

# Where Dreams

Come to

**Real Life**



**Microbit Computing**

**Discover Create Robotify!**

**Grades 1-3**

Live 1:1 or 1:2 Online | Offline classes  
Personalised curriculum | Monthly Fee structure



# Welcome to Roboticschools

## **Program Overview**



Children have an innate love for all things joyful and fun. Our mission is to unleash their full potential through a wide range of interactive and multidisciplinary programs.

At Roboticschools, we've redefined learning by making it a delightful and playful experience. We encourage children to explore their passions and uncover their hidden talents. Our curriculum takes a playful approach to cover a wide spectrum of subjects, from coding and design thinking to cutting-edge technologies like AR, VR, Robotics, IoT, and the ever-evolving domains of artificial intelligence and machine learning.

A Roboticschools student embarks on a journey of self-discovery and skill development, reaching their maximum potential through our meticulously crafted programs. These skills complement their regular school curriculum, leading to improved academic performance.

Our methodology is designed to help students grasp complex concepts in science and mathematics through coding, visualizations, and animations. We offer a unique curriculum that instills new-age skills in children, preparing them for success and the ability to tackle any challenge that comes their way. As they learn with us, their relationship with technology shifts from that of a consumer to that of a creator.

**Join Roboticschools and let your child's learning journey be a joyous adventure in discovery and creativity."**

# About Curriculum

At Roboticschools, our curriculum is meticulously crafted to unlock the genius within your child. We offer a comprehensive technology program for kids, spanning from laying a strong foundation in coding to fostering scientific exploration, nurturing design thinking skills, and delving into the world of robotics. What sets us apart is our commitment to providing specialized expertise across various technology domains, making us the premier choice for holistic tech education.



Hands-On Learning

Creativity  
and Problem-Solving



Progressive Skill Building

Fun engagement



Advanced technology



## Module 1

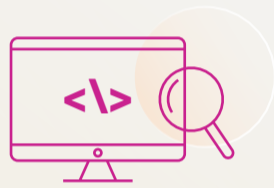
# Computing with Microbit



- Microbit makes coding hands-on and fun for kids, allowing them to actively engage in programming.
- Kids connect Microbit to sensors and LEDs, exploring the interaction between code and hardware.
- Microbit computing sparks creativity as kids design various projects, enhancing problem-solving skills through hands-on exploration.



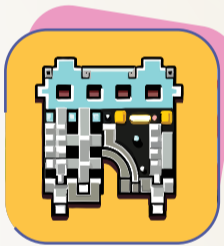
**40** Classes



**30** Projects



**65** Concepts



### 1: Introduction to **Microbit and LED's**

**Objective:** Get familiar with Microbit by programming it to control LEDs.

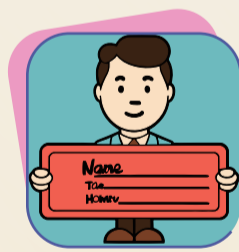
**Learning Outcomes:** Understand basic Microbit functionality, practice LED control, and explore the coding environment.

### 2: **Flashing Heart & Shining Sunbeam**

**Objective:** Program Microbit to display a flashing heart pattern.



**Learning Outcomes:** Learn about animation in Microbit, timing control, and basic blocks.



### 3: **Data Types Strings - Name Tag**

**Objective:** Introduce string data types by displaying a personalized name tag.

**Learning Outcomes:** Understand string data types, string manipulation.

### 4: **Data Types - Numbers Game Counter**

**Objective:** Explore number data types by creating a game counter on Microbit.



**Learning Outcomes:** Understand numeric data types, variable assignment.



### 5: **Inputs - Smiley Buttons**

**Objective:** Use button inputs on Microbit to display different smiley faces.

**Learning Outcomes:** Learn about button inputs, conditional programming.





### 6: Variables I - Voting Machine

**Objective:** Use variables to create a simple voting machine simulation on Microbit.

**Learning Outcomes:** Understand variable usage, updating variables based on input, and simulate a basic voting process.

### 7: Variables II

#### Digital Wallet

**Objective:** Implement a digital wallet system on Microbit using variables.



**Learning Outcomes:** Updating balances, and simulate a basic digital financial transaction.



### 8: Conditions I Coin Flipper

**Objective:** Simulate a coin flip using conditional statements on Microbit.

**Learning Outcomes:** Learn randomization, and simulate a simple probability experiment.

### 9: Conditions II

#### Microbit Dice

**Objective:** Create a Microbit-based digital dice using conditional statements.



**Learning Outcomes:** Simulate dice rolling, and explore applications of randomization in games.



### 10: Hack Headphones

**Objective:** Use Microbit to create a simple music player interface.

**Learning Outcomes:** Practice using buttons for user input, and create interactive music player.

### 11: Banana Piano

**Objective:** Create a virtual piano using bananas as touch-sensitive keys.

**Learning Outcomes:** Understand capacitive touch sensing, and explore creative applications of input sensors.



### 12: Light Sensor

#### Morning Alarm

**Objective:** Use a light sensor to create a morning alarm that activates when light increases.

**Learning Outcomes:** Learn to use light sensors, and create a simple environmental trigger.



### 13: Sound Sensor Clap Lights

**Objective:** Make lights are activated by clapping, using a sound sensor.

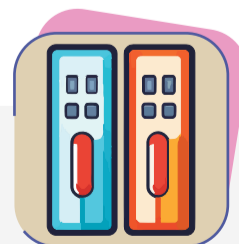
**Learning Outcomes:** Understand sound sensors, sound input, and create a responsive system.

### 14: Temperature Sensor

#### Weather Display

**Objective:** Display current temperature on Microbit using a temperature sensor.

**Learning Outcomes:** Learn to use temperature sensors, and create a weather display system.



### 15: Accelerometer I Step Counter

**Objective:** Use the accelerometer sensor to count steps and display the count.

**Learning Outcomes:** Understand accelerometer sensors, reading and interpreting sensor data.



### 16: Accelerometer Sensor II - Rock, paper and scissors

**Objective:** Use accelerometer sensor to create a virtual RPS game.

**Learning Outcomes:** Understand accelerometer data interpretation and create an interactive game.

### 17: Compass Sensor I

Where is North?

**Objective:** Use the compass sensor to code and display the direction of North.



**Learning Outcomes:** Learn to use compass sensors, interpret sensor data for direction.



### 18: Compass Sensor II Simple Door Alarm

**Objective:** Implement a door alarm system using Microbit and a compass sensor.

**Learning Outcomes:** Learn conditional programming based on compass data.

### 19: Microbit Maze Game

**Objective:** Develop a simple maze game using its sensors and display.



**Learning Outcomes:** Integrate multiple features and create an interactive game with sensors.



### 20: Bluetooth Controlled Microbit Display

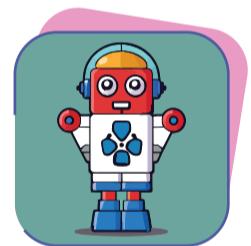
**Objective:** Enable Bluetooth control for a Microbit dot matrix display.

**Learning Outcomes:** Create a remotely controlled display system and display widgets.

### 21: Microbit Mathbot

**Objective:** Create a Mathbot that generates and quizzes users on math problems.

**Learning Outcomes:** Random number generation, implement basic arithmetic operations, and develop an interactive educational application.



### 22: Button Password System

**Objective:** Implement a password system using buttons for access control.



**Learning Outcomes:** Handling multiple inputs, Conditional program for password validation.



### 23: Microbit Pet

**Objective:** Develop a virtual pet simulation on Microbit with interactive features.

**Learning Outcomes:** Create a responsive system based on user input, and sensor integrations.

### 24: Microbit Watch

**Objective:** Transform the Microbit into a digital watch with various features.



**Learning Outcomes:** Understand time-related programming and list concept.



### 25: Catch the Dot Game

**Objective:** Develop a game where users catch a moving dot on the LED display.

**Learning Outcomes:** Integrate user input for gameplay, and create a simple interactive game.





## 26: Dot Dodger Game

**Objective:** Create a game where users navigate a dot to avoid oncoming dots.

**Learning Outcomes:** Collision detection, develop game mechanics for avoiding obstacles.

## 27: Scratch Paint

**Objective:** Create a digital painting application with various drawing tools.



**Learning Outcomes:** Basic Scratch-Microbit blocks, creative expression through coding.



## 28: Racing Game

**Objective:** Develop a racing game where users control a character.

**Learning Outcomes:** Sprite movement and collision detection, and create game dynamics.

## 29: Space Invaders

**Objective:** Create a Space Invaders game where users shoot down alien invaders.



**Learning Outcomes:** Learn about game design in Scratch, sprite control and animation.



## 30: Interactive Story with Sensors

**Objective:** Scratch with external sensors to create an interactive story.

**Learning Outcomes:** Integrate external input with Scratch and responsive scratch sprites.



**Register Now**



**ROBOTIC  
SCHOOLS**

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