

Lesson 3:
Order is Key

Lesson 3 Overview: In Lesson 3, children will learn what an algorithm is, including examples of algorithms in everyday life, and understand the importance of order in algorithms.

Powerful Ideas from Computer Science: Representation, Algorithms, Hardware/Software, Debugging
Powerful Ideas from Literacy: Sequencing, Alphabet and Letter-Sound Correspondence, Editing and Audience Awareness

I. Warm Up: Did That Sentence Make Sense?

- Scramble cut-out words and ask children if the sentence makes sense.
- Ask children to put the words in the right order and explain that language needs to be in the right order to be understood,

II. Opening Tech Circle: What Is an Algorithm?

- Explain that programmers tell computers what to do with step-by-step instructions in a programming language. Algorithms are a sequence of steps in the right order.
- Go over everyday examples with children, such as brushing your teeth, or putting on putting on socks and shoes.

III. Unplugged Time: Program the Teacher

- Children will be responsible for verbally directing their teacher to special destinations in the classroom (e.g., to a bookcase or a closet) or doing a task (e.g., making a sandwich).
- The instructions the children give to the teacher must be specific, or teachers can misunderstand and make errors.

IV. KIBO Time: Order Matters

- Discuss how the Begin and End blocks can only be at the start and end of a program.
- Show children two programs and ask them what they will do differently. Remind children of the importance of order in programming,

V. Word Time: How-to-Book Design Journal

- In their Design Journal, have children write or draw the steps for getting ready to go to bed at night.

VI. Closing Tech Circle: Different How-tos!

- Have children share the instructions they created for getting ready to go to bed.

Vocabulary:

Algorithm

Program

Programmer

Programming languages