



**SEPTEMBER  
2024**

# NEWSLETTER

**GOAL 7:  
AFFORDABLE AND CLEAN ENERGY**

**(Sustainable Development Goals)**



**VSPK International School,  
Rohini Sec-13 , New Delhi**

# OVERVIEW OF SUSTAINABLE DEVELOPMENT GOALS

- The 70th Session of the UN General Assembly held on 25th September 2015 adopted the Sustainable Development Goals (SDGs) with 17 goals and 169 targets, under the official agenda “Transforming our world: the 2030 Agenda for Sustainable Development”. India is a signatory to this landmark agreement.



70 Session of UN General Assembly, New York , 25th Sept. 2015

- Officially, the SDGs came into effect from 1st January 2016.
- Member Countries have the responsibility for follow-up and review the progress made in implementing the goals and targets.
- SDGs is an inter-governmentally agreed set of goals relating to international development which aims at meeting the needs of the present without compromising the ability of future generations to meet their own needs.

## 17 GOALS OF SDG



# WHAT IS GOAL 7

# AFFORDABLE AND CLEAN ENERGY

Sustainable Development Goal (SDG) 7 focuses on ensuring access to affordable, reliable, sustainable, and modern energy for everyone. It aims to address the global challenge of energy access by increasing the availability of renewable energy sources, improving energy efficiency, and ensuring that energy is clean and accessible to all.

## KEY ASPECTS INCLUDE:

- Expanding the use of renewable energy sources like solar, wind, and hydroelectric power.
- Improving energy infrastructure to be more efficient and less reliant on fossil fuels.
- Making sure that even the poorest communities have access to affordable energy, which is vital for health, education, and economic development.

Ultimately, SDG 7 is about transforming energy systems to support sustainable development and reduce environmental impacts like climate change.



## WHAT IS THE GOAL HERE?

The world is at a turning point in terms of energy. As we continue to battle climate change and work towards sustainable development, Sustainable Development Goal 7 (SDG 7) stands as a critical pillar.

## WHY DO WE NEED AFFORDABLE AND CLEAN ENERGY AS AN SDG?

It emphasizes ensuring universal access to affordable, reliable, sustainable, and modern energy by 2030. The focus is clear: we need clean, renewable energy that powers lives without harming our planet.

## REASONS WHY SDG 7 IS NECESSARY

Energy powers our daily lives – from turning on the lights to fueling industries and connecting us digitally. However, 759 million people globally still live without access to electricity, and 2.6 billion rely on harmful, polluting fuels like wood and coal for cooking. Without clean energy, health, education, and economic growth are stunted, especially in developing regions. SDG 7 seeks to transform this scenario, ensuring energy equity, while pushing the world towards a low-carbon future. It aligns directly with the global effort to mitigate climate change, aiming to decrease dependency on fossil fuels and promote renewable energy.

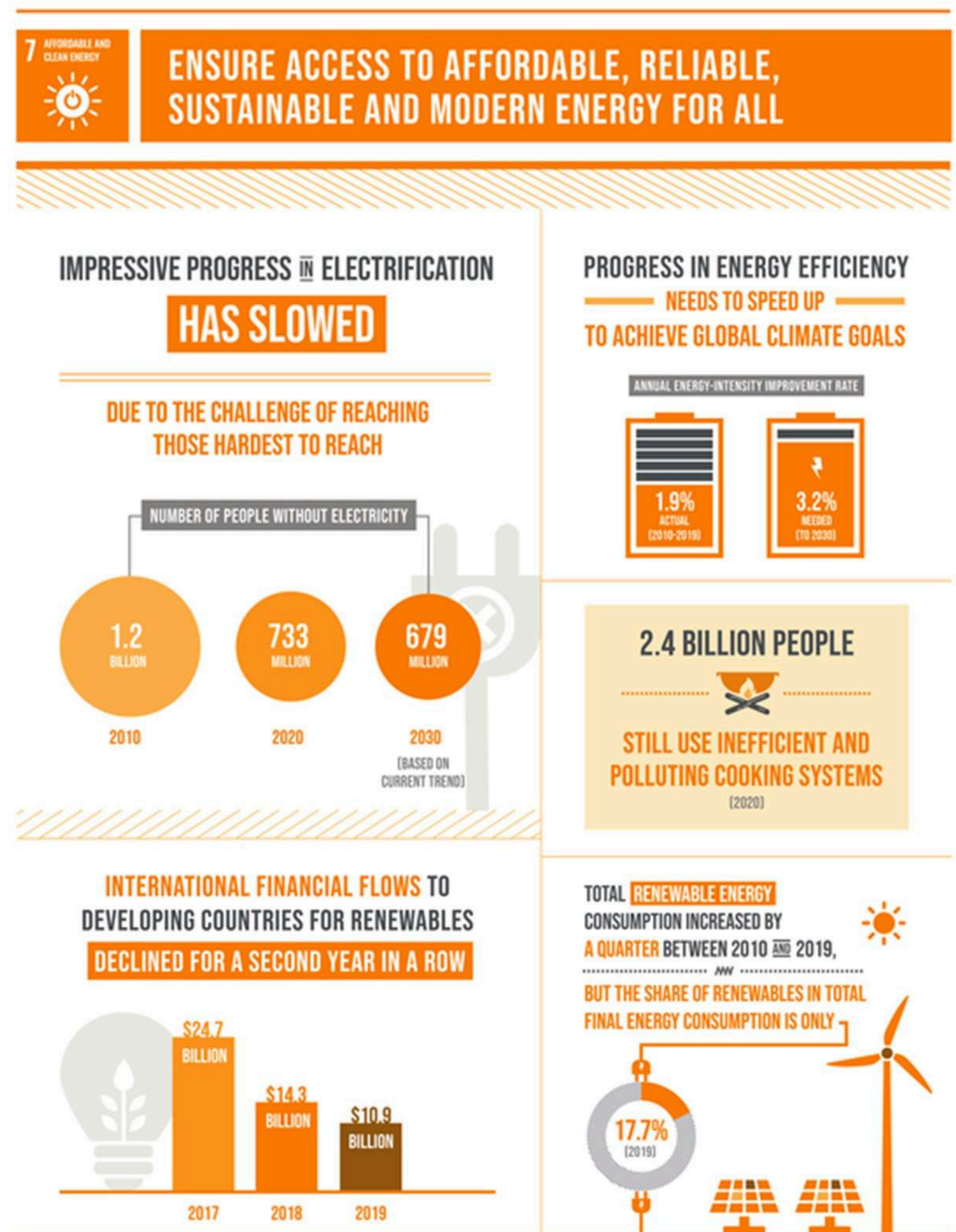
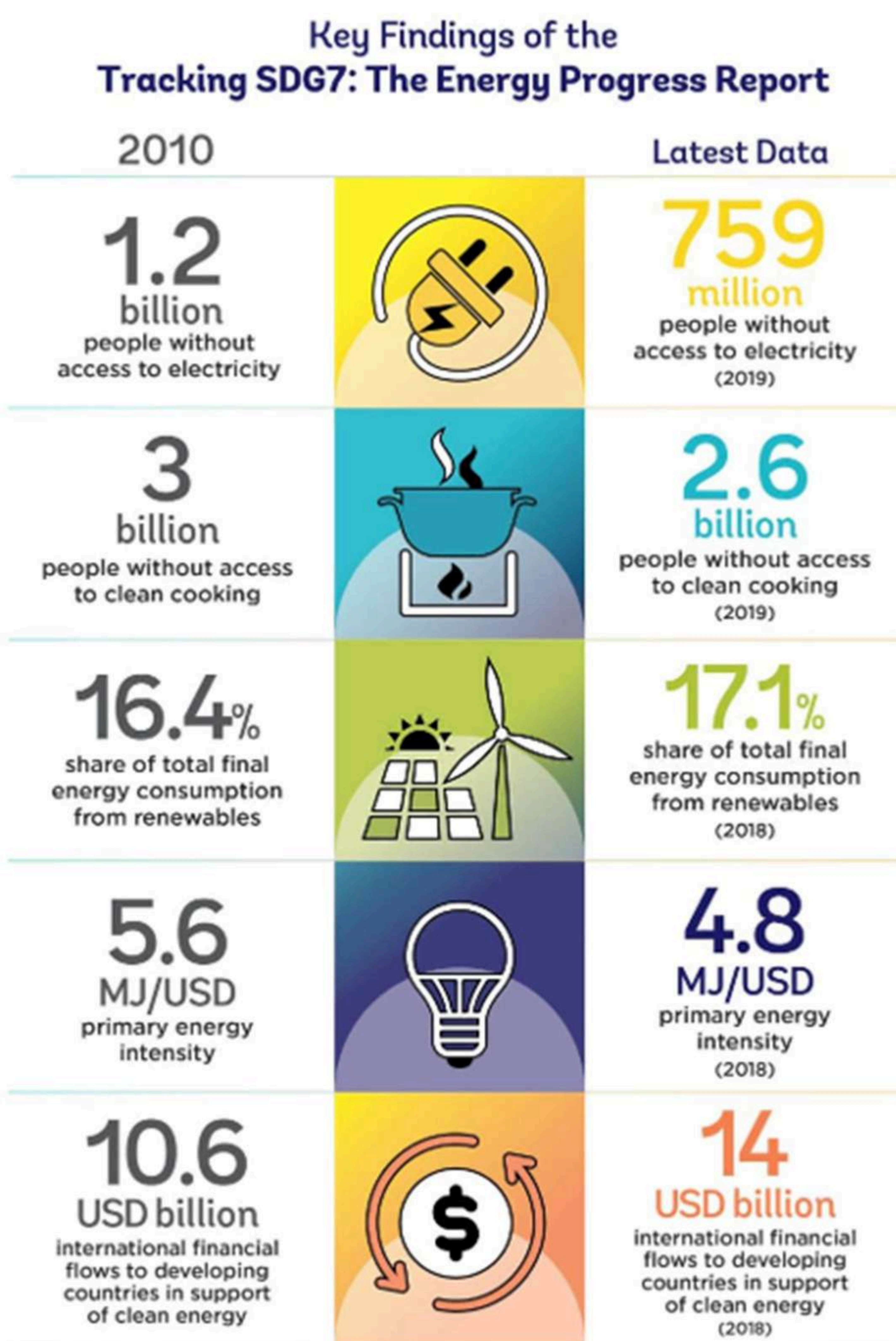
# WHAT ARE THE GOAL TARGETS OF SDG 5 BY 2030?

**Universal Access to Energy:** By 2030, ensure that everyone, everywhere, has access to electricity, including rural and underserved communities.

**Increase in Renewable Energy:** Substantially increase the share of renewable energy in the global energy mix. This includes sources like wind, solar, hydro, and geothermal, which offer a cleaner alternative to traditional fossil fuels.

**Energy Efficiency Improvements:** Doubling the rate of energy efficiency by promoting smarter consumption and the use of technology to reduce energy waste.

**International Collaboration:** Enhance international cooperation to provide modern, sustainable energy infrastructure and technology, especially in developing countries.



# HOW TO ACHIEVE SDGs

- A localized approach to address the unique challenges and opportunities present at the local level. By building a Local SDG Agenda tailored to gender equality, we can effectively target and implement initiatives that promote women's rights and empowerment.
- Creating an environment where multiple stakeholders—including civil society, private sector organizations, professional associations, and other agencies—actively participate in gender-focused initiatives is crucial. These collaborative efforts can drive meaningful change and ensure that diverse perspectives and resources contribute to gender equality.
- Conducting a situation assessment to identify development gaps and needs related to gender inequality is essential. By setting priorities at the local government and district levels, we can formulate targeted SDG-wise planning that addresses specific gender issues. Aligning existing budgets, schemes, and programs with relevant SDG 5 targets will further enhance our efforts to achieve gender equality in our state.



## ABOUT

# STEMROBO TECHNOLOGIES



**STEMROBO** provides 'End-To-End Solution to K-12 Schools' for 'Nurturing Innovation & 21st Century Skills' among young students of age 6-18 years across the globe. We offer young students an opportunity to explore, experience and bring innovation through a world class STEAM, Artificial Intelligence, Robotics & Coding curriculum integrated with our unique & affordable 'Technology Products and Solutions' delivered in an online or hybrid model; thereby enabling and empowering students to be able to become Creative - Thinkers and Problem - Solvers. Together, let's unlock the potential within each student, ignite a passion for Innovation, Creativity & Learning, and pave the way for a brighter tomorrow.

## IMPORTANCE OF STEM EDUCATION FOR KIDS

The term "STEM" typically refers to a group of academic disciplines that are focused on science, technology, engineering, and mathematics. It prepares them for the future by building problem-solving skills, encouraging curiosity and exploration, fostering collaboration and communication skills, and addressing global challenges that require STEM principles for their solution.



# STEMROBO TECHNOLOGIES

Innovation, Creativity & Learning

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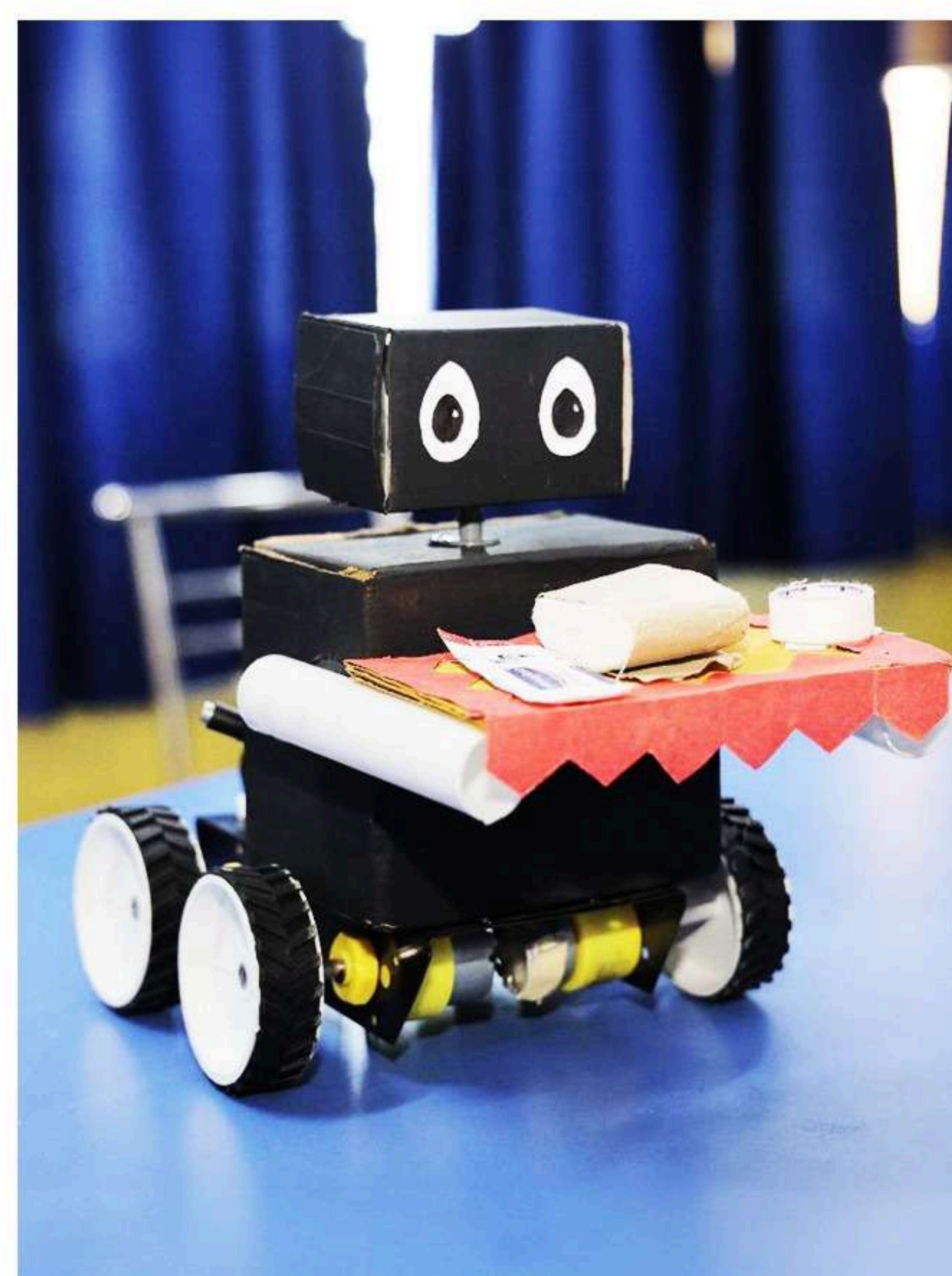
[www.stemrobo.com](http://www.stemrobo.com)

## Mission

Our mission is to build an ecosystem focused on leveraging technology in education where **STEAM, Robotics, Coding, Artificial Intelligence & AR/VR** are utilized as crucial tools for kids to become smart in their academics and be able to solve modern world problems.

## Vision

The company's vision is to nurture innovation and 21<sup>st</sup> century skills in K-12 students across the globe and prepare them for the future technological world. We are on a journey which will help every student to elevate core skills like **Logical Thinking, Creativity, Computational Thinking and Problem - Solving**.



# About

## About School ATL Lab



The Atal Tinkering Lab (ATL) initiative, launched by the Indian government under the Atal Innovation Mission, aims to cultivate a culture of innovation and entrepreneurship among school students. These labs serve as creative spaces where young minds can explore and experiment with various tools and technologies, fostering hands-on learning and critical thinking. ATLs are designed to provide students with access to advanced equipment like robotics kits, 3D printers, and electronics. This hands-on approach encourages students to engage in problem-solving and develop innovative solutions to real-world challenges. By integrating science, technology, engineering, arts, and mathematics (STEAM), ATLs promote an interdisciplinary learning environment that nurtures creativity and collaboration.



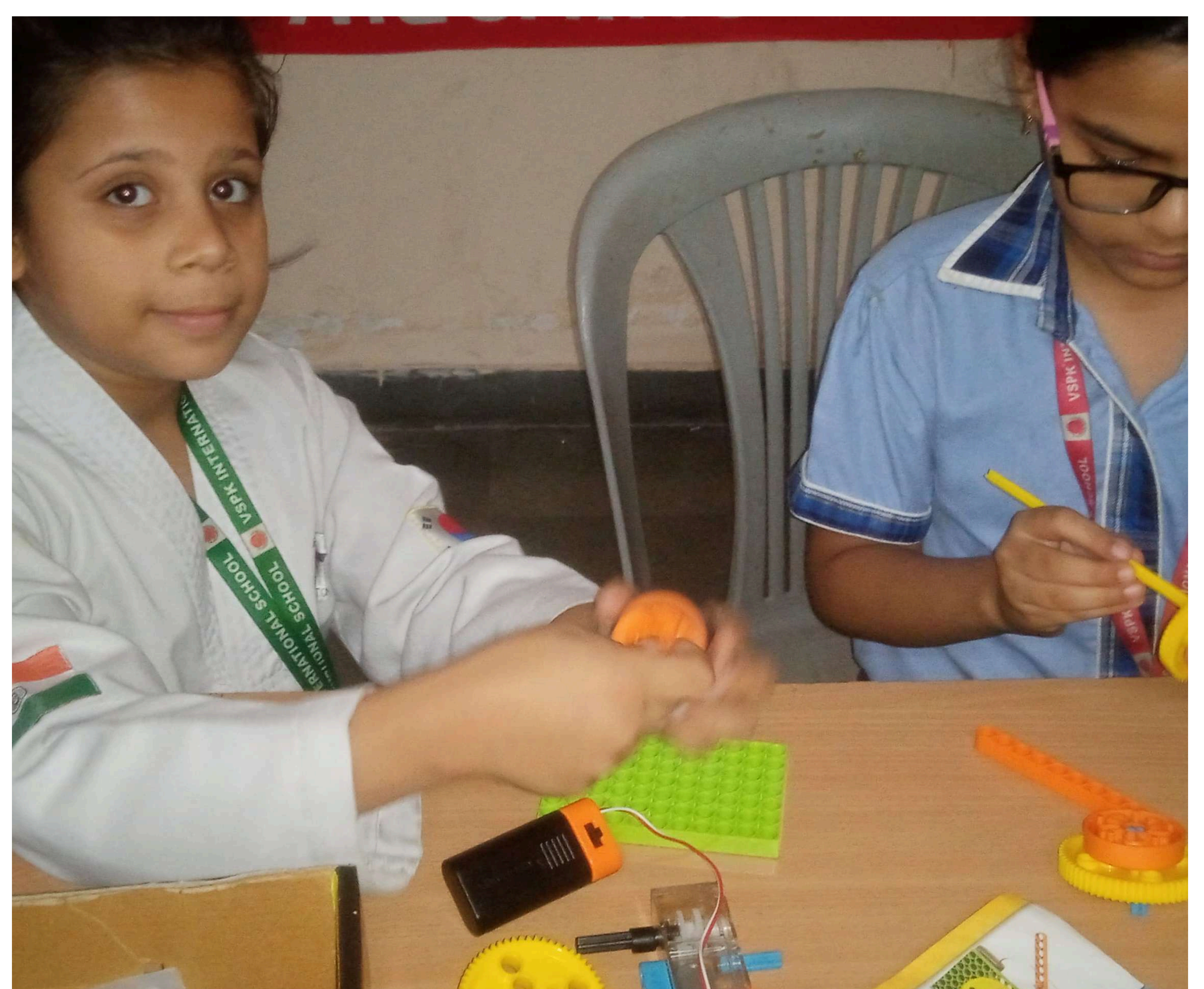


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## GLIMPSE OF ACTIVITIES

### 5th A & 6th

- Activity performed Basic Car.
- Activity performed on discovery motion kit.
- Explained the concept Electric coil and magnetic circuit.
- Explained the working of Electric circuit using paper circuit kit.
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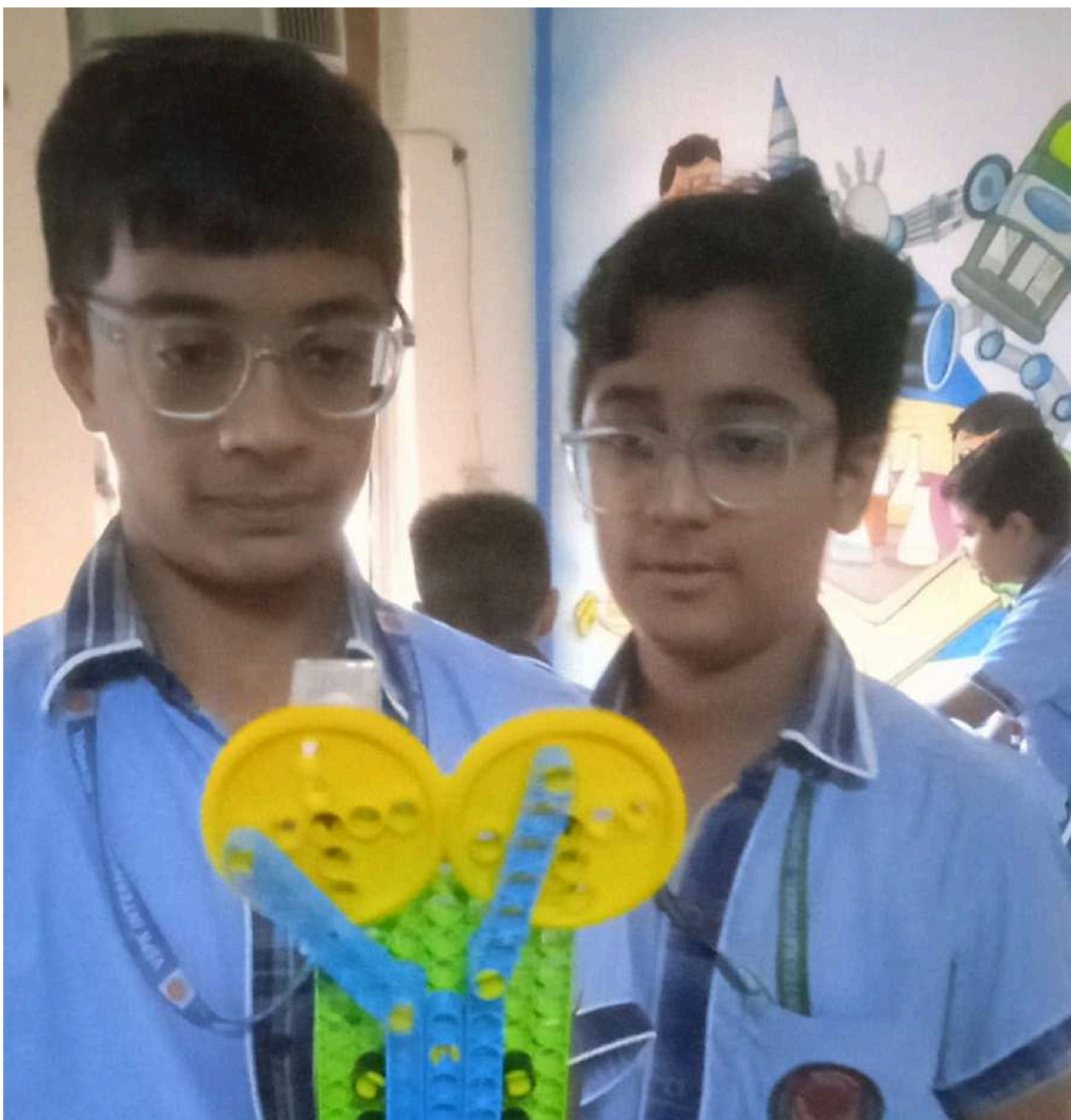


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## GLIMPSE OF ACTIVITIES

### 7th & 8th Class

- Practical for making a Blind spectacles using the ultrasonic sensor and Arduino nano.
- Practical session on clap based system using Arduino uno, relay and electric bulb.
- Coding demonstration by using tinkercad on project named water tank alarm system using ultrasonic sensor.



## — GLIMPSE OF — PROJECTS

### Project Name-Open CV based traffic control System

- The Traffic Control System utilizes OpenCV for real-time traffic density analysis, enabling dynamic traffic light adjustments based on current conditions. By processing video feeds from strategically placed cameras, the system effectively detects vehicle counts and movement patterns.
- Combining Arduino and Raspberry Pi, it integrates hardware and software for seamless data processing. Arduino manages sensor inputs and signal outputs, while Raspberry Pi processes video data using OpenCV algorithms, ensuring low latency in decision-making.
- This continuous monitoring allows for dynamic optimization of traffic signal timings, reducing congestion during peak hours and enhancing road safety. By prioritizing traffic flows at busy intersections and minimizing idle times, the system improves vehicle movement, lowers emissions, and fosters a healthier urban environment.



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Thirsty crops: Agriculture uses 70% of the world's freshwater supply.

**FUN  
FACT**



# THANK YOU



## CONTACT US

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Visit our website– [www.stemrobo.com](http://www.stemrobo.com)