



Kindergarten 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 30 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/28003/explore>

	Kindergarten	1st Grade	2nd Grade
Getting Started	<ul style="list-style-type: none"> Welcome to CodeHS Mouse Practice Keyboard Introduction Introduction to Programming 	<ul style="list-style-type: none"> Welcome to CodeHS Mouse Practice Level 2 Introduction to Programming 	<ul style="list-style-type: none"> Welcome to CodeHS Introduction to Programming
Computing Systems	<ul style="list-style-type: none"> Computer Basics: Introduction 	<ul style="list-style-type: none"> Computer Basics: Evaluation 	<ul style="list-style-type: none"> Computer Basics: Connections
Productivity Software	<ul style="list-style-type: none"> Types of Software 	<ul style="list-style-type: none"> Introduction to Word Processing Introduction to Presentations Introduction to Spreadsheets 	<ul style="list-style-type: none"> Essential Word Processing Essential Presentations Essential Spreadsheets
Networks	<ul style="list-style-type: none"> Learn Networks in Context 	<ul style="list-style-type: none"> Networks and the Internet 	<ul style="list-style-type: none"> Essential Computer Networks
Online Safety	<ul style="list-style-type: none"> Basic Email Online Responsible Information Safety 	<ul style="list-style-type: none"> Responsible Online Behavior Responsible Data Safety 	<ul style="list-style-type: none"> Responsible Digital Citizens
AUP & Responsible Use	<ul style="list-style-type: none"> Introduction to Responsible Technology Use 	<ul style="list-style-type: none"> Essential Responsible Technology Use 	<ul style="list-style-type: none"> Essential Responsible Technology Use
Impacts of Computing	<ul style="list-style-type: none"> Impacts of Computing: Daily Life 	<ul style="list-style-type: none"> Impacts of Computing: Our Community 	<ul style="list-style-type: none"> Impacts of Computing: Character World
Careers in CS	<ul style="list-style-type: none"> Careers in CS: Research/Design 	<ul style="list-style-type: none"> Careers in CS: Other Fun Communities 	<ul style="list-style-type: none"> Careers in CS: Fashion Model
Digital Collaboration			<ul style="list-style-type: none"> Collaboration: Creativity
Research & Attribution	<ul style="list-style-type: none"> Basic Research 	<ul style="list-style-type: none"> Essential Research 	<ul style="list-style-type: none"> Essential Research
Data Analysis & Visualization	<ul style="list-style-type: none"> What Can Data Tell Us? 	<ul style="list-style-type: none"> Basic Data and Populations Data Patterns and Projections 	<ul style="list-style-type: none"> Data Analysis

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

Course Breakdown

Unit 1: Getting Started (4 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	<ul style="list-style-type: none">● 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	<p>Welcome to CodeHop</p> <ul style="list-style-type: none">● 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. <p>Mouse Practice</p> <ul style="list-style-type: none">● Demonstrate mouse skills by dragging and clicking with the mouse in multiple games. <p>Keyboard Introduction</p> <ul style="list-style-type: none">● Use the letters, numbers, and basic functions of the keyboard effectively. <p>Introduction to Programming</p> <ul style="list-style-type: none">● Navigate the CodeHopJr programming interface to create a scene with characters.

Unit 2: Computing Systems (3 lessons)

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

Objectives / Topics Covered	<ul style="list-style-type: none">● 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.
Lessons	<p>Computer Basics: Introduction (Unplugged EK-SYS-HW-11)</p> <ul style="list-style-type: none">● Learn what a computer is, how we use it, and what to do when it doesn't work. They will also be able to identify input, output, hardware, and software. <p>Types of Software (Unplugged EK-SYS-HW-11)</p> <ul style="list-style-type: none">● Compare and select appropriate software applications to complete different computing tasks. <p>Using Networks to Connect</p> <ul style="list-style-type: none">● Describe how people and devices connect and share information using a network, with and without wires.

Unit 3: Safety & Responsibility (3 lessons)

In this module, students learn how to stay safe and responsible when using technology.

Objectives / Topics Covered	<ul style="list-style-type: none">● Recognize the importance of keeping personal information private online.● Demonstrate responsible and respectful technology use.
Lessons	<p>Being Kind Online</p> <ul style="list-style-type: none">● Identify examples of inappropriate behavior, including cyberbullying, by recognizing kind and unkind online messages. <p>Keeping Information Safe (Unplugged EK-SYS-SE-12)</p>

	<ul style="list-style-type: none"> Identify private and personal information. <p>Introduction to Responsible Tech Use (Unplugged EK-SYS-IM-13)</p> <ul style="list-style-type: none"> Identify ways to use technology safely and responsibly, including understanding an Acceptable Use Policy (AUP).
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Unit 4: Impacts of Computing (2 lessons)

In this module, students examine the impact of computing on daily life and careers.

Objectives / Topics Covered	<ul style="list-style-type: none"> Describe how computing affects daily life and the world around us. Explore computer science careers and their impact on communities.
Lessons	<p>Impacts of Computing: Daily Life (Unplugged EK-SOC-HI-14, EK-SOC-CE-16)</p> <ul style="list-style-type: none"> Identify examples of computing devices in their daily lives and explain how technology has changed the way people live, work, and play. <p>Careers in CS: Spacecraft Design (EK-SOC-HU-15)</p> <ul style="list-style-type: none"> Explain the advantages of using technology in different careers and create a space program to animate an astronaut and a spacecraft.

Unit 5: Data & Analysis (3 lessons)

In this module, students explore how data is collected, organized, stored, and analyzed by investigating school transportation data and learning how computers store information as files.

Objectives / Topics Covered	<ul style="list-style-type: none"> Collect and organize data. Analyze data to find patterns or insights. Explain how computers store data as files.
Lessons	<p>Introduction to Research (2 classes)</p> <ul style="list-style-type: none"> Find information using research sources and create a program to communicate their research visually. <p>What Can Data Tell Us? (EK-DAT-DC-08, EK-DAT-DI-09)</p> <ul style="list-style-type: none"> Collect, organize, and analyze data about school transportation. <p>Introduction to Data Storage and Files</p> <ul style="list-style-type: none"> Recognize that computers store data as files and model how data is collected and stored.

Unit 6: AI Exploration (3 lessons)

In this module, students take their first steps into artificial intelligence, learning how AI systems recognize patterns and are trained to make decisions.

Objectives / Topics Covered	<ul style="list-style-type: none"> Explain what artificial intelligence is and how it learns from examples. Demonstrate how machine learning systems are trained to classify information.
Lessons	<p>What is AI?</p> <ul style="list-style-type: none"> Identify two examples of AI in their daily lives and explain one way a smart machine is different from a regular tool. <p>Sorting with Decision Trees (Unplugged EK-ALG-ML-02, EK-DAT-IM-10)</p> <ul style="list-style-type: none"> Explain how AI uses data to learn and make decisions and create a simple decision tree to sort items based on rules. <p>Machine Learning: What is a Blog? (EK-ALG-ML-02)</p> <ul style="list-style-type: none"> 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 .	