



Florida Foundations of Computer Science: Kindergarten Course Syllabus

One Year for Elementary School, 36 Hours

Course Overview and Goals

The Florida Foundations of Computer Science: Kindergarten 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 30 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_K/overview



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

Course Breakdown

Unit 1: Unplugged Exploration (4 lessons)

Students explore the core computer science ideas of sequences and events through hands-on, screen-free activities and collaborative games.

Objectives / Topics Covered	• Create step-by-step sequences • Collaborate to solve maze challenges • Explore how events trigger actions • Practice computational thinking unplugged
Lessons	Sequences (Unplugged) • Create a sequence of step-by-step instructions for a dance. Coding Card Game: Sequences • Work as a team to sequence instructions that move Scout through a maze. Coding Card Game: Sequences 2 • Build longer team sequences to guide Scout through a maze. Acting with Events • Act out how an event can trigger an action.

Unit 2: Getting Started (4 lessons)

Students learn to log in and navigate the CodeHopJr platform while building foundational knowledge of computers, keyboards, and responsible technology use.

Objectives / Topics Covered	• Log in and navigate CodeHopJr • Identify keyboard keys and functions • Describe hardware, software, input, and output • Use technology safely and responsibly
Lessons	Welcome to CodeHop! (SC.K.CO.1.3, SC.K.CO.1.6) • Log in and explore the CodeHopJr Playground. Keyboard Introduction (SC.K12.CTR.3.1) • Use letters, numbers, and basic keyboard functions. Computer Basics: Introduction (SC.K.CO.1.1, SC.K.CO.1.2, SC.K.PE.1.1, SC.K.CO.1.7) • Identify what a computer is and recognize input, output, hardware, and software. Introduction to Responsible Technology Use (SC.K.CO.1.7, SC.K.HS.2.1, SC.K.HS.2.2, SC.K.TI.2.1) • Identify safe, responsible technology habits and an Acceptable Use Policy. Computational Thinking: Morning Routines (SC.K.PE.1.2) • Break down and sequence a morning routine using computational thinking.

Unit 3: Programming Exploration (6 lessons)

Through the story-driven Scout Adventures unit, students progressively learn to add characters, backgrounds, and pages and to move characters with motion blocks and events.

Objectives / Topics Covered	• Navigate the programming interface • Add and modify characters, backgrounds, and pages • Move characters using motion blocks • Build sequences with events
Lessons	Scout Adventures 1: Introducing Scout (SC.K.PE.1.2, SC.K12.CTR.5.1, SC.K12.CTR.3.1) • Explore the programming interface and add characters.

	Scout Adventures 2: Scout Starts Exploring (SC.K.PE.1.2, SC.K12.CTR.5.1, SC.K12.CTR.3.1) - Add backgrounds and a new page to a program. Scout Adventures 3: Scout Meets a Friend (SC.K.PE.1.2, SC.K12.CTR.5.1, SC.K12.CTR.3.1) - Delete and modify characters in a program. Scout Adventures 4: Scout Explores the Forest (SC.K.PE.1.2, SC.K12.CTR.5.1, SC.K12.CTR.3.1) - Use motion blocks to move characters around the stage. Scout Adventures 5: Scout and Bluebird Help (SC.K.PE.1.2, SC.K12.CTR.5.1, SC.K12.CTR.3.1) - Build a sequence of motion blocks to collect objects. Scout Adventures 6: Scout Celebrates with Friends (SC.K.PE.1.2, SC.K12.CTR.5.1, SC.K12.CTR.3.1) - Combine characters, pages, backgrounds, and motion sequences with events.
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Unit 4: Sequences and Events (6 lessons)

Students deepen their programming skills by creating multi-step sequences and event-driven programs, applying them to community problems and early math concepts.

Objectives / Topics Covered	- Create programs with multiple event types - Build multi-step sequences - Connect computer science to careers and community - Model math ideas with animation
Lessons	Introduction to Events (SC.K.PE.1.2, SC.K12.CTR.5.1, SC.K12.CTR.3.1, ELA.K12.EE.5.1) - Create a program using different types of events. Sequences: Snowball Fight (SC.K12.CTR.2.1, SC.K.PE.3.2, ELA.K12.EE.5.1) - Create a program using multiple sequences. Careers in CS: Litter Free Communities (SC.K.TI.1.1, SC.K12.CTR.2.1, ELA.K12.EE.2.1, ELA.K12.EE.3.1, ELA.K12.EE.5.1, SC.K12.CTR.7.1) - Explain how computer science solves community problems and program litter sorting. Introduction to Grow and Shrink Blocks (MA.K12.MTR.2.1) - Use grow and shrink blocks to change character size. Finding an Unknown in a Word Problem (SC.K.PE.1.2, SC.K12.CTR.5.1, SC.K12.CTR.3.1) - Use events and sequences to build addition and subtraction number stories. Place Value: Ones and Tens (SC.K.PE.1.2, SC.K12.CTR.5.1, SC.K12.CTR.3.1) - Animate groups of one, five, and ten to model place value.

Unit 5: Pages (5 lessons)

Students create multi-page programs and use navigation blocks to switch between pages while exploring number sense and comparison concepts.

Objectives / Topics Covered	- Create programs with multiple pages - Navigate between pages with the go-to-page block - Decompose numbers up to 10 - Compare and represent numbers
Lessons	Introduction to Pages (SC.K.PE.1.2, SC.K12.CTR.5.1, SC.K12.CTR.3.1) - Create a program with multiple pages. Using the Go To Page Block (SC.K12.CTR.2.1, SC.K.PE.3.1) - Add a go-to-page block to switch between pages. Decompose Numbers Up to 10 (MA.K12.MTR.1.1, MA.K12.MTR.2.1, MA.K12.MTR.3.1, MA.K12.MTR.4.1, MA.K12.MTR.6.1, MA.K12.MTR.7.1, ELD.K12.ELL.MA.1) - Build an interactive program that decomposes numbers using events. Story Problems: Add and Subtract within 10 (SC.K.PE.1.2, SC.K12.CTR.5.1, SC.K12.CTR.3.1) - Create a scene representing an addition or subtraction story problem. Greater Than and Less Than: Single-Digit Numbers (SC.K.PE.1.2, SC.K12.CTR.5.1, SC.K12.CTR.3.1)

	• Use events to compare numbers as greater than, less than, or equal to.
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Unit 6: Block Exploration (4 lessons)

Students experiment with speed, sound, and shape blocks and practice debugging to refine their programs.

Objectives / Topics Covered	• Program characters using speed blocks • Add sound and say blocks • Find and fix bugs in sequences • Create and combine shapes with events
Lessons	Introduction to Speed Blocks (SC.K.PE.1.2, SC.K12.CTR.2.1, SC.K12.CTR.5.1, SC.K12.CTR.3.1, SC.K.CO.1.3, MA.K12.MTR.2.1, ELA.K12.EE.4.1, ELA.K12.EE.5.1) • Use different speed blocks to animate characters. Animal Sounds (SC.K.PE.1.2, SC.K12.CTR.5.1, SC.K12.CTR.3.1, ELA.K12.EE.5.1) • Use say or sound blocks to make a character speak. Debugging: Events and Motion (SC.K12.CTR.2.1, ELA.K12.EE.5.1, SC.K12.CTR.4.1) • Find and correct bugs in sequences. Creating Shapes (SC.K.PE.1.2, SC.K12.CTR.5.1, SC.K12.CTR.3.1) • Program interactive shapes and combine them into a complex shape.

Unit 7: Loops (3 lessons)

Students learn how loops repeat code, using them to create animations, effects, and musical patterns.

Objectives / Topics Covered	• Create programs using loops • Explain how loops repeat code • Use forever loops for continuous effects • Build patterns with sequences and loops
Lessons	Loops (SC.K.PE.1.2, SC.K12.CTR.2.1, SC.K12.CTR.5.1, SC.K12.CTR.3.1, SC.K.PE.3.4, ELA.K12.EE.5.1) • Create a program using loops and explain how loops repeat code. Forever Loops: Fireworks (SC.K.PE.1.2, SC.K12.CTR.2.1, SC.K12.CTR.5.1, SC.K12.CTR.3.1, SC.K.PE.3.4) • Create sequences that repeat while the program runs. Patterns and Music (SC.K.PE.1.2, SC.K12.CTR.5.1, SC.K12.CTR.3.1, SC.K.PE.3.4) • Create musical patterns using sequences and loops.

Unit 8: Culmination Project (2 lessons)

Students apply the skills they have built throughout the course to design a personal program about themselves.

Objectives / Topics Covered	• Plan a multi-part program • Apply events and sequences • Communicate personal information through code
Lessons	All About Me! (2 classes SC.K.CC.1.1, SC.K.CO.1.4, SC.K12.CTR.1.1, SC.K.PE.1.2) • Create a program that shares information about their favorites.

Unit 9: Digital Literacy (6 lessons)

Students build essential digital citizenship and literacy skills, including typing, online safety, data, artificial intelligence, and networks.

Objectives / Topics	• Type simple words and sentences • Protect private and personal information
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Covered	- Collect, organize, and analyze data - Explain artificial intelligence and networks
Lessons	Keyboarding Basics (SC.K.CO.1.5) - Type simple words and sentences on a computer. Keeping Information Safe (SC.K.HS.1.1, SC.K.HS.1.3, SC.K.HS.1.4, SC.K.TI.2.1, SC.K.HS.1.2) - Identify private and personal information. What Can Data Tell Us? (SC.K.PE.2.1, SC.K.PE.2.2, SC.K.PE.3.1, SC.K.PE.3.3, ELA.K12.EE.3.1) - Collect, organize, and analyze data about school transportation. What Can AI Do? (SC.K.TI.1.1, SC.K12.CTR.3.1) - Identify AI tools and compare tasks better suited for humans versus AI. Using Networks to Connect (SC.K.HS.1.2) - Describe how people and devices connect and share information over a network. Introduction to Research (2 classes SC.K12.CTR.6.1, ELA.K12.EE.1.1, ELA.K12.EE.5.1, SC.K.PE.2.1, SC.K.PE.3.1, SC.K12.CTR.3.1) - Find information using research sources and communicate it visually.

Interdisciplinary Connections (Supplemental)

These optional lessons connect computer science to science, social studies, and language arts, letting students apply programming concepts across subject areas.

Objectives / Topics Covered	- Apply programming to science and social studies topics - Use events, sequences, and messages across subjects - Create animations that tell stories and share ideas - Model real-world concepts through code
Lessons	Living and Nonliving (SC.K.PE.1.2, SC.K12.CTR.5.1, SC.K12.CTR.3.1, ELD.K12.ELL.SC.1, ELA.K12.EE.5.1) - Classify items as living or nonliving using tap events. Weather and Seasons (SC.K.PE.1.2, SC.K12.CTR.5.1, SC.K12.CTR.3.1, ELD.K12.ELL.SC.1, SC.K12.CTR.7.1, ELA.K12.EE.5.1) - Program an animation showing the weather across seasons. How Living Things Survive (ELD.K12.ELL.SC.1, SC.K12.CTR.7.1) - Illustrate and explain how living things survive in their environment. Comparing Organisms (SC.K.PE.1.2, SC.K12.CTR.5.1, SC.K12.CTR.3.1, ELD.K12.ELL.SC.1) - Group animals by similar characteristics. Types of Motion (SC.K.PE.1.2, SC.K12.CTR.5.1, SC.K12.CTR.3.1, ELD.K12.ELL.SC.1, SC.K12.CTR.7.1, ELA.K12.EE.5.1) - Program an animation displaying types of motion. Needs of Plants (ELD.K12.ELL.SC.1, SC.K12.CTR.7.1) - Use events and messages to model the needs of plants. Build a Sentence - Create an interactive program that writes and reads sentences aloud. Storytelling Animations (SC.K.PE.1.2, SC.K12.CTR.2.1, SC.K12.CTR.5.1, SC.K12.CTR.3.1, ELA.K12.EE.2.1, ELA.K12.EE.5.1) - Retell the details of a story in the correct order. Original Story Animations - Personal Story (2 classes SC.K.CC.1.1, SC.K.CO.1.4, SC.K12.CTR.1.1) - Animate an original story and describe the development process. Who Keeps Us Safe? (SC.K.CO.1.3, ELA.K12.EE.4.1, ELA.K12.EE.5.1) - Program a description of an authority figure's role. Cardinal Directions (SC.K.PE.1.2, SC.K12.CTR.5.1, SC.K12.CTR.3.1, ELA.K12.EE.5.1) - Use events to create an interactive compass rose.

Florida Foundations of Computer Science: Kindergarten 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 .	