

# Code.org Computer Science Fundamentals



**Why Computer Science?** Every 21st-century student should have the opportunity to learn computer science. The basics help nurture creativity and problem-solving skills, and prepare students for any future career.

## Why teach computer science in elementary school?

Code.org has developed elementary school curriculum that allows even the youngest students to explore the limitless world of computing. Courses blend online, self-guided and self-paced tutorials with “unplugged” classroom activities that require no computer. Each course consists of 20 lessons.

## High-quality, professional development workshops, free of charge

Code.org is hosting no-cost, one-day workshops for K-5 educators interested in teaching computer science. Workshops will cover courses 1-4 and offer supplies needed to teach the courses.



**Thousands of teachers have participated. They rate our workshops 4.8 on a 5 point scale. The majority say, “It’s the best professional development I’ve ever attended.”**



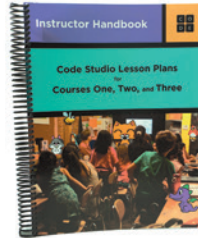
“I can’t think of anything that would improve this workshop. The workshop facilitator was very professional. This is by far the BEST workshop I’ve ever attended!”



“This will totally change my curriculum. I love how the lessons are prepared and aligned to the Common Core and Next Generation Science Standards.”

## What's in a workshop?

In-person instruction from an experienced computer science facilitator, including an intro to computer science, pedagogy, overview of the online curriculum, teacher dashboard, and strategies for teaching “unplugged” classroom activities.



## What you'll receive (at no cost)

- Printed curriculum guide
- Certificate of completion
- Classroom supplies for the unplugged lessons
- Fun Code.org swag

## Code.org's Computer Science Fundamentals consists of 4 courses

| Course 1:<br>Early readers  | Course 2:<br>Beginners, readers  | Course 3:<br>Prerequisite Course 2   | Course 4:<br>Prerequisite Course 3  |
|---|--|--|---|
| <b>Ages 4-6</b> <ul style="list-style-type: none"><li>• Sequences</li><li>• Loops and events</li><li>• Meaningful collaboration with others</li><li>• Problem-solving and perseverance techniques</li><li>• Internet safety</li></ul> | <b>Ages 6+</b> <ul style="list-style-type: none"><li>• Conditionals</li><li>• Algorithms</li><li>• Binary code</li><li>• Debugging</li><li>• Societal impacts of computing</li></ul> | <b>Ages 6+</b> <ul style="list-style-type: none"><li>• Problem decomposition</li><li>• Functions</li><li>• Nested loops and conditionals</li><li>• Digital citizenship</li><li>• Internet transmission methods</li></ul> | <b>Ages 10+</b> <ul style="list-style-type: none"><li>• Algorithmic problem solving</li><li>• Abstraction</li><li>• Variables</li><li>• For Loops</li><li>• Functions with Parameters</li><li>• Binary code</li></ul> |

By the end of each course, students can create interactive games or stories they can share with anyone. The lessons align to CSTA Computer Science and ISTE standards, and reinforce concepts and skills taught in other subject areas by integrating national Math, English Language Arts, and Science standards.

**To find a workshop visit: <http://code.org/csfundamentals>**



“The facilitator’s passion for the content of this workshop was contagious. I learned a great deal and feel empowered to share this learning with students.”

**Code.org** is a 501(c)3 non-profit dedicated to expanding participation in computer science education by making it available in more schools, and increasing participation by women and underrepresented students of color. The Code.org vision is that every student in every school should have the opportunity to learn computer programming.

