



# Kindergarten 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 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>



A clickable PDF can be found at [https://codehs.com/DigLit\\_Roadmap](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"><li>● Log in and navigate the CodeHop Playground independently.</li><li>● Demonstrate basic mouse skills such as clicking and dragging.</li><li>● Use letters, numbers, and essential keyboard functions correctly.</li><li>● Explore the programming interface to create a simple programmed scene with characters.</li></ul>
Lessons	<p><b>Welcome to CodeHop</b></p> <ul style="list-style-type: none"><li>● 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.</li></ul> <p><b>Mouse Practice</b></p> <ul style="list-style-type: none"><li>● Demonstrate mouse skills by dragging and clicking with the mouse in multiple games.</li></ul> <p><b>Keyboard Introduction</b></p> <ul style="list-style-type: none"><li>● Use the letters, numbers, and basic functions of the keyboard effectively.</li></ul> <p><b>Introduction to Programming</b></p> <ul style="list-style-type: none"><li>● Navigate the CodeHopJr programming interface to create a scene with characters.</li></ul>

### Unit 2: Computing & Society (4 lessons)

In this module, students explore how computing impacts daily life, learn the importance of responsible and safe technology use, recognize kind and unkind online behaviors, and discover how computer science is used in careers such as spacecraft design through creative programming activities.

Objectives / Topics Covered	<ul style="list-style-type: none"><li>● Identify computing devices and their impact.</li><li>● Describe safe and responsible technology use, including understanding an Acceptable Use Policy (AUP).</li><li>● Recognize examples of kind and unkind online behavior, including cyberbullying.</li><li>● Explore careers in cs.</li></ul>
Lessons	<p><b>Impacts of Computing: Daily Life</b></p> <ul style="list-style-type: none"><li>● Identify examples of computing devices in their daily lives and explain how technology has changed the way people live, work, and play.</li></ul> <p><b>Introduction to Responsible Technology Use</b></p> <ul style="list-style-type: none"><li>● Identify ways to use technology safely and responsibly, including understanding an Acceptable Use Policy (AUP).</li></ul> <p><b>Being Kind Online</b></p> <ul style="list-style-type: none"><li>● Identify examples of inappropriate behavior, including cyberbullying, by recognizing kind and unkind online messages.</li></ul> <p><b>Careers in CS: Spacecraft Design</b></p> <ul style="list-style-type: none"><li>● Explain advantages of using technology in different careers and create a space program to animate an astronaut and spacecraft.</li></ul>

### Unit 3: Research & Attribution (1 lesson)

In this module, students learn how to find information using appropriate research sources and create a program that visually communicates what they have learned.

Objectives / Topics Covered	<ul style="list-style-type: none"> <li>● Identify and use appropriate sources to research a topic.</li> <li>● Gather and organize key information from research.</li> </ul>
Lessons	<b>Intro to Research (2 classes)</b> <ul style="list-style-type: none"> <li>● Find information using research sources and create a program to communicate their research visually.</li> </ul>

#### Unit 4: Systems & Security (3 lessons)

In this module, students learn the basic parts and functions of a computer, how devices connect through networks, and how to keep personal and private information safe when using technology.

Objectives / Topics Covered	<ul style="list-style-type: none"> <li>● Identify hardware, software, input, and output.</li> <li>● Explain how devices connect through networks.</li> <li>● Recognize and protect personal information.</li> </ul>
Lessons	<b>Computer Basics: Introduction</b> <ul style="list-style-type: none"> <li>● 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.</li> </ul> <b>Using Networks to Connect</b> <ul style="list-style-type: none"> <li>● Describe how people and devices connect and share information using a network, with and without wires.</li> </ul> <b>Keeping Information Safe</b> <ul style="list-style-type: none"> <li>● Identify private and personal information.</li> </ul>

#### Unit 5: Productivity Tools (1 lesson)

In this module, students learn about different types of software and how to choose the right application to complete specific computing tasks.

Objectives / Topics Covered	<ul style="list-style-type: none"> <li>● Identify different types of software.</li> <li>● Compare software based on purpose.</li> </ul>
Lessons	<b>Types of Software</b> <ul style="list-style-type: none"> <li>● Compare and select appropriate software applications to complete different computing tasks.</li> </ul>

#### Unit 6: Data & Analysis (2 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"> <li>● Collect and organize data.</li> <li>● Analyze data to find patterns or insights.</li> <li>● Explain how computers store data as files.</li> </ul>
Lessons	<b>What Can Data Tell Us?</b> <ul style="list-style-type: none"> <li>● Collect, organize, and analyze data about school transportation.</li> </ul> <b>Introduction to Data Storage and Files</b> <ul style="list-style-type: none"> <li>● Recognize that computers store data as files and model how data is collected and stored.</li> </ul>

#### Unit 7: Artificial Intelligence (1 lesson)

In this module, students learn how AI uses data to make decisions and create a simple decision tree to sort items based on specific rules.

Objectives / Topics Covered	<ul style="list-style-type: none"> <li>● Explain how AI uses data to make decisions.</li> <li>● Identify rules used for sorting.</li> <li>● Create a simple decision tree.</li> </ul>
Lessons	<p><b>Sorting with Decision Trees</b></p> <ul style="list-style-type: none"> <li>● Explain how AI uses data to learn and make decisions and create a simple decision tree to sort items based on rules.</li> </ul>

## K-1 Course Supplemental Materials

Resources	Description
<a href="#">Parent Welcome Letter (Spanish)</a>	Send this letter home to introduce families to their new computer science curriculum.
<a href="#">Warm-Up Activities</a>	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.
<a href="#">Program Self-Assessment (Spanish)</a>	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.
<a href="#">Peer Review Resources (Spanish)</a>	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.
<a href="#">Lesson Reflection &amp; Computational Thinking (Spanish)</a>	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 <a href="#">CodeHop Resources Page</a> .	