iRobot Education

Root® Coding Robots

Using Robots to Empower Learning.

Take learning to code to the next level

Bringing code to life through art, music and hands-on activities, iRobot's Root® coding robots deliver a revolutionary coding experience suitable for any expertise, from pre-readers to advanced coders.

Not just your average coding robot

A creative combination of features and sensors appeal to students of all interests. Program your Root® robots to drive, draw, react to touch, glow the colours of the rainbow, play music and more!

3 Learning Levels for any skill-level

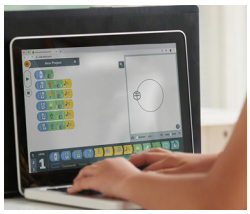
Easy for beginners, but still challenging enough to keep experienced coders engaged. Students can begin with graphical coding before advancing to hybrid coding, then full-text coding.

edu.irobot.com | education@irobot.com

With over 30 years of building and programming robots, learn to code from the expert that brings you the Roomba® robot vacuum and Braava® robot mop.

30 YEARS
Robotics Expertise & Innovation

Root® Lite/Pro coding robot features:



iRobot® Coding App included

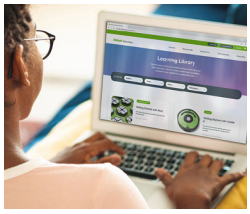
Pair your classroom's Root® robots with the iRobot® Coding App using Bluetooth® technology to watch projects come to life. **Get coding now at code.irobot.com**

Connect classroom learning with the real world

Use interactive experiences with the Root® coding robots to increase student engagement and relate classroom learning to the real world.

Seamlessly switch code across Learning Levels

An auto-level converter instantly translates code across each Learning Level, making the Root® robots great tools for differentiated learning opportunities.



Hours of free and premium learning content

A learning library offers hours of free activities to encourage student learning. Premium content modelled after educational standards is available with a subscription.

Form cross-curricular connections

From STEM subjects to history, ELA, art and beyond, use the Root® robots to combine the content and skills from multiple subjects into a single interactive learning experience.

Bring learning into the home

Students can access iRobot® Coding at home to practice their coding skills with virtual SimBots before returning to the classroom and sharing their discoveries.

Make the robot do more

Use the magnetic attachment points, marker holder, or charging port on the Root® robots to attach accessories or your own 3D printed creations.

Specifications

PRODUCTS

Root® Lite UPC	885155024756
Root® Pro UPC	854967008001
Battery Type	Lithium ion
Connectivity	Bluetooth® Low Energy

MODEL COMPARISON

Features	Root® Lite	Root® Pro
Drives	✓	✓
Draws	✓	✓
Plays Music	✓	✓
LED Lights (4x)	✓	✓
Light Sensors (2x)	✓	✓
Top Touch Sensors (4x)	✓	✓
Front Bumpers (2x)	✓	✓
Sound Sensor	✓	✓
Colour Sensor	X	✓
Climbs Magnetic Surfaces	X	✓
Erases Magnetic Surfaces	X	✓
Whiteboard Top	X	✓
Accessories Available	✓	✓

SUPPORTED OPERATING SYSTEMS

Android
Chrome OS
Windows
iOS
macOS

*In order to connect to the Root® coding robot using the iRobot® Coding App, your device requires Bluetooth Low Energy (BLE) and a supported browser such as Chrome.

iRobot Education

iRobot® Coding App

A Coding Journey Powered by Robots.

Graphical Coding

Begin with drag-and-drop, graphical blocks in Learning Level 1 to teach the fundamental logic skills of coding, no reading required. Then, use the App's auto-level converter to instantly translate code to the next level.

Hybrid Coding

Differentiate learning by allowing students to work between Learning Levels. When they are ready to progress, hybrid blocks in Learning Level 2 build coding fluency by featuring a mix of graphics and coding script.

Full-Text Coding

The ability to flip between Learning Levels to helps students build their way up to Learning Level 3, which uses full-text code to teach the structure and syntax of professional coding languages.

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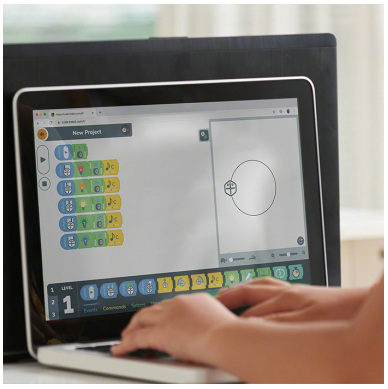
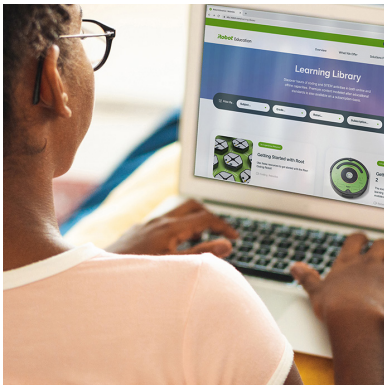


Program SimBots in virtual arenas

The best part about learning with robots? Seeing all you can do with them. Take on challenges using robot SimBots in virtual arenas. **Get coding now at code.irobot.com.**



Hours of activities at your fingertips

Visit the learning library to discover hours of free tutorials, projects and activities that encourage student learning. Premium educator content that has been created, curated and scaffolded to meet classroom needs is also available on a subscription basis.

Easily code in mixed device landscapes

Suitable for mixed device or BYOD landscapes, the iRobot® Coding App can be accessed on a variety of types or models of devices running most major, up-to-date operating systems.

Connect to and control real robots*

Engage learners through innovation and creativity using interactive, real-world experiences with the Root® coding robot. Whether a budding scientist, explorer, musician, artist or engineer, the Root® coding robot's combination of features and sensors keep students engaged.

Specifications

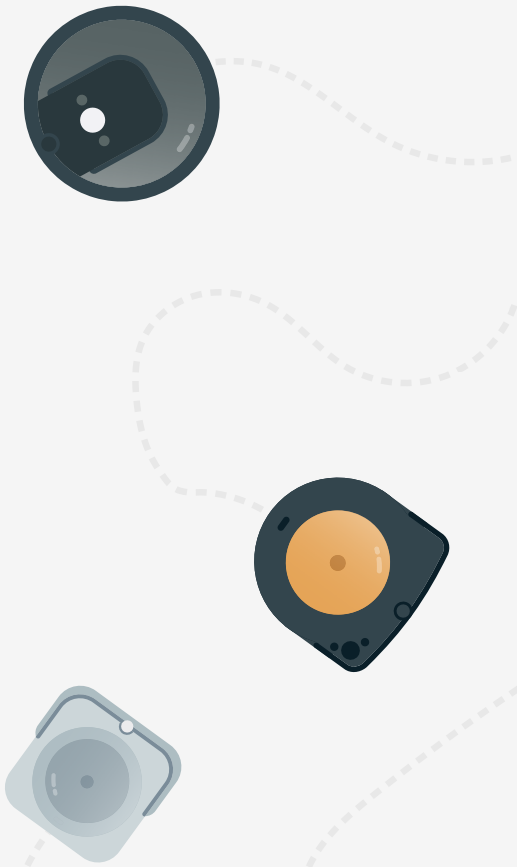
CODING APP

Learning Level 1	Graphical
Learning Level 2	Hybrid
Learning Level 3	Full-Text
Virtual SimBots	Root® Pro

The App's auto-level converter instantly translates code to the next level, creating a framework of knowledge that students can build upon.

SUPPORTED OPERATING SYSTEMS

Android
Chrome OS
Windows
iOS
macOS



*In order to connect to the Root® coding robot using the iRobot® Coding platform, your device requires Bluetooth Low Energy (BLE) and a supported browser such as Chrome.

iRobot Education

Root™ Brick Top

Unlock the Ability to Build.

Code, Create and Actively Participate

Foster engagement and creativity in the classroom with the Root™ Brick Top, which lets students turn the Root® coding robot into just about anything they can imagine– from a storytelling crocodile to a musical rocketship, and more!

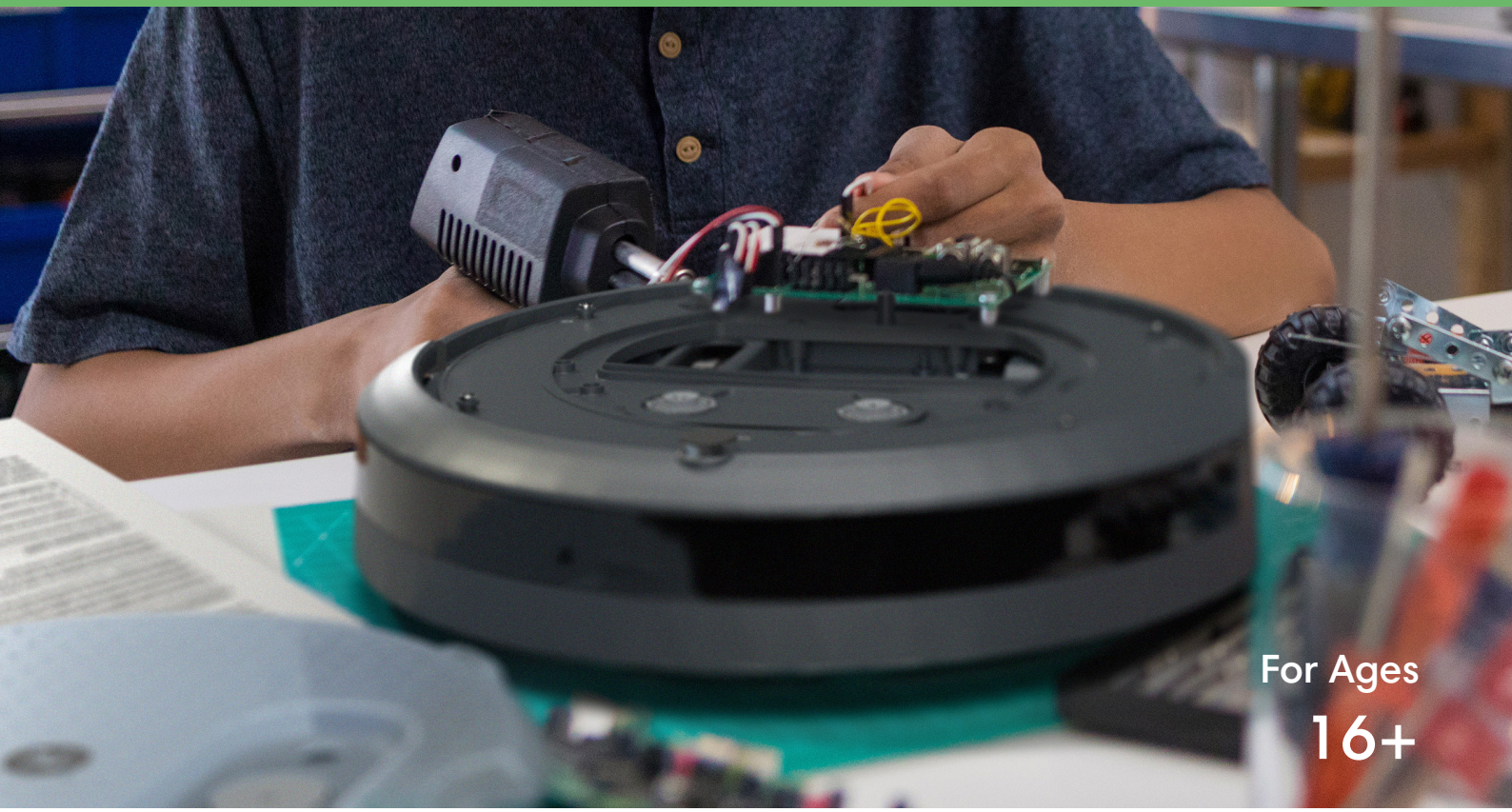
Encourage Learning Through Experience

Use the Root® coding robot to power your Brick Top creations and demonstrate key learning points, such as the physics behind a catapult's projectile motion. The Root™ Brick Top is compatible with common building blocks.

Specifications

PRODUCT	
Single Unit UPC	885155024268
Robot Compatibility	Root® coding robots
How Does it Connect?	Built-in magnets“

iRobot Education



Create® 3 Educational Robot

iRobot's Foundation for Mobile Robot Development

A Buildable, Mobile Robotics Platform

Tackle robotics projects with an affordable, trusted mobile robot development platform that features a buildable design to mount additional hardware.

Begin by Programming Basic Behaviors

Grasp the fundamentals of robotics, computer science, and engineering by programming the Create® 3 to perform simple behaviors, sounds, and movements.

Evolve to Advanced Robotics Applications

Tap into advanced applications including multi-robot exploration, navigation and mapping technology, and telepresence capabilities. Additional hardware not included.

With over 30 years of building and programming robots, advance your robotics skills with the expert that brings you the Roomba® robot vacuum and Braava® robot mop.

30 YEARS
Robotics Expertise & Innovation

Create® 3 educational robot features:

Build and test robotics applications

The new and improved version of its popular predecessor, the Create® 3 provides a full suite of modules, sensors, LED lights, and wheels to fuel robotics exploration.

Multi-language software support

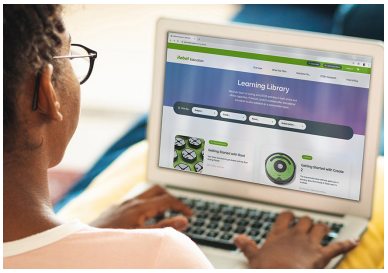
Learn using ROS 2, the industry-standard software for roboticists worldwide. Or leverage the iRobot Coding App and the iRobot Education Python 3 SDK for increased access to robotics education and research.

Operational out of the box

Program, connect to, and control the Create® 3 educational robot out of the box with an easy onboarding process. Communicate with the robot using Wi-Fi, Ethernet over USB, or Bluetooth® Low Energy technology.

Equipped with smart technology

Affordably develop scalable robotics projects with the Create® 3 robot's combination of intelligent sensors and actuators. The robot comes with a Home Base® charging station for docked charging.



Educator resources available

Explore the iRobot Education learning library for tutorials and sample projects, or venture into expansive, online open source databases for access to software packages and libraries in ROS 2 or Python 3.

Specifications

PRODUCT CONTENTS

Robot Model	1x Create® 3 Educational Robot
Battery Type	1x 26 Wh Lithium Ion Rechargeable Battery
Charging Dock	Home Base® Station
Robot UPC	885155030948

CONNECTIVITY

ROS 2	Wi-Fi Ethernet over USB
iRobot Education Python 3 SDK	Bluetooth® Low Energy
iRobot Coding App	Bluetooth® Low Energy

SENSORS

1x Power button
2x User buttons
2x Front bumper zones
2x Wheel encoders
4x IR cliff sensors
7x IR obstacle sensors
1x Downward optical flow sensor for odometry
1x 3D gyroscope
1x 3D accelerometer
1x Battery level monitor

ACTUATORS

2x Drive motors
6x RGB LED ring
1x Speaker

CHARGING AND EXPANSION

1x Docking port
1x USB port, 3A at regulated 5V
1x Payload power, 2A at unregulated (nominal 14.4V)