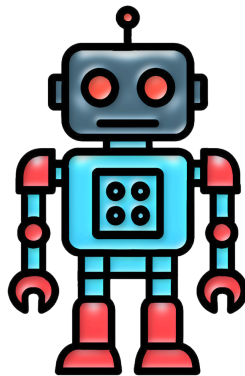


10 Hands-On Coding Robot Challenges for Kids

Fun, screen-free STEM ideas for Mio Robot, Evolution Robot, and other coding bots!



Welcome!

These quick, creative robot challenges help children practise coding logic, spatial reasoning, problem-solving, and teamwork – using ANY programmable robot.

Perfect for:

- rainy days
- STEM stations
- extra challenges after buying a robot
- keeping the “new toy” excitement going
- homeschool STEM lessons

You can use **Mio Robot, Evolution Robot, Botley, Bee-Bot, Sphero Mini, Dash**, or any bot that can follow commands.

CHALLENGE LIST

1. [Bug-in-the-Kitchen Maze Challenge](#)

Create a maze using masking tape or cardboard “walls.”

Goal: Program the robot to reach the “chocolate coin” (or any reward) in the fewest steps.

Add difficulty: add “one-way doors” or dead ends.

2. The Treasure Trail

Place 5–6 objects around the room.

Challenge: Code the robot to visit them in a specific order.

Add difficulty: timed challenge.

3. Draw-a-Path Challenge

Stick a large sheet of paper to the floor.

Children draw a winding path; the robot must follow commands to trace it.

Add difficulty: draw sharp turns or bridges to “jump.”

4. [Sibling Showdown](#)

One child programs Robot A.

Another child programs Robot B.

Goal: Both robots must reach the same target from different starting points.

Add difficulty: paths must not cross!

5. Robot Bowling

Set up 6 plastic cups as bowling pins.

Code your robot to knock down as many as possible.

Add difficulty: smaller pins or a longer distance.

6. Delivery Driver

Give your robot a “parcel” (paper square).

Code it to deliver it to different rooms or stations.

Add difficulty: add “traffic lights” (red → pause, green → go).

7. Colour Coding Race

Place coloured markers or cards along a route.

Challenge: Robot must stop on each colour in order.

Add difficulty: move the markers further apart.

8. Maths Mission

Place number cards on the floor.

Call out a sum (e.g., 7-3).

Robot must drive to the correct answer.

Add difficulty: multi-step sums.

9. Shape Builder Challenge

Stick shapes (triangle, square, star, etc.) to the floor in a pattern.

Challenge: Program robot to trace each shape's outline.

Add difficulty: the robot must draw ALL shapes without stopping.

10. Escape the Room

Set boundaries with books or tape.

Add obstacles inside.

Goal: Code the robot to reach the exit without touching anything.

Add difficulty: create a "locked door" that opens only after completing Task A (e.g., visiting a mark first).

PARENT GUIDE

Coding Skills Practised

- Sequencing
- Debugging
- Estimation
- Spatial reasoning
- Collaboration
- Cause & effect

Tips for Success

- Let kids test + fix (“debug”)
- Add timers or scoring for older kids
- Start simple and increase the challenge
- Let children [*design their own maze*](#) – huge skill boost

Want More Programming Fun?

Check out our Coding For Kids Resources

You’ll find beginner-friendly coding resources and activities to help kids explore programming.

- **Beginner Guides:** Step-by-step introductions to coding concepts and tools.
- **Coding Activities:** Fun projects and challenges for kids learning to code.
- **Coding Toys & Reviews:** Hands-on coding toys and educational tech reviews.

[Visit: MagicKidsLearning.com/kids-coding](https://www.magickidslearning.com/kids-coding)

