



# TECHNO ROBO

EMPOWERMENT THROUGH STEM INTEGRATION

## Why Robotics?

**Robotics** inspires students to make connection across several disciplines rather than learning topics in isolation as it combines concepts of Science, Technology, Engineering and Mathematics. In other words robotics develops the skills of students in **STEM** related concepts.

## What is TECHNO ROBO?

**TechnoRobo** is a curriculum on robotics where students work hands-on in constructing robots and program them to perform various tasks. Students will be introduced to a simple engineering process based on these five steps: imagine, ask, plan, create and improve.

Working individually or in pairs, students will start with simple structures and then begin to make robots through intermediate level of construction. TechnoRobo is having two different kits namely:

\* TechnoRobo student kit    \* TechnoRobo school kit



## Some Models



Cleaner Robot

Dump Truck



Bug Battle



Touch Battle



Helicopter



Motor Bike



Scorpion Robot

## TECHNOROBO Curriculum Includes...

- ▶ Learning, Understanding, Designing and Building simple machines and mechanism.
- ▶ Designing, Building and Programming ROBO Transporter and Bug Battle Bot.
- ▶ Learning ROBOT simulation using Virtual Reality Software.
- ▶ Use of sensors and their programming.
- ▶ Tasks and challenges for skill review.
- ▶ Activities include robots edge avoider, line detector, touch stop, Robo Soccer, Robo racing.



TechnoROBO robotics promotes active learning which will enhance knowledge of physics, mathematics, computer science and engineering. TechnoROBO kits are suitable for children from the age of 9 to 17 years. We have plastic and metal robotic kits that are fully programmable, with multiple sensors and controllers.

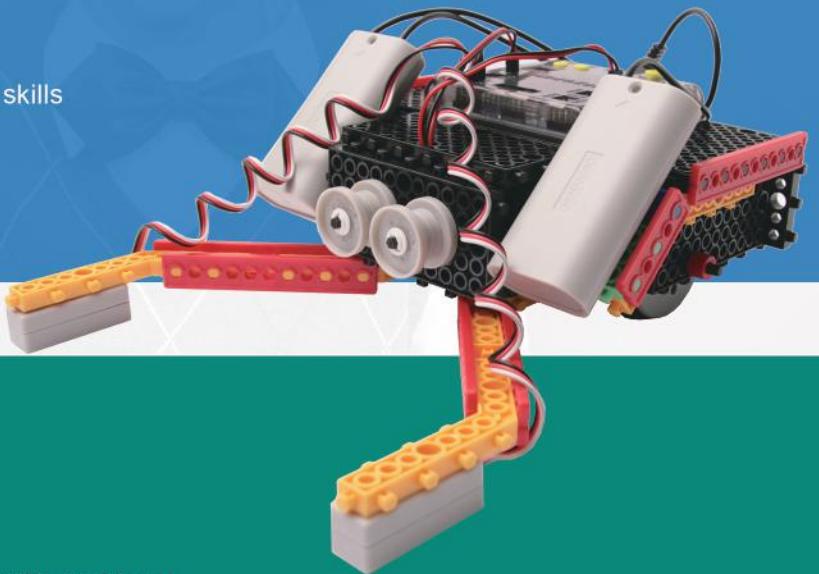
## Features

- Learn to build cool robots using the principle of electronics and programming. Learn how to control core robotic functions using multiple sensors and controllers.
- Kit consist of not less than 211 parts, including 1 mother board, battery case, IR sensor, 1RC receiver,1 remote control, 2 DC motor.
- Sensors (Touch, Light, Cds, Infrared) to interact with environment
- GUI software for programming
- Six side block connectivity
- No screw and bolts required
- STEM base learning
- Programming using GUI software
- CS-STEM based curriculum
- Autonomous and remote control operated
- Align to various curriculums
- Globally accepted robotic platform



## Benefits

- Best to learn Programming and motor skills
- Helps in developing creative problem solving skills
- Comes with STEM integrated curriculum
- Implementation and training support
- Enhance learning skills



## Learning Outcomes

- Working principle of simple machines.
- Applying engineering process.
- Learn how to automate process.
- Student can make their own projects.
- Practical approach towards solving day to day life problems.
- Develop personal and social skills such as reasoning, time-management, coordination, teamwork etc.
- Building prototypes, programming, testing, troubleshooting and visual simulation.