



We help schools
Build Capacity.
Teach STEM Better.
Enhance Learning.

Grades 6-8



EXPLORING AUTONOMOUS VEHICLES WITH mBOT

A comprehensive course that enables instructors to create a dynamic, engaging classroom integrated with CS/STEM competencies that ensure student success.

A WORLD OF DRIVERLESS CARS

Revolutionize transportation and mobility using mBot, the autonomous vehicle! Hands-on activities guide students to learn how automated vehicles work by using sensors for light levels, finding lane lines, parallel parking, and avoiding objects like adaptive cruise control. Throughout the mBot course, students are engaged in problem based learning and critical thinking as they learn the foundations of new technologies and the science and engineering behind it.

STUDENTS WILL:

- **Build a robot** and learn about its mechanical components and sensors
- **Learn to code** with Scratch at any skill level, on: Chromebook, Android, iOS, PC, or Mac.
- **Apply Computer Science** principles to real world problems.



STEM Solutions for Busy Teachers



Save time in lesson prep with standards-aligned, easy to teach lessons created by teachers for teachers.



Gain helpful STEM and CS tips and techniques through live or virtual PD sessions with our experts.



Tailored for your timeframe: Camp, after-school, or in-class with 6 to 40 hours of hands-on activities.



You can count on our support team for technical and lesson planning assistance when you need it.

ROBOT TECHNOLOGY TO ENGAGE IN CS/CODING

Equipped with the latest tech, sensors, and parts; mBot is designed for education.

- **Rugged aluminum parts** built for years of classroom use
- An **Ultrasonic sensor** to calculate distances and avoid collisions
- **Infrared Sensor** to follow pathways or detect nearby objects
- A **Light sensor** to measure surrounding brightness levels



- **RGB LEDs** and a **Buzzer** to communicate with lights or sound
- **Arduino** powered for easy programming with Scratch or C
- **LED Screen** for displaying messages and facial expressions.
- * **Available: Rechargeable battery pack** that lasts for 4 hours of activities

TURN-KEY FOR ALL LEARNERS AND EDUCATORS*

Start easily with a **STEM Lab Pack** that includes everything needed for success:



World-class digital Curriculum packed with 5E lessons, slide decks, videos, activities, handouts, assessments.



Knowledgeable PD and dependable support services.



Reliable STEM products that last several years.



Fun Software Apps for Coding on almost any device with easy to follow step-by-step instructions.



*Also available: Up to 3 **College credits and certificates** from our partnership with **UC San Diego**

EXTENDED STUDIES

STANDARDS-ALIGNED CURRICULUM



Science

Apply physical science concepts, engage in scientific inquiry, and perform data analysis.



Technology

Create and test programs in projects combining hardware and software with variables, loops, and conditionals.



Engineering

Collaborate, communicate, and create innovative designs using the Engineering Design Process.



Mathematics

Reason abstractly while solving multi-step real world problems and algorithms.



Ask our STEM Specialists for an Implementation Plan today!



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