SCHOOL-FACING CURRICULUM
AND LAB SETUP DOCUMENT

GNR ROBOTICS

School Curriculum & Composite Skill Lab Proposal

Curriculum plans • Grade-wise courses • Composite Skill Lab framework

Prepared by **GNR Robotics**
A programme by SRS EduTech, Bengaluru

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The course titles identified as GNR proposals are proposed course titles, not new official CBSE subject names.

SECTION 1

Composite Skill Lab Framework and Proposed Coverage

1.1 What does "Composite" mean?

A normal science lab is usually focused on science experiments. A robotics lab is focused on robotics. A Composite Skill Lab is designed to support multiple skill areas in one flexible space. CBSE organizes these skills into three broad forms of work.

1.2 The Three Forms of Work

WORKING WITH LIFE FORMS



Examples: agriculture, gardening and food production.

Students learn to grow plants, care for living things, use gardening tools, test soil and explore irrigation. Technology can be integrated through soil-moisture sensors or smart watering systems.

MACHINES & MATERIALS



Examples: electronics, mechatronics, carpentry, automotive, apparel and IT.

Students assemble circuits, build mechanisms, use tools, create digital designs and learn how products work. This is where GNR Robotics' robotics, electronics, coding and 3D design activities fit most directly.

WORKING IN HUMAN SERVICES



Examples: healthcare, retail, beauty and wellness, and other service activities.

Students explore how services work, practise appropriate practical tasks, understand users' needs and develop communication, care and problem-solving skills.

These are the three forms of work used throughout the guideline. The school chooses the particular skill areas it wants to offer; the intention is not to turn every Composite Skill Lab into an identical laboratory containing every tool listed in the document.

SECTION 1.3

Proposed Lab Coverage

Working with Machines & Materials

PRIMARY TECHNICAL SECTION

This will be the primary technical section of the lab, equipped for:

- Robotics, electronics and mechatronics activities.
- Electronic circuits, sensors, motors and hardware testing.
- 3D modelling, 3D printing and rapid prototyping.
- Arduino and microcontroller-based projects.
- Mechanical assembly, prototyping and troubleshooting.
- Introductory drone technology and supervised aerial robotics learning.

These resources will enable students to understand how machines and electronic systems work by designing, assembling and testing practical projects.

Working with Life Forms

The lab will include an agriculture and sustainability learning section featuring:

- Smart planters and soil-moisture sensor demonstrations.
- Plant-care and basic irrigation projects.
- Gardening tools, pots, planting materials and soil-testing resources.
- Water-saving, sustainable gardening and environmental monitoring activities.

Students will gain practical exposure to plant care and agricultural applications, including how electronics and sensors can support smart gardening.

Working in Human Services

The lab will include a practical learning section for age-appropriate home-science and service-related activities, such as:

- Simple home-science demonstrations and cooking-without-fire activities.
- Basic food hygiene, measurement and safe handling practices.
- Financial literacy and basic economics learning modules.
- Budgeting, resource management, entrepreneurship and product-planning activities.

This section will introduce students to practical life skills, service-oriented thinking and the responsible use of resources.

SECTION 1.4

How the Setup Supports CBSE's Composite Skill Lab Requirements

The proposed setup is designed to support the key infrastructure and equipment expectations in CBSE's Composite Skill Lab guidelines by:

1. Providing a flexible, multi-sector practical-learning environment.
2. Including resources for all three forms of work: Life Forms, Machines and Materials, and Human Services.
3. Providing suitable tools, furniture, storage and safety provisions for the selected skill areas.
4. Supporting practical projects, interdisciplinary learning and student demonstrations.
5. Establishing a maintenance and inventory-management process for lab resources.

The lab will be developed as a shared, adaptable learning environment in which equipment can be used for multiple projects and age-appropriate practical activities.

SECTION 2.1 · PRE-PRIMARY

LKG — Little Explorers

Machines, Making & Everyday Skills

TARGET AGE	PROGRAMME	SUGGESTED CLASS
≈ 3–4 years	24 sessions	45–50 minutes

Learning goal. Children explore how things work, practise simple practical skills, learn to handle materials safely and discover the world of machines through play.

Sessions 1–12

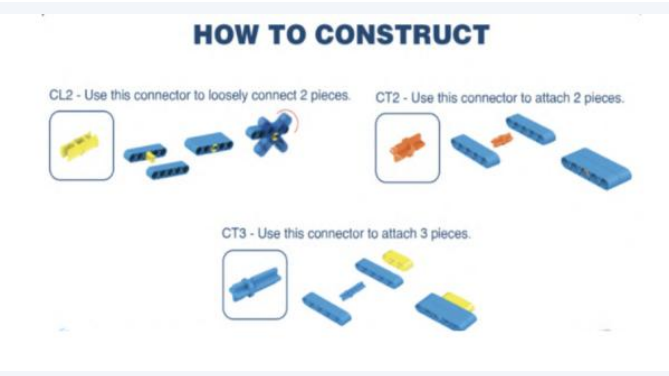
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#	SKILL UNIT	PRACTICAL ACTIVITY
1	**My World of Machines**	Identify fans, cars, lifts, washing machines and toys through pictures and demonstrations.
2	**Sorting and Organising**	Sort large objects by colour, shape, size and material. Practise putting tools and toys back in their places.
3	**Build with Blocks**	Build towers, houses and simple structures; discover how to make them stable.
4	**Wheels and Movement**	Assemble a simple wheeled vehicle and explore pushing, pulling and rolling.
5	**My First Tools**	Learn the purpose of child-safe tools such as large plastic tweezers, scoops, chunky connectors and toy screwdrivers.
6	**Join, Connect and Build**	Connect large reusable building pieces to make a robot or machine body.
7	**Push, Pull and Lift**	Use levers, ramps and large blocks to move objects in a simple challenge.
8	**Light and Dark**	Explore how lights help us see; make a light-up model using an enclosed low-voltage module.
9	**Buttons and Switches**	Press a large button to control an enclosed light or sound module.
10	**Sounds Around Us**	Match familiar sounds to the machines that produce them. Build a simple sound-and-signal game.
11	**Meet the Motor**	Observe an enclosed motor turning a wheel or other protected mechanism.
12	**Build a Robot Friend**	Create a robot from reusable pieces, giving it a body, wheels and a purpose.

SECTION 2.1 · LKG CONTINUED

Little Explorers: Sessions 13–24

#	SKILL UNIT	PRACTICAL ACTIVITY
13	**Machines at Home**	Match common appliances with their uses and discuss safe adult supervision around them.
14	**Water-Saving Helpers**	Play a water-saving game and design a model that reminds people to close a tap.
15	**Electricity-Saving Helpers**	Make a model room with a light switch and learn to switch lights off when not needed.
16	**Clean and Sort**	Sort reusable materials and waste using picture-guided bins.
17	**Reuse and Create**	Turn clean cardboard packaging into a toy machine or robot.
18	**Follow the Path**	Guide a toy robot along a floor path using forward, backward, left and right directions.
19	**My Robot Helps Me**	Role-play how a robot might help carry objects, remind us of tasks or keep a room organised.
20	**Build a Bridge**	Use blocks and cardboard to build a bridge that supports a toy.
21	**Find and Fix**	Repair a simple model by reconnecting a wheel, stabilising a structure or correcting a misplaced part.
22	**My Own Invention**	Design a simple machine or robot for a familiar everyday task.
23	**Little Problem-Solvers**	Complete team challenges involving sorting, building, movement and simple instructions.
24	**Little Explorers Showcase**	Demonstrate a favourite creation and explain what it does.





Illustrative construction resources and project components

SECTION 2.2 · PRE-PRIMARY

UKG — Little Inventors

Practical Engineering & Smart Machines

TARGET AGE	PROGRAMME	SUGGESTED CLASS
≈ 5–6 years	24 sessions	50–60 minutes

Learning goal. Children move from exploring objects to using tools with guidance, assembling working models, following simple sequences and designing solutions to everyday problems.

Sessions 1–12

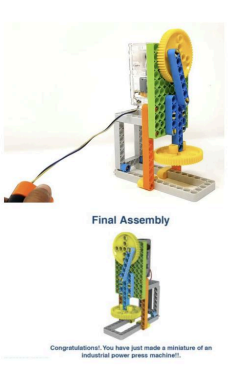
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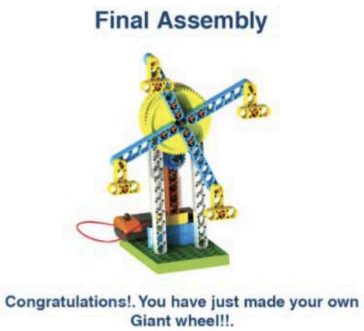
#	SKILL UNIT	PRACTICAL ACTIVITY
1	**Machines and Their Jobs**	Match machines with the tasks they perform; identify which machines need human control.
2	**Materials Detective**	Compare cardboard, wood, fabric and plastic samples by touch and use; choose materials for a model.
3	**Measure and Compare**	Use non-standard units, such as blocks, to compare the length, height and width of objects.
4	**Tool Skills I: Connectors**	Practise joining and separating large connectors, nuts and bolts designed for young children.
5	**Tool Skills II: Build and Assemble**	Follow a picture guide to assemble a simple structure using a child-safe toolkit.
6	**Wheels, Axles and Gears**	Build a vehicle and explore how its wheels and gears affect movement.
7	**Ramps and Levers**	Design a ramp or lever to move a toy from one position to another.
8	**Design a Strong Structure**	Build a bridge or tower and test how to make it more stable.
9	**Electrical Connections**	Explore a protected low-voltage circuit with a switch and light.
10	**Inputs and Outputs**	Press buttons or activate preconfigured modules to trigger lights and sounds.
11	**Motors and Motion**	Assemble a model using an enclosed motor module and test different wheel arrangements.
12	**Build a Working Robot**	Construct a basic moving robot or motorised vehicle.

SECTION 2.2 · UKG CONTINUED

Little Inventors: Sessions 13–24

#	SKILL UNIT	PRACTICAL ACTIVITY
13	**Sensor Detectives**	Explore how touch, light and distance sensors detect changes through guided demonstrations.
14	**Automatic Light**	Use a preconfigured light-sensitive module to explore when a light turns on.
15	**Robot Instructions**	Arrange direction cards to guide a programmable floor robot through a route.
16	**Robot Maze Challenge**	Plan, test and correct a sequence of movements to complete a maze.
17	**Responsible Technology**	Explore how machines help people and why robots must be used safely and responsibly.
18	**Repair and Maintenance**	Identify loose, misplaced or dirty parts in a model and practise a guided maintenance routine.
19	**Reuse and Recycling**	Design a useful object from clean reusable materials and sort the leftover materials.
20	**Water and Energy Helpers**	Build a model that demonstrates a water-saving reminder or an energy-saving room.
21	**Design for Accessibility**	Build a model to help someone carry, reach, organise or identify an object more easily.
22	**Plan a Machine**	Choose a simple everyday problem, draw a design and select the materials needed.
23	**Build, Test and Improve**	Build the planned model, test it against a simple goal and make one improvement.
24	**Young Inventors Showcase**	Demonstrate the final invention, describe its purpose and explain how it works.





Illustrative practical project models

SECTION 3 · GRADES I–V

Primary Curriculum

3.1 Grade-wise Course Overview

Each grade combines **Course A — Robotics, Electronics & Hardware** with **Course B — Software, Design & 3D**. The grade-wise themes and project outcomes are summarised below.

	Course A	Course B
GRADE I	**Little Makers I** Switches, lights, buzzers, movement, wheels, levers and simple mechanisms. **Project: miniature moving machine.**	**Creative Thinking I** Patterns, sequencing, logical puzzles, digital drawing and introductory ScratchJr storytelling.
GRADE II	**Little Makers II** Safe low-voltage circuits, motors, gears, simple sensors and mechanism design. **Project: mini alarm or motorised model.**	**Creative Computing II** ScratchJr, events, sequences, animations and interactive digital stories.
GRADE III	**Foundation Electronics I** LEDs, switches, buzzers, batteries, basic circuits, component identification and input/output. **Project: electronic indicator.**	**Scratch Game Development I** Sequences, events, sprites, animation and simple interactive games.
GRADE IV	**Foundation Electronics II** Light and sound sensors, simple control circuits, motors and troubleshooting. **Project: automatic night lamp or security alarm.**	**Scratch Game Development II** Loops, conditions, variables, scoring, game rules and debugging. Introduce basic geometric digital design.
GRADE V	**Applied Electronics & Mechanisms** Sensor-based circuits, simple IC modules, mechanical assemblies, measurement and circuit testing. **Project: automatic fan or environmental indicator.**	**Creative Computing & 3D Design I** Advanced Scratch projects, logic, introductory CAD, coordinates, measurements and basic 3D models.

SECTION 3.2 · COMBINED COURSE · 22 SESSIONS

Grade I — Little Makers I + Creative Thinking I

COURSE A · Little Makers I: Robotics, Machines & Mechanisms		Sessions 1–14
1	**Introduction to Machines**	Identify everyday machines and explore what they do.
2	**Switches in Daily Life**	Use a simple switch to control an enclosed low-voltage circuit.
3	**Lights and LEDs**	Operate a light module and explore how it is used in everyday devices.
4	**Buzzers and Sounds**	Build a simple sound-alert model using a protected buzzer module.
5	**Movement: Push and Pull**	Explore movement by pushing, pulling and rolling objects.
6	**Wheels and Axles**	Build a simple wheeled vehicle.
7	**Ramps and Slopes**	Test how ramp height affects the movement of a toy vehicle.
8	**Levers**	Build a simple lever to lift or move a lightweight object.
9	**Joining and Connecting**	Assemble a structure using child-safe building connectors.
10	**Simple Mechanisms**	Explore how connected parts create movement.
11	**Meet the Motor**	Observe a motor-powered mechanism using a protected module.
12	**Design a Miniature Machine**	Sketch and assemble a machine using simple mechanisms.
13	**Build and Test**	Test the machine's movement and improve its structure.
14	**Miniature Moving Machine Project**	Demonstrate a moving machine and explain how it works.

COURSE B · Creative Thinking I		Sessions 15–22
15	**Patterns Around Us**	Create patterns using colours, shapes and objects.
16	**Logical Puzzles**	Solve age-appropriate sorting, matching and reasoning challenges.
17	**Sequencing**	Arrange picture cards in the correct order to complete a task.
18	**Direction and Instructions**	Guide a classmate or toy through a simple floor path.
19	**Digital Drawing**	Create a picture using digital drawing tools.
20	**Introduction to ScratchJr**	Explore characters, backgrounds and beginner-friendly blocks.
21	**Storytelling with ScratchJr**	Create a short digital story using characters and movement.
22	**Creative Showcase**	Present a digital story and the miniature machine.

SECTION 3.2 · COMBINED COURSE · 22 SESSIONS

Grade II — Little Makers II + Creative Computing II

COURSE A · Little Makers II: Circuits, Motors & Mechanisms		Sessions 1–14
1	**Safe Electricity and Batteries**	Identify battery terminals and practise safe low-voltage handling.
2	**Basic Circuit Connections**	Assemble a simple circuit using a protected learning module.
3	**Switch-Controlled Circuits**	Build a circuit that can be switched on and off.
4	**Light and Sound Outputs**	Operate LED and buzzer modules in simple applications.
5	**Introduction to Motors**	Explore how a motor produces movement.
6	**Motorised Mechanisms**	Assemble a simple motor-powered mechanism.
7	**Wheels and Axles**	Build a motorised vehicle model.
8	**Gears and Motion**	Explore how gears transfer movement.
9	**Levers and Mechanism Design**	Build a lever-based model.
10	**Introduction to Sensors**	Explore a preconfigured light or touch sensor module.
11	**Sensor-Controlled Output**	Use a sensor module to activate an indicator or buzzer.
12	**Plan a Mini Project**	Sketch a motorised model or simple alarm.
13	**Assemble and Test**	Build the chosen model and check its connections.
14	**Mini Alarm or Motorised Model**	Demonstrate the completed project and explain its purpose.

COURSE B · Creative Computing II		Sessions 15–22
15	**ScratchJr Interface**	Explore characters, backgrounds and block categories.
16	**Events and Starting Actions**	Trigger an action using a start block.
17	**Sequences**	Arrange multiple actions to create a logical sequence.
18	**Animation and Movement**	Animate a character across a scene.
19	**Characters and Backgrounds**	Design a story using multiple characters and scenes.
20	**Interactive Stories**	Make characters respond to user actions or events.
21	**Build a Digital Story**	Combine sequences, events and animation into a complete story.
22	**Story Showcase**	Present the interactive story and demonstrate the physical project.

SECTION 3.2 · COMBINED COURSE · 22 SESSIONS

Grade III — Foundation Electronics I + Scratch Game Development I

COURSE A · Foundation Electronics I		Sessions 1–14
1	**Introduction to Electronics**	Identify common electronic components and their uses.
2	**Batteries and Power Sources**	Explore battery polarity and safe low-voltage power.
3	**Circuit Basics**	Build and identify open and closed circuits.
4	**Component Identification**	Identify LEDs, switches, buzzers, batteries and motors.
5	**LEDs and Polarity**	Assemble an LED circuit with suitable current limiting.
6	**Switches and Control**	Build a switch-controlled light circuit.
7	**Buzzers and Alerts**	Assemble a simple electronic sound indicator.
8	**Series Circuits**	Build and test a simple series circuit.
9	**Parallel Circuits**	Compare a simple parallel circuit with a series circuit.
10	**Inputs and Outputs**	Identify switches and sensors as inputs and LEDs or buzzers as outputs.
11	**Simple Input-Output Circuit**	Use an input to control an output in a prepared circuit.
12	**Electronic Indicator Design**	Plan an indicator for a familiar everyday use.
13	**Build and Test the Indicator**	Assemble the circuit and troubleshoot connection errors.
14	**Electronic Indicator Project**	Demonstrate the indicator and explain its input, output and purpose.

COURSE B · Scratch Game Development I		Sessions 15–22
15	**Introduction to Scratch**	Explore the workspace, sprites and backdrops.
16	**Events and Starting Actions**	Start an animation using an event block.
17	**Sequences and Motion**	Arrange motion blocks to move a sprite.
18	**Sprites and Costumes**	Change a character's appearance to create animation.
19	**Sound and Storytelling**	Add sound effects to a short animated scene.
20	**Interactive Controls**	Control a sprite using keyboard input.
21	**Simple Interactive Game**	Create a basic catching game or maze.
22	**Game Showcase**	Test and present the game, explaining how the controls work.

SECTION 3.2 · COMBINED COURSE · 22 SESSIONS

Grade IV — Foundation Electronics II + Scratch Game Development II

COURSE A · Foundation Electronics II			Sessions 1–14
1	**Review of Electronic Circuits**	Assemble a circuit from a simple diagram.
2	**Light Sensors**	Explore a light-sensitive sensor module.
3	**Automatic Lighting**	Use a preconfigured light sensor to operate an indicator.
4	**Sound Sensors**	Explore how a sound sensor responds to sound.
5	**Sound-Activated Circuit**	Operate a sound-responsive indicator or alarm module.
6	**Switches and Control Circuits**	Use a push button or limit switch to control an output.
7	**Motors and Movement**	Operate a small motor using a suitable protected setup.
8	**Motor-Control Applications**	Build a model that uses a motor for a specific task.
9	**Combining Inputs and Outputs**	Connect a sensor input to a suitable output module.
10	**Automatic Night Lamp**	Assemble or configure a light-responsive lamp model.
11	**Security Alarm**	Build a sensor-triggered alarm using a preconfigured module.
12	**Circuit Troubleshooting**	Identify incorrect polarity, loose connections and assembly errors.
13	**Project Assembly**	Assemble the automatic lamp or security alarm.
14	**Test and Demonstrate**	Test the project under different conditions and explain how it works.

COURSE B · Scratch Game Development II + Basic Geometric Digital Design			Sessions 15–22
15	**Loops and Repetition**	Use repeat blocks to simplify repeated actions.
16	**Conditions and Decisions**	Use if and if-else blocks to control a game.
17	**Variables**	Create and update a score variable.
18	**Scoring and Game Rules**	Add points, winning conditions or limited lives.
19	**Debugging**	Find and correct errors in game logic.
20	**Game Development**	Build a game that combines movement, conditions and scoring.
21	**Geometric Digital Design**	Create a simple digital design using shapes, alignment and size changes.
22	**Final Showcase**	Present the game and geometric design alongside the electronics project.

SECTION 3.2 · COMBINED COURSE · 22 SESSIONS

Grade V — Applied Electronics & Mechanisms + Creative Computing & 3D Design I

COURSE A · Applied Electronics & Mechanisms		Sessions 1–14
1	**Electronics in Everyday Devices**	Identify components and explain their roles in common devices.
2	**Circuit Diagrams and Symbols**	Read and draw basic circuit diagrams.
3	**Measurement and Testing**	Use suitable classroom instruments to measure and test low-voltage circuits.
4	**Resistors and LEDs**	Build a correctly protected LED circuit and investigate resistor values.
5	**Switches and Control**	Compare switch types and use them in a practical circuit.
6	**Sensors and Inputs**	Explore available light, temperature or other sensor modules.
7	**Simple IC Modules**	Identify and use a preconfigured IC-based module.
8	**Motor Control**	Operate a motor through a suitable protected control module.
9	**Mechanical Assemblies**	Build a mechanism using wheels, axles, gears or linkages.
10	**Sensor-Based Circuits**	Use a sensor response to trigger an indicator or other suitable output.
11	**Automatic Fan**	Assemble or configure a temperature-responsive fan demonstration using a suitable module.
12	**Environmental Indicator**	Build a simple environmental indicator using an available sensor module.
13	**Project Integration**	Assemble the circuit and mechanical parts of the selected project.
14	**Testing and Troubleshooting**	Test the project, identify faults and demonstrate the final working model.

COURSE B · Creative Computing & 3D Design I		Sessions 15–22
15	**Advanced Scratch Logic**	Combine sequences, loops, conditions and variables in a project.
16	**Structured Programming**	Use custom blocks or reusable instructions to organise a Scratch project.
17	**Interactive Scratch Project**	Develop a game or simulation with user interaction.
18	**Debugging and Improvement**	Test the project, correct errors and improve usability.
19	**Introduction to CAD**	Explore a beginner-friendly CAD tool such as Tinkercad.
20	**Coordinates and Measurements**	Position and resize shapes using dimensions and workspace coordinates.
21	**Basic 3D Modelling**	Combine, align and modify 3D shapes to design a useful object.
22	**Digital Design Showcase**	Present the Scratch project and 3D model, explaining the design choices.

SECTION 4 · GRADES VI–XII

Proposed Grade-wise Course Catalogue

This structure is based on the official CBSE skill-subject list, the new Computational Thinking and Artificial Intelligence (CT&AI) curriculum for Classes III–VIII, and the prescribed vocational curriculum for secondary and senior secondary grades. **Course titles below are GNR's proposed titles, not new official CBSE subject names.**

CLASS	COURSE A — ROBOTICS, ELECTRONICS & HARDWARE	COURSE B — SOFTWARE, DIGITAL DESIGN & 3D
VI	**Maker Engineering I: Circuits & Mechanisms** Electrical basics, switches, LEDs, buzzers, motors, simple machines and mechanical movement.	**Creative Computing I: Computational Thinking & Digital Design** Sequencing, patterns, algorithms, introductory Scratch, shapes and basic 3D modelling.
VII	**Smart Electronics II: Sensors & Automation** LDR, IR and temperature sensors, alarms, automatic lighting, motor control and simple automated machines.	**Game Design II: Scratch Programming & CAD** Loops, conditions, variables, interactive games, simple simulations and 3D models of objects.
VIII	**Robotics Engineering III: Microcontrollers & Autonomous Robots** Arduino, sensor inputs, motor drivers, line-following robots, obstacle avoidance and introductory IoT.	**Digital Engineering III: Python, AI Foundations & 3D Prototyping** Python fundamentals, data handling, AI literacy, CAD, slicing and introductory 3D printing.
IX	**Robotics Engineering IV: Embedded Systems & Intelligent Machines** Circuit design, Arduino/ESP32, sensors, actuators, troubleshooting, embedded programming and smart-device projects.	**AI & Python IV: Intelligent Solutions & Digital Product Design** AI concepts, project cycle, basic Python, data literacy, responsible AI and digital prototyping.
X	**Electronics & Hardware: Electrical Systems, Devices & Robotics** Electrical components, motors, circuit testing, device servicing, workplace safety and robotics as an applied extension.	**Design Thinking & Innovation: CAD, 3D Printing & Product Development** Problem discovery, ideation, technical drawings, CAD, prototyping, testing and product improvement.
XI	**Electronics Technology V: Circuits, PCB & Embedded Product Engineering** Electronic devices, circuit testing, engineering drawings, PCB design/fabrication and embedded systems.	**Intelligent Product Design V: AI, Python & Digital Prototyping** Python, AI applications, data analysis, CAD, 3D prototyping and an interdisciplinary capstone project.
XII	**Advanced Electronics VI: Embedded Systems, PCB & Product Integration** Advanced circuit design, PCB development, sensor integration, diagnostics, testing and a documented engineering project.	**Advanced Digital Innovation VI: AI/Data Projects & Product Development** AI or data-based solutions, digital product design, CAD/3D prototypes, project validation and final portfolio development.

SECTION 5 · GRADES VI–XII

CBSE Curriculum Alignment

The following mapping records the official curriculum areas identified for each grade and the GNR Robotics course content proposed to align with them.

CLASS	OFFICIAL CBSE CURRICULUM TO ALIGN WITH	WHAT GNR SHOULD OFFER
VI	**Kaushal Bodh; CT&AI curriculum**	Basic circuits and mechanisms, computational thinking, Scratch activities and age-appropriate design projects.
VII	**Kaushal Bodh; CT&AI curriculum**	Sensor-based making, automation, block coding and digital modelling activities.
VIII	**Kaushal Bodh; CT&AI curriculum**	Microcontroller and robot projects, Python introduction, basic AI literacy and prototyping.
IX	**Mandatory Kaushal Vikas; optional AI (417), or IT (402) where selected**	Embedded systems as practical enrichment; structure Course B around the official AI (417) syllabus when supporting that subject.
X	**Electronics & Hardware (420), AI (417), Data Science (419), or Design Thinking & Innovation (422), depending on the subject selected**	Course A can support 420 only when the prescribed hardware and appliance-service content is covered. Course B can be mapped to 422 if the complete design-thinking curriculum is covered.
XI	**Electronics Technology (820), AI (843), Data Science (844), or Design Thinking & Innovation (848)**	Offer electronics and PCB work in Course A. For Course B, identify the specific senior-secondary syllabus selected by the school and align the full course to it.
XII	**Continuation of the selected senior-secondary skill subject**	Advanced practical work and projects that build on the Class XI curriculum without omitting the prescribed Class XII content.



Let's Build the Future, One Student at a Time.

Partner with GNR Robotics to create practical learning opportunities that help students explore technology, solve problems and bring ideas to life.

Let's discuss how GNR Robotics can support your institution.

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