



Florida Foundations of Computer Science: 1st Grade Course Syllabus

One Year for Elementary School, 36 Hours

Course Overview and Goals

The Florida Foundations of Computer Science: 1st Grade introduces students to foundational programming concepts through a block-based programming language. Students will develop computational thinking and problem-solving skills while learning to create interactive projects, animations, and games. This course emphasizes creativity and collaboration, providing students with a solid base in computer science concepts and digital literacy.

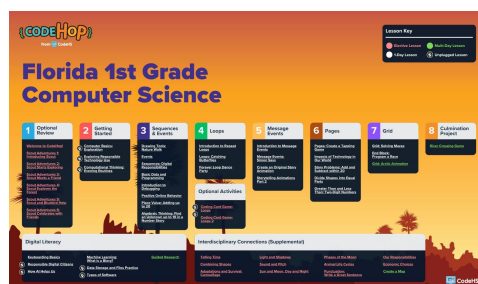
Learning Environment: This course is teacher-led and includes ready-to-use lessons following a consistent structure: Introduction, Guided Practice, Independent Practice, Extension, and Reflection. Instruction follows an “I do, we do, you do” model and incorporates spiral review to reinforce concepts and build confidence over time.

The course includes 36 lessons, each approximately 45 minutes long, providing a full year of instruction when taught once per week. While the course allows for instructional flexibility, some lessons are required to fully meet state computer science standards and are clearly identified within the syllabus. All Digital Literacy lessons are required to ensure full standards alignment, as they address essential non-programming computer science concepts. Required lessons are labeled with the specific standards they address to support planning and compliance.

Programming Environment: Students will write and run programs that are 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/FL_1/overview



A clickable PDF can be found at <https://codehs.com/FL-K-5Roadmaps>

Course Breakdown

Optional Review

These optional lessons let students review CodeHopJr navigation and the story-driven Scout Adventures unit before beginning first grade content.

Objectives / Topics Covered	• Log in and navigate CodeHopJr • Add and modify characters, backgrounds, and pages • Move characters with motion blocks • Build motion sequences with events
Lessons	Welcome to CodeHop! • Log in and explore the CodeHopJr Playground. Scout Adventures 1: Introducing Scout • Explore the programming interface and add characters. Scout Adventures 2: Scout Starts Exploring • Add backgrounds and a new page to a program. Scout Adventures 3: Scout Meets a Friend • Delete and modify characters in a program. Scout Adventures 4: Scout Explores the Forest • Use motion blocks to move characters around the stage. Scout Adventures 5: Scout and Bluebird Help • Build a sequence of motion blocks to collect objects. Scout Adventures 6: Scout Celebrates with Friends • Combine characters, pages, backgrounds, and motion sequences with events.

Unit 1: Getting Started (3 lessons)

Students build foundational knowledge of computers and responsible technology use and apply computational thinking to everyday routines.

Objectives / Topics Covered	• Identify hardware, software, input, and output • Explain safe, responsible technology use • Apply computational thinking to routines • Recognize patterns and sequence steps
Lessons	Computer Basics: Exploration (SC.1.CO.1.1, SC.1.CO.1.9, SC.1.TI.1.1) • Identify what a computer is and recognize input, output, hardware, and software. Exploring Responsible Technology Use (SC.1.CO.1.11, SC.1.HS.1.2, SC.1.HS.2.1) • Explain ways to use technology safely and responsibly. Computational Thinking: Evening Routines (SC.1.PE.3.1, SC.1.PE.3.2, SC.K12.CTR.3.1) • Break down and sequence an evening routine using computational thinking.

Unit 2: Sequences and Events (8 lessons)

Students learn to program with drawing tools, events, and sequences while exploring data, debugging, online responsibility, and early math concepts.

Objectives / Topics Covered	• Use drawing tools and event blocks • Build and sequence programs • Collect and present data • Find and fix bugs in code
Lessons	Drawing Tools: Nature Walk (SC.K12.CTR.3.1, SC.K12.CTR.5.1, SC.1.CO.1.5) • Use drawing tools to create a nature-walk scene.

	Events (SC.K12.CTR.2.1, SC.K12.CTR.3.1, SC.1.CO.1.5) - Explain what an event is and use multiple event blocks in a program. Sequences: Digital Responsibilities (SC.1.PE.1.1, SC.K12.CTR.3.1, SC.1.CO.1.5) - Use sequences to program characters and explain online responsibility. Basic Data and Programming (SC.1.CO.1.2, SC.1.CO.1.3, SC.1.PE.2.1) - Collect data and create a program to present it visually. Introduction to Debugging (SC.K12.CTR.2.1, SC.1.CO.1.5, SC.K12.CTR.4.1) - Find and correct bugs in sequences. Positive Online Behavior (SC.1.HS.1.1, SC.1.CO.1.8, SC.1.HS.1.3) - Identify appropriate and inappropriate online behavior. Place Value: Adding Up to 20 (SC.K12.CTR.3.1, SC.K12.CTR.5.1, SC.1.CO.1.5) - Use events to decompose a two-digit number into tens and ones. Algebraic Thinking: Find an Unknown Number Up to 10 in a Number Story (MA.K12.MTR.3.1, MA.K12.MTR.4.1, SC.1.CO.1.5) - Build an interactive program to solve for unknown numbers in number stories.
--	--

Optional Unplugged Loops Activities

These optional, screen-free games introduce loops as students collaborate to guide Scout through a maze.

Objectives / Topics Covered	- Explore loops unplugged - Collaborate to solve maze challenges - Use loops to repeat instructions
Lessons	Coding Card Game: Loops (SC.1.CC.1.1, SC.1.PE.3.1, SC.1.PE.3.2) - Work as a team to build looped instructions to move Scout through a maze. Coding Card Game: Loops 2 (SC.1.CC.1.1, SC.1.PE.3.1, SC.1.PE.3.2) - Build longer looped maze solutions as a team.

Unit 3: Loops (3 lessons)

Students use repeat and forever loops to run code multiple times, creating games and animations.

Objectives / Topics Covered	- Use repeat loops to run code multiple times - Use show and hide blocks with loops - Create continuous action with forever loops
Lessons	Introduction to Repeat Loops (SC.K12.CTR.2.1, SC.1.PE.3.1, SC.1.CO.1.5) - Use repeat loops to run a section of code multiple times. Loops: Catching Butterflies (SC.K12.CTR.3.1, SC.1.PE.3.1, SC.1.CO.1.5) - Use show and hide blocks with loops to build a butterfly-catching game. Forever Loop Dance Party (SC.1.PE.3.1, SC.1.PE.3.2, SC.1.CO.1.5) - Use a repeat-forever loop to make characters repeat actions.

Unit 4: Message Events (4 lessons)

Students use message events to make characters communicate and interact, applying them to relay races, games, and storytelling.

Objectives / Topics Covered	- Program characters to interact with messages - Send messages to one or many characters - Animate original stories - Retell a story in sequence
Lessons	Introduction to Message Events (SC.K12.CTR.2.1, SC.K12.CTR.3.1, SC.1.CO.1.5) - Program a relay race using messages to make characters interact. Message Events: Simon Says (SC.K12.CTR.2.1, SC.1.CO.1.5) - Use message events to make one character communicate to many.

	Create an Original Story Animation (SC.1.CO.1.10, SC.K12.CTR.1.1, SC.1.CO.1.5) - Create a program that animates an original story. Storytelling Animations Part 2 (SC.K12.CTR.2.1, SC.K12.CTR.1.1, SC.1.CO.1.5) - Design a program to retell the sequence of a story.
--	---

Unit 5: Pages (5 lessons)

Students create multi-page programs and games while exploring technology's impact and math concepts.

Objectives / Topics Covered	- Use go-to-page blocks to move between pages - Explain how technology impacts the world - Represent story problems within 20 - Compare two-digit numbers
Lessons	Pages: Create a Tapping Game (MA.K12.MTR.2.1, SC.1.CO.1.5) - Create a game that moves between pages using go-to-page blocks. Impacts of Technology in Our World (SC.1.CO.1.5) - Create a program showing how technology impacts our world. Story Problems: Add and Subtract within 20 (MA.K12.MTR.3.1, MA.K12.MTR.4.1, SC.1.CO.1.5) - Create a scene representing an addition or subtraction story problem. Divide Shapes into Equal Parts (MA.K12.MTR.2.1, MA.K12.MTR.1.1, SC.1.CO.1.5) - Animate partitioning circles and rectangles into equal parts. Greater Than and Less Than: Two-Digit Numbers (MA.K12.MTR.3.1, MA.K12.MTR.4.1, SC.1.CO.1.5) - Use events to compare two-digit numbers as greater than, less than, or equal to.

Unit 6: Grid (4 lessons)

Students use the CodeHopJr grid to design mazes, program precise movement, and create animations.

Objectives / Topics Covered	- Use the grid to program movement - Design and solve mazes - Use the end block in a project - Create grid-based animations
Lessons	Grid: Solving Mazes (SC.K12.CTR.2.1, SC.1.CO.1.5) - Design a maze and use the grid to move a character through it. End Block: Program a Race (SC.K12.CTR.2.1, MA.K12.MTR.2.1, SC.1.CO.1.5) - Program a race and use the end block in an animation. Grid: Arctic Animation (2 classes SC.1.CO.1.5, ELA.K12.EE.5.1) - Use the grid to create an animation.

Unit 7: Culmination Project (2 lesson)

Students apply their programming skills to build an interactive game with obstacles and adjustable difficulty.

Objectives / Topics Covered	- Program obstacles in a game - Adjust difficulty with speed blocks - Combine skills into a complete project
Lessons	River Crossing Game (2 classes SC.1.CO.1.2, SC.K12.CTR.1.1, SC.1.CO.1.5) Program obstacles and change difficulty using speed blocks.

Unit 8: Digital Literacy (7 lessons)

Students build digital citizenship and literacy skills including typing, online safety, artificial intelligence, machine learning, data, and research.

Objectives / Topics Covered	- Type simple words and sentences - Act as a responsible digital citizen - Explain AI and machine learning - Recognize how data and files are stored
Lessons	Keyboarding Basics (SC.1.CO.1.7, SC.K12.CTR.3.1, SC.1.CO.1.8) - Type simple words and sentences on a computer. Responsible Digital Citizens (SC.1.HS.1.1, SC.1.TI.2.1, ELA.K12.EE.4.1) - Explain digital footprints, cyberbullying, and how to report concerns. How AI Helps Us (SC.1.PE.1.1, SC.1.TI.1.1, SC.1.TI.1.2) - Explain how AI assistants answer questions and help people. Machine Learning: What is a Blog? (SC.1.TI.1.3) - Explain how AI learns by being trained to identify an alien. Data Storage and Files Practice (SC.1.CO.1.6, SC.1.PE.2.1, SC.1.CO.1.5) - Recognize that computers store data as files and model how data is collected. Types of Software (SC.K12.CTR.3.1) - Compare and select software applications for different computing tasks. Guided Research (2 classes SC.1.CO.1.2, SC.1.CO.1.9, SC.1.PE.2.1) - Find information using research sources and communicate it visually.

Interdisciplinary Connections (Supplemental)

These optional lessons apply computer science to math, science, social studies, and language arts through interactive programs.

Objectives / Topics Covered	- Apply programming across subject areas - Use events, loops, and message events in context - Model real-world and scientific concepts - Create animations that communicate ideas
Lessons	Telling Time (MA.K12.MTR.1.1, MA.K12.MTR.3.1, MA.K12.MTR.4.1) - Use sequences and events to create an analog clock and show time in both forms. Combining Shapes (MA.K12.MTR.1.1, MA.K12.MTR.3.1, MA.K12.MTR.4.1) - Create composite shapes and animate a scene with them. Adaptations and Survival: Camouflage (SC.K12.CTR.2.1, ELD.K12.ELL.SC.1, SC.K12.CTR.7.1) - Illustrate and explain how living things use camouflage to survive. Light and Shadows (SC.K12.CTR.3.1, SC.K12.CTR.5.1, SC.K12.CTR.7.1) - Use events to program the sources and effects of light. Sound and Pitch (ELD.K12.ELL.SC.1, SC.K12.CTR.7.1) - Animate sound and pitch and explain the link between sound and vibration. Sun and Moon, Day and Night (ELD.K12.ELL.SC.1, SC.K12.CTR.7.1) - Use loops to model the movements of the sun and moon and the pattern of day and night. Phases of the Moon (ELD.K12.ELL.SC.1, SC.K12.CTR.7.1) - Use message events to model the phases of the Moon. Animal Life Cycles (SC.K12.CTR.2.1, ELD.K12.ELL.SC.1, SC.K12.CTR.7.1) - Use message events to model the butterfly life cycle. Punctuation: Write a Great Sentence! - Use sequences with loops to write sentences with correct punctuation. Our Responsibilities - Use sequences to program characters explaining responsibility at school and home. Economic Choices - Use message events to show characters choosing between wants and needs. Create a Map (3 classes SC.K12.CTR.2.1, SC.K12.CTR.3.1, SC.K12.CTR.5.1) - Create a map and program a character to follow it.

Florida Foundations of Computer Science: 1st Grade 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 .	