

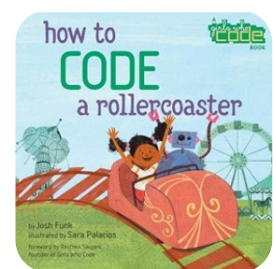
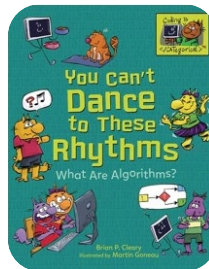


Coding Resources for Children

This handout provides different resources that educators can use to support children's learning in computational thinking (CT) and computer science (CS). Please note that this list is not exhaustive. New resources are continually being developed to support young children's learning in CT and CS.

Books

Books offer an opportunity for children of all ages to explore CT skills, such as algorithms, and CS skills, such as coding, in an unplugged way.



Name	Author	Age
Baby Loves Coding (also available in Spanish)	Ruth Spiro	0–3
I Can Code: If/Then	Vicky Fang	0–3
I Can Code: And/Or	Vicky Fang	0–3
Computer Engineering for Babies	Chase Roberts	1–5
How to Code a Rollercoaster	Josh Funk	4–8
How to Code a Sandcastle	Josh Funk	4–8
Bugs That Make Your Computer Crawl: What Are Computer Bugs?	Brian P. Cleary	5–8
Nothing Loopy about This: What Are Loops and Conditionals?	Brian P. Cleary	5–9
You Can't Dance to These Rhythms: What Are Algorithms?	Brian P. Cleary	5–9
This Python Isn't a Snake: What Are Coding Languages and Syntax?	Brian P. Cleary	5–9



Physical Tools

Physical tools provide toddlers, preschoolers, and elementary school children with opportunities to engage in CT and CS skills in a plugged, screen-free way.

Physical tools typically include a robot, a set of coding blocks that can be assembled into a sequence of instructions for the robot, and some supporting materials such as sensors and lights. For more resources on how to use these tools, visit the company website.



Botzees Toddler Coding Train Set



KIBO



Matatalab Coding Set



Bee-Bot

Name	Company	Age	Price Range: \$ = less than \$50; \$\$ = \$51–100; \$\$\$ = more than \$100
Botzees Toddler Coding Train Set	Botzees Toys	2–3	\$\$
Botzees Mini	Botzees Toys	3+	\$\$
Bee-Bot	Terrapin	3+	\$\$
Matatalab TaleBot	MatataStudio	3–5	\$\$
Code-a-Pillar	Fisher-Price	3–6	\$
Cubetto	Primo Toys	3–6	\$\$\$
KIBO	KinderLab Robotics	4–7	\$\$\$
Sphero indi	Sphero	4–7	\$\$\$
Matatalab Coding Set	MatataStudio	4–9	\$\$\$
KUBO Coding Starter Kit	KUBO Education	4+	\$\$\$
Code & Go Robot Mouse	Learning Resources	4+	\$
Robot Turtles	ThinkFun	4+	\$
Botley the Coding Robot	Learning Resources	5–7	\$\$
KiwiCo Robot Coder Starter Kit	KiwiCo	5+	\$



Screen-Based Tools

Screen-based tools provide older preschoolers and elementary school children with opportunities to engage in CT and CS skills in a plugged, screen-based way.

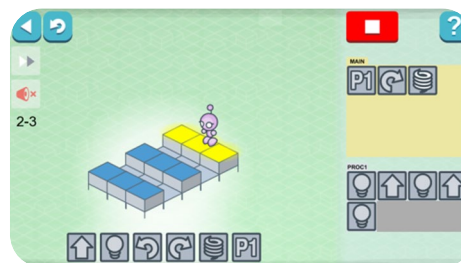
These mobile or PC-based applications typically include programmable characters, game or story scenes, and a set of graphical coding blocks. For more resources on how to use these applications, visit the company website.



ScratchJr



Kodable



LightBot

Name	Company	Age	Price Range: \$ = less than \$50; \$\$ = \$51–100; \$\$\$ = more than \$100
Bee-Bot online emulator	Terrapin	4+	Free
LightBot	LightBot	4+	\$
codeSpark Academy (The Foos)	codeSpark	4–9	\$
ScratchJr	ScratchJr	5–7	Free
Move the Turtle	Move the Turtle	5+	\$
Kodable	Kodable	5+	\$\$
Code.org	Code.org	5+	Free
OctoStudio	MIT Media Lab	7+	Free

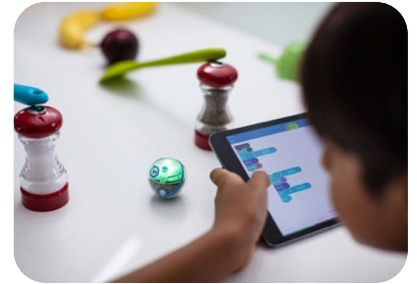


Hybrid Tools

Hybrid tools include both physical and screen-based components, such as physical robots that are programmed using a mobile-based coding application. For more resources on how to use these tools, visit the company website.



COJI The Coding Robot Toy



Sphero BOLT

Name	Company	Age	Price Range: \$ = less than \$50; \$\$ = \$51–100; \$\$\$ = more than \$100
Blue-Bot	Terrapin	3+	\$\$\$
COJI The Coding Robot Toy	WowWee	4+	\$
Cubelets	Modular Robotics	4+	\$\$\$
Botzees Classic	Botzees Toys	4+	\$\$
Sphero mini	Sphero	5–8	\$\$
Osmo Coding Awbie	Osmo	5+	\$
Dash and Dot	Wonder Workshop	6+	\$\$\$
Sphero BOLT	Sphero	8+	\$\$\$