

# **CSTA Student Standards**

View the [K-12 CSTA Standards](#) and [CSTA Standards Progression Chart](#).

# Walker Kit - Summary

Mission	Security Zone	Ultrasonic Drum	Resistor Piano	Waker Race	Walker Dance	Walker Detect
<b>Key Skills &amp; Competencies</b>	Build a circuit with an ultrasonic range finder; Code with loops, comparison operators, and conditionals; Graph ultrasonic data	Use the ultrasonic sensor to create "air music" based on distance; map distance values to notes in a scale; code with loops, conditionals, and comparison operators	Create a panel of resistors and play notes with a jumper wire; map sounds to a list	Build walker robot and a circuit to control 2 servo motors; Refine the angles and speed of servo motors to produce the fastest robot; Code with angles and a loop	Build walker robot and a circuit to control 2 servo motors; Program functions to create dance moves; Refine speed and angles to customize the dance	Build walker robot and a circuit to control 2 servo motors and an ultrasonic sensor; Use ultrasonic sensor as feedback; Program with functions, conditionals, and loops;
<b>Vocabulary</b>	Conditionals, sensor, ultrasonic, echolocation, comparison operators	Variables, sensor, ultrasonic,	Resistor, voltage, lists	Servo motors, loops	Servo motors, functions	Servo motors, ultrasonic sensor, functions
<b>Build Difficulty</b>	Intermediate	Intermediate	Intermediate	Intermediate	Intermediate	Intermediate
<b>Code Difficulty</b>	Beginner	Intermediate	Advanced	Beginner	Intermediate	Intermediate

## WALKER KIT - CSTA LEVEL 1B (Grades 3-5) ALIGNMENT

Mission	Security Zone	Ultrasonic Drum	Resistor Piano	Waker Race	Walker Dance	Walker Detect
<i>Computing Systems</i>						
Devices in a system 1B-CS-01	✓	✓	✓	✓	✓	✓
Hardware & software 1B-CS-02	✓	✓	✓	✓	✓	✓
Troubleshooting 1B-CS-03	✓	✓	✓	✓	✓	✓
<i>Data &amp; Analysis</i>						
Use data to predict 1B-DA-07	✓		✓			
<i>Algorithms &amp; Programming</i>						
Variables 1B-AP-09		✓	✓			✓
Sequence, loops, conditionals 1B-AP-10	✓	✓	✓	✓	✓	✓
Decomposition 1B-AP-11	✓	✓	✓	✓	✓	✓
Modify & remix programs 1B-AP-12		✓				✓
Test & debug 1B-AP-15	✓	✓	✓	✓	✓	✓

Note: There are 21 CSTA standards in Level 1B. For better readability, the standards in the table show only the standards covered by the Walker Kit.

## WALKER KIT - CSTA LEVEL 2 (Grades 6-8) ALIGNMENT

Mission	Security Zone	Ultrasonic Drum	Resistor Piano	Waker Race	Walker Dance	Walker Detect
<i>Computing Systems</i>						
Hardware & software 2-CS-02	✓	✓	✓	✓	✓	✓
Troubleshooting 2-CS-03	✓	✓	✓	✓	✓	✓
<i>Data &amp; Analysis</i>						
Data encoding 2-DA-07			✓			
Transform data 2-DA-08	✓	✓	✓			
Refine models 2-DA-09	✓	✓	✓			
<i>Algorithms &amp; Programming</i>						
Variables 2-AP-11		✓	✓			✓
Compound conditionals 2-AP-12	✓	✓	✓		✓	✓
Decomposition 2-AP-13	✓	✓	✓	✓	✓	✓

Note: There are 23 CSTA standards in Level 2. For better readability, the standards in the table show only the standards covered by the Walker Kit.