



NEWSLETTER

GOAL 4 : QUALITY EDUCATION
(Sustainable Development Goals)



VSPK International School Rohini Sec-13

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 4 - QUALITY EDUCATION

Goal 4 aims to ensure inclusive and equitable quality education and promote lifelong learning opportunities for all. This goal supports the reduction of disparities and inequities in education, both in terms of access and quality. It recognizes the need to provide quality education for all, and most especially vulnerable populations, including poor children, children living in rural areas, persons with disabilities, indigenous people and refugee children.

UNDERSTANDING THE CHALLENGE:

The main challenges to achieving SDG 4, which focuses on quality education, include the need for faculty adaptation to the use of ICTs and online education, as well as the emotional reactions and increased workloads that come with it. Another challenge is the lack of chances for learning, which hinders social, economic, and sustainable development. E-learning, while offering opportunities for inclusive and equitable education, also faces challenges related to quality assurance. Additionally, poor quality education and the lack of relevant skills and competences in learners contribute to the failure to achieve SDG 4. Higher education institutions have a crucial role to play in driving SDG 4, but they must overcome challenges such as limited involvement and the need for curriculum innovations and professional development.



WHAT IS THE GOAL HERE?

Ensure inclusive and quality education for all and promote lifelong learning.

WHY DOES EDUCATION MATTER?

Education is the key that will allow many other Sustainable Development Goals (SDGs) to be achieved. When people can get quality education they can break from the cycle of poverty. Education therefore helps to reduce inequalities and to reach gender equality. It also empowers people everywhere to live more healthy and sustainable lives. Education is also crucial to fostering tolerance between people and contributes to more peaceful societies.

SO, THROUGH EDUCATION PEOPLE CAN GET BETTER JOBS AND HAVE BETTER LIVES?

Yes, education reduces inequality. Using data for 114 countries in the 1985–2005 period, one extra year of education is associated with a reduction of the Gini coefficient by 1.4 percentage points.



Quality Education



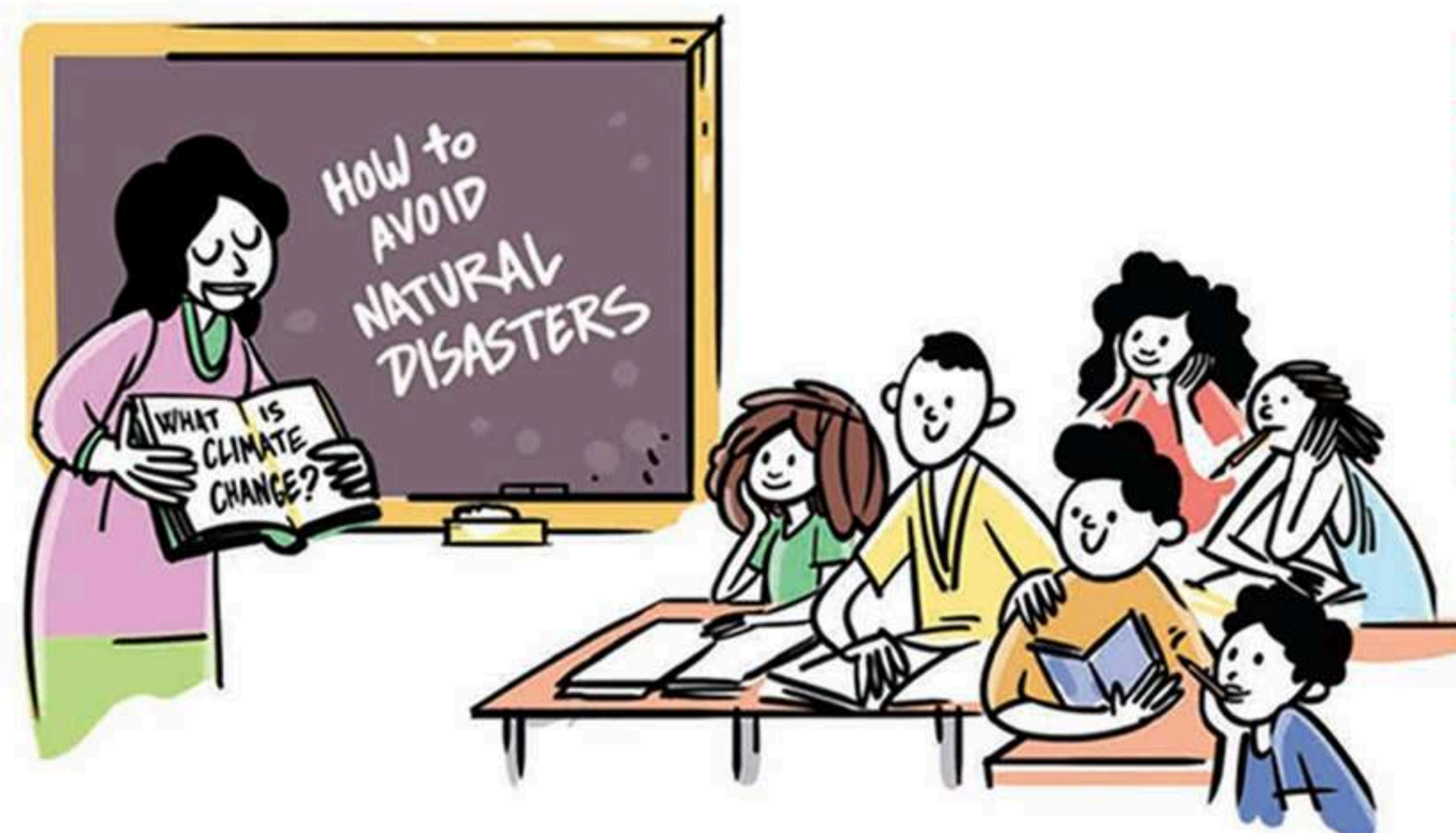
Challenges

103 MILLION youth worldwide **LACK BASIC LITERACY SKILLS.** More than **60%** are **WOMEN**



Solutions

PROMOTE EDUCATION FOR ALL as a powerful tool to build sustainable and resilient societies



LACK OF ACCESS TO BASIC SERVICES such as water and electricity prevent children, especially **GIRLS**, from going to school



IMPROVE ACCESS TO BASIC SERVICES to free children's time so that they can go to school.



NATURAL DISASTERS such as floods and droughts can lead to children dropping **OUT OF SCHOOL** for extended period of time



BUILD RESILIENCE to ensure children can go to school at all time, including during extreme climate events



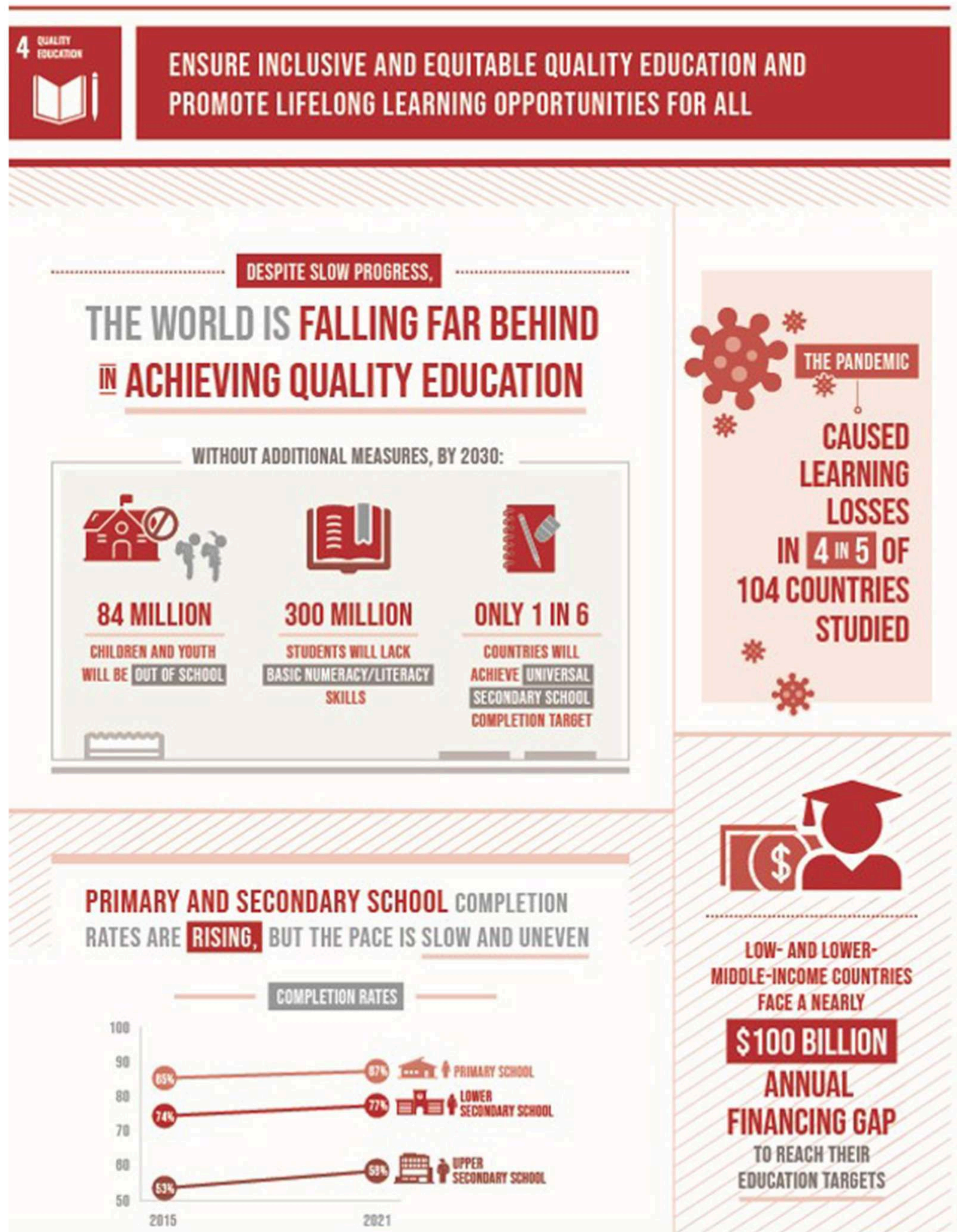
WHAT ARE THE GOAL TARGETS OF SDG 4 BY 2030?

1. To ensure that all girls and boys complete free, equitable and quality primary and secondary education leading to relevant and Goal-4 effective learning outcomes.
2. To ensure that all girls and boys have access to quality early childhood development, care and preprimary education so that they are ready for primary education.
3. To ensure equal access for all women and men to affordable and quality technical, vocational and tertiary education, including university.
4. To substantially increase the number of youth and adults who have relevant skills, including technical and vocational skills, for employment, decent jobs and entrepreneurship.
5. To eliminate gender disparities in education and ensure equal access to all levels of education and vocational training for the vulnerable, including persons with disabilities, indigenous peoples and children in vulnerable situations.

6. To ensure that all youth and a substantial proportion of adults, both men and women, achieve literacy and numeracy.

7. To ensure that all learners acquire the knowledge and skills needed to promote sustainable development, including, among others, through education for sustainable development and sustainable lifestyles, human rights, gender equality, promotion of a culture of peace and non-violence, global citizenship and appreciation of cultural diversity and of culture's contribution to sustainable development.

8. Build and upgrade education facilities that are child, disability and gender sensitive and provide safe, nonviolent, inclusive and effective learning environments for all.



HOW TO ACHIEVE SDGs

- Since, the context and issues in SDGs are summative in nature; localization becomes an important element for achieving the SDGs. Realization of Goals & Targets mostly happen at the local level. It is the local actors that make all the differences. Thus, building up Local SDG Agenda is the most effective way of achieving SDGs.
- Creating an environment where multi-stakeholders among civil society, private sector organizations, professional associations and other agencies could take initiatives to implement SDGs.
- Situation Assessment for finding development gaps and needs, making priorities at the level of local governments and districts and formulating SDG-wise planning at levels of local government or aligning existing budgets/schemes/programmes with relevant SDG targets will help in achieving SDGs 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.

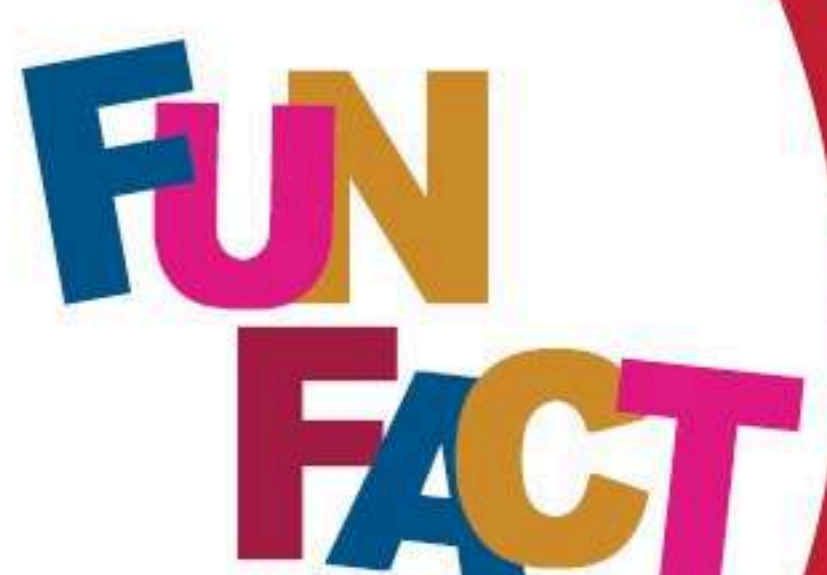


About

School ATL Lab



The **Atal Tinkering Lab (ATL)** is an initiative by the Government of India under the Atal Innovation Mission to foster a spirit of innovation and entrepreneurship among school students. These labs are designed to provide a hands-on learning experience in science, technology, engineering, and mathematics (STEM) fields. The Atal Tinkering Labs are equipped with state-of-the-art facilities, including tools and equipment like 3D printers, robotics kits, and electronics components, allowing students to explore and create. The primary goal is to cultivate a culture of problem-solving and critical thinking skills from an early age. By encouraging experimentation and innovation, ATLs aim to nurture the next generation of innovators and entrepreneurs, preparing them for the challenges of the future and contributing to the overall development of India's technological landscape.



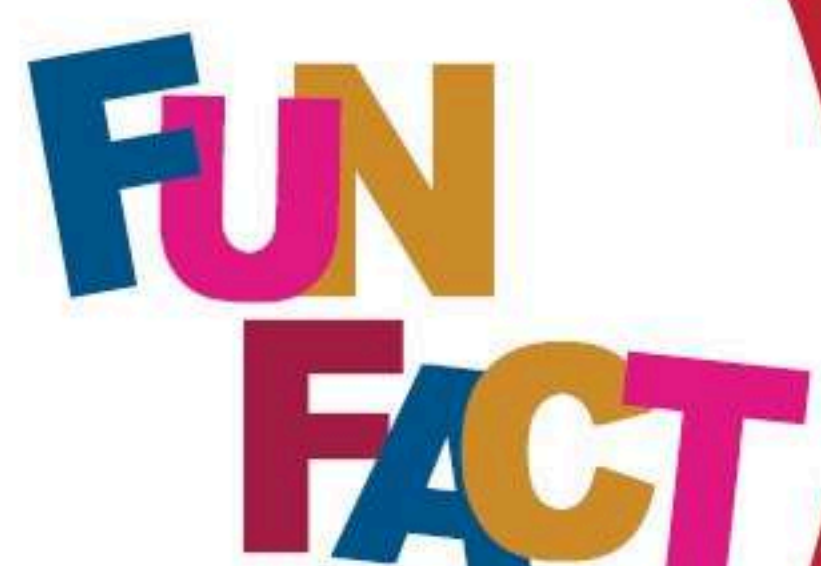
The 'Hundred Languages of Children' approach in Reggio Emilia, Italy, emphasizes diverse forms of expression in education, from painting to poetry.

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GLIMPSE OF ACTIVITIES

5th Class

- Activities performed using smart circuit kit.
- Concepts of LED, voltage, current, and resistor.
- Introduction Micro-Bit
- Drawing pictures and names using 3D pen.



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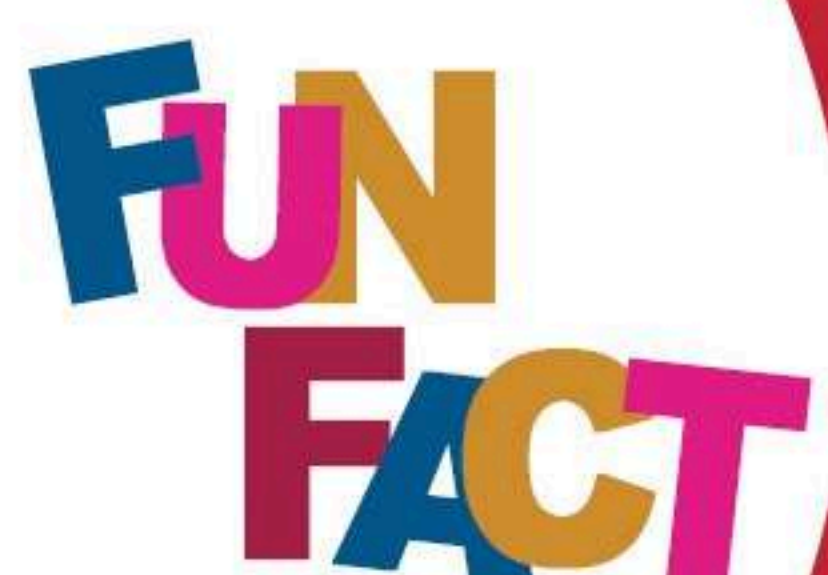
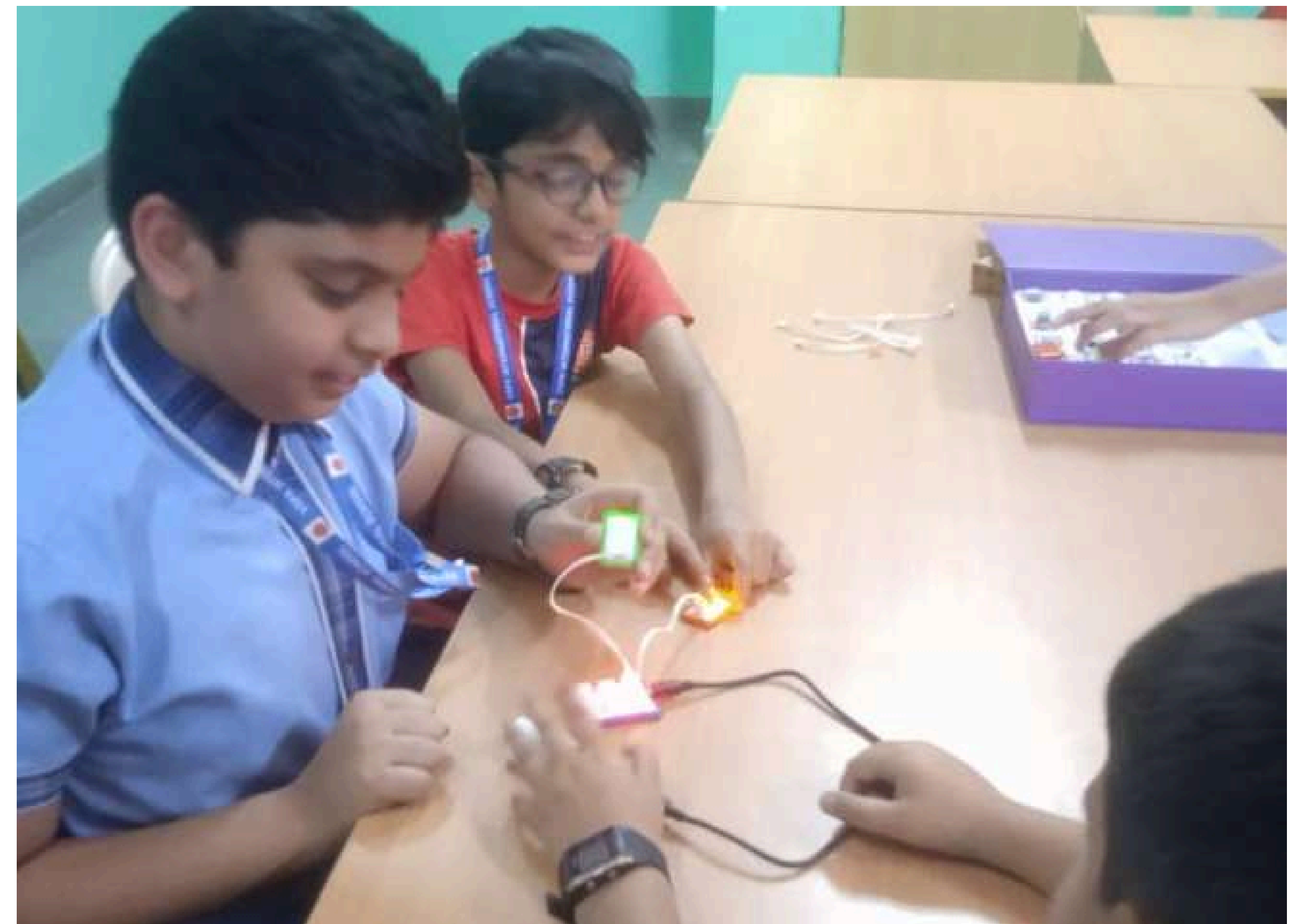
Did you know? Finland's education system, known for its high quality, assigns virtually no homework to students!

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GLIMPSE OF ACTIVITIES

6th Class

- Introduction to Learning Management System and explained how to login
- Gone through documents and videos of STEM and Robotics
- Discussed quiz questions on Robotics.
- Square pyramid activity
- Activity on tinker orbit
- Carousel and windmill activity



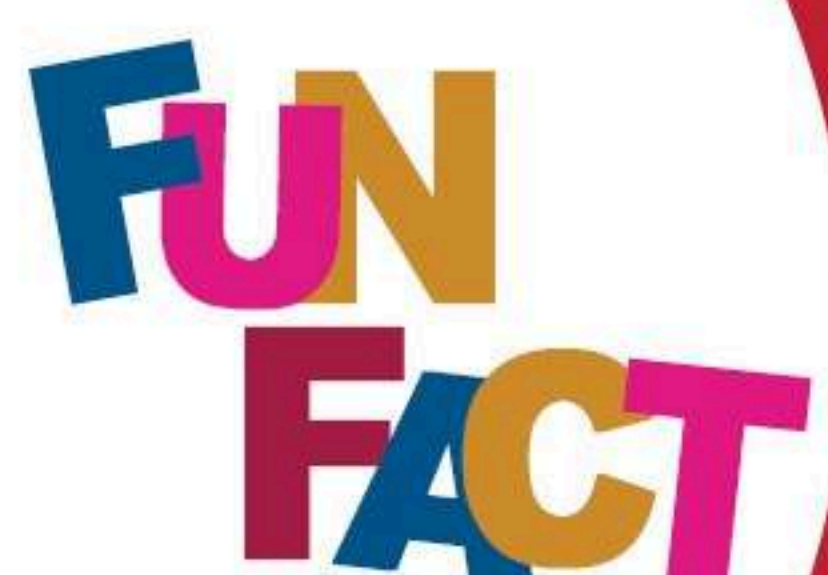
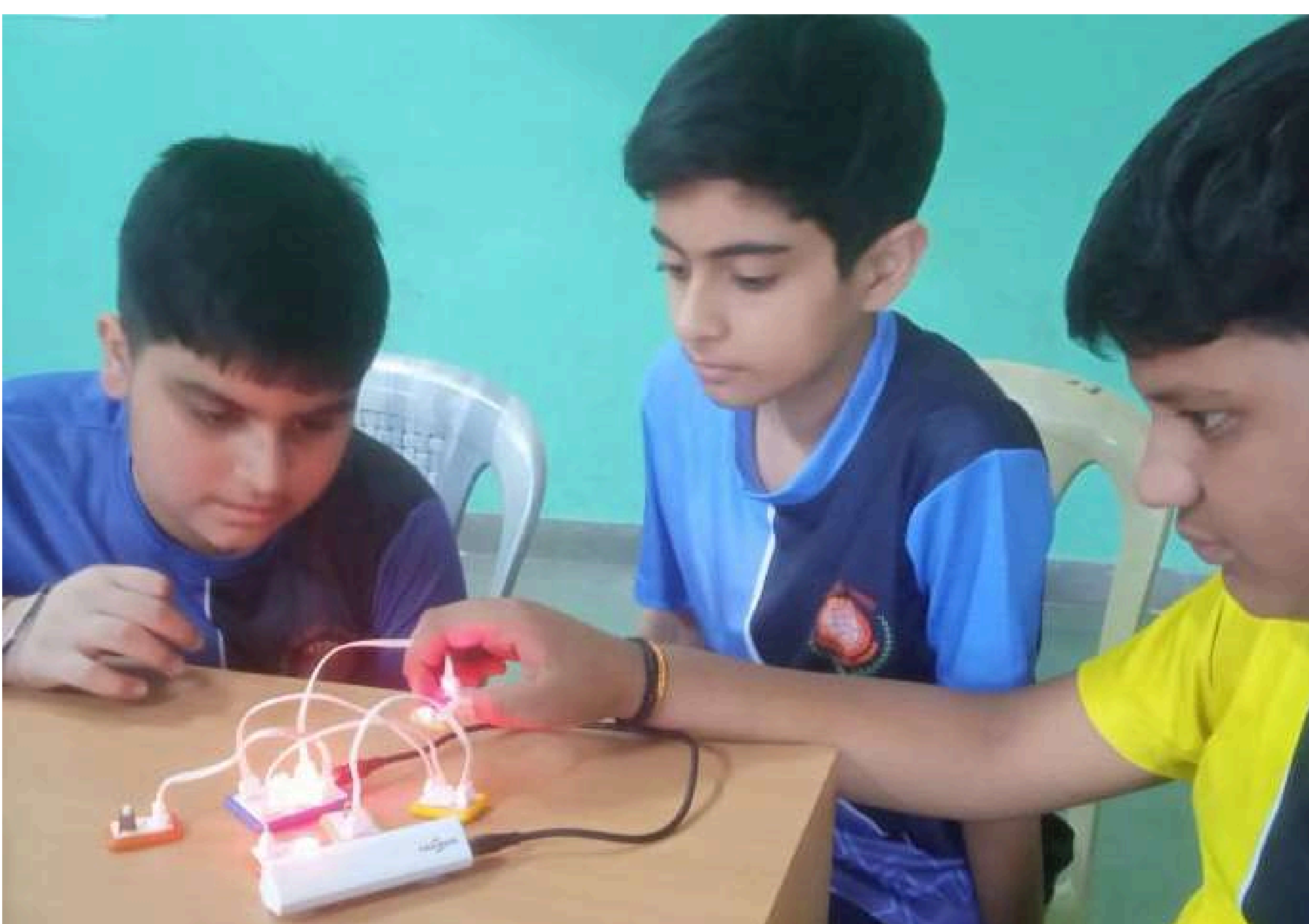
In Bhutan, they measure national success not by GDP but by Gross National Happiness, emphasizing holistic education's importance.

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GLIMPSE OF ACTIVITIES

7th and 8th Class

- Types of Sensors like: LDR, IR Ultra-sonic sensors etc.
- Activities performed on various types of sensors using Tinker orbit
- Introduction to Arduino , types of Arduino UNO.
- Activities performed using mechatronic kit like: Gaint Wheel, F1- car, flying wheel etc.

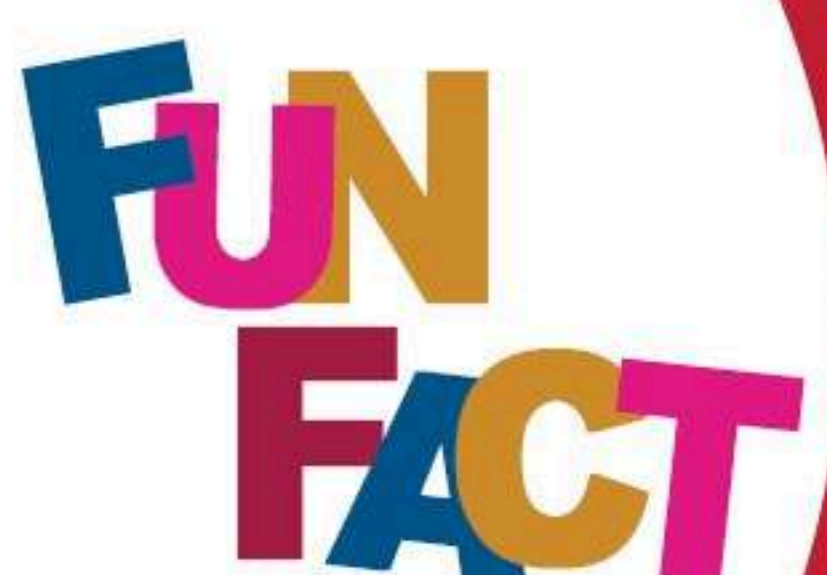


The world's oldest known university is in Morocco, dating back to 859 AD, highlighting the longstanding value of education.

GLIMPSE OF PROJECTS

List of projects

- Fuel scam detector
- Agro bot
- Forest fire protection using AI.
- Grass crop cutter



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Astronauts aboard the International Space Station receive education and training while orbiting Earth, showcasing education's boundless possibilities.

GLIMPSE OF PROJECTS

Project name - BUSH FIRE PRECAUTION

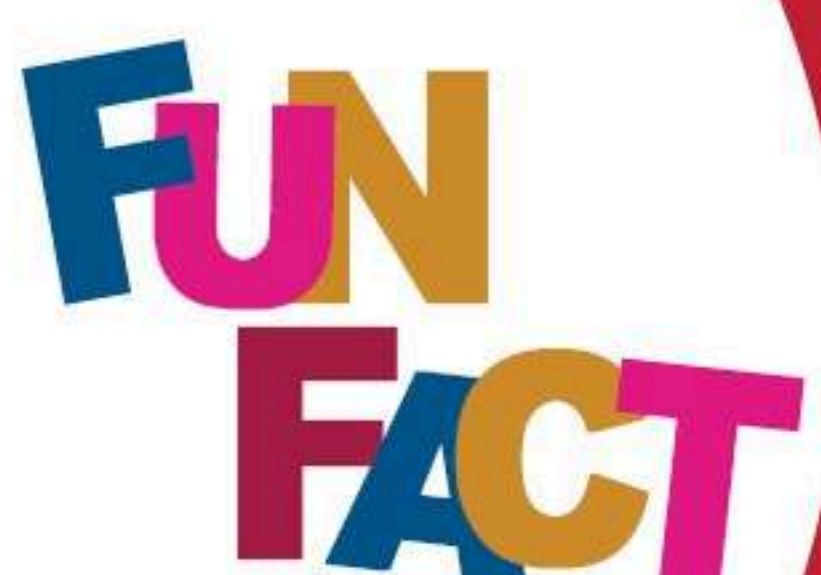


"In response to the urgent need for effective forest fire prevention measures, we have developed a cutting-edge project leveraging soil moisture sensors and DHT11 sensors. Our system is designed to detect and mitigate the risk of forest fires by monitoring crucial environmental parameters in real-time.

The soil moisture sensor accurately measures the moisture content of the soil, providing vital information about the overall dryness of the forest floor. Meanwhile, the DHT11 sensor monitors temperature and humidity levels in the air, offering insights into atmospheric conditions that can influence fire behavior.

By continuously collecting data from these sensors, our project employs intelligent algorithms to analyze the information and identify areas at high risk of ignition. When a potential fire hazard is detected, the system triggers immediate alerts to relevant authorities, enabling swift intervention to prevent the spread of wildfires.

This innovative solution not only enhances early detection capabilities but also empowers forest management authorities with actionable insights for proactive fire prevention strategies. By combining advanced sensor technology with data-driven analytics, our project represents a crucial step towards safeguarding our precious forests and mitigating the devastating impact of wildfires."



The world's first university degree was awarded in 1200 AD in Bologna, Italy, marking a milestone in higher education history.

ACHIEVEMENTS AT A GLANCE

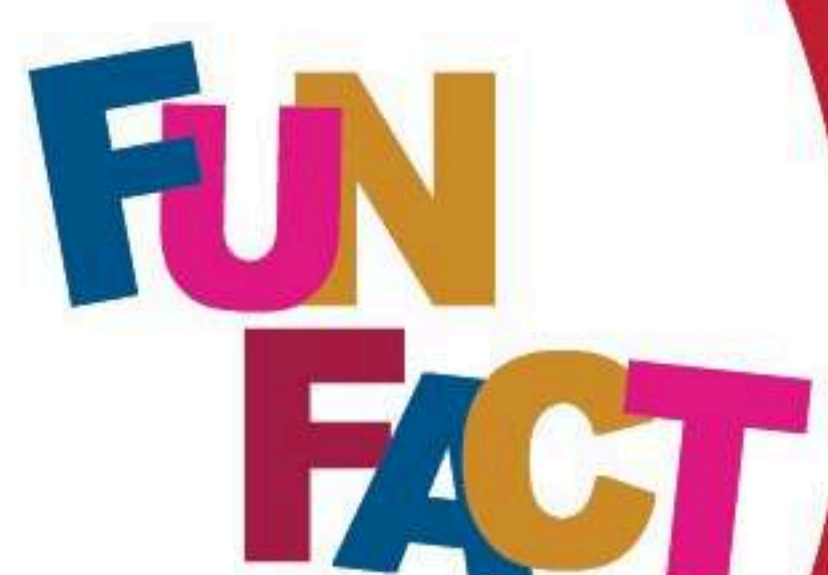
Project name - FUEL SCAM DETECTOR



Our second project tackles the critical issue of fuel scams by integrating a flow meter and I2C LCD display. This innovative solution aims to combat fraudulent fuel dispensing practices and ensure fair transactions for consumers and businesses alike.

The flow meter accurately measures the flow rate of fuel during dispensing, providing real-time data on the volume of fuel transferred. Paired with an I2C LCD display, this information is instantly visible to both consumers and station operators, enabling transparency and accountability in fuel transactions.

Through this system, discrepancies in fuel quantity can be identified and addressed promptly, mitigating losses due to scams and ensuring fair business practices. By leveraging technology to enhance accountability, our project contributes to the integrity of the fuel distribution system and promotes trust between consumers and fuel providers."



Finland's schools have no standardized tests until the age of 16, prioritizing holistic learning over rote memorization.

ACHIEVEMENTS AT A GLANCE

Project name - Smart crop cutter

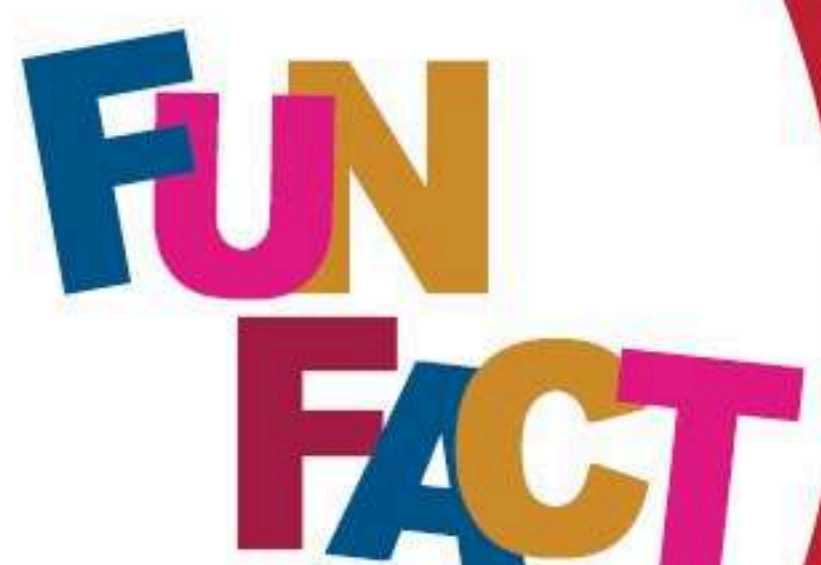


"Our grass crop cutter project employs a combination of cutting-edge technology to enhance efficiency and precision in agricultural practices. By integrating a grass crop cutter with advanced sensors and a control system, we aim to revolutionize the way grass is harvested.

The core component of our system is a precision grass crop cutter equipped with sensors that detect the height and density of the grass. This data is processed by a control unit, which dynamically adjusts the cutting blades to optimize efficiency and ensure uniformity in the harvested crop.

Additionally, we have implemented an I2C LCD display to provide real-time feedback to the operator, including information on cutting speed, grass density, and any potential obstacles in the field.

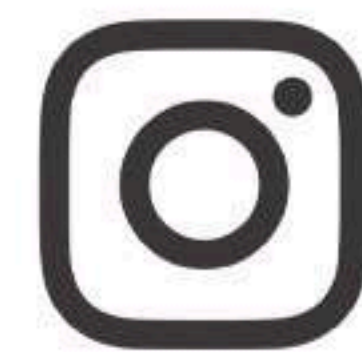
By harnessing the power of technology, our grass crop cutter project streamlines the harvesting process, reduces labor costs, and maximizes crop yield. This innovation represents a significant step forward in agricultural productivity and sustainability."



The world's largest library, the Library of Congress in the USA, holds over 170 million items, highlighting the vast wealth of knowledge available.



THANK YOU



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