



South Carolina 1st Grade Computer Science and Digital Literacy Course Syllabus

One Year for Elementary School, 18 Hours

Course Overview and Goals

The **South Carolina 1st 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 **18 standards-aligned lessons** and **19 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/27365/overview>



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

Course Breakdown

Unit 1: Getting Started (4 lessons)

This module introduces students to foundational computer skills—including logging in, keyboarding, computational thinking, and basic computer components—to build confidence using technology independently.

Objectives / Topics Covered	• Logging in and basic navigation • Pattern recognition and sequencing • Computer parts and simple troubleshooting • Basic keyboarding skills
Lessons	Welcome to CodeHop! (optional) • Intro to logging in and navigating the CodeHop Playground. Computational Thinking: Evening Routines • Use patterns, sequencing, and task breakdown to map out an evening routine. Computer Basics: Exploration • Learn what a computer is, how it works, and the roles of hardware, software, input, and output. Keyboarding Basics • Practice typing simple words and sentences using basic keyboard functions.

Unit 2: Getting Started: Programming (4 lessons)

This module introduces key programming concepts such as events, sequences, drawing tools, and real-world applications to help students create simple programs and understand how computer science connects to their community.

Objectives / Topics Covered	• Using events and sequences • Applying digital responsibility concepts • Exploring real-world CS applications • Creating scenes with drawing tools
Lessons	Events • Introduce events and use multiple event blocks to trigger actions in a program. Sequences: Digital Responsibilities • Use sequences to program characters while explaining responsible online behavior. Careers in CS: Litter Free Communities • Explore how CS can address community problems by creating a program that collects and sorts litter. Drawing Tools: Nature Walk • Use drawing tools to create a nature-themed scene.

Unit 3: Digital Literacy (10 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	• Positive online behavior • Impacts of technology • Word processing, spreadsheets, presentations • Internet communication and networks • Basic research and data concepts
Lessons	Positive Online Behavior • Identify appropriate vs. inappropriate online behavior by analyzing a program. Impacts of Technology in Our World • Create a program showing how technology influences daily life and society. Introduction to Word Processing • Use word processing features to write a document about a favorite season. Introduction to Spreadsheets • Use spreadsheet software to explore and present class data. Introduction to Presentations • Create a presentation about personal favorites using basic slide-editing tools. Networks and the Internet • Learn what networks are and model how Internet messages are sent and received. Guided Research (2 classes) • Use research sources to find information and create a program that visually communicates findings. Basic Data and Programming • Collect data and present it visually through a program. Data Storage and Files Practice • Understand data storage and model how computers store information in files.

Unit 4: Programming Skill Development (9 lessons)

This module strengthens programming skills through motion, size, timing, loops, messages, debugging, and game design, enabling students to build increasingly complex and interactive programs.

Objectives / Topics Covered	• Motion, size, and timing blocks • Debugging basics • Repeat loops • Message events • Simple game creation
Lessons	Grow and Shrink Blocks in Motion • Create animations using motion blocks combined with grow/shrink effects. Introduction to the Wait Block • Use wait blocks to add pauses and timing to character actions. Introduction to Debugging • Find and fix bugs in simple sequences. Introduction to Repeat Loops • Use loops to repeat actions multiple times within a program. Introduction to Message Events • Program character interactions using message events in a relay-style activity. Message Events: Simon Says • Use message events to have one character direct the actions of multiple others. Create a Mini Golf Game • Build an interactive mini-golf game using messages and loops.

	River Crossing Game (2 classes) Program obstacles and adjust difficulty using speed blocks
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Unit 5: Interdisciplinary Exploration (10 lessons)

This module integrates programming with social studies, science, literacy, music, and math, allowing students to model academic concepts using events, messages, sequences, loops, and storytelling.

Objectives / Topics Covered	- Mapping and navigation - Economic choices - Light, shadows, and Moon phases - Phonics and storytelling - Music patterns and math comparisons - Programming clocks and time
Lessons	Create a Map - Design a map and program a character to follow its path. - Standard: 1.G.1 Economic Choices - Use messages to model wants, needs, and simple economic decisions. - Standard: 1.E.1 Light and Shadows - Create a program that demonstrates light sources and the effects of shadows. - Standard: 1-PS4-2 Phases of the Moon - Model the phases of the Moon using message events and character motions. - Standard: 1-ESS1-1. Phonics: Digraphs - Create a phonics activity using events and recorded audio for digraph sounds. - Standard: ELA.1.F.3.8 Original Story Animations – Personal Story (2 classes) - Animate an original story and explain the steps used to build the program. - Standard: 1.SL.5 Patterns and Music - Create musical patterns using sequences and loops. - Standard: 1.OA.7 Greater Than and Less Than: Two-Digit Numbers - Program a comparison tool that shows whether one number is greater, less, or equal to another. - Standard: 1.NBT.3 Telling Time - Create an analog clock and program it to display digital and analog time. - Standard: 1.MD.3

1st 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.
These resources and more are found on the CodeHop Resources Page .	