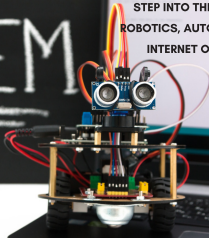


STEM

STEP INTO THE WORLD OF
ROBOTICS, AUTOMATION AND
INTERNET OF THINGS

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ROBOTICS KIT DEFINITION

BLOCK ELECTRONICS



PROJECT KIT



ARDUINO



GRADE 3 CURRICULUM

UNIT 01



Topics - Introduction to Electronic, Input and Output devices, Different types of Switches & Circuit types

How it helps - Creativity, Develop Imagination, Futuristic thinking, Knowledge of Technology

UNIT 02



Topics - Introduction to Sensors, Project Building and Day to Day Applications like Automatic Street lamp, Clap Switch, Water Dispenser, Motor Related projects

How it helps - Use of sensors, Automation, Technological skills

UNIT 03



Topics - Automation, Build your first Robot, Speed control, Introduction to Transmitter and Receiver, Remote operated Utilities and more

How it helps - Application of knowledge, Analytical skills

UNIT 04



Topics - Applications of Electronic Blocks, Line followers, Cliff avoiding robotic vehicle, Light Following Robots

How it helps - Project management, Design thinking and Problem Solving

PLATFORM

BLOCK ELECTRONICS



INCLUSIONS

- ALL PRACTICAL 18 CLASSES
- CONCEPT CLASSES
- PROJECT CLASSES
- REVISION CLASSES
- ASSESSMENT
- QUIZZES
- CLASS SUMMARY
- PRACTICE PROJECTS
- PROCEDURE DOCS

GRADE 4 CURRICULUM

UNIT 01



Topics - Advanced concepts related to Electronic, Input and Output devices, Use of circuits and Structures for home applications

How it helps - Logical Reasoning, Knowledge of Technology

UNIT 02



Topics - Design Applications like Automatic Dustbin, Light Dependent Resistor (LDR) Circuits, Sound Sensors, Automatic Watering System, Introduction to Different types motors

How it helps - Cognitive flexibility, Engineering skills

UNIT 03



Topics - Home Automation, Remote Controlled devices, Application of Blue devices like Auto mail box, Sensor controlled umbrella using Servo motor

How it helps - Analytical skills, Problem Solving

UNIT 04



Topics - Introduction to Robotic Line followers, Cliff avoiding robotic vehicle, Introduction to OR, AND and NOT Gate

How it helps - Project management, Innovative thinking

PLATFORM

BLOCK ELECTRONICS



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GRADE 5 CURRICULUM

UNIT 01



Topics - Introduction to Tinker CAD, Coding basics for different sensors and devices

How it helps - Logical reasoning, Exploration mindset, Inquiry skills

UNIT 02



Topics - Block based programming to operate the devices using Ardublocks, Introduction to Sensors like Obstacle Sensor, LDR Sensor, Moisture Sensor etc.

How it helps - Cognitive ability, Research attitude

UNIT 03



Topics - Design program them to operate Robotic Line followers, Cliff avoiding robotic vehicle, etc

How it helps - Critical thinking, Adaptability, Decision making skills

UNIT 04



Topics - Home automation using Logic Blocks like OR, AND and NOT Gate, Other Home Automation Projects

How it helps - Presentation skills, Initiative & Leadership

PLATFORM
BLOCK
ELECTRONICS
TINKER
CAD
Ardublock

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GRADE 6 CURRICULUM

UNIT 01



Topics - Introduction to Robotics, Learn to program your Arduino with ardublocks and make LED blink in different pattern

How it helps - Cognitive ability, Presentation skills, Creativity

UNIT 02



Topics - Learn about Different Sensors and integrate it with Arduino to make different projects

How it helps - Adaptability, Decision making, Critical thinking

UNIT 03



Topics - Build a cart using Bo Motor, Wheels, Platform and start automating its operation using sensors

How it helps - Application of knowledge, Analytical skills, Problem Solving

UNIT 04



Topics - Build an android application to operate a bot for different day to day applications

How it helps - Design Thinking and Problem Solving, Communication, Self management, Futuristic Applications

PLATFORM



Ardublock

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GRADE 7 CURRICULUM

UNIT 01



Topics - Introduction to Automation and Internet of things, Learn to program using Arduino IDE

How it helps - Cognitive ability, Computation Skills, Programming Skills, Building Circuits

UNIT 02



Topics - Know what is Ultrasonic Sensor, Serial monitor and make a distance Measuring device, Make your Weather monitoring System and other Internet of things projects

How it helps - Adaptability, Decision making

UNIT 03



Topics - Design Different Automation projects like water vending machine, Automatic dustbin, etc and **learn Automation**

How it helps - Design thinking, Initiative, Imagination

UNIT 04



Topics - Introduction to Virtual Electronics and Real time testing with Arduino circuits

How it helps - Collaboration, Communication, Self management

PLATFORM



Ardublock

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GRADE 8 CURRICULUM

UNIT 01



Topics - Control LED using voice, IR Sensors, DTDP Switch, Industrial application of Robotics

How it helps - Adaptability, Decision making, Empirical and Quantitative Skills

UNIT 02



Topics - Understand Sensors and make projects like parking sensor, automatic plant watering system

How it helps - Research aptitude, Result Documentation, Numerical ability

UNIT 03



Topics - Learn to communicate Arduino with your Phone via Bluetooth, Programming hacks

How it helps - Engineering skills (Motor skills), Design thinking, Cognitive flexibility

UNIT 04



Topics - Observe a problem and think of Solution, Make a capstone project, Control appliances with Bluetooth

How it helps - Collaboration, Communication, Self management

PLATFORM



Ardublock

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GRADE 9 CURRICULUM

UNIT 01



Topics - Coding hacks using Arduino IDE, Industrial applications of Internet of things

How it helps - Cognitive ability, Computation Skills, Programming Skills, Building Circuits

UNIT 02



Topics - Understand Keypad and learn to operate appliance with the the help of keypad also learn to make a moody lamp

How it helps - Adaptability, Decision making

UNIT 03



Topics - Learn to communicate Arduino with your Phone through Wifi and make home automation projects

How it helps - Design thinking, Initiative, Imagination

UNIT 04



Topics - Make a capstone project - Control your lights from anywhere in world via internet

How it helps - Collaboration, Communication, Self management

PLATFORM

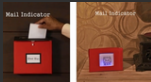
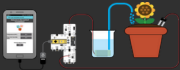


Ardublock

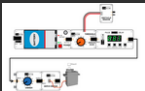
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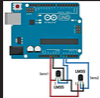
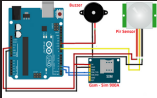
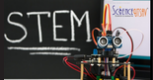
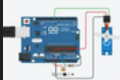
SAMPLE PROJECTS



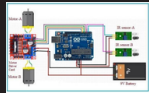
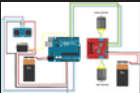
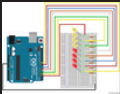
SAMPLE PROJECTS



SAMPLE PROJECTS



SAMPLE PROJECTS



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