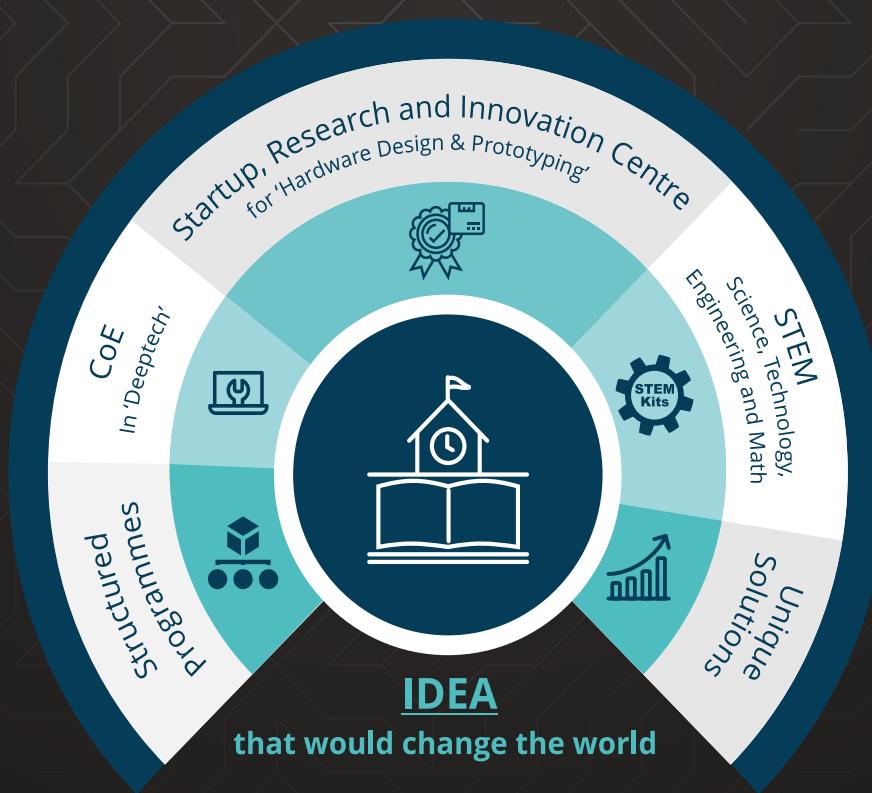


Game Changer 2023



Prayog FX EduLab Pvt. Ltd. Is a Start-Up Company, promoted by a team of highly skilled & experienced Engineering professionals having experience of more than 30 year in the field of the execution of Engineering projects in Oil & Gas, Electrical Engineering, Automation, Water Supply, Waste Water Management sectors etc. PrayogFX EduLab selected as an Associate of M/s EdgeFX Technologies Pvt. Ltd. which is an Edutech company having 25 years of experience in incubating ideas and driving innovation. EdgeFX is recognized by DIPP, Govt. of India for innovation, mentors of change for Tinkering with NITI Aayog and have won many awards and recognition in the area of technology innovation.

EdgeFX is specialize in setting up 'Startup, Research and Innovation Centres' including Physical and Virtual Labs, 600+ indigenously designed and manufactured products in the areas of STEM, Computer Science, Electronics, Electrical, Robotics, Communication and IOT and sell them to 50+ countries worldwide.

EdgeFX is embarking on the 4th Industrial revolution to help students, academia, government and policy makers alike to ride the wave. Our solutions provide platforms for teachers and students to improve teaching, learning and research competence and develop 21st century skills like problem solving, innovation, collaboration, leadership and practical skills.

EdgeFX has emerged as the fastest Skill Development company in India.

EdgeFX Multidisciplinary STEM Tinkering and Innovation Lab. (Physical & Virtual)

{STEM (Electronics / Arduino / Robotics) / STEAM / AI-ML, IOT &
Coding with Future Technology Models, Real-Time Models}



As the world enters into the **fourth industrial revolution**, **STEM** along with a new set of skills, i.e. 'skills of the future', including **21st century skills** like problem solving, innovation, collaboration, leadership and practical skills, with a clear focus on **employability**, **innovation** and **entrepreneurship** have to be developed and mastered.

STEM stands for Science, Technology, Engineering, and Mathematics.

STEM is important because it pervades every part of our lives.

Innovation leads to
new products and processes that sustain our economy.

STEM education

and careers must be a **national priority** as **STEM education** creates critical thinkers, increases science literacy, and enables the

next generation of innovators.



We set up '**Multidisciplinary STEM Tinkering and Innovation (Physical & Virtual) labs**',
powered by **engineering design principles** for students from class (V-XII),
ITI, Polytechnic, Engineering, Colleges, Universities and Technical Institutions
with high quality teaching, learning, research and community engagement in line with

NEP 2020 & Industry 4.0, empowering them with the
futuristic technologies and real-time models.

The Workstations, Research & Innovation Centers,
Technology Business Incubations are very much available for ITI,
Polytechnic, Engineering College & Universities too.

We provides a playground of **experiential learning** with focus on applications, problem solving, critical thinking, **employability and 21st century skills** for students to

kindle the spirit of innovation and entrepreneurship with **Industry Visits, Expert Interaction, Masterclasses on Emerging Technologies, Live Project Works etc.**

We also provides **hand holding throughout the academic year** and Capacity Building of teachers with a fully integrated **gamified teaching & learning platform 'STEM PLAY'** to update them with the advancements in education.



We are the most trusted Edtech company in India, which designs and **manufactures 600+ products in STEM, Electronics, Electrical, Communication, IOT, Robotics etc., powered by virtual labs.**

We pioneers in setting up Startup, Research & Innovation Centres, Technology Business Incubators, Technical Services & Consultancy, COE in Emerging Technologies along with Training & Hackathons with a multi disciplinary, learner-centred approach for **Schools, ITIs, polytechnics, Engineering, colleges & Universities.**

We have won many awards and recognition in the field of technology innovation including **TiE Global Award** for 'Spirit of manufacturing' and **National Award 2020** for 'Access to institutional education'.

We are also **recognised by DPIIT**, Govt of India for innovation. We have **30 years of rich international experience** working with academia and students from **122 countries** worldwide.



A few of our esteemed clients include Visvesvaraya Technological University, Uttarakhand Technical University, Assam Science & Technology University, IET Bundelkhand University, Odisha Skill Development Authority, BC Welfare, JNV, KVS, Municipal, EWIDC Schools, PDACE-Karnataka, GEC-Aurangabad, VEC- Chandigarh, IET- Banda, MIT-Bihar, DST to name a few.

Why STEM

(Science - Technology - Engineering - Mathematics)

STEM is more than the sum of its parts.

STEM > S + T + E + M



21st Century Skills

A set of core skills that equip students to collaborate, adapt, solve problems, and face unknown challenges.



Constructivism

A theory of education which describes student learning as the construction of knowledge through experience and reflection.



Engineering Design Process

A specific, step-by-step approach that engineers use to design products and solve problems. This process is frequently used in STEM lessons.



Gamification

The integration of game-based elements and mechanics for the purpose of increasing student engagement and success.



Maker Movement

A community of amateur DIY enthusiasts who blend arts, crafts, engineering, science projects, and the Do-It-Yourself mindset.



Problem-Based Learning

Teaching method used to implement real-world problems to promote learning.



Professional Learning Community (PLC)

A community for teachers to share information, collaborate, and learn from one another.



Aligned to Grade-Level Standards
Aligned to appropriate state and/or national math, science, technology, and engineering standards.



Multidisciplinary
Integrating science, technology, engineering, and mathematics.



Addresses Authentic Challenges
Presenting students with real-world challenges or problems with practical and meaningful implications.



Integrates 21st Century Skills with real-world challenges, practical and meaningful implications.



More Than One Solution
Includes problems or challenges that have more than one possible solution.



Uses the Engineering Design Process Any design, or prototyping follows the steps of the engineering design process.



Hands-On : Encourages hands-on manipulation of technology or materials to solve a problem or engineer a design.



Integrates Technology
Incorporates technology in a way that is seamless and appropriate.

STEM Features and Benefits

STEM 75 Projects-in-1 Electronic Design and Prototyping Lab Kit

Powered by Virtual Lab



Class (V-XII), ITI, Polytechnic, Engineering, Colleges, Universities and Technical Institutions

Build 75 fun-filled projects with reusable electronic building blocks including basic components, sensors, inputs, outputs, wires, connectors, mechanical accessories and breadboard Practical learning of concepts like Electricity, Circuits, Sound, Light and Mechanical Energy, Logic gates, Motors Primary & Secondary colours and more.

Learn and use the elements of ideation, design thinking and computational thinking to bring your ideas to life with real-time prototyping.

Virtual Lab Login : 1 year Licence Validity + Complementary (Industry 4.0 + Innovation Life Cycle)

**STEM Arduino (Coding)
Beginners Design & Prototyping Lab Kit**
Powered by Virtual Lab



**Class (V-XII), ITI, Polytechnic, Engineering, Colleges,
Universities and Technical Institutions**

Arduino Step by Step Coding and Prototyping Kit. Generate primary and secondary colours using Arduino and reusable electronic building blocks including basic Components, Inputs, Outputs, Wires, Connectors and Breadboard. Practical learning of concepts like Electricity, Circuits, Sound, Light and Mechanical energy, Arduino coding and more. Learn and use the elements of ideation, design thinking and computational thinking to bring your ideas to life with real-time prototyping.

Virtual Lab Login: 1 year Coding Licence Validity + Complementary (Industry 4.0 + Innovation Life Cycle)

STEM 10 Projects in 1 - Robotics Design and Prototyping Lab Kit

Powered by Virtual Lab



Class (V-XII), ITI, Polytechnic, Engineering, Colleges, Universities and Technical Institutions

Build 10 real-time Robots and Remotes, in a one of its kind, arrangement using reusable electronic building blocks including basic Components, Sensors, Inputs, Outputs, Wires, Connectors, Electrical and Mechanical accessories & Breadboard. Practical learning of concepts like Electricity, Circuits, Motors, RF, Communication, Mechanical energy, & more. Learn and use the elements of ideation, design thinking & computational thinking to bring ideas to life with real-time prototyping.

Virtual Lab Login: 1 year Robotics Licence Validity + Complementary (Industry 4.0 + Innovation Life Cycle)

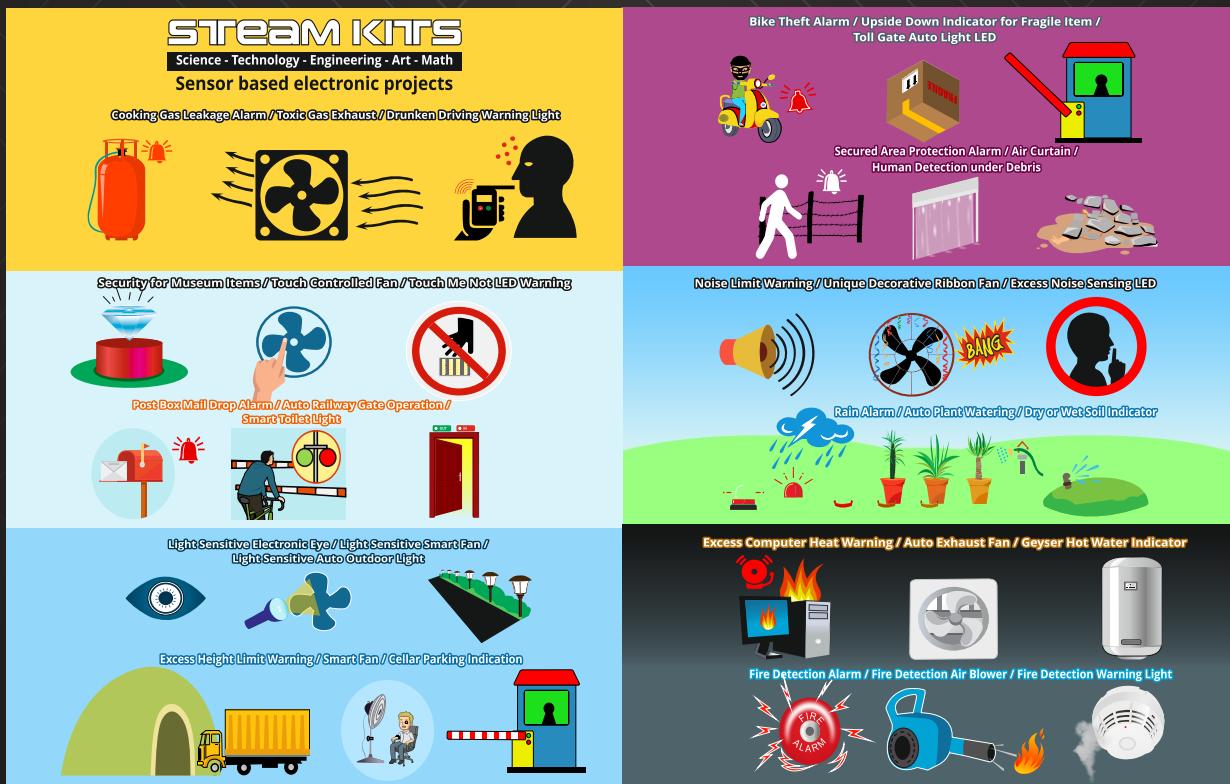
**EdgeFX Centre of Excellence in
'Robotics and Automation'**

Powered by Design and Prototyping Labs



EdgeFX Centre of Excellence in Robotics and Automation is powered by 100+ applications in the areas including but not limited to AI Enabled bots, Life size bots, Autonomous robots, Sensor based robots in technologies like RF, DTMF, IR, App based, Bluetooth, Voice controlled and Voice assistant device like Alexa, Google Home controlled and more. The deliverables include a holistic learner-centred approach using reusable building blocks with easy to use and user-friendly experiential learning approach. EdgeFX empowers the teaching and student fraternity in this vital industry 4.0 skill.

**STEAM 15 and 18 Projects in 1 - Sensor Based
Design and Prototyping Lab Kit**
Powered by Virtual Lab



**Class (V-XII), ITI, Polytechnic, Engineering, Colleges,
Universities and Technical Institutions**

Sensor Based STEAM kits with reusable electronic building blocks including inputs, outputs, wires, connectors, sensors including Flame/ Gas/ Light/ Moisture/ Obstacle/ PIR/ Magnetic/ Sound/ Temperature/ Tilt/ Touch, breadboard and more.

**Learn and use the elements of ideation, design thinking and computational thinking
to bring your ideas to life with real-time prototyping.**

Virtual Lab Login : 1 year Licence Validity + Complementary (Industry 4.0 + Innovation Life Cycle)

EdgeFX Centre of Excellence in 'Drone and Aerospace'

Powered by Design and Prototyping Labs



Drones are expected to be significant creators of employment and economic growth with India's drone market expected to reach Rs. 50,000 crore (US\$ 6.69 billion) in five years as per Chief of the Drone Federation of India, in applications including aerial cinematography, land surveys, agriculture & mining activities, disaster management, construction activities and mapping national highways and railway tracks. The Indian Govt. is taking the drone sector forward on three wheels: policy, incentives and demand creation. India has the potential of becoming a global drone hub by 2030 as per union civil aviation minister.

EdgeFX Centre of Excellence in Drone and Aerospace empowers public and private stakeholders in building a robust drone ecosystem in India and in skilling the teaching and student fraternity for demand fulfilment.

Gamified Virtual Lab Platform

STEM PLAY

PLAYGROUND OF INNOVATION

Gamification

Elevate your Levels



Leader Board



Earn Badges



(Earn Virtual Currencies and Trade them)



Unlock Bonus Courses



Earn x 2 Innovation Life Cycle Earn x 6 Industrial Revolution 4.0

Proficiency Certificate



Learn and Play Games

Image Pair

Flash Cards

Dialog Cards

Question Set

Space Invader

Find the hotspot

Guess the Answer

Find the Word (Crossword)

Areas Covered

Virtual - Physical - Real Time - Industry Application

Disaster Management STEM Game
Waste Management Automation
Energy Efficiency Agricultural and Organic Farming
Smart Devices

App Development Recycling Management
STEAM Light and Solar
3D Design and Printing Virtual Labs
STEM Electronics, Mechanics

AR/VR

Creativity, Innovation and Entrepreneurship
Gadget Development Transport and Communication
AI/ML Wearables
Health and Cleanliness Sustainability

Industry 4.0

Innovation Life Cycle Agritech
Game Development

Hologram Resource Management
IOT Adv Robotics

Technology Pranks Smart Cities
Industrial Applications Health Management

Skills Developed

Entrepreneurship

Innovation

Team Work

Practical Skills

Collaboration

Self Discipline

Discovery Based Learning

Holistic Learning

Inquiry Based Learning

Critical Thinking

Analysis based Learning

Leadership Skills

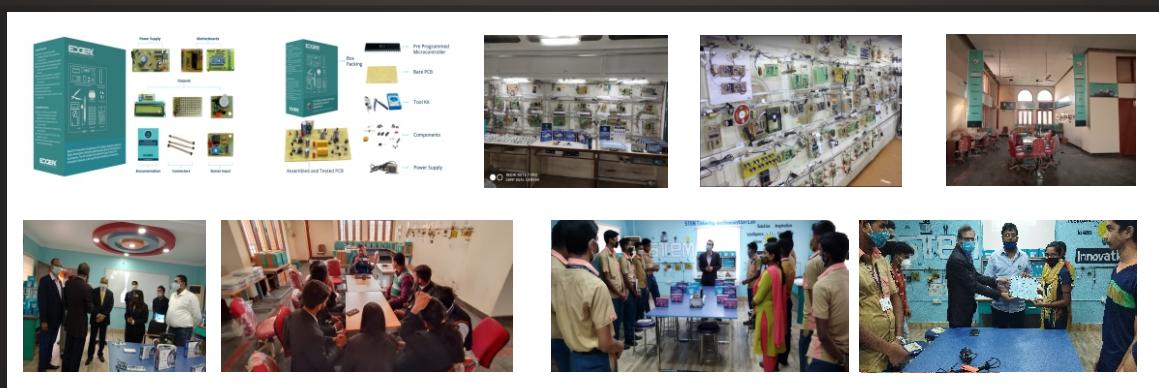
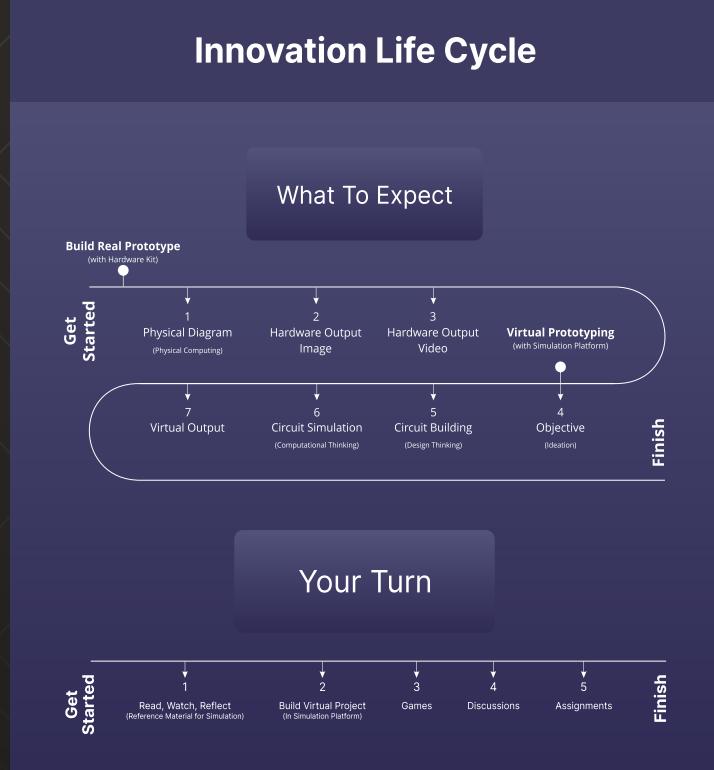
Self Direction

Life Skills

Problem Solving

Self Initiation

Collaboration



STEM TII Lab

**(STEM Tinkering, Incubation and Innovation Lab)
(Physical & Virtual) (Schools/Colleges/Universities)**

STEM (Electronics / Arduino / Robotics), STEAM / AI-ML, IOT & Coding with Future Technology Models, Real-Time Models, DroneTech, 3D Printing

Lab



Deliverables



Workstations



Industry Connect



Teaching &
Learning Platform



Real time
projects



Hackathon



Exhaustive
Curriculum



Train the
trainer programs

EdgeFX Designs and manufactures 600+ indigenous products with 30 years of international experience working with 122 countries worldwide. EdgeFX provides a playground of experiential learning with focus on applications,

problem solving, critical thinking, employability and 21st century skills for students to kindle the spirit of innovation and entrepreneurship with Industry Visits, Expert Interaction, Masterclasses on Emerging Technologies, Live Project Works and more in line with NEP 2020 and Industry 4.0.

Our Partners



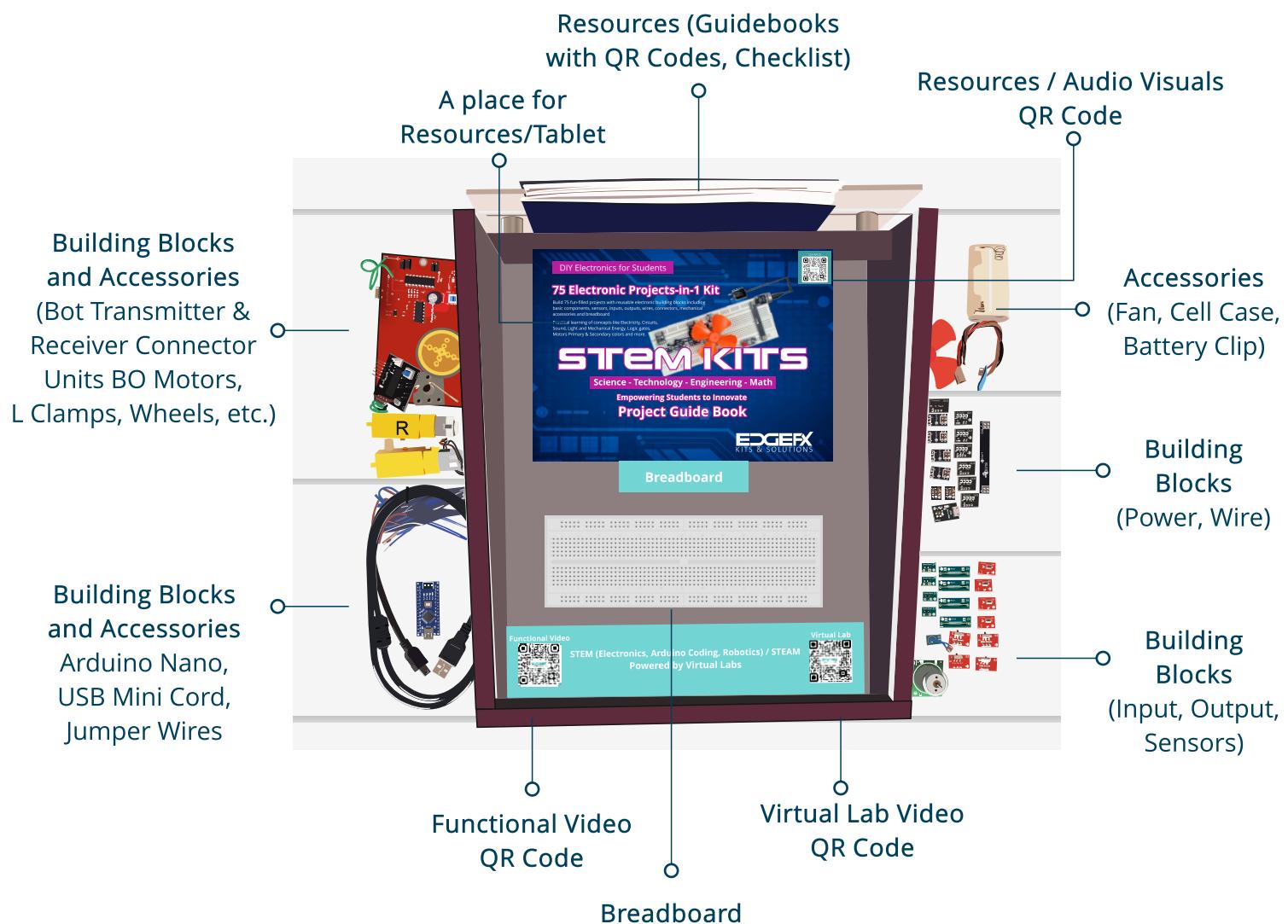
TinkerFX

STEM Workstation

STEM (Electronics, Arduino Coding, Robotics / Virtual Labs)

Features and Benefits

- ➡ NEP 2020
- ➡ Innovation & Entrepreneurship
- ➡ Cognitive Abilities
- ➡ Maker Movement
- ➡ 21st Century Skills
- ➡ Engineering Design Process
- ➡ Industry 4.0
- ➡ Multidisciplinary
- ➡ Problem Based Learning



Real- Time Models

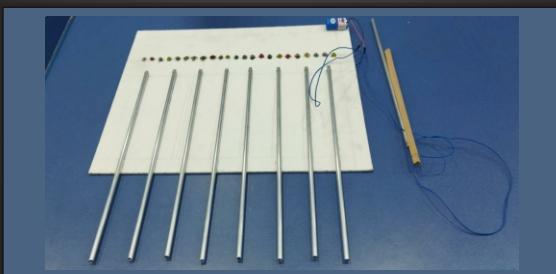
Maze Runner



Contactless Hand Sanitizer



Conductor and Insulator



Dusk to Dawn Street Lights



Conveyor Belt



Habit Band

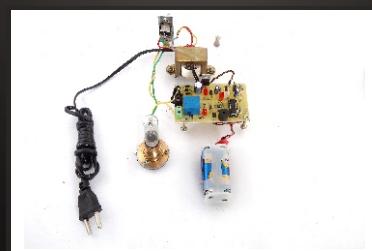


Future Technology Models

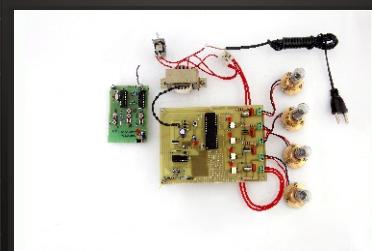
Wireless Power Transfer



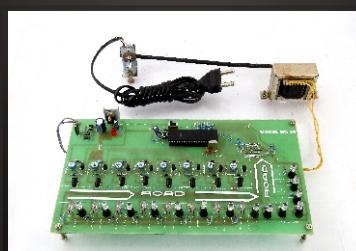
Electronic Eye Controlled Security System



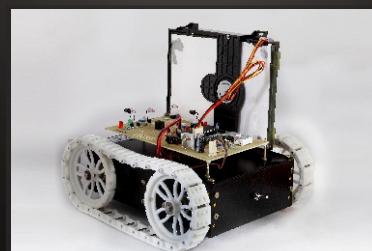
RF Based Home Automation System



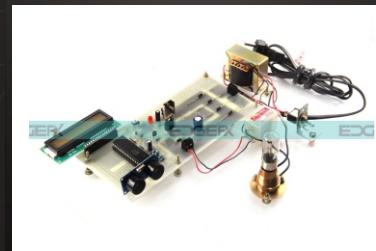
Street Light that Glows on Detecting Vehicle Movement



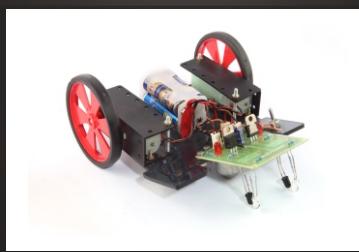
Auto Metro Train to Shuttle Between Stations



Contactless Liquid level controller



Line Following Robotic Vehicle



TV Remote Operated Domestic Appliances Control

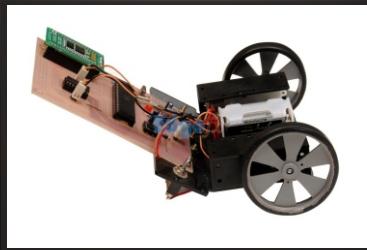


Remote Override of Traffic Signal in Emergency

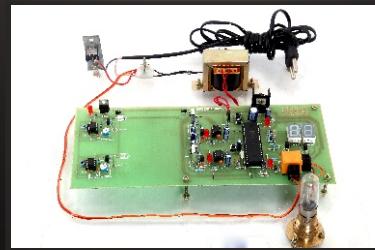


Future Technology Models

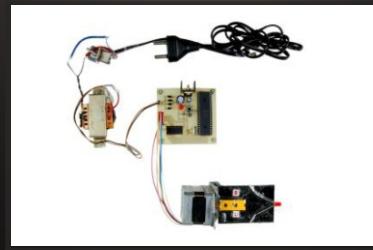
Voice Controlled Robot by Cell Phone with Android App



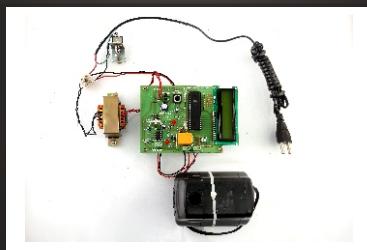
Optimum Energy Management System



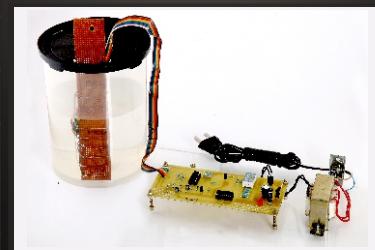
Sun Tracking Solar Panel



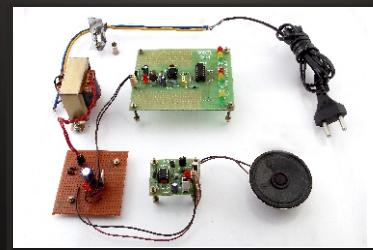
Automatic Irrigation System on Sensing Soil Moisture Content



Intelligent Overhead Tank Water Level Indicator



Rhythm Following Flashing Lights



'Empowering students to innovate'

As the World enters into the industrial revolution-4.0 a new set of skills, i.e skill of the future, including 21st Century Skills like Problem Solving, Innovation, Incubation, Leadership and Practical Skills, with a clear focus on employability, innovation and entrepreneurship have to be developed and mastered.

Deliverables



Hardware products



Teaching & Learning Platform



Hand holding for the entire year



Exhaustive curriculum



Train the trainer programs



Industry connect



Real time projects



Faculty development program



ASSOCIATE :

PrayogFX EduLab (P) Limited

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