



Grades K-2 Pacing Guide



Overview

The **Ari Pacing Guide** is a resource designed to guide educators as they integrate Ari into their classrooms or programming.

Within each grade band, you will find a curated selection of lessons aligned to the corresponding content standards. We recommend starting with our 'Meet Ari' lessons, included in each grade, to build a foundational understanding of the coding and programming concepts used with Ari.

From there, use your grade-level guide as a lesson playlist. We've arranged the lessons in a suggested order based on their progression in coding and robotics skills, but you can choose the ones that best align with your instructional goals and content focus.



Lesson	Objective	Standard
1 Meet Ari: Hardware, Software, and Apps (K-4)	Students will learn the basic functions of Ari and demonstrate their ability to use the software for learning applications. Students will understand the capabilities of 9 hardware components on Ari and identify the location of each on a diagram.	CSTA.1A-CS-02 Use appropriate terminology in identifying and describing the function of common physical components of computing systems (hardware).
2 Meet Ari: Color Codes (K-4)	Students will learn how to use Color Codes with Ari using the Color Codes app, by filling in the missing Color Codes and running Ari on 8 different tracks. Students will use the language of observation to describe what they see and document their findings.	ISTE.1.1d Students understand fundamental concepts of how technology works, demonstrate the ability to choose and use current technologies effectively, and are adept at thoughtfully exploring emerging technologies.
3 Meet Ari: The Ozobot Editor (K-4)	Students will learn how to navigate and use the Ozobot Editor, including selecting, editing, deleting, duplicating, and customizing blocks to create block-based programs. Students will demonstrate their understanding of coding concepts by programming Ari to perform a sequence including movement, light effects, and sounds.	CSTA.1A-AP-10 Develop programs with sequences and simple loops, to express ideas or address a problem.
4 Plant Life Cycles	Students will apply their knowledge of plant life cycles to design a step-by-step plan for a process related to plant growth and reproduction. Students will program a model of a plant life cycle on Ari's screen. Students will use the language of sequencing to describe their model of a plant life cycle as Ari runs the track.	NGSS.K-LS1-1 Use observations to describe patterns of what plants and animals (including humans) need to survive.

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5 <u>Moon Phases with Ari Level 1</u>	Students will identify the four major phases of the moon; first quarter, full moon, last quarter, and new moon. Students will program Ari to recognize a color to indicate each phase.	NGSS.1-ESS1-1 Use observations of the sun, moon, and stars to describe patterns that can be predicted.
6 <u>Stargazing with Ari</u>	Students will learn about star patterns and constellation formation, by identifying the key stars that form the Orion constellation and understanding how they contribute to its overall shape. Students will use their creativity to design a new constellation, then share how their unique interpretation reflects the idea that constellations can be viewed differently by each individual.	NGSS.1-ESS1-1 Use observations of the sun, moon, and stars to describe patterns that can be predicted.
7 <u>How Can We Measure?</u>	Students will define the terms measure and length. Students will measure the distance to objects using unique measurement tools and the Ari distance app.	CCSS.MATH.CONTENT.1.MD.A.2 Express the length of an object as a whole number of length units, by laying multiple copies of a shorter object (the length unit) end to end; understand that the length measurement of an object is the number of same-size length units that span it with no gaps or overlaps. Limit to contexts where the object being measured is spanned by a whole number of length units with no gaps or overlaps.
8 <u>Can We Sense That?</u>	Students will measure the distance from different material surfaces using the Ari Distance app. Students will evaluate which types of materials the Ari can easily sense.	NGSS.1-PS4-3. Plan and conduct an investigation to determine the effect of placing objects made with different materials in the path of a beam of light.

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9 Late for School!	Students will program a path for Ari using Color Code directions and speed. Students will demonstrate the ability to problem solve while considering calculated risks.	CSTA.1A-AP-08 Model daily processes by creating and following algorithms (sets of step-by-step instructions) to complete tasks.
10 Ozobot Race Track	Students will learn how to use Color Codes to program Ari to move at different speeds. Students will demonstrate effective problem-solving skills through the process of trial and error, with the ability to adapt and learn from their mistakes. Students will analyze and interpret the results of various speed Color Code combinations.	CSTA.1A-AP-14 Debug (identify and fix) errors in an algorithm or program that includes sequences and simple loops.
11 What's My Value?	Students will program Ari to follow the lines and the Color Codes to choose a place value. Students will identify the hundreds, tens, and ones places in a three-digit number. Students will distinguish between the hundreds, tens, and ones places in a three-digit number by writing each value.	CCSS.MATH.CONTENT.2.NBT.A.1 Understand that the three digits of a three-digit number represent amounts of hundreds, tens, and ones; e.g., 706 equals 7 hundreds, 0 tens, and 6 ones.
12 Picking Out Irregular Plural Nouns	Students will identify the correct way to spell and use irregular plural nouns. Students will program Ari to move to the correct irregular plural nouns using Color Codes. Students will use irregular plural nouns to complete a sentence.	CCSS.ELA-LITERACY.L.2.1.b Form and use frequently occurring irregular plural nouns (e.g., feet, children, teeth, mice, fish).