvania, New Jersey and Delaware.
- **Snapology**: Snapology partners with schools around the country to offer STEAM programs, contests, and camps. The programs are interactive, which allows kids to learn through hands-on instruction and play. Programs are offered in a number of different formats, including after school, on weekends, and over the summer.
- **Vision Tech Camps**: Vision Tech offers camps for kids ages 7-17 in the San Francisco Bay Area. Camp topics include robotics, programming, minecraft, and more.

- **Youth Digital Summer Camps:** Design 3-D models for Minecraft, create your own video game or even direct a 3-D animation! These camps focused on digital technology are held in various southern cities. For kids age 8 to 16.

#### STEM Career Resources

- **Career Aisle: Elementary:** Dreaming about what you want to be when you grow up? These videos about jobs in science, technology, engineering and math can help you decide.

Note: There are plenty of state and regional organizations that didn't make it onto this list. If you're interested in local camps, scholarships and after-school activities, check with your teachers and school.

<https://www.edutopia.org/topic/coding-classroom>

### **CODING IN THE CLASSROOM**

#### How to Get Started Teaching Coding

A three-step plan to help teachers in any subject and any grade teach the foundations of coding.

By [Jorge Valenzuela](#)

November 6, 2019

alvarez / iStock

I first learned about coding and computer science (CS) in college about 20 years ago. Looking back, not much has changed in the [foundational concepts or core practices](#) in CS. What has changed is who can teach it and where it can live in the curriculum—today educators in any subject can teach coding. For example, an English language arts teacher may teach a lesson that helps students make connections between [coding with proper syntax and writing with correct grammar](#). An early elementary teacher may set up a project where a programmed robot travels on a floor map so that students can begin to comprehend how their lives relate to a broader community and the larger world.

Many teachers are looking for creative and practical ways to teach coding and programming. Although the two terms are often used interchangeably, there is a difference between them. Coding is typing and testing—writing code—and a coder translates a list of requirements into a programming language like Java, Python, C++, etc. Programming is broader, involving coding as part of a larger process: identifying a problem, finding the solution, coding the solution, and then testing the solution. This process requires the programmer to understand algorithms and data structures, among other things.

Teachers preparing students in this set of skills will need to get them grounded in the basics and will need to use appropriate edtech in tandem with good teaching practices. Here's how to start in three steps.

#### **STEP 1: GET STUDENTS GROUNDED IN CORE CODING CONCEPTS**

Every language—spoken or written—has a grammar, a set of principles that define parameters for constructing a sentence or successive sentences. Similarly, coding requires coders to be able to understand and implement fundamental coding concepts using the [appropriate syntax](#) (grammar). This is a requirement, no matter the programming language.

Critical coding concepts include inputs and outputs, [loops](#), [functions](#), [conditional statements](#), and [variables](#).

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## STEP 2: PICK THE RIGHT TOOL FOR THE JOB

The resource you use to teach coding will need to augment your instruction, taking students beyond following step-by-step directions. Moreover, it will need to get them grounded in the core coding concepts mentioned above and allow them to see the effects of each line of code executed in real time. That will provide them with moments of success, creating confidence and a willingness to tackle more complex coding tasks.

These tools come with curriculum resources that you can adapt to your coding lessons:

- Code.org: [Intro to Programming](#), part of the [CS Principles Curriculum Guide](#), lets you adapt lessons to help students learn programming basics by applying algorithms and abstraction to draw pictures.
- littleBits Code Kit: The [Code Kit](#) offers a comprehensive solution for teaching kids to design their own games and physical inventions. It comes with over 20 hours of adaptable standards-based lessons, videos, presentation slides, an inventor log, rubrics, and code tutorials addressing key coding concepts in tandem with game-based coding.
- Scratch for Educators: With a plethora of [resources and tutorials](#), the Scratch platform provides teachers with tools for coaching students in programming interactive stories, games, and animations.

## STEP 3: USE THE WORKSHOP MODEL

Most likely, all of our students will not be coding at the same level. Once we know the basics of coding and have a resource for teaching, it's important to employ sound teaching strategies to reach them all.

For this purpose, I like to use the [Workshop Model](#) (WM) developed by Carmen Fariña and Lucy Calkins. The WM structure allows me to organize and monitor learning while helping my students become more responsible for their own mastery as they build competence in coding. Engaging them in this structure also leads to increased confidence and willingness to extend their presumed capabilities for the multilayered skill of coding.

In my adaptation of the WM, I conduct mini-lessons and allow groups of students to create programs and build their coding skills with appropriate activities for their varied levels. Teachers can facilitate learning for learners new to

coding by having them participate in the following [station rotations](#) within the WM structure:

- Coding with the teacher: For learners who are very new, having me model and coach by their side gives them the confidence that they too can code their first program.
- Pair programming: [Pair programming](#) (PP) is a strategy used by software developers and students in CS classes for learning collaboratively and completing big and complex projects. When both partners are newbies, the PP strategy has potential pitfalls, so be sure to provide rubrics and make time for frequent teacher check-ins and student reflection.
- Learning core concepts using personalized tutorials: As students gain more confidence with both the core concepts and edtech, I allow them to build further mastery independently by using tutorials that address specific coding skills (i.e., loops, functions, etc.). Again, have them use rubrics and provide frequent check-ins.

Coding is a multilayered skill that requires time, patience, effective use of edtech, and sound strategies for achieving mastery. Moreover, creating a computer scientist could take [up to 25 years](#)—it cannot happen in one class, lesson, or semester. Therefore, focus your teaching on the basics, building student capacity and getting them where they need to be, which is the rigor level appropriate to their current understanding and grade level

<https://blog.upperlinecode.com/top-10-tips-for-your-first-year-teaching-computer-science-7225d57c65e5>

AWARD certificates

[https://www.educationworld.com/tools\\_and\\_templates/award-certificate-templates](https://www.educationworld.com/tools_and_templates/award-certificate-templates)

BLOCKLY

<https://blockly.games/>

Coding vocabulary

<https://code.org/curriculum/docs/k-5/glossary>