1st Grade Digital Literacy & AI Course Syllabus
One Year for Elementary School, 17 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 **17 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 & Society (3 lessons)

In this module, students explore how computing impacts their community, practice positive online behavior, and examine how computer science can be used to solve real-world problems such as keeping communities litter-free.

Objectives / Topics Covered	- Identify how technology affects daily life. - Recognize appropriate and inappropriate online behavior. - Explain how computer science can solve community problems. - Create a program to model collecting and sorting litter.
Lessons	**Impacts of Computing: Our Community** - Identify examples of computing devices in their daily lives and explain how technology has changed the way people live, work, and play. **Positive Online Behavior** - Identify appropriate and inappropriate online behavior in a program. **Careers in CS: Litter Free Communities** - Explain how computer science can help solve community problems and create a program to collect and sort litter.

Unit 3: Research & Attribution (1 lesson)

In this module, students conduct guided research using reliable sources and create a program to visually communicate their findings.

Objectives / Topics Covered	- Use reliable sources to research a topic. - Identify key information. - Create a program to present findings visually.
Lessons	**Guided Research (2 classes)** Find information using research sources and create a program to communicate their

	research visually.

Unit 4: Systems & Security (3 lessons)

In this module, students explore responsible technology use, learn the basic components and functions of computers, and understand how networks and the Internet enable communication.

Objectives / Topics Covered	● Demonstrate safe and responsible technology use. ● Identify hardware, software, input, and output. ● Explain how networks and the Internet transmit messages.
Lessons	**Exploring Responsible Technology Use** ● Explain ways to use technology safely and responsibly. **Computer Basics: Exploration** ● 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. **Networks and the Internet** ● 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 5: Productivity Tools (3 lessons)

Overview of all concepts in the module. *In all the 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 how to open a blank document.*

Objectives / Topics Covered	● Create a document using word processing tools. ● Design a simple presentation. ● Use a spreadsheet to organize and present data.
Lessons	**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.

Unit 6: Data & Analysis (2 lessons)

In this module, students collect and visualize data through programming while learning how computers store and manage data as files.

Objectives / Topics Covered	● Collect and organize data. ● Create a program to present data visually. ● Explain how computers store data as files.
Lessons	**Basic Data and Programming** ● Collect data and create a program to present their data visually. **Data Storage and Files Practice** ● Recognize that computers store data as files and model how data is collected and stored.

Unit 7: Artificial Intelligence (2 lessons)

In this module, students explore how AI assistants answer questions, examine how AI helps people and impacts jobs, and learn how machine learning models are trained to recognize patterns by classifying new examples.

Objectives / Topics Covered	- Explain how AI assistants answer questions. - Describe ways AI helps people and changes jobs. - Demonstrate how AI learns through training and classification.
Lessons	**How AI Helps Us** - Explain how AI assistants answer questions by observing a demonstration and describe how AI helps people by solving problems and changing jobs. **Machine Learning: What is a Blorg?** - Explain how AI can learn information by being trained to identify an alien.

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**.	