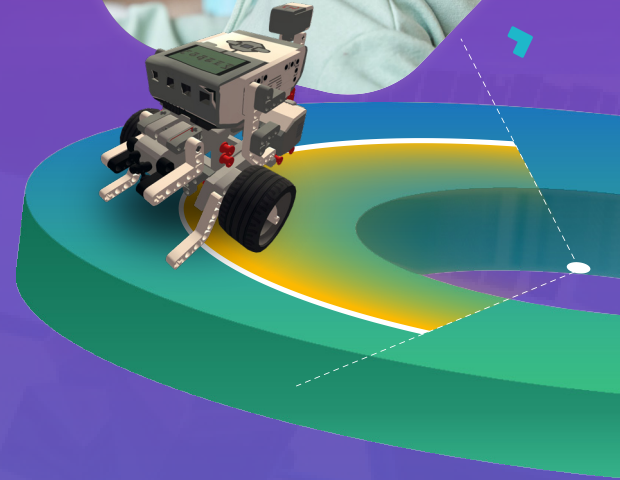




# Cyber Robotics 101

## A flexible beginner's guide to CS and robotics

This course guides students to discover computer science and robotics concepts by programming their own virtual robot through a series of gamified missions. In addition to discovering the nuts and bolts of coding and controlling robots, they'll practice STEM, computational thinking, problem solving, and soft skills.



Suggested for  
Grade 5-9



20-25 hours of activity

**For teachers of all backgrounds**

**Easy, web-based access**

**Encourages peer collaboration**

Cyber Robotics 101 is perfect for students (and teachers) with little to no background in CS or robotics. It covers a broad set of topics that helps beginners get their bearings.

### STUDENT OUTCOMES:

- + Writing algorithms and code
- + Understanding algorithm and code
- + Practicing control flow: loops, if/else, and more
- + Exploring navigation: screw and smooth turns
- + Discovering detection: touch, distance, color, gyro
- + Practicing object manipulation: robot's arm

### CSTA and NGSS alignment

All lessons include guided walkthroughs with clear learning objectives.

### TEACHING RESOURCES:

- + Teachers' guide
- + Instructional videos
- + Suggested solutions (for teachers)
- + Slide deck to lead classroom sessions
- + Class conclusion questions
- + Learning progress heatmap
- + Knowledge base and help desk



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