

ROBOTICS HARDWARE REFERENCE — CLASSES 4 TO 9

RobotName | Companion Booklet Coding Sketch |

CLASS /	ROBOT NAME HARDWARE COMPONENTS	CODING SKETCH (COMPANION BOOKLET)
CLASS 4 NOVA Junior Sense-Think-Act Bot	Hardware Components: ● Arduino Uno R3 Clone ● HC-SR04 Ultrasonic Sensor ● L298N Motor Driver Module ● BO Geared Motors (x2) + Wheels ● Castor Wheel · Large Acrylic Chassis (2-Layer) ● LEDs (R/G/B) + Resistors Pack · Active Buzzer Module ● Battery Holder 4xAA + Switch · Mini Breadboard ● Laminated Part Labels: SENSOR / BRAIN / ACTUATOR	Coding Sketch: Arduino IDE RoboticsCompanionBooklet — separate module
CLASS 5 Gear Walker Open-Body Line Follower	Hardware Components: ● Arduino Uno R3 Clone ● IR Line Sensor Modules (x2) ● L298N Motor Driver Module ● Geared BO Motors (x2) + Wheels ● Transparent Acrylic Chassis · Castor Wheel ● Jumper Wires (M-M / M-F) · Battery Box	Coding Sketch: Line-following algorithm — Arduino IDE sketch Arduino IDE RoboticsCompanionBooklet — separate module
CLASS 6 Grid Navigator Medicine Delivery Rover	Hardware Components: ● Arduino Uno R3 Clone ● HC-SR04 Ultrasonic Sensor · IR Sensors (x3) ● LDR (Light Dependent Resistor) · DHT11 Temperature Sensor ● BO Motors + Wheels · Robot Chassis ● 6x6 ft Laminated Grid Floor Mat ● Jumper Wires · Battery Box	Coding Sketch: Multi-sensor navigation sketch — Arduino IDE Arduino IDE RoboticsCompanionBooklet — separate module
CLASS 7 Warehouse Runner Pick & Drop Bot	Hardware Components: ● Arduino Uno R3 Clone ● Servo Gripper Claw Kit · Servo Motor ● IR Line Sensors (x2) ● L298N Motor Driver Module ● Sturdy Robot Chassis · Jumper Wires	Coding Sketch: Autonomous pick-and-drop sequence — Arduino sketch Arduino IDE RoboticsCompanionBooklet — separate module
CLASS 8 Krishi Mitra AI Irrigation System	Hardware Components: ● Arduino Uno R3 Clone ● Soil Moisture Sensor · Relay Module ● 5V Mini Water Pump · Rubber Tubing ● 16x2 LCD Display Module ● Jumper Wires · Battery Box	Coding Sketch: Threshold-based auto-irrigation logic — Arduino IDE Arduino IDE RoboticsCompanionBooklet — separate module
CLASS 9 Cobot Arm 4-DOF Robotic Arm	Hardware Components: ● 4-DOF Robotic Arm Kit (TECH BIZ / RoboKreeda) ● Servo Motors (x4) ● Gripper Claw Assembly ● Servo Driver / Control Board · Jumper Wires	Coding Sketch: Pick-and-place servo sequencing — Arduino IDE sketch Arduino IDE RoboticsCompanionBooklet — separate module