Vivekanand School - MICRO PLANNER (2024-25)							
Month Class 6	**Sessions**	**Topic**	**Activity**	**Kits**	**Skills**	**Learning Outcome**	**Teacher Mannual**
August	1	Simple Machine	4WD car	MechanzO 9+	Creativity and Engineering	1. Grasp the fundamental principles of four-wheel drive systems, including traction, force distribution, and torque. 2. Develop the ability to test hypotheses and make adjustments based on observations.	NA
	2	complex machine	Speed adjusted car with gear	MechanzO 9+	Creativity and Engineering	1. Learn about the mechanical advantage provided by different gear setups. 2. Understand gear ratios and how they affect speed and torque.	NA
	3	final project	Drag and Drop bot	MechanzO 9+	Creativity and Engineering	Develop skills in designing and constructing a functional model car.	NA
	4	complex machine	Mechanical Base	MechanzO 9+	Creativity and Engineering	Students will learn about the basic mechanics of a car, including how different components like wheels, axles, and gears work together.	NA

Vivekanand School - MICRO PLANNER (2024-25)							
Month Class 7	**Sessions**	**Topic**	**Activity**	**Kits**	**Skills**	**Learning Outcome**	**Teacher Mannual**
August	1	Project	Ultrasonic sensor	Arduino Uno Tinkering Kit	Electronics and Creativity	1. Learn about ultrasonic sensors, including how they work using sound waves to measure distance. 2. Develop programming skills to control the ultrasonic sensor using Arduino, particularly in sending ultrasonic pulses and measuring their reflection.	
	2	Robotics with Electronics	Integration of Arduino with Motor Driver	Robotics Tinkering Kit	Electro-Robotics & Logical Skills	Students learn about the basic principles of electronics, including voltage, current, resistance, and how these concepts apply to motor control circuits.	NA
	3	Robotics with Electronics	Integration of Motor Driver and Motors	Robotics Tinkering Kit	Electro-Robotics & Logical Skills	Students learn about different types of motors (DC, stepper, servo), their operating principles, construction, and characteristics such as torque, speed, and power consumption.	NA
	4	Robotics with Mechanical parts	Construction of Mechanical Assembly	Robotics Tinkering Kit	Electro-Robotics & Logical Skills	Students learn about various mechanical components used in robot construction, including frames, chassis, actuators, joints, gears, bearings, and fasteners. They understand the purpose and functionality of each component and how they contribute to the robot's overall structure and movement.	NA

Vivekanand School - MICRO PLANNER (2024-25)							
Month Class 8	**Sessions**	**Topic**	**Activity**	**Kits**	**Skills**	**Learning Outcome**	**Teacher Mannual**
August	1	Tinkercad	Tinkercad – Blinking LED	Tinkercad	Problem Solving	Tinkercad blinking LED project include understanding basic circuits, programming with Arduino, controlling components, and exploring electronics through simulation and hands-on experimentation.	
	2	Tinkercad	Tinkercad – Dual LED	Tinkercad	Problem Solving	1. Tinkercad dual LED project include understanding parallel circuit design, controlling multiple components with Arduino, mastering digital output pins, and practicing coding logic to synchronize or alternate LED blinking.	NA
	3	Tinkercad	Tinkercad – Traffic Light	Tinkercad	Problem Solving	traffic light project include simulating real-world traffic systems, understanding sequential control of LEDs, using timers and delays in Arduino code, and applying logic to control multiple outputs in a timed sequence.	NA
	4	Tinkercad	Tinkercad – Led Chaser	Tinkercad	Problem Solving	Tinkercad LED chaser project include mastering sequential lighting patterns, understanding loops and timing in Arduino programming, practicing digital pin control, and learning to create dynamic visual effects by manipulating multiple LEDs.	NA

Vivekanand School - MICRO PLANNER (2024-25)							
Month Class 9	**Sessions**	**Topic**	**Activity**	**Kits**	**Skills**	**Learning Outcome**	**Teacher Mannual**
August	1	Tinkercad	Tinkercad – Blinking LED	Tinkercad	Problem Solving	Tinkercad blinking LED project include understanding basic circuits, programming with Arduino, controlling components, and exploring electronics through simulation and hands-on experimentation.	
	2	Tinkercad	Tinkercad – Dual LED	Tinkercad	Problem Solving	1. Tinkercad dual LED project include understanding parallel circuit design, controlling multiple components with Arduino, mastering digital output pins, and practicing coding logic to synchronize or alternate LED blinking.	NA
	3	Tinkercad	Tinkercad – Traffic Light	Tinkercad	Problem Solving	traffic light project include simulating real-world traffic systems, understanding sequential control of LEDs, using timers and delays in Arduino code, and applying logic to control multiple outputs in a timed sequence.	NA
	4	Tinkercad	Tinkercad – Led Chaser	Tinkercad	Problem Solving	Tinkercad LED chaser project include mastering sequential lighting patterns, understanding loops and timing in Arduino programming, practicing digital pin control, and learning to create dynamic visual effects by manipulating multiple LEDs.	NA