1st Grade Digital Literacy & AI Course Syllabus

One Year for Elementary School, 19 Hours

Course Overview and Goals

The **Digital Literacy & AI Course** introduces students to essential digital skills and foundational computer science concepts needed to thrive in today's technology-driven world. Throughout the course, students build problem-solving skills and responsible technology practices while engaging in hands-on activities and real-world applications. They will develop an understanding of artificial intelligence, digital tools, online safety, and emerging technologies, building a strong foundation in digital literacy. This flexible course can be taught in any order to meet the needs of diverse classrooms.

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 lessons**, each approximately 45 minutes long.

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/28004/explore

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

Course Breakdown

Unit 1: Getting Started (2 lessons)

In this module, students learn to log in and navigate the CodeHop Playground, build foundational mouse and keyboard skills, and are introduced to basic programming concepts by using the CodeHopJr interface to create interactive scenes with characters.

Objectives / Topics Covered	● Log in and navigate the CodeHop Playground independently. ● Demonstrate basic mouse skills such as clicking and dragging. ● Use letters, numbers, and essential keyboard functions correctly. ● Explore the programming interface to create a simple programmed scene with characters.
Lessons	**Welcome to CodeHop!** (optional) ● Learn how to log in and use the CodeHop Playground. This short introductory lesson can be used on its own or right before a full lesson. **Introduction to Programming** ● Navigate the programming interface to create a scene with characters. **Mouse Practice: Level Up!** ● Practice mouse skills. This library of mouse activities should be completed after the lesson, Mouse Practice.

Unit 2: Computing Systems (5 lessons)

In this module, students explore how computers work and the difference between hardware and software.

**In the productivity software lessons in this module, the Guided Practice section guides students using Google™. If your school uses a different presentation software, model the editing tools prior to or after the Guided Practice section videos, and instruct students on how to open a blank document.*

Objectives / Topics Covered	● Identify basic hardware components of a computer (e.g., keyboard, mouse, screen). ● Distinguish between hardware and software with everyday examples. ● Identify different types of software. ● Compare software based on purpose. ● Create a document using word processing tools. ● Design a simple presentation. ● Use a spreadsheet to organize and present data.
Lessons	**Computer Basics: Exploration** (Unplugged | E1-SYS-HW-11) ● Learn what a computer is, how we use it, and what to do when it doesn't work. They will be able to identify input, output, hardware, and software. **Introduction to Word Processing** ● Use word processing tools to create a document about their favorite season of the year. **Introduction to Presentations** ● Use presentation software to create a presentation on their favorite things. **Introduction to Spreadsheets** ● Use spreadsheet software to review and present data on class pets and favorite seasons. **Networks and the Internet** (E1-SOC-CE-16) ● Explain what a network is and how people communicate over networks and the Internet. They will model how messages are communicated using the Internet.

Unit 3: Safety & Responsibility (3 lessons)

In this module, students explore online safety, responsible technology use, and digital ethics. Through unplugged activities and online projects, students learn how to protect their information and give appropriate credit for others' work.

Objectives / Topics Covered	● Create and evaluate strong passwords to protect personal accounts. ● Demonstrate responsible and respectful technology use. ● Give credit to others by using proper attributions in digital projects.
Lessons	**Positive Online Behavior** ● Identify appropriate and inappropriate online behavior in a CodeHopJr program. **Password Protectors** (Unplugged | E1-SYS-SE-12) ● Understand the importance of usernames and passwords and demonstrate strategies to keep login information safe. **Exploring Responsible Technology Use** (Unplugged | E1-SYS-IM-13) ● Explain ways to use technology safely and responsibly.

Unit 4: Impacts of Computing (2 lessons)

n this module, students examine how computing shapes communities and careers. Through unplugged activities and programming projects, students explore real-world applications of computer science and its positive impact on the world around them.

Objectives / Topics Covered	● Describe how computing and technology affect daily life and communities. ● Explain how computer science careers contribute to solving real-world problems.
Lessons	**Impacts of Computing: Our Community** (Unplugged | E1-SOC-HI-14, E1-SOC-CE-16) ● Identify examples of computing devices in their daily lives and explain how technology has changed the way people live, work, and play. **Careers in CS: Litter Free Communities** (E1-SOC-CE-16) ● Explain how computer science can help solve community problems and create a program to collect and sort litter.

Unit 5: Data & Analysis (4 lessons)

In this module, students collect, organize, and analyze data while connecting data literacy to programming. Students conduct guided research and use programs to present their findings, learning how to interpret data and make predictions.

Objectives / Topics Covered	● Collect and organize data and create a program to present it visually. ● Use reliable sources to research a topic and communicate findings through programming. ● Identify ways computers store data and files.
Lessons	**Guided Research** (2 classes) ● Use reliable online sources to research a chosen topic and create a multi-page program to communicate findings visually — completed over two class periods. **Basic Data and Programming** (E1-DAT-DC-08, E1-DAT-DI-09) ● Collect data, organize it into categories, and create a program to present the data visually, connecting data literacy with coding skills. **Data Patterns and Predictions** (E1-PRO-VD-05, E1-DAT-IM-10) ● Analyze data sets to identify patterns and use those patterns to make predictions, applying computational thinking to real-world information. **Data Storage and Files Practice**

	• Recognize that computers store data as files and model how data is collected and stored.

Unit 6: AI Exploration (2 lessons)

In this module, students take their first steps into artificial intelligence. Through unplugged activities, students explore what AI can and cannot do, and learn how AI systems sort and classify information using patterns in data.

Objectives / Topics Covered	• Identify examples of what AI can and cannot do in everyday life. • Explain how AI systems use patterns in data to sort and classify information.
Lessons	**What Can AI Do?** (Unplugged | E1-SOC-HU-15) • Identify tools that use AI, explain that AI uses data to learn and make decisions, and compare tasks that are better suited for humans versus AI. **Sorting with Charts** (Unplugged | E1-ALG-ML-02) • Recognize patterns, use a decision tree to classify objects, and create a chart to show how patterns help computers make decisions.

K-1 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**.	