

# Let's Learn Computer Science 2



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## Unit Summary

This is Course 2 of a three-course set developed by Code.org intended to give elementary school students an engaging hands-on introduction to computer science. Course 1 is aimed at early readers, generally in the K-2 grades. Teachers of students who can read and have no prior programming experience may elect to begin with Course 2. Course 2 is a prerequisite for Course 3. Each course employs a spiraling curriculum, where concepts are introduced and later revisited, delving deeper.

All three courses in the set utilize a blend of brief (1-2 minute) video introductions, teacher-led classroom activities, and hands-on exercises where students are expected to use the programming concepts to solve problems and create things, such as an interactive game, a drawing, or a story. Students can share their creations with their friends. Each course comprises 18 or so lessons, and each lesson requires roughly 25 to 45 minutes to complete. The lessons can be introduced by the teacher with the included teacher notes and prep videos. Also included are assessment plans and mapping to USA and international standards.

Course 2 introduces students to a few key concepts in computer programming, such as sequences, loops, conditionals, and events, as well as the concepts of algorithms, debugging, and relay programming. The students work in small groups and learn to collaborate to solve challenging problems. The course includes a lesson on the societal impacts of computing and the consequences of creating our own digital footprint.

## At a Glance

- **Grade:** K-2, 3-5
- **Subjects:** Math, Arts, English Language Arts
- **Topics:** Computer Science, Engineering, Design
- **Higher-Order Thinking Skills:** Creativity, Collaboration, Persistence, Problem Solving
- **Key Learnings:** Computer programming concepts, vocabulary, collaboration
- **Content Type:** Unit Plan
- **Time Needed:** 19 lessons, each 25-45 minutes. May be done on consecutive days or over 19 week period
- **Prerequisites:** Ability to read
- **License:** Read about the license and what you can do with this material [here](#).

## Learning Outcomes

- Students should gain an understanding of basic computer programming concepts, such as sequences, loops, conditions, and events.
- Students should experience meaningful collaboration with other students.

- Students should learn problem solving and techniques for persevering through difficult challenges.
- Students should learn about how their online activities can create a digital footprint and what the consequences of that footprint might be.

### **Things You Need**

Computer with internet connection

This course requires students to use a computer or tablet with an internet connection. Students may work independently on the hands-on activities, but we recommend they work in pairs or threesomes to learn to collaborate to solve the challenges. The course utilizes YouTube to embed the instructional videos. If YouTube is blocked at your school, Code.org will attempt to play the video content through its own hosted non-YouTube video player. Additional IT help [here](#).

Link to the Unit Plan: <https://studio.code.org/s/course2>

Students learn computer programming skills, and then put those skills to the test solving real problems and creating games, art, and stories they can share.