

Computer Science Explorations 2 Syllabus

Upper Middle School - 50 hours

Course Overview and Goals

CodeHS takes a modular approach to middle school curriculum, where each module contains about 10 hours of content and introduces students to a specific topic within the field of computer science. Designed specifically for middle school students, students will explore topics in a variety of engaging and interactive ways.

The Computer Science Explorations 2 course is an introductory course for upper middle school students. It is great for students who are completely new to coding or for students who are continuing on their coding journey. The five modules in this course are stand alone modules, and they can be taught in any order.

Prerequisites: We recommend that students complete CS Explorations 1 before completing CS Explorations 2. However, CS 2 includes optional introductory materials to support students who have not had the opportunity to complete CS Explorations 1.

This course is the second course in the **CodeHS Middle School Pathway**:

6th	Computer Science Explorations 1
7th	Computer Science Explorations 2
8th	Python Basics with Tracy 1 and 2

Learning Environment: The course utilizes a blended classroom approach. The content is a mix of web-based and physical activities. Students will write and run code in the browser, create websites and digital presentations, complete interactive activities online, and engage in in-person collaborative exercises with classmates. Teachers utilize tools and resources provided by CodeHS to leverage time in the classroom and give focused 1-on-1 attention to students.

Technology Requirements: To complete all activities and exercises in this course, students must have access to the 3rd party sites and tools listed here: [Computer Science Explorations 2 Course Links](#)

Module Overviews

Module	Description	Overview Video Link
Exploring Code with Karel	Students learn the basics of programming by giving Karel the Dog commands in a grid world.	Exploring Code with Karel Overview
Exploring the Internet	Students learn about network protocols and different strategies used to protect online information.	Exploring the Internet Overview
Exploring Web Design	This module introduces students to the basics of designing web pages. Students will learn HTML and CSS.	Exploring Web Design Overview
Exploring Art with Code	Students explore the intersection of art and technology by creating art programs using p5.js.	Exploring Art with Code Overview
Exploring Game Design	Students learn the basics of video game design elements, game mechanics, sprite and world design, and game programming.	Exploring Game Design Overview