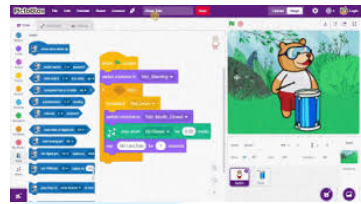
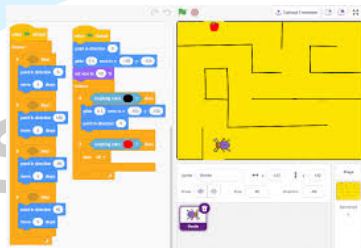
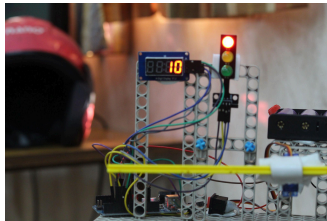
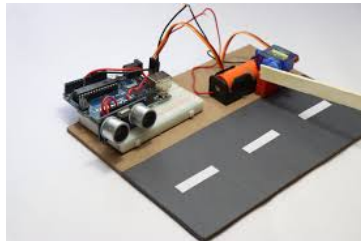


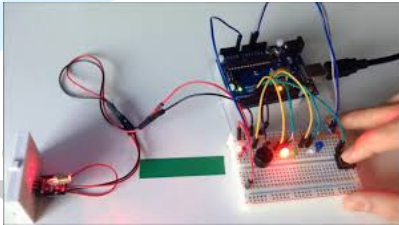




Detailed Curriculum (Robotics & AI)

Semester 1 /Level 1

36-40 classes or 1 Academic Year: 9-10 months (excluding holidays)

Module Number/ Topic	Visual Cue	Description	No. of Classes (36 total)
1 Introduction to Block-Based Coding		Learners apply their creative flair to create interesting stories and animations using block coding.	2
2 Game Development I&II		Learners develop game modules using scripts, sprites and stage	2
Class Test 1 (Modules 1 & 2)			1
3 Traffic Light Signal (with & without counter)		Create a working prototype of a traffic signal light with Arduino and coding—familiarisation with a conditional loop using TM 1637.	4
4 Traffic Light + Toll Gate		Familiarisation with angles and practical uses of a servo motor along with Arduino Uno.	3
Class Test 2 (Modules 3 & 4)			1

5 Cube Satellite		Learners will develop and code a working prototype of a CubeSat using Arduino Uno, DHT 11, TM1637 1637 and solar panel (project upgrade).	3
Unit Test 1 (Modules 3 to 5)			1
6 Automatic/Smart Street Light		Understanding LDR sensor and how to use it as a digital as well as an Analog sensor to make a smart street light that switches on/off by sensing the surrounding light.	3
7 Laser Intrusion Alarm		Familiarisation with the Laser and LDR module. Use them to develop a door alarm which sounds when someone tries to intrude.	3
Class Test 3 (Modules 6 & 7)			1
8 Bluetooth Traffic Light		Learning the concept of Bluetooth and wireless communication, and using Bluetooth to control LEDs and a servo motor to build a remote-controlled traffic light system. This project enables learners to understand how a Bluetooth device works.	3

9 Bluetooth Car		Familiarisation with motors, motor drivers and HC05 Bluetooth. Develop a Bluetooth vehicle that can be controlled via phone.	5
Unit Test 2 (Modules 6 to 9)			1
Revision & Practice			2
End Semester Exam (Modules 1 to 9)			1

- Class Test : 3 (15-20 marks, practical not compulsory)
- Unit Test: 2 (20-30 marks practical required)
- End Sem: 1 (50 marks practical required)

SPACE-E-FIC

SGPA	Grade
9.00-10.00	Ex
8.00-8.99	A
7.00- 7.99	B
6.00-6.99	C
5.00-5.99	D
<5	F