CURRICULUM OVERVIEW | 2027–28

Syllabus Progression

Classes II–VIII • STEM, Robotics & Artificial Intelligence

A school-facing map of the chapter sequence, broad learning outcomes and skills in the updated textbooks. Each grade builds from exploration and making towards coding, AI, connected devices and integrated projects.

CLASS II | STEM–AI

CHAPTER SEQUENCE	LEARNING OUTCOMES	SKILLS DEVELOPED
01 Robotics (Artificial Intelligence) 02 Shapes Around Us 03 Science Around Us 04 Maps & Directions 05 Magnetism 06 Power of Air 07 Electrical Energy 08 Working of Buzzer 09 Electronic Card 10 Projects (Robotics & 3D Models)	Recognise robots, their parts and guided AI tools; explore shapes, directions and everyday science; investigate simple forces and materials; build low-voltage circuits, an electronic card and introductory models.	Observation • spatial reasoning • following directions • prediction and testing • safe tool use

CLASS III | STEM

CHAPTER SEQUENCE	LEARNING OUTCOMES	SKILLS DEVELOPED
01 Artificial Intelligence (Using AI Tools) 02 Transformation (2D to 3D) 03 Science Behind (Solutions in Water) 04 Magnetism 05 Static Electricity 06 Renewable Energy (Sunlight) 07 Using Breadboard 08 Playing with Buzzer 09 Playing with DC Motor 10 Projects (Robotics & 3D Models)	Use guided AI tools to plan a visual story; transform 2D nets into 3D forms; investigate solutions, magnets, static effects and solar energy; build simple circuits and robotics models.	Creative thinking • spatial reasoning • observation • circuit awareness • making and explaining

CLASS IV | ROBOTICS & AI

CHAPTER SEQUENCE	LEARNING OUTCOMES	SKILLS DEVELOPED
01 Robots and AI 02 Circuits Using Breadboard 03 Introduction to Tinkercad 04 Robotics Components 05 Light Emitting Diode 06 Switch & Its Types 07 Electronic Circuits 08 Working of a DC Motor 09 Create & Print 3D 10 WitBlox – Robotics Projects	Describe robot tasks and introductory AI; recognise components and build or simulate simple circuits; use basic design tools to create 3D models and modular robotics projects.	Technology vocabulary • component recognition • sequencing • circuit building • design and testing

CLASS V | ROBOTICS & AI

CHAPTER SEQUENCE	LEARNING OUTCOMES	SKILLS DEVELOPED
01 AI – Training Machines 02 Robotics Components 03 Tinkercad – Robotics Circuits 04 Introduction to Arduino 05 Robotics Coding I 06 Coding with Lights 07 Coding with Buzzer 08 Coding with Potentiometer 09 Create & Print 3D 10 WitBlox – Robotics Projects	Train and test recognition models; identify circuit components and Arduino functions; code light, sound and input behaviours; create a 3D design and use modular robotics blocks.	Pattern recognition • electronics • algorithms • coding and debugging • 3D design

CLASS VI | ROBOTICS & AI

CHAPTER SEQUENCE	LEARNING OUTCOMES	SKILLS DEVELOPED
01 Revealing Innovation 02 Machine Learning 03 AIoT Integration 04 Robotics Circuits I 05 Robotics Coding I 06 Innovate with Servo Motor 07 Playing with IR Sensor 08 Using 7-Segment Display 09 WitBlox – AI Projects 10 Bambu Studio – 3D Projects	Apply design thinking and data concepts; train and test machine-learning models; connect AI ideas to devices; simulate and code Arduino circuits; control servo, sensor and display outputs; prepare AI and 3D projects.	Problem framing • model testing • computational thinking • electronics and code • interpreting inputs and outputs

CLASS VII | ROBOTICS & AI

CHAPTER SEQUENCE	LEARNING OUTCOMES	SKILLS DEVELOPED
01 Revealing Innovation 02 AIoT Integration 03 Machine Learning 04 Robotics Circuits II 05 Robotics Coding II 06 Coding with Keypad 07 Coding with LDR Sensor 08 Coding with Ultrasonic Sensor 09 WitBlox – AI Projects 10 Bambu Studio – 3D Projects	Plan and test ideas; relate AI to connected data; evaluate model predictions; build on circuit and coding skills with keypad and sensor inputs; prepare AI Vision and 3D projects.	Systems thinking • data and model evaluation • input/output reasoning • coding and debugging • design iteration

CLASS VIII | ROBOTICS & AI

CHAPTER SEQUENCE	LEARNING OUTCOMES	SKILLS DEVELOPED
01 AI Project Cycle 02 AI Model – Hand Gestures 03 Go Wireless Using ESP32 04 IoT – Remote Control 05 Robotics Circuits & Coding 06 Coding with LCD Displays 07 Coding with Sensors 08 Mobile App Development 09 WitBlox – AI Projects 10 Bambu Studio – 3D Projects	Use the AI Project Cycle to train and evaluate gesture models; explore ESP32 and IoT control; integrate circuits, code, displays and sensors; develop mobile app interfaces and apply AI and 3D workflows.	Project planning • model evaluation • wireless systems • app development • hardware/software integration

HOW LEARNING BUILDS ACROSS THE GRADES

CLASSES II–III	CLASSES IV–V	CLASSES VI–VIII
Explore and describe	**Build and control**	**Integrate and apply**
Notice patterns, investigate everyday science, make simple models and explain observations.	Learn components, plan circuits, simulate and code outputs, then test and improve designs.	Connect AI, sensors, code, wireless systems, apps and robotics projects to solve problems.

Chapter titles follow the updated 2026 textbooks used for the 2027–28 programme. The progression summarises the curriculum; lesson plans and project details are provided in the teachers' handbooks and grade-wise activities list.