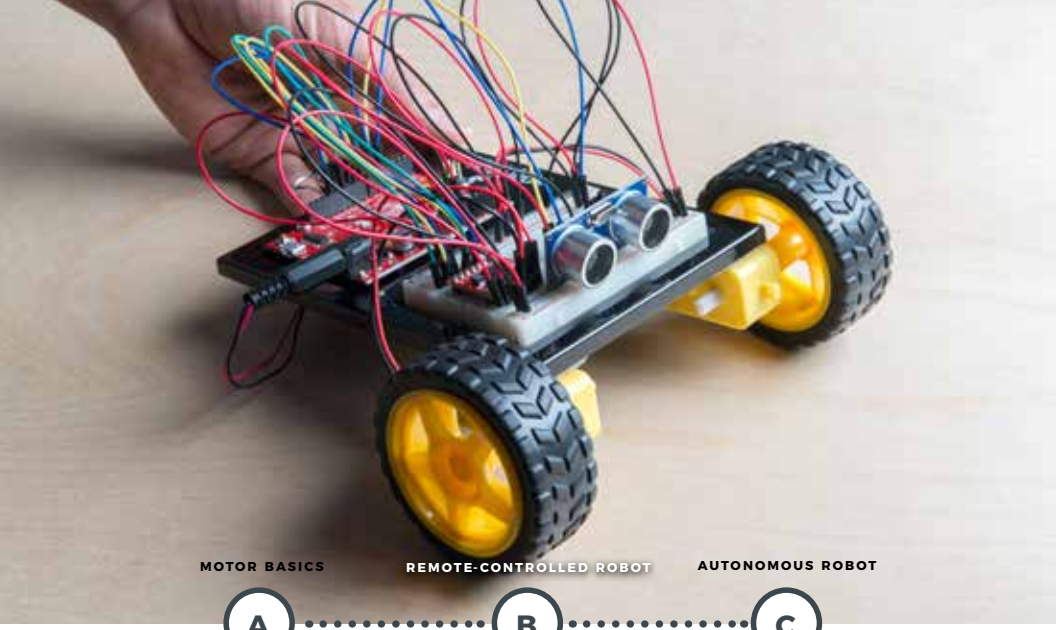

PROJECT 5

Ah, robots. One of the most iconic and exciting electronics applications. In this project, you will learn all about **DC motors** and **motor drivers** by building your own robot! You'll first learn motor control basics. Then you'll control a tethered robot by sending it commands over serial. Last, you will unleash your robot by removing the tether and making it autonomous! By adding a distance sensor, the robot can learn how to avoid obstacles.

NEW COMPONENTS INTRODUCED IN THIS PROJECT

- TB6612FNG MOTOR DRIVER
- SWITCH
- DC GEARMOTOR
- WHEEL

NEW CONCEPTS INTRODUCED IN THIS PROJECT

- INPUT VOLTAGE
- INTEGRATED CIRCUITS
- H-BRIDGE MOTOR DRIVER
- ASCII CHARACTERS
- CONVERTING STRINGS
- AUTONOMOUS VEHICLES

YOU WILL LEARN

- HOW TO CONTROL A MOTOR USING A MOTOR DRIVER
- HOW TO SEND SERIAL COMMANDS TO CREATE A REMOTE-CONTROLLED ROBOT
- HOW TO BUILD A ROBOT THAT USES SENSORS TO REACT TO ITS ENVIRONMENT