Discover Learning
Knowledge Empowers Success

6 - 14 Years

Ignite Young Minds with Our AI & Robotics Program!

- Intro to Robotics & AI
- Gears & Motors
- Sensors & Responses
- Smart Machines
- Intro to Programming
- Certificates for All Levels

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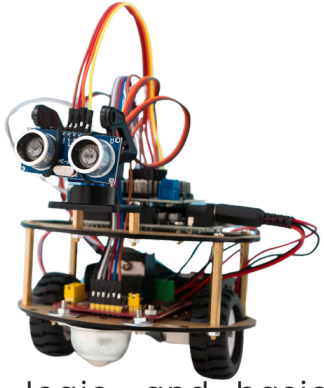
Foundation - 6 to 8 years



Level 1: Introduction to Robotics

Objective:
Playful discovery of robots using Lego Spikes, cause-effect logic, and basic problem-solving through guided building and coding.

What student will learn:

- Understanding robots in everyday life (e.g., Robot escelator, Printing Machine)
- Identifying robot parts: sensors, wheels, body, and controller.
- Drawing and labeling their own “dream robot”.

Level 2: Moving Machines (Gears & Motors)

Objective:
Students explore how robots move using gears and motors. They will engage in hands-on activities using kits to understand how movement is created and controlled, experimenting with different combinations to see how motion changes.

What student will learn:

- What makes robots move?
- Hands-on play with LEGO Spikes - gears and motors.
- Make a spinning toy or dancing bot.

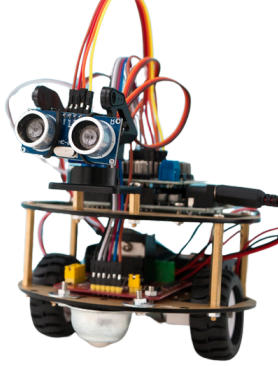
Level 3: Sensors & Responses

Objective:
Explore how robots "sense" the world around them and react accordingly, laying the groundwork for automation and intelligent behavior.

What student will learn:

- Understand how robots detect input using sensors.
- Learn cause-and-effect through hands-on coding.
- Program robots to move when triggered by light or sound.
- Use visual coding tools like Scratch Jr and Lego Education - Word Block.

Advanced - 9 to 14 years



Level 1: Introduction to AI & Robotics

Objective:
Students will explore what robots and AI are, how they're used in everyday life, and begin programming simple tasks using block-based coding.

What student will learn:

- What defines a robot and what AI means in simple terms.
- Where and how AI is used (self-driving cars, smart assistants, earthquake tester)
- Use Scratch, mBlock and Lego Education - Word Block to program robot actions.
- Simulate real-life robot tasks using visual programming.

Level 2: Engineering Robots (Gears, Motors & Motion)

Objective:
Students will learn how gears and motors create movement, experiment with mechanical designs, and control robot motion using code.

What student will learn:

- How gear types affect speed and strength.
- The function of motors in driving robots.
- Build robots that lift, push, or race using gear systems.
- Code motor functions like forward, reverse, and timed motion.

Level 3: Smarter Robots (Sensors & Decision Making)

Objective:
Students will understand how robots collect and react to information using sensors and apply logic-based programming to make decisions.

What student will learn:

- Use Lego Spikes and light sensors in robot builds.
- Apply if-then-else logic to control robot behavior.
- Program a robot to follow a path, stop at objects, or react to sound.
- Train simple AI models using tools like Teachable Machine.