

# STEM LEARNING SYSTEM (ADVANCED)

## Order Code - STEM-003



This kit is designed for schools to be able to roll out well structured STEM/Robotics/IoT/AI education programs. This is an awesome advance kit that offers modular Electronics, Robotics & Coding blocks. The kit can be used both with and without coding making the first step very easy for students. It has 63 blocks containing coding block, power supply, various inputs, sensors, outputs, motors, blocks for logic gates, transmitter, receiver, Smart Switch and much more. The kit also has plastic construction components.

The kit support Block coding, C++ & Python. The coding can be done using Windows, Android and iOS PCs/tablets

The kit comes with well structured 24 sessions of video curriculum that is available in LMS (learning management service). We also conduct teacher training programs.

Education topics covered: Electronics, Robotics, Automation, AI & IoT

### SPECIFICATION

- Contains 63 Module & Accessories
- It contain one Programmable Block called – NetLogic (WIFI & Bluetooth both)
- Basic electronics components like Light, Buzzer, NOT Gate, High Speed Motor
- Two ON/OFF Motors with Mounted BO & Servo motor & Parts.
- 13 types of sensors, few are Light Sensor, Obstacle Sensor & Moisture Sensor, Motion, Vibration Sensor, Sound Sensor, Tilt Sensor
- Smart Switch – to control appliances
- Having Construction Kit which contains 100+ components

### SAMPLE PROJECTS

- Morse code with buzzer
- Pre-programmed path robot
- Automatic plant watering
- Cliff avoiding robot
- Obstacle avoiding robot
- Salt water conductivity
- Digital Key
- Digital dimmer project .....and many more



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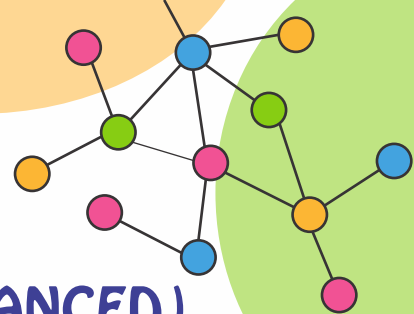
### Order Code - STEM-003

Component	Qty
Adapter/Charger	1
Battery Power	2
Buzzer	1
Connectivity sensor	1
Copy	1
Dimmer	1
High speed motor	1
Inverter	1
Light	1
Light Sensor	1
Limit Switch	2
Magnetic sensor	1
Mini Plastic Fan	1
Motion Sensor	1
Motor with mounted BO	2
NetLogic	1
Obstacle sensor	2
OTG Adapter	1
Pipe	1
Pulley	1
Pulse Delay	1

Component	Qty
Push Button	2
Receiver	1
Sensor Base with threshold	4
Servo Motor	2
Servo Motor part	2
Smart Switch	1
sound sensor	1
Submersible pump	1
Switch	2
Tilt sensor	1
Transmitter	1
U- Left	1
U- Right	1
USB Cable	3
Vibration Motor	1
Vibration sensor	1
Wheel	2
Small Wheel	1
Magnet	1
Wire	4

Component	Qty
AND	1
OR	1
Toggle	1
USB Rechargeable Battery	2
Plastic Building Block Set 100+ Pcs	1



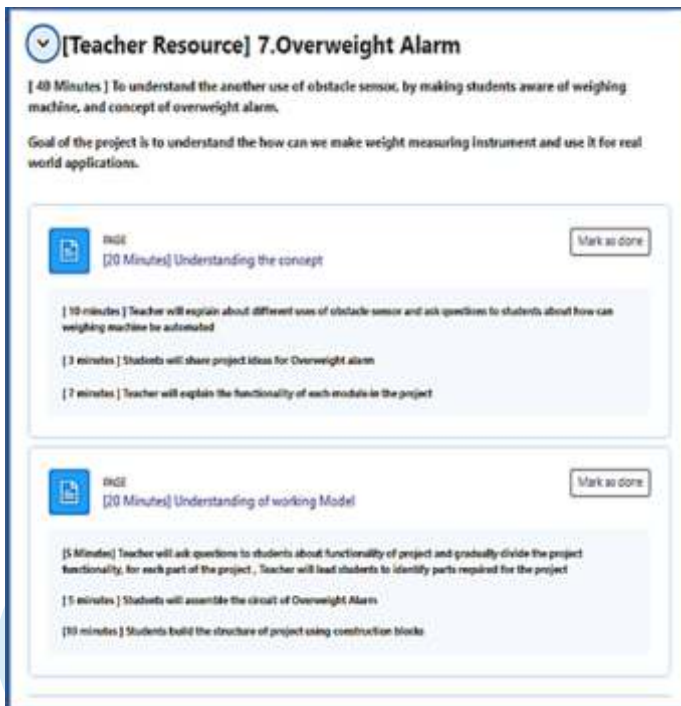


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LMS FOR TEACHER'S & STUDENT'S

### Teachers View



**[Teacher Resource] 7.Overweight Alarm**

[ 48 Minutes ] To understand the another use of obstacle sensor, by making students aware of weighing machine, and concept of overweight alarm.

Goal of the project is to understand the how can we make weight measuring instrument and use it for real world applications.

**INCE** [20 Minutes] Understanding the concept Mark as done

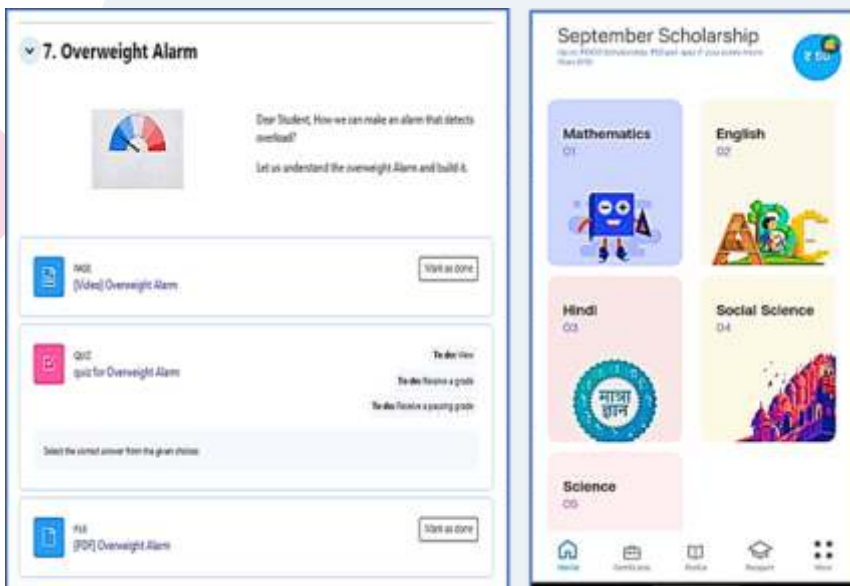
- [ 10 minutes ] Teacher will explain about different uses of obstacle sensor and ask questions to students about how can weighing machine be automated
- [ 3 minutes ] Students will share project ideas for Overweight alarm
- [ 7 minutes ] Teacher will explain the functionality of each module in the project

**INCE** [20 Minutes] Understanding of working Model Mark as done

- [5 Minutes] Teacher will ask questions to students about functionality of project and gradually divide the project functionality, for each part of the project, Teacher will lead students to identify parts required for the project
- [ 5 minutes ] Students will assemble the circuit of Overweight Alarm
- [10 minutes ] Students build the structure of project using construction blocks

- Teaching Resources
- Session Power Point presentations
- Monitor students progress

### Students View



**7. Overweight Alarm**

Dear Student, How we can make an alarm that detects overload?  
Let us understand the overweight Alarm and build it.

**INCE** [Video] Overweight Alarm Mark as done

**QUIZ** [Quiz] Overweight Alarm Teacher View

Select the correct answer from the given choices.

**FILE** [PDF] Overweight Alarm Mark as done

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**September Scholarship**

- Mathematics 01
- English 02
- Hindi 03
- Social Science 04
- Science 05

- Learning Resources – Videos & Documents
- Quizzes
- Scholarship