South Carolina 3rd Grade Computer Science and Digital Literacy Course Syllabus

One Year for Elementary School, 19 Hours

Course Overview and Goals

The **South Carolina 3rd Grade Computer Science and Digital Literacy Course** introduces students to foundational programming concepts through **CodeHop**, a block-based programming language. Students explore digital literacy and computer science skills while engaging in lessons that integrate coding into math, science, English language arts (ELA), and social studies. This course emphasizes creativity, collaboration, and real-world connections, providing students with a strong foundation in both academic content, digital literacy, and computer science.

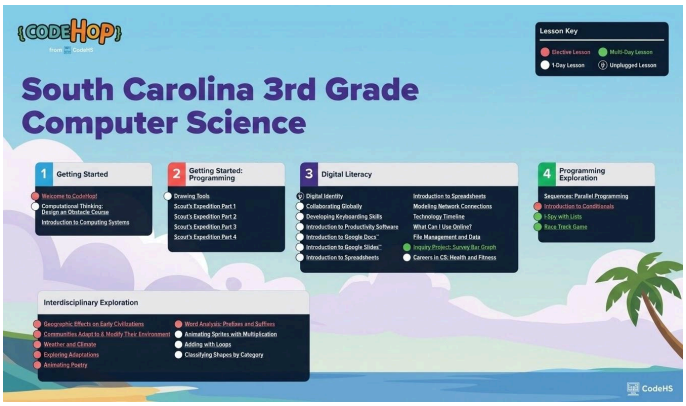
Learning Environment: This course is designed to be teacher-led, with ready-to-use lesson plans that follow a structured format: **Introduction, Guided Practice, Independent Practice, Extension, and Reflection**. Lessons are built with spiral review to reinforce key concepts and culminate in engaging projects to showcase student understanding.

The lessons are delivered in an **"I do, we do, you do"** format, ensuring a gradual release of responsibility and fostering confidence in students as they learn. Teachers can adapt the content to fit their schedule and instructional needs. The concepts taught in this course spiral across grade levels, ensuring that students can revisit and build upon their understanding year after year, even if all lessons are not completed within a single year. The course includes a total of **19 standards-aligned lessons** and **17 exploration lessons,** each approximately 45 minutes long. This provides a full school year of material if teaching one lesson per week.

Programming Environment: Students will write and run programs in **CodeHop** embedded and saved in students' accounts. The environment supports interactive, hands-on programming, enabling students to create and debug projects in a user-friendly interface.

Prerequisites: There are no prerequisites for this course. It is designed to support all learners, regardless of prior computer science experience.

More Information: Browse the content of this course at https://codehs.com/course/27367/overview



A clickable PDF can be found at https://codehs.com/SCRoadmap

Course Breakdown

Unit 1: Getting Started (3 lessons)
Students learn how to log in and navigate the CodeHop Playground to begin coding activities confidently.

Objectives / Topics Covered	● Logging into CodeHop ● Navigating the CodeHop Playground ● Identifying basic computer components ● Solving simple hardware/software issues
Lessons	**Welcome to CodeHop! (optional)** ● Learn how to log in and navigate the CodeHop Playground. **Computational Thinking: Design an Obstacle Course** ● Use computational thinking to design an obstacle course by identifying patterns, sequencing actions, and breaking tasks down. **Introduction to Computing Systems** ● Identify parts of a computer system and solve simple hardware and software issues.

Unit 2: Getting Started: Programming (5 lessons)
This module introduces essential computer skills, such as foundational programming ideas and beginning to write simple code.

Objectives / Topics Covered	● Introduction to basic programming concepts ● Creating sprites and simple animations ● Using sequences, loops, and events ● Building confidence with beginner coding
Lessons	**Drawing Tools** ● Create customized sprites and backdrops using drawing tools. **Scout's Expedition Part 1** ● Use basic commands to make a sprite move and talk in a story-driven activity. **Scout's Expedition Part 2** ● Add sprites and create a sequence to animate the next part of the ongoing story. **Scout's Expedition Part 3** ● Animate a Scout story using loops, events, looks, and motion blocks. **Scout's Expedition Part 4** ● Continue building the animated Scout story using events, looks, and motion blocks.

Unit 3: Digital Literacy (15 lessons)
This module develops students' digital literacy by teaching positive online behavior, the impact of technology, productivity tools (word processing, spreadsheets, presentations), Internet communication, research skills, and basic data concepts.

Objectives / Topics Covered	● Understanding online identity and safety ● Collaborating and communicating digitally ● Using Docs, Slides, and Sheets ● Practicing typing skills ● Researching online and citing sources ● Managing files and basic data concepts ● Understanding networks and technology impacts
Lessons	**Digital Identity**

	● Connect real-world identity with online identity and recognize actions that shape a positive digital footprint. **Collaborating Globally** ● Collaborate digitally with others to improve a program. **Developing Keyboarding Skills** ● Practice proper finger placement while typing paragraphs. **Introduction to Productivity Software** ● Compare and choose appropriate software tools for different computing tasks. **Introduction to Google Docs™ (Microsoft version available)** ● Edit and format text in Google Docs. **Introduction to Google Slides™ (Microsoft version available)** ● Create an "All About Me" presentation using Google Slides. **Introduction to Google Sheets™ (Microsoft version available)** ● Enter, organize, and visualize data in a spreadsheet. **Modeling Network Connections** ● Model how messages move between devices and how data travels across a network. **Technology Timeline** ● Create an interactive timeline showcasing major developments in music player technology and their cultural impact. **What Can I Use Online?** ● Search for information online and provide proper attribution to sources. **File Management and Data** ● Explain how digital data varies in size and where different types of files are stored. **Inquiry Project: Survey Bar Graph (2 classes)** ● Follow the inquiry process and update a program to display survey results in a bar graph. **Careers in CS: Health and Fitness** ● Explore how coding supports the health and fitness fields and create an animation illustrating its impact.

Unit 4: Programming Introduction (6 lessons)

This module builds on CS skills like conditionals, variables, lists, and building games.

Objectives / Topics Covered	● Deepening programming skills through practice ● Using events, loops, and broadcasts ● Applying math or science concepts in code ● Creating interactive scenes and animations
Lessons	**Sequences: Parallel Programming** ● Create a program that uses parallel sequences running at the same time. **Introduction to Conditionals** ● Explain what a conditional is in programming and create a program that uses if/then blocks. **I-Spy with Lists (2 classes)** ● Create an I-Spy style activity using variables and lists. **Race Track Game (2 classes)** ● Use drawing tools to design their own race car and race track, then program a racing game that tracks players' scores using conditionals, variables, and lists.

Unit 5: Interdisciplinary Exploration (9 lessons)

This module connects programming to academic subjects by using events, loops, conditionals, and animations to model concepts in geography, science, literacy, and math.

Objectives / Topics Covered	• Applying programming across academic subjects • Building interactive models of real-world concepts • Using events, loops, and conditionals in content-based projects
Lessons	**Geographic Effects on Early Civilizations** • Explain how physical geography influenced early civilizations using broadcast messages. • Standard: 3.2.3.ER **Communities Adapt to & Modify Their Environment** • Use click events to create a scene showing how communities adapt to or change their environments. • Standard: 3.4.1.PR **Weather and Climate** • Use climate data and event blocks to model typical weather conditions for a selected month. • Standard: 3-ESS2-1 **Exploring Adaptations** • Create an interactive program showing how animal adaptations support survival in different habitats. • Standard: 3-LS4-3 **Animating Poetry** • Break a poem into parts and create an animated reading that blends literal and figurative meaning. • Standard: Students in third grade continue to read the four major types of literary texts in print and multimedia formats: fiction, literary nonfiction, poetry, and drama. **Word Analysis: Prefixes and Suffixes** • Use the platform to identify and explain the meaning of common prefixes and suffixes. • Standard: SC.ELA.3.F.4.3 **Animating Sprites with Multiplication** • Use multiplication, loops, and wait blocks to animate sprites. • Standard: 3.PAFR.1.2, 3.PAFR.1.3 **Adding with Loops** • Use loops to repeat commands and model multi-digit addition based on place value. • Standard: 3.PAFR.1.1 **Classifying Shapes by Category** • Use events to classify quadrilaterals based on defining properties. • Standard: 3.MGSR.3.1

3rd Grade Course Supplemental Materials

Resources	Description
Parent Welcome Letter (Spanish)	Send this letter home to introduce families to their new computer science curriculum.
Warm-Up Activities	This warm-up activity slide deck provides 5-10 minute problems aligned with computer science skills to engage students at the start of class, allowing teachers to preview or review concepts with answer keys and discussion tips included in the Speaker Notes.
Program Self-Assessment (Spanish)	This is a student self-assessment tool designed to help K-6 learners reflect on their programming projects, evaluate their skills in algorithms, debugging, collaboration, and reflection, and set goals for improvement.
Peer Review Resources (Spanish)	This provides structured worksheets to facilitate student feedback during collaborative coding projects. It encourages reflection by guiding students to highlight successes, ask questions, and offer constructive feedback on their partner's work.
Lesson Reflection & Computational Thinking (Spanish)	This guides students in engaging with computational thinking concepts, preparing for discussions, reflecting on lessons, and applying their learning to real-world problem-solving.
Design-Your-Own-Lesson Templates	Empower your students to explore and express their knowledge creatively with our versatile graphic organizer templates. Designed with adaptability and ease of use in mind, these interactive tools transform any subject into an engaging, hands-on learning experience.
These resources and more are found on the **CodeHop Resources Page**.	