eDuniQue

Composite Skill STEAM Lab

- USA Stem Certified
- Build Games & Apps
- Drone Engineering
- Microbit Courses
- Applied Science
- Logic Math
- Snap Circuits
- Robotics

+91 9773743007

www.stemlabsupgrade.com

Who is Edunique?

EduNique is the 1st Intelligent AI and Human blended online and offline educational platform that embraces, recognizes and harnesses the power of a child and also polish the skills to revolutionize the way children go through their educational journey, both in online and offline settings. The core philosophy behind EduNique is to provide a transformative educational experience for each child. We provide STEM Programs, Skill and Brain enhancement Clubs at school across Asia.

EduNique's approach is to offer comprehensive, tailored learning programs according to age, personality, emotional intelligence and environment. These programs are specifically designed to match the unique learning styles and challenges of each batch of student. We believe that learning should be an enjoyable and fulfilling for every child. Our mission is not only to make learning fun but also highly applicable in the future of students and effective in helping students achieve their educational goals.

We are committed to help students excel academically, develop essential life skills, foster creative thinking, enhance logical reasoning abilities, and stimulate cognitive growth. These goals are at the heart of our educational philosophy.

Edunique has been Featured In

BS

NEWS TRACK Outlook

ANI NEWS INDIA

Ahmedabad Mirror

Google News

ET

Topics EVERYDAY

The Print

THE HINDUSTAN EXPRESS

Why EduNique ?

STEM Diploma

Scratch Programming

AR/VR

Animation

Coding

Microbit

HTML

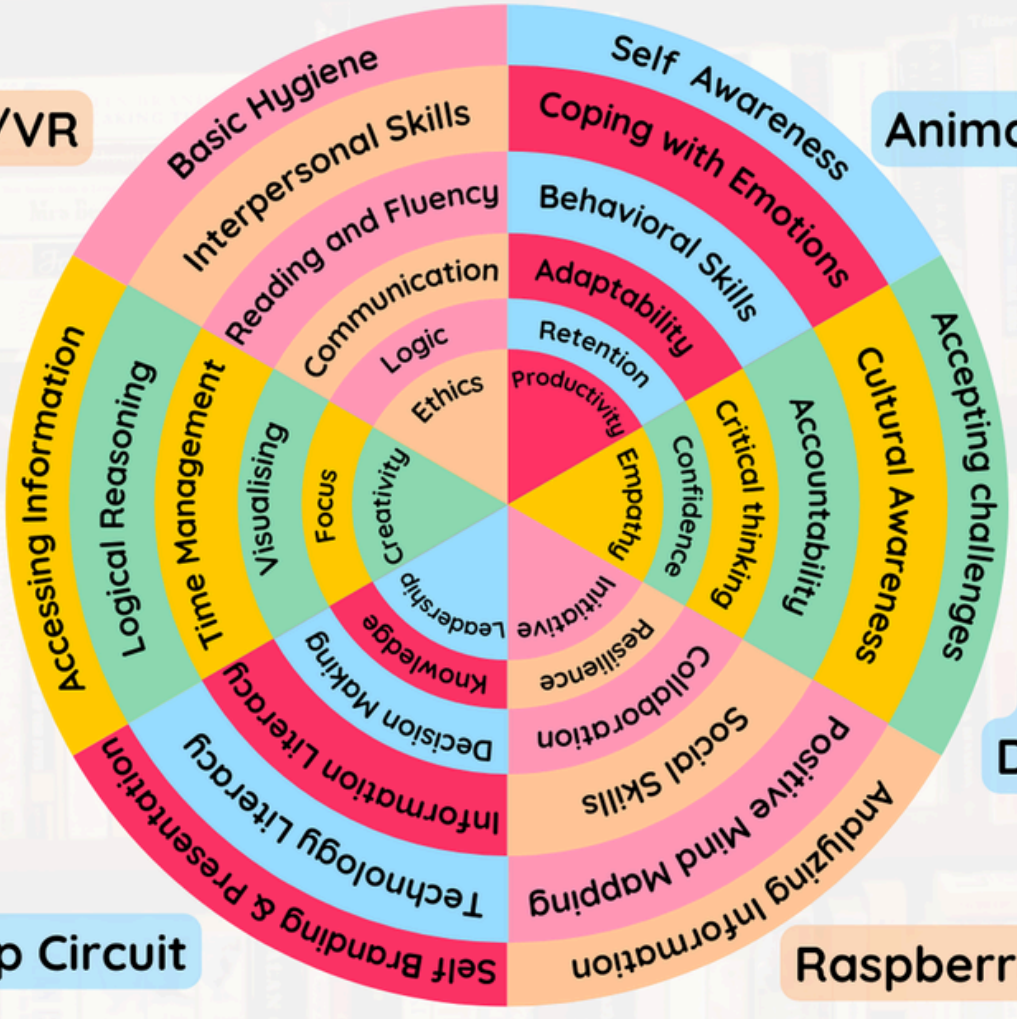
Drone Designing

Snap Circuit

Raspberry Pi

Artificial Intelligence

Ardunio Programming



21 Skills : One course

Concept of Composite Skill STEAM Lab?

A Composite Skill STEAM Lab is an initiative by CBSE aimed at improving students' practical learning experiences by offering hands-on training in various skills. These labs are designed to equip students with the knowledge and expertise that align with industry standards, preparing them for diverse career opportunities and enhancing their employability.

It is also leading to development of curiosity, inquisitiveness, critical thinking, problem solving, imagination, questioning & exploration skills among students for innovation, designing & creating, testing & modifying solutions to complex problems.

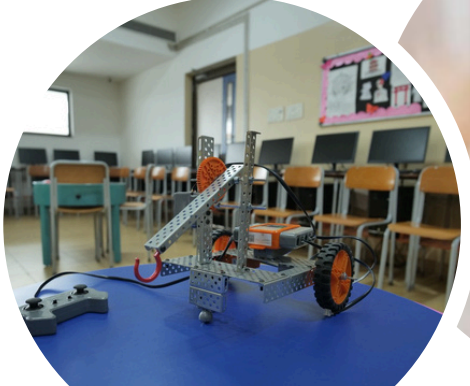
Why Composite Skill STEAM Learning?

The National Education Policy (NEP) 2020 places a strong emphasis on vocational and skill-based education. The objective behind this is to integrate vocational training into mainstream education, ensuring that every student has access to skill development from an early age.
Key measures under this policy include establishing skill development centres nationwide, providing opportunities for internships & apprenticeships.

Benefits of NEP's Skill Building Initiatives

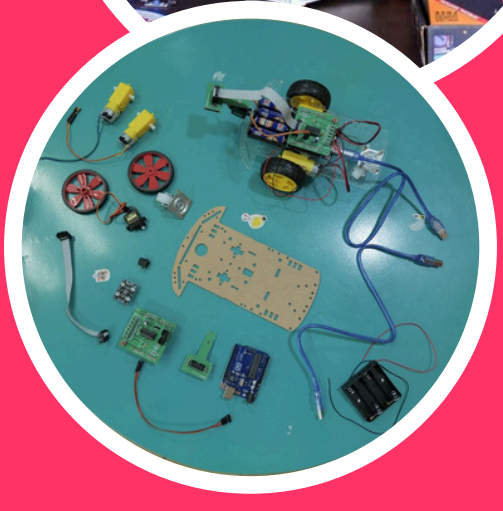
The NEP emphasis on vocational and skill-based education to equip students with industry-relevant skills, enhancing their employability & career prospects. Here are few of the benefits:

- Increased employability
- Hands-on training
- Industry exposure
- Higher earning potential
- Entrepreneurial opportunities
- Improved critical thinking
- Adaptability in the job market



Classification of Skill Subjects

According to the NEP 2020 guidelines, CBSE provides a wide range of vocational courses to promote skill development. The Board has divided these courses into three categories based on their educational level:



- Middle School (Classes 6-8),
- Secondary School (Classes 9-10),
- Senior Secondary School (Classes 11-12)

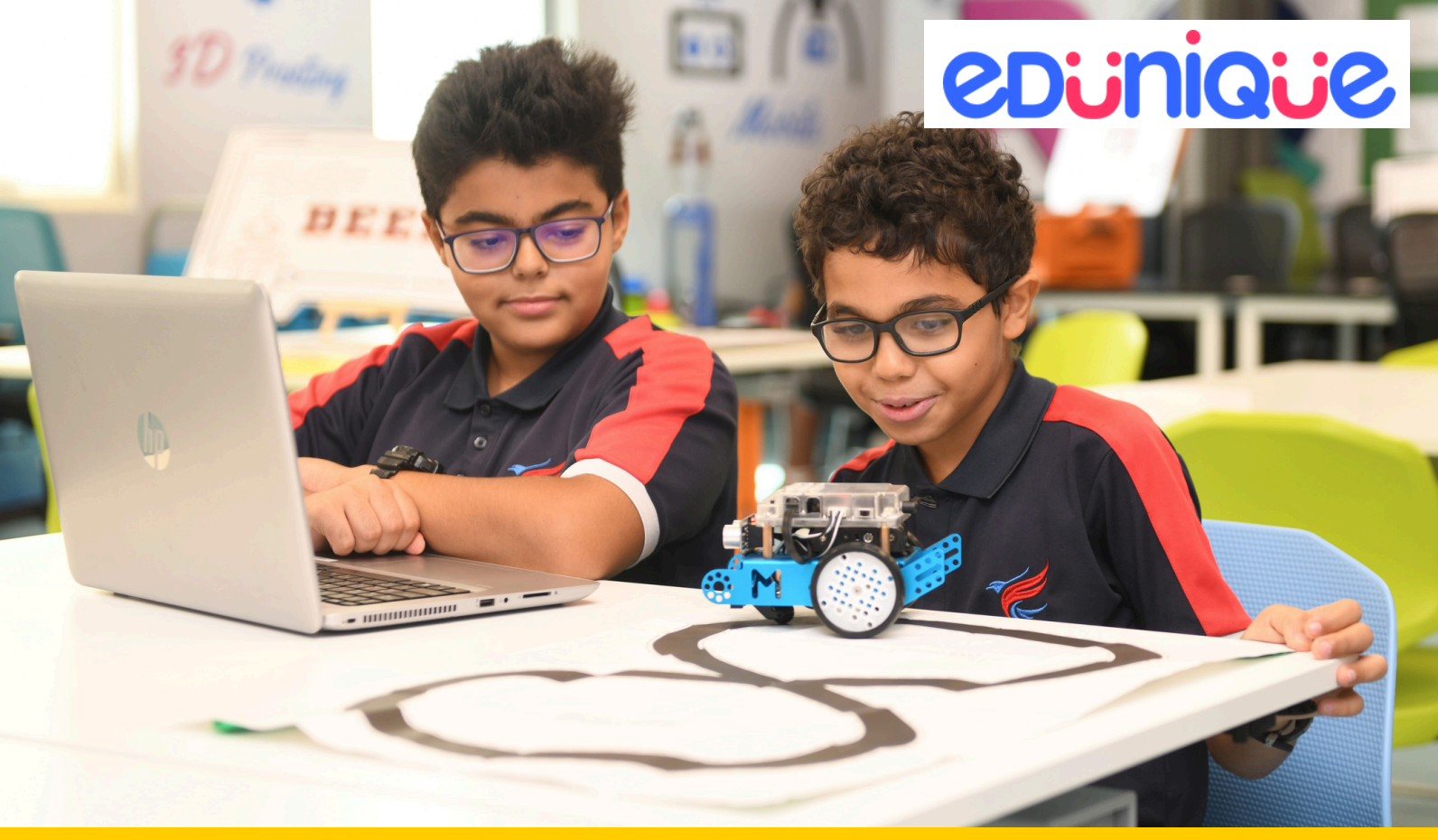
At the senior secondary level, CBSE provides a variety of courses, including Introduction to Financial Markets, Banking & Insurance, Data Science, Artificial Intelligence, Electronics & Hardware etc. These courses are designed to offer students specialised knowledge & skills that are directly applicable to various professions & industries.

What is an EduNique Composite Skill STEAM Lab?

A team of experts has created a Certified Composite Skill STEAM program aligned to CBSE and IB curriculum that has reached 4.5 million students across 23 countries through online mode since 2020. These programs teach the practical application of school curriculum in the form of practical projects.

Every concept taught in IT, Engineering, Science, & Math is converted into projects and children are taught them to use those school concepts and create real world skills which helps them make a career in future across globe.

Lets take an example:- Students of your school through EduNique can design a drone or build an app and design a website from the age of 10 years. They also have discovered AI/ML multi function use in technology and other fields to enhance and develop brain.



The Composite Skill STEAM/STEM courses will not only empower the educational policy across 23 countries but also enhance brain activity of child. The curriculum is 85% practical based as we take the theoretical concepts from school books which are already covered and learned by students in school.

A child can build a drone for future needs, open a business and design projects for clients across globe. They are building apps and making path breaking software's with our team of teachers and Industry mentors.

Also, Skill Development like logical reasoning, critical thinking, problem solving, personality enhancement, confidence and ability to fight competition.

These projects gives an international recognition to our country India. We aspire to go to government schools/ Private schools & give the taste of the platform to the children. Its an AI enabled platform.

Process of Setting up a Composite Skill STEAM Lab

- EduNique will provide the entire set up like Hardware, DIY Kits, Software and worksheets (at 50% market cost).
- The entire program can be mapped from a portal for the school, parents & students. The Composite Skill STEAM program provides 120 activities for the Practical Application of all the CBSE/IB curriculum concepts And also the application of NEP policy.
- EduNique shall provide trained staff and training with necessary expertise to run the lab throughout the year or you can outsource the lab to us.
- We conduct national & international (Inter-school/Inter-country) competitions throughout the year along with a platform for children to build and showcase their inventions through exhibitions.
- Students will be accessed monthly, quarterly and annually through quizzes, classroom activities, projects and an annual exam before the STEM Certification.

Skill Subjects Offered by CBSE

Course Name	Prospective Job Roles
Retail	Store Operations Assistant
Information Technology	Domestic IT Executive/Operator
Security	Unarmed Security Guard
Automotive	Automotive Service Technician
Introduction to Financial Markets	Business Correspondent
Introduction to Toursim	Assistant Tour Guide
Beauty & Wellness	Assistant Beauty Therapist
Agriculture	Solanaceous Crop Cultivator
Food Production	Assistant Chef(Registered)
Front Office Operations	Front Office Executive
Banking & Insurance	Field Executive
Marketing & Sales	Marketing Assistant
Health Care	General Duty Assistant
Apparel	Hand Embroider
Multimedia	Texture Artist
Multi Skill Foundation Course	Multi Skill Assistant
Artificial Intelligence	AI Data Analyst, Machine Learning Assistant
Physical Activity Trainer	Early Years Physical Activity Facilitator
Data Science	Data Analyst, Junior Data Scientist
Electronics & Hardware	Field Technician - Other Home Appliances
Foundation Skills for Sciences(Pharmaceutical & Biotechnology)	Lab Assistant, Research Support Specialist
Design thinking & Innovation	Innovation Consultant, Creative Problem Solver

LAB AND KIT STRUCTURE

No.	Entity	Qty.	Details
1.	STEM Kits	300	We will provide 300 DIY STEM kits. Topics covered - Physics, Chemistry, Biology, Electronics, Robotics etc.
2.	Lab Models	60	This includes table top models. Covering areas like Robotics, Electronics, Programming, Coding, Space and Astronomy, Physics, Electrochemistry, Solar and wind energy and much more.
3.	Posters	30	Lab structure includes infographic posters.
4.	Establishment	6 Weeks	EduNique will provide on site installation at the school.
5.	Online Support	✓	EduNique will provide free online support for one year.
6.	Training	✓	We will provide onsite training if the school is deploying their own teachers, if not, then EduNique will provide the teachers for the functioning of lab.

300 DIY ACTIVITY KITS

ACTIVITY BASED PROGRAM FOR COGNITIVE DEVELOPMENT AND EXPERIENTIAL EDUCATION

- DIY School Chemistry workshop Kit
- DIY Motorised Solar System Model Kit
- Motorised Mars Rover
- Motorised Model
- 3D Paper Model
- Solar energy Conversion Model
- Horizontal Levitation Kit
- DIY Magnetic Car Model
- DIY Periscope Kit
- Air Propelled Car
- DIY Electronic Circuit Making Kit
- Generation of Electricity
- DIY Lenses & Optics Kit
- DIY Moon Rover Kit Motorised
- Solar Powered Vehicle
- Paper Kaleidoscope Kit
- DIY Star Illuminated Box
- DIY Fun Robotics Kit
- DIY Electrical Conductivity Testing Robot
- Secret Agent's Lens Kit
- Motion & Physics of Moving Objects Electrochemistry Kit
- Eclipses, Full Moon, New Moon, etc

TECHNOLOGY & ENGINEERING KITS

1. AR and VR app development software: (Quantity : 20)

Platform that can help a student develop AR and VR applications

- Support both block coding and JavaScript coding
- Supports browser-based AR-VR deployment using APIs
- Custom 3D models and environment can be added
- IoT applications can be merged with AR-VR technology
- GitHub based 3d models can be directly integrated
- Bluetooth Controller based VR support
- Static VR and Dynamic VR
- Custom trigger image can be integrated for markered AR
- Must work offline for schools with limited internet connectivity

2. Hard VR headset: (Quantity : 20)

Helps students visualize the VR application that is running on their mobile phones.
VR headset where students can

- Develop the app and install it in the mobile phone
- Insert the mobile phone into the headset
- Adjust the lenses according to their eyesight for better visualization
- Quick insertion and removal of mobile device to and from the headset

3. Bluetooth remote: (Quantity : 20)

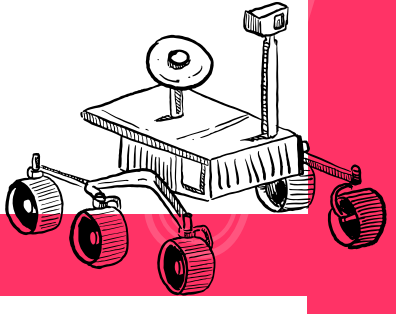
Helps students rotate a 3D model and also to move around in a virtual environment while using a VR application.
Bluetooth remote that has the following functionality

- 360 degrees joystick
- 2 pairing modes
- 4 mode buttons
- 2 configurable joysticks

4. DIY Hologram kit: (Quantity : 10)

Helps students understand the concept of holograms and how a hologram ki is build.

- Pyramid based hologram
- Base stilt structure
- Side slides for reflection prevention



5. Wired Game controller: (Quantity : 5)

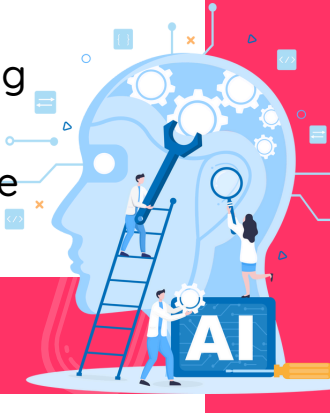
Helps students fly the drone in the drone simulator.

-Used for controlling the drone in the drone simulator
-Compatible with windows PC
-Similar to a PC game controller with two joysticks, minimum of 4 control buttons and 2 menu buttons
- Controller must be compatible with the drone simulator

6. AI prototyping software: (Quantity : 20)

Helps students understand data and how a machine learns a particular dataset in order to predict certain outcomes.
Desktop software with user interface that:

- Supports a GUI interface where students can perform various experiments of Artificial Intelligence and Machine Learning
- Teach students how to identify object based on data inputs
- Teach students how to predict data
- Teach students how to train a machine to recognize images
- Understand effect of datasets, algorithm and other parameters on the prediction accuracy
- Live camera capture support for image-based predictions
- Multiple machine predictions in a single testing
- Choose different algorithms according to the dataset
- Support python programming for advanced programming of AI and ML
- AI software IS able to program a camera-based hardware robot



7. 3D Modelling Software: (Quantity : 10)

Will teach students to create, animate, simulate and render a 3D model. 3D modelling is one of the important skills needed to build AR and VR applications.
3d modeling software to create 3d models and export them in the following file formats

- Obj
- FBX

8. AI Voice controlled and Hardware robot: (Quantity : 5)

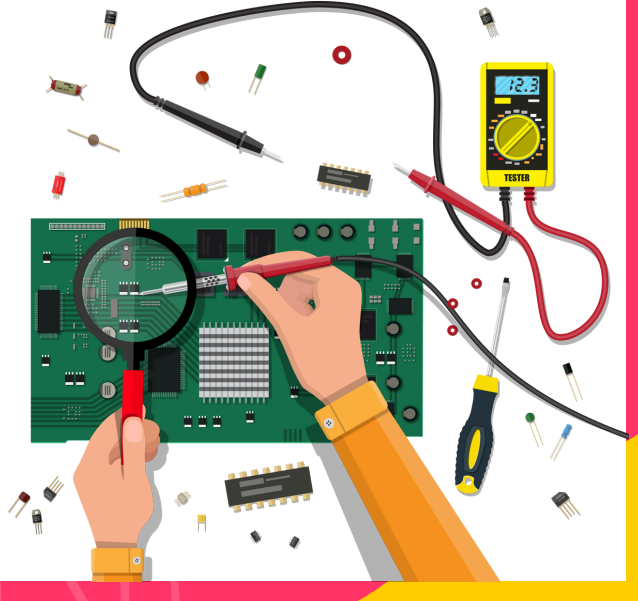
Helps students understand how a machine responds to voice commands using a voice assistant (Alexa) and how different parameters of movement can be changed just by using the voice commands with the AI robot.

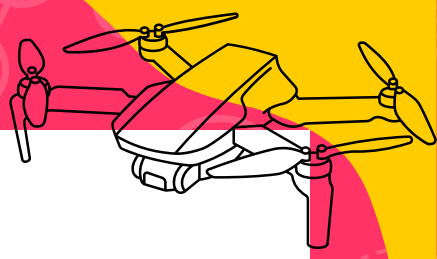
- Hardware robot compatible and programmable using a GUI based AI software
- Students can program the software using their own images and robot can recognize those images
- Includes a single-board computer that supports python programming
- Camera interfacing to capture and recognize images
- Alexa voice control interface capability
- Robotic movement control using voice AI (threshold distance, direction or movement)
- Custom image dataset based prediction and robotic movement

9. Set of Auxiliary Components: (Quantity : 3 Sets)

Required for replacement of components and repairs if required for the robotic kits.

DC motor (4)
IR sensor (2)
Soldering gun (1)
Resistor pack (1)
Ceramic Capacitor kit (1)
Electrolytic Capacitor kit (1)
Motor driver (2)
Wheel (4)
Cutter (2)
Plier (2)
Hacksaw (2)
Rechargable batteries (3)





10. Drone Simulator: (Quantity : 20)

Helps students simulate drone flight and make them learn about the physics behind drone flight.

-Desktop application for simulation of drone flight
-Students must be able to control the individual motors to simulate pitch, roll and yaw
- Simulator must have a garage section where the students can assemble their drones
-Drone training and operation on drone movements
-Meeting and completing challenges on the software
- Simulator must support various learning levels clearly, where students can learn concepts of hovering, pitch, roll and yaw
- Student performance and scoring to be monitored for each learning level
- School must be able to conduct competitions for the students using the simulator

11. Basic Quadcopter Drone: (Quantity : 5)

A quadcopter drone comes with a mobile application that can be used to fly the drone.

- Primus V4 STM32F303: 72Mhz Controller
- Total 4 MOSFET drives
- 10-DOF sensor suite
- WIFI interface
- 10 Minutes flight time: 600mAH Battery
- Range: 60m
- Programmable with Cygnus IDE in C++
- Payload max 15 gm
- Total weight 85 gm
- Size 16cmX 16cm
- Lipo Battery 600 mAh

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Compute kit - 2

(Quantity - 10)

The playful codable computer for kids which can be combined with variety of sensors and Technic Blocks in addition to being codable using Plode.

Age
8+

Code with Plode

35+ components

Built in 9 Sensors and 4 Outputs

11 Input and 11 Output Modules

Plug & Play Ports

Technic Building Block Compatible

Strong Online Support Ecosystem

A.I and IoT Enabled

Grade 4-9 Playfully Crafted Curriculum

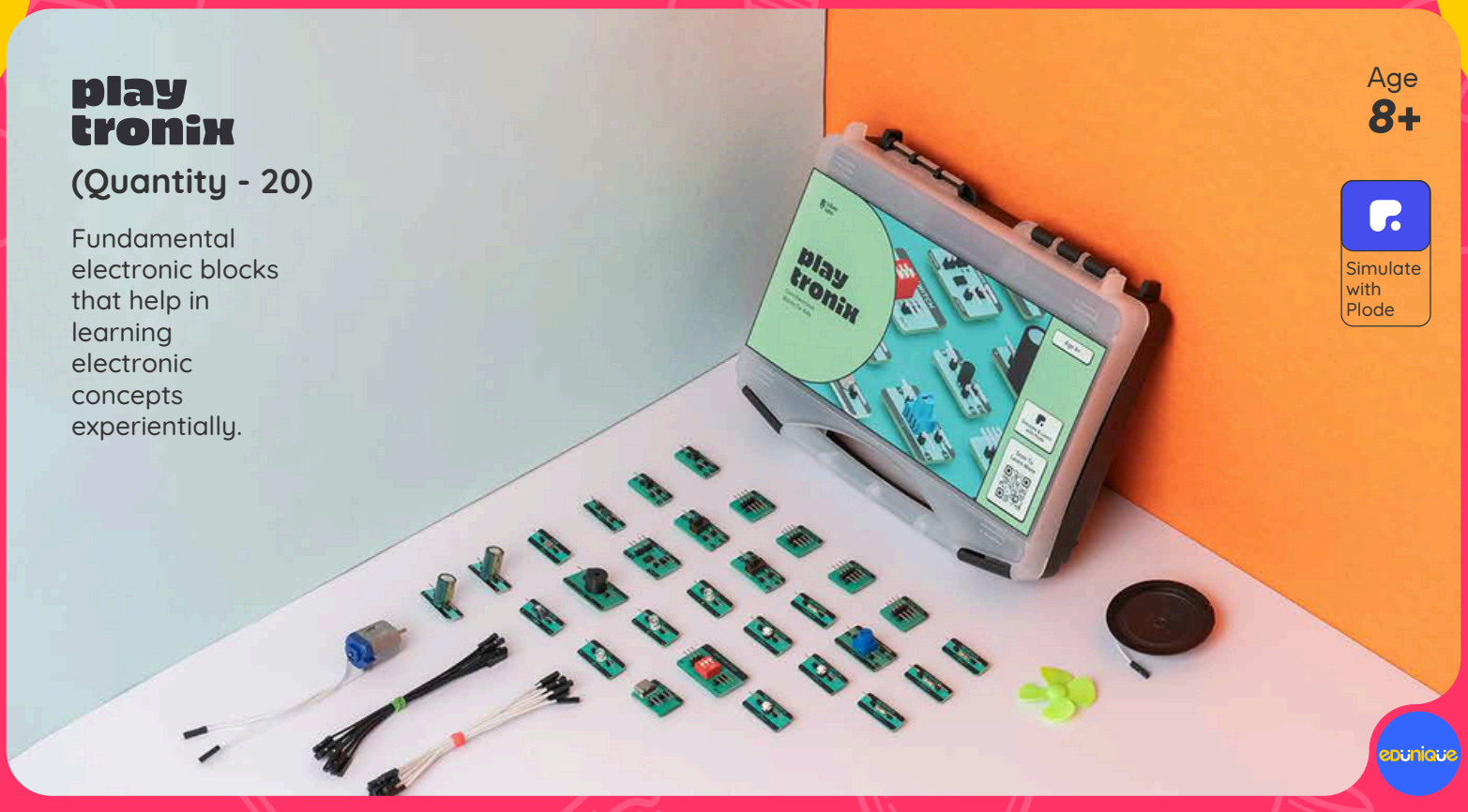
play tronix

(Quantity - 20)

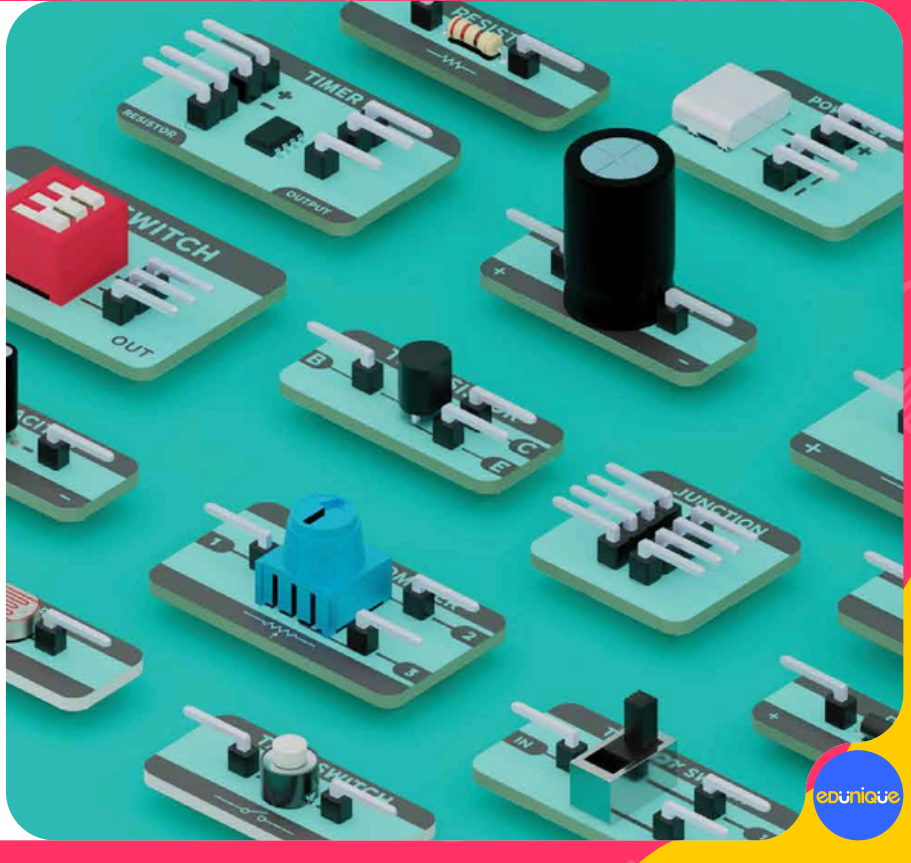
Fundamental electronic blocks that help in learning electronic concepts experientially.

Age
8+

Simulate with Plode

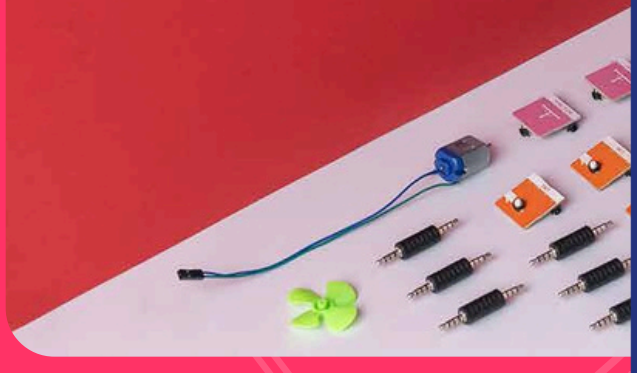


- 50+ components
- 7 Input and 6 Output Modules
- USB-C based Power Connector
- Open-ended and Flexible
- Simulation for Ease of Construction
- Inclusive of Resistors, Diode, Transistors and more
- Grade 3-9 Elemental Electronics Curriculum



play trons

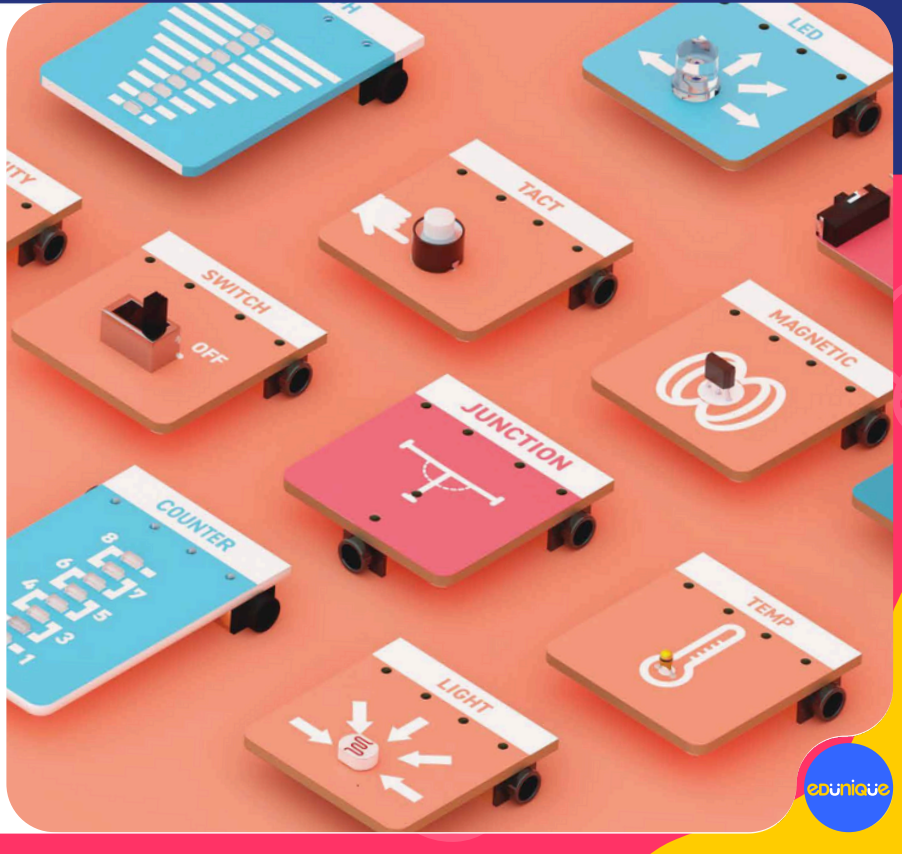
Easy to use electronic building blocks designed for children over 6 years of age.



Age
6+

Simulate with Plode

- 34+ Components
- 9 Input and 7 Output Modules
- USB-C based Power Connector
- Open-ended and Flexible
- Simulation for Ease of Construction
- Inclusive of Resistors, Diode, Transistors and more
- Grade 1-3 Playfully Crafted Curriculum

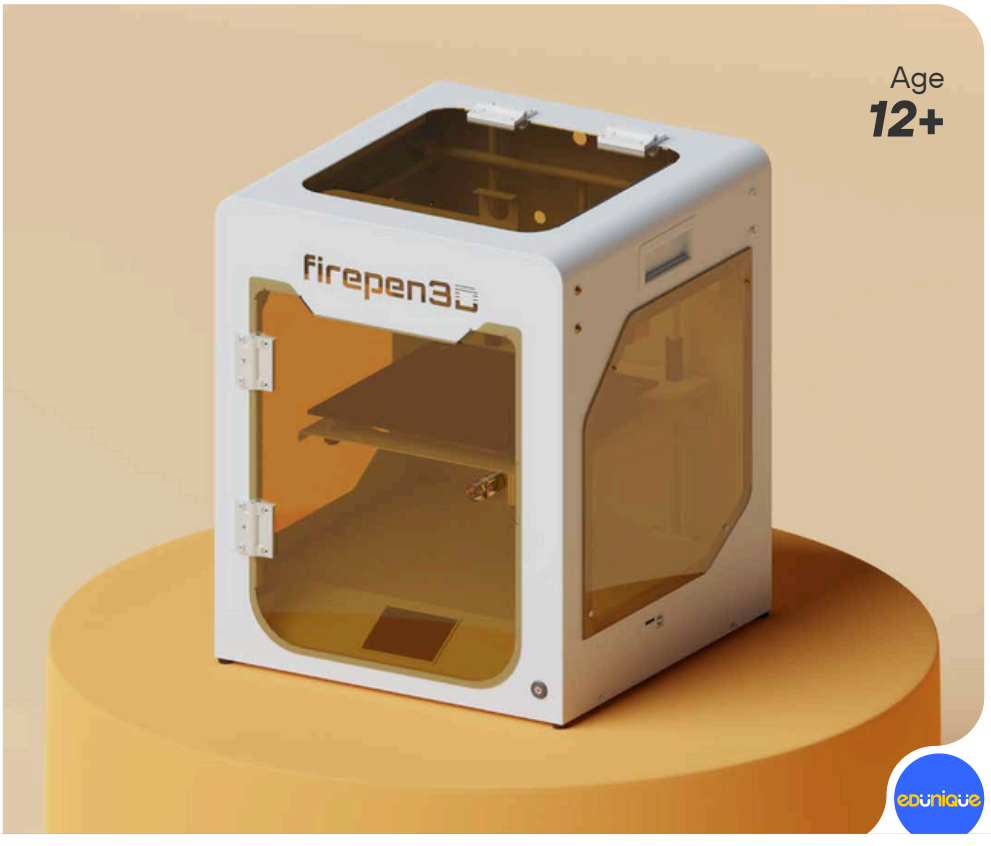


Firepen 3D

(Quantity - 1)

State of the art 3D printer which can help to prototype your ideas and turn concepts into reality.

Age
12+



Maximum Printing size: 200mm x 200mm x 190mm

Auto Power On/OFF Resume

Removable Magnetic Bed

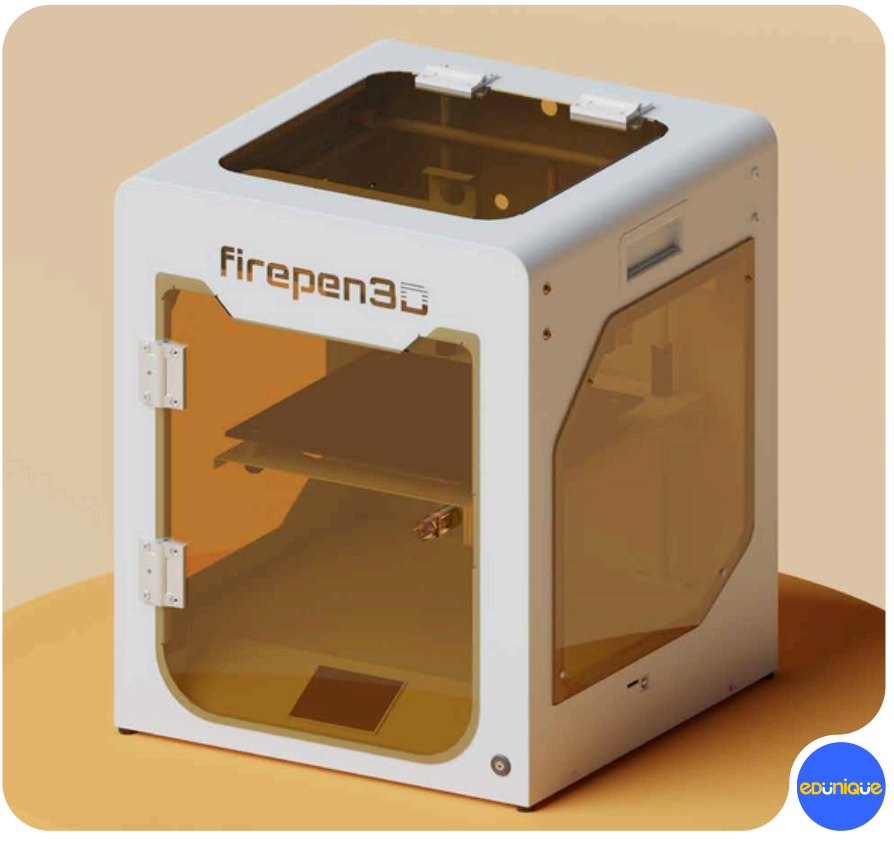
Spool Break Detection

Dual Doors

Display Screen: Color with Touch Screen

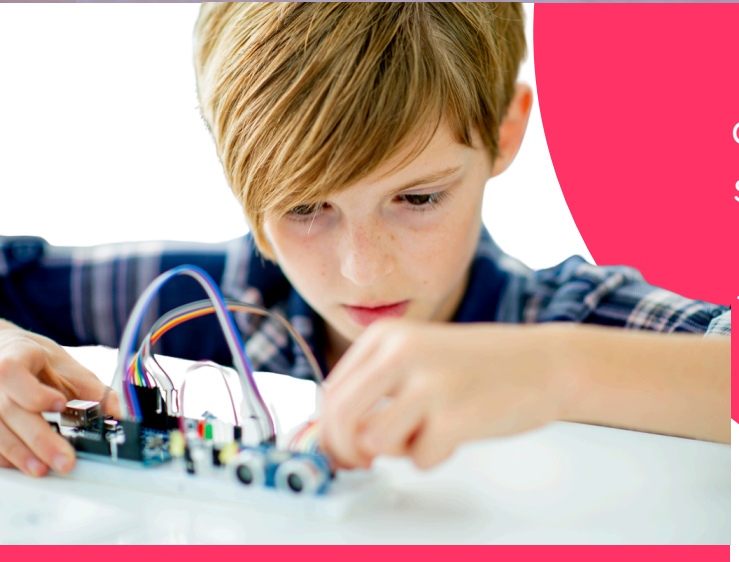
Machine size: 450mm x 350mm x 250mm

Other Customisable Options



One-to-one Concept Classes

SNAP CIRCUIT

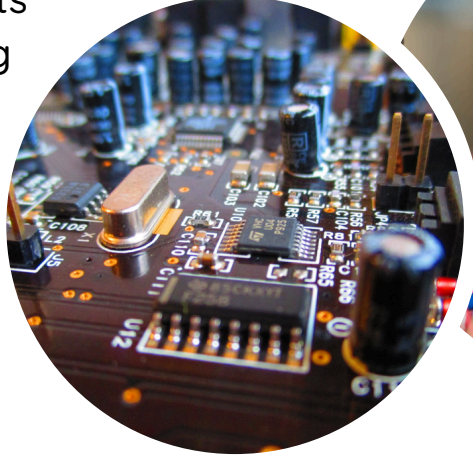


Students will be able to re-create circuits of various functionalities such as shining a light bulb, spinning a motor, or both. They will be able to manipulate these circuits & create their own circuits using the components provided in the snap circuit kit.

What you'll learn?

No. of Classes: 24 Classes, 2 classes per week, 45 mins per class

Give a child an exciting, hands-on introduction to electronics with Snap Circuits, This innovative kit contains over many colour-coded, real circuit components that snap together to create working electronic circuits and devices. Recommended for children 8 and older, this set offers do-it-yourself projects that will give your child an entertaining, concrete education on how electronics work.



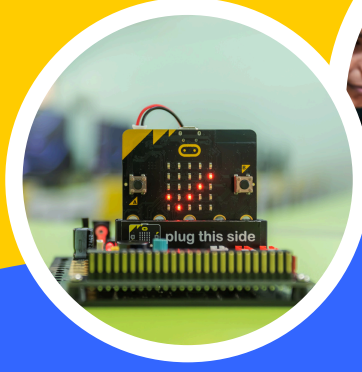
MICROBIT

The BBC microbit is a pocket-sized computer that introduces you to how software and hardware work together. It has an LED light display buttons, sensors and many input/output features that you can program and physically interact with. The latest microbit adds sound sensing and playback capabilities.

What you'll learn?

Students will be able to create projects on their own utilizing all the onboard sensors, also will be familiar with the basics of programming, as well as find information that will enable them to continue to learn independently.

No. of Classes: 24 Classes, 2 classes per week, 45 mins per class



APPLIED MATH CURRICULUM

INTROCDUCTION

THE BASIC MENTAL-MATH STRATEGIES

MENTAL - MATH STRATEGIES

Encourage students to feel comfortable using mental-math strategies and become flexible thinkers.

VISUALIZING NUMBERS & PATTERNS

Increase students' number confidence by improving their ability to remember and sequence numbers.

NUMBER FACTS

Teach strategies for learning basic number facts that are easy to remember and retain for years to come.

SKILL BUILDERS

Provide opportunities to learn and Practice different mental-math strategies.

MONEY MATH

Apply mental-math skills to solve money-math problems.

PROBLEM SOLVING

Practice mental-math skills with a variety of problem-solving

NUMBER TRICKS

Add interest, fun, and motivation for learning mental-math skills with these "magic tricks."

ANSWERS

NUMBERS and OPERATIONS

Whole Numbers

Rational Numbers

GEOMETRY and MEASUREMENT

Geometry

Measurement

MATHEMATICAL REASONING

Visual

Other

ALGEBRA, STATISTICS, and PROBABILITY

ANSWERS

Case studies and Word problems

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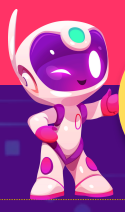
USA Certified STEAM Diploma Course

Creativity & Innovation

Problem Solving

Critical Thinking



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Technology Programmes

#	Technologies	Basic (7-9 years) 60 Classes	Advanced (10-12 years) 75 Classes	Masters (13-19 years) 100 Classes
1.	3D Modelling	Basic (Paint 3D/Tinkercad)	Advance (Fusion 360)	Master (Blender)
2.	3D Animation	Basic (Scratch)	Advance (Fusion 360)	Master (Blender)
3.	Augmented Reality / Virtual Reality	AR/VR (Enabl AR)	AR/VR (Enabl AR)	AR/VR (Unity)
4.	Drone	Drone Simulation (Eduvance)	Drones (Eduvance)	Drones (Eduvance)
5.	AI	AI : Basics	AI: How humans & Machine Learn & Classification	AI: Regression & Image Recognition
6.	Programming Coding	Basic (Blockly)	Advance (C++)	Master (Python)
7.	Mobile App Development	Basic (MIT)	Advance (MIT)	Advance (Android Studio)
8.	Website Development	Basic	Advance (HTML/CSS)	Master (HTML/CSS/SQL)
9.	Game Designing	Block Based Game Development	Advance Game Development	Advance (Unity)
10.	Robotics	Robotics - Manual	Line Follower Robot (HWD)	Pick & Drop Robotic Arm (HWD)
11.	Applied Science	7 Physics, Chemistry, Biology DIY Practical Projects	12 Physics, Chemistry, Biology DIY Practical Projects	20 Physics, Chemistry, Biology DIY Practical Projects

40 Projects & 20 DIY Activities

Small group of 6-7 students

Customised Content

STEM Certification

Courses Starting from 1999 (800 ST)

Educational Trip to NASA or ISRO

Learning coding is not only about understanding the programming being used but also developing important computational thinking skills, which are useful for problem-solving across many disciplinary areas. In this course, students will learn basic programming skills by creating interactive animations, which is a block-based visual programming language for anyone new to coding.

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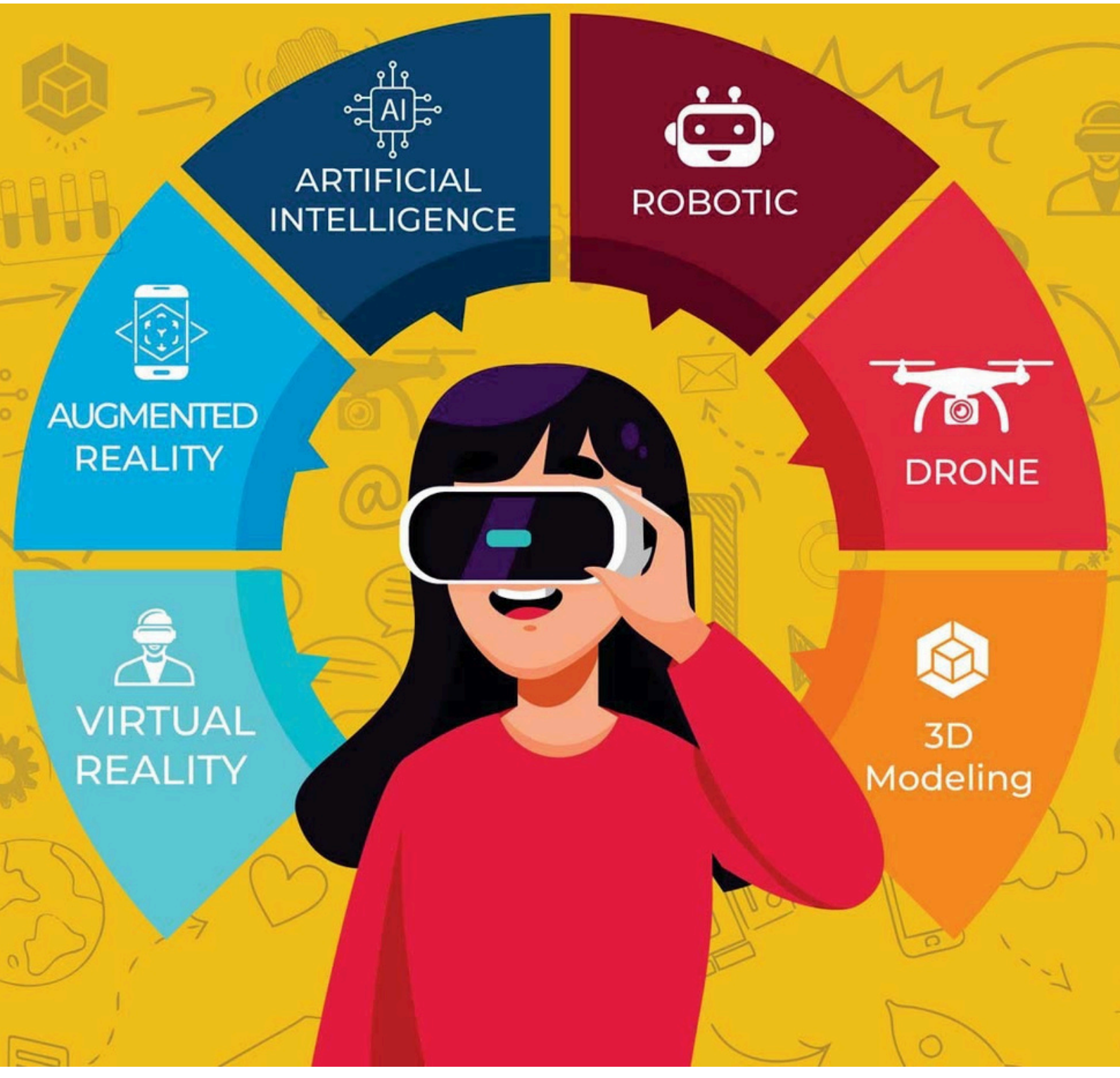

Contact Us

+91 9773743007

www.stemlabsupgrade.com