

Future of Education

Ujjwal Koirala, Rabin Dular

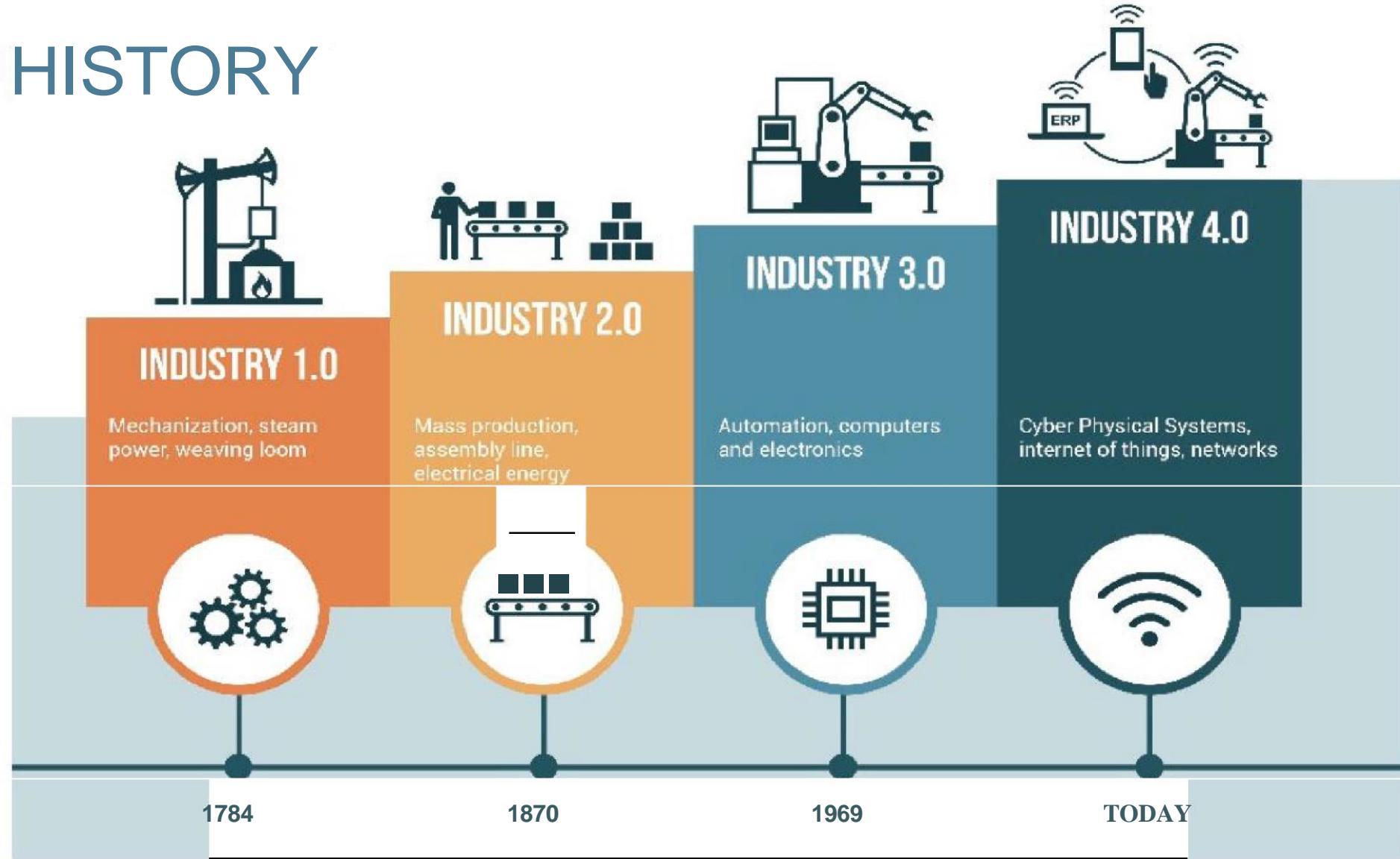
Generational challenges and their changing contexts:

- **Father's Generation:**
 - Faced limited competition within their borders.
- **Our Generation:**
 - Encounters cross-border competition; in the digital age, anyone can work from anywhere, anytime, in the cloud or the digital world.
- **Kids' Generation:**
 - Those currently in school, who compete not only with humans but with machines.

- Are our current educational practices sufficient to make our students more competent than machines (AI, ML, IoT, cloud, & metaverse)?

If yes, what are they? If no, what are the factors contributing to this?

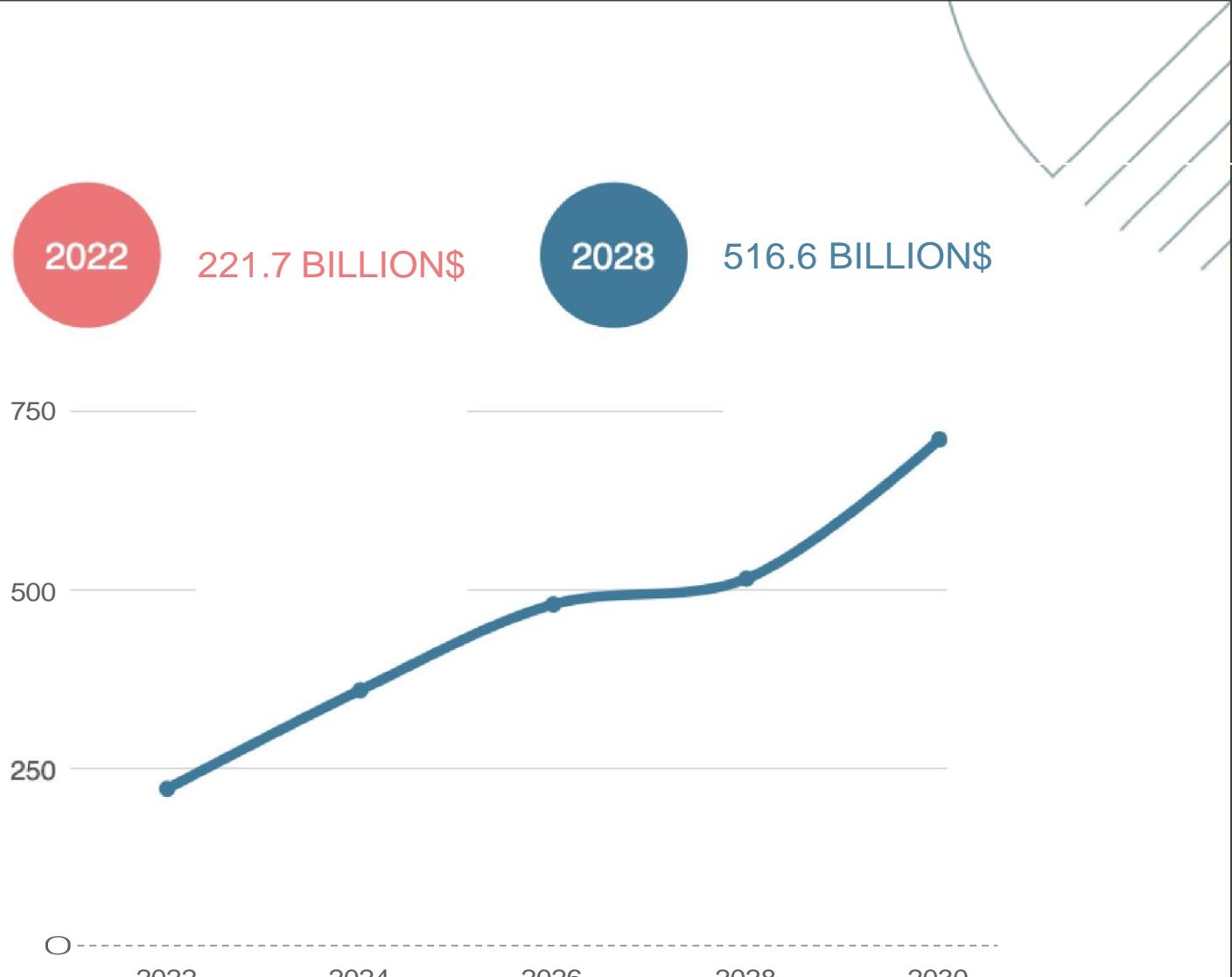
HISTORY

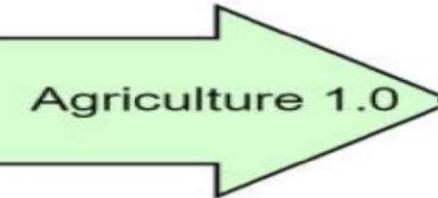


TRENDS

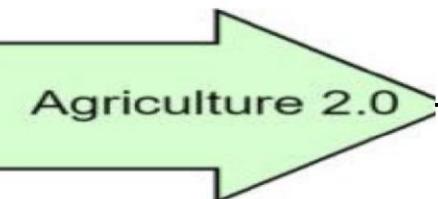
Industry 4.0 is based on integration of AI and 5G technologies, cloud computing and machine learning.

Will play major role in digital automation and real time problem handling

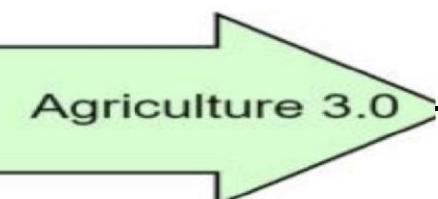




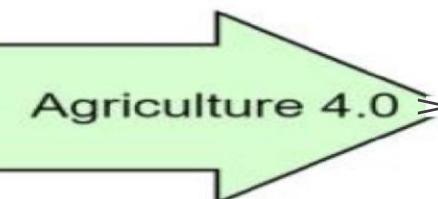
Convent-onal
Agriculture with
human and ani-ma
resou resces



Agriculture wi h
Machinary resou1rces



Agriculture w-h high
speed automatic
resources



Agric Iture with oT
resour-ces and di,gita
technologies

In the recently released *LinkedIn Learning 2022 Workplace Learning Report*, LinkedIn analyzed data from 660+ million professionals and 20+ million jobs over the last 15 months in demand skills.

Top 10 Soft Skills

- #1 Creativity
- #2 Persuasion
- #3 Collaboration
- #4 Adaptability
- #5 Emotional Intelligence
- #6 Communication
- #7 Analytical Reasoning
- #8 Problem Solving
- #9 Entrepreneurial Mindset

Top 10 Hard Skills

- #1 Basic Coding
- #2 Project Management
- #3 Google Analytics
- #4 Digital Marketing
- #5 Machine Learning
- #6 Cloud Computing
- #7 Blockchain
- #8 App Development
- #9 Artificial Intelligence
- #10 SQL (Structured Query Language)

16 Trillion of GDP will be added with help of AI in Business

-technology is critical for innovation,
but many schools and colleges are still
struggling to capture students'
attention in education.



*Education is a **big/big challenge** now.. If we do not change the way we teach, 30 years later we will be in trouble. The things we teach our kids are from 200 years ago, which is knowledge-based.. Therefore, we need to shift towards skills-based ,education and problem-solving-based education.*

- Why do we need innovation in Education?
- 2 Min Discussion

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- Make school Inclusive
- Make class fun and engaged
- Implement Project Based Learning
- Integrate Activity based learning in Classroom
- Focus more on Group Activities

- Local Context add to curriculum
- Community level engagement
- Fec,clb,1c:k basecl le,1r1111g:Retlc,ctiv8 L8a1r1ir1g



TRUE

FALSE

Topic: GENETICS

Lesson 1: Species

Prev Next

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WHY CAN'T
MULEP
HAVE BABIES?



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Aug 17, 2020

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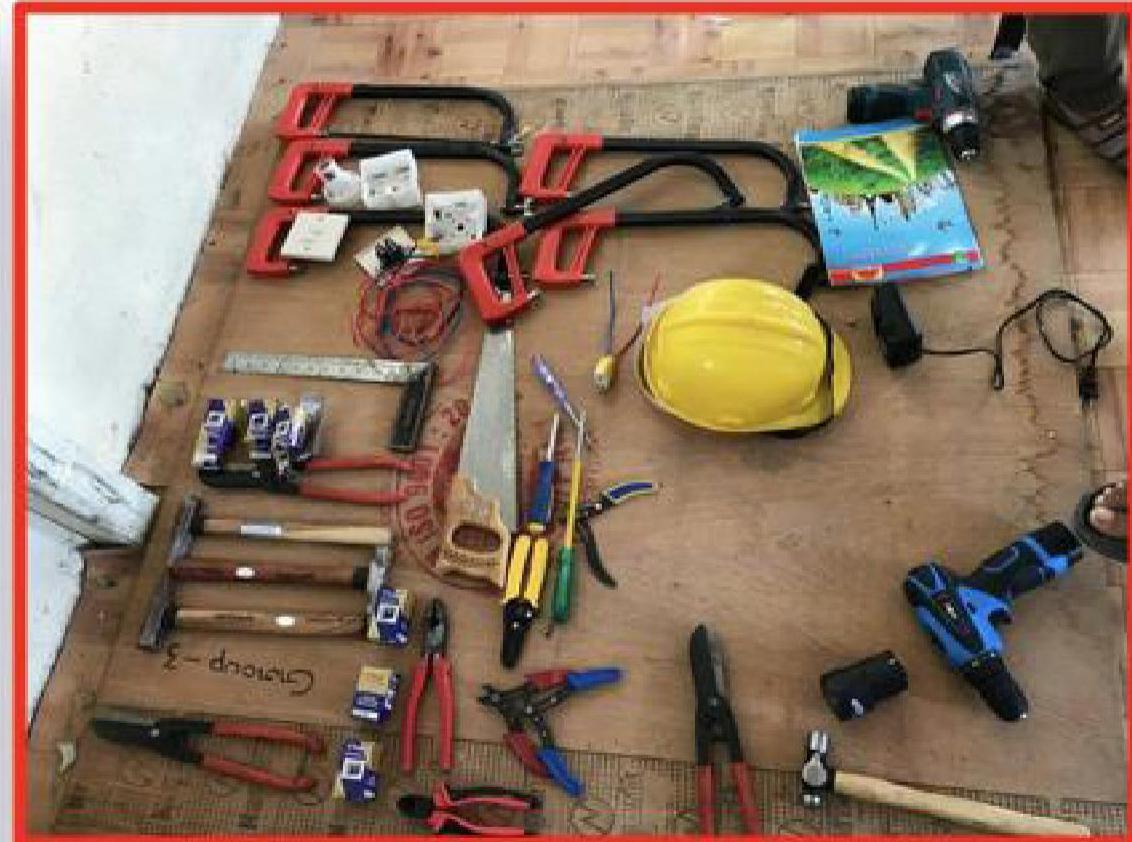
Ub-



- Detail about Hard Skills and Soft Skills.
 - Basic about Design Thinking Skills (Creativity, Innovation & Collaboration)
- 0 Research Skills [Searching for related content for project work]
- Team work and collaboration skills.
 - Presentation Skills.

Case : Implementing a STEM Approach in School

- How can we use robotics systems and automation to solve our community's water supply system? Additionally, we need to develop a prototype model for this purpose. What are the other areas in your school where we can apply this type of model?





Judging Criteria

Comment

Problem

Depth of understanding of the problem
Finding the root of the problem

No | Maybe | Yes

User

Relevance of chosen user
Understanding of the user
Focus on the user's needs

No | Maybe | Yes

Solution

Innovativeness and novelty of ideas
Relevance to the problem and the user
Importance to the user
Any plans for scalability and sustainability

No | Maybe | Yes

Prototype & Testing

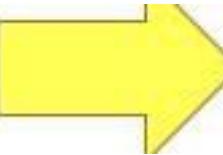
Implementation of user feedback on the solution
Is it immediately doable

No | Maybe | Yes

- Why do we need clubs & Labs in school?
- 2 Min Discussion

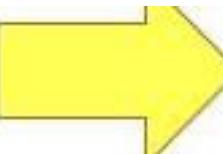
Power of Lab

GBSAle



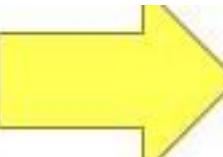
Bomb Disposal
Robot

Sunil
Pariyar



Electric
Wheelchair

Saroj Bista



Trinity College
Dublin

Why do we need Clubs & Labs in School?



Classroom



STEM Club activities



Careers talks



Speed networking



Mentoring



Site visits and hosting
workexperience



Large science festivals
and fairs



Community and
youth groups

Our Current Project

Case Analysis Based
Teaching1



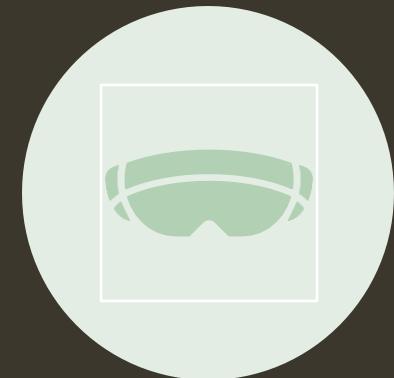
De-Sig1n Thin1king
Approach



Conducting Robotics Workshop



Debate on practicality of Innovative tools in teaching profession?



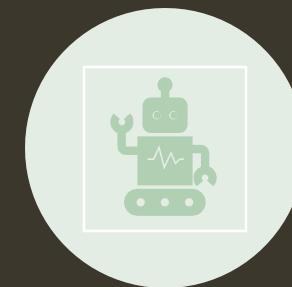
5 Minute Discussion

-
- Define emerging technologies and provide a few examples of emerging technologies that will most likely impact the future of education?
 - 5 Min Discussion

Debate on practicality of Innovative tools in teaching profession?



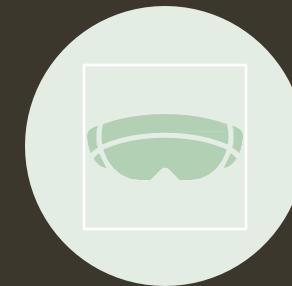
**IoT (Internet of
Things)**



**AI (Artificial
Intelligence) & ML
(Machine Learning)**



Cloud Computing



AR/VR/MR

Application of IoT in Education:



Automatic Gate Locked System



RFID-Based Automation



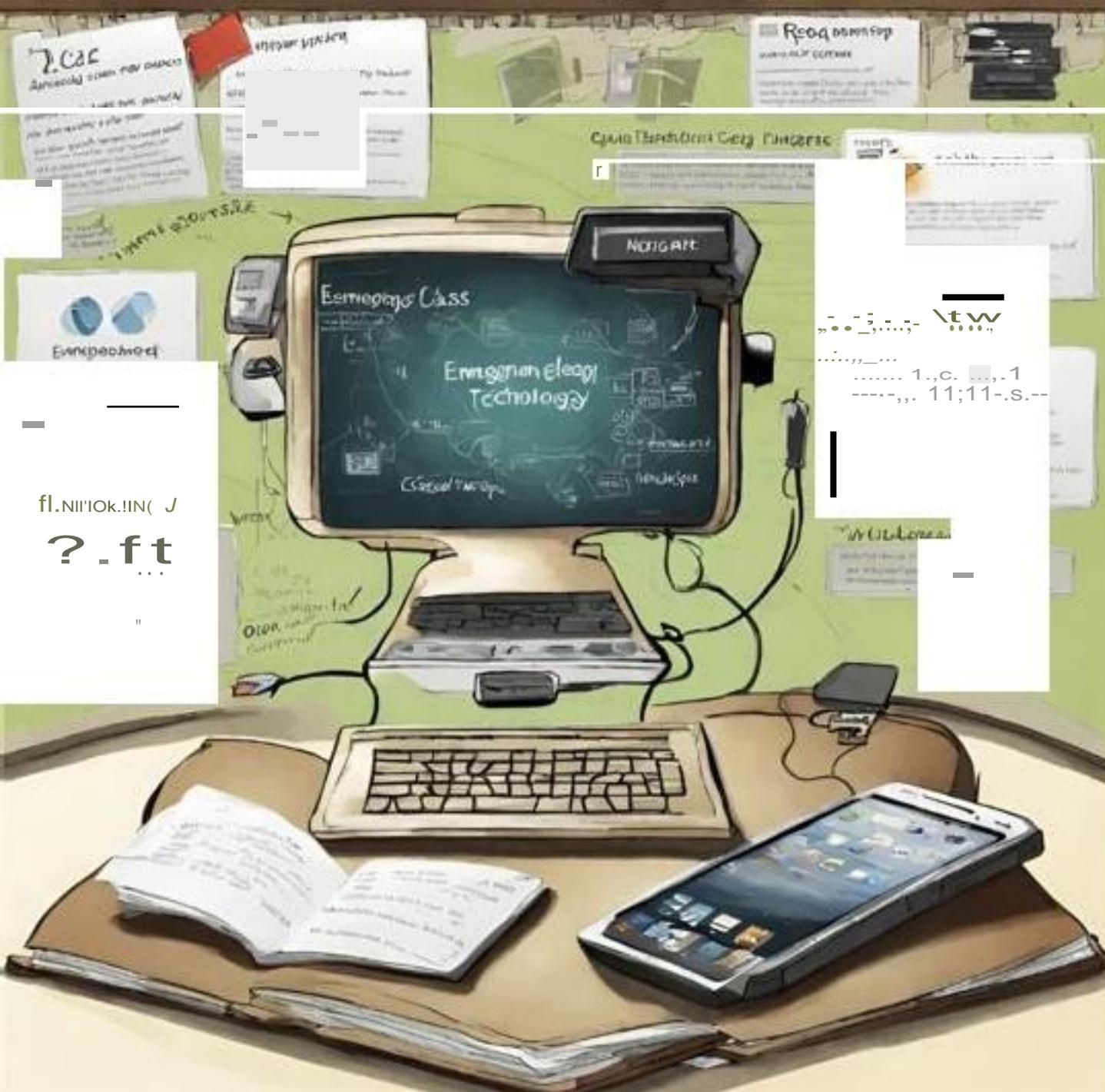
Automatic Bus Tracking System Using Smart GPS



Room Temperature Adjustment and Heater/Cooler Control Using Raspberry Pi



Using Interactive Boards to Manage, Store, and Share Content



AI in Education

X



Computer Vision

Describe contents of
what we see

summ1ar1ze what we
have seen

Recognize face or
object we have seen

X



Virtual, Augmented , and Mixed Reality

VR Headsets: Oculus Rift

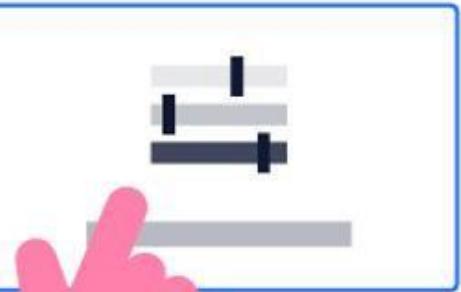


X

- Innovative tools useful for teaching & learning process:



Mentimeter



Ideation in Padlet

Cloud Computing (IaaS, PaaS, SaaS)

using software on rent

Sanita Mastran
Storage and network

Nisha Ghimire
Storage and network

Santiram Dahal
SaaS, Software as Infrastructure

SIM -

Cir.Mg t.c.wd

TikM
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hM- fs-c,i - ,WOI!.,"-MC.,, S.- • 5o11w,...cqoog11ooa.

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CloudComl, llhg ((NS, PIIS,SaaS),Unatna Rented Services of server Storage and Networking

Pitambar Acharya
Virtual storage to be used online

Srijana Sapkota
IAAS "Itllr-II Cbn, UA < MIIIIII-ofd WtlWIICWNM- HASRIIWNNAs.w;c. fM1:lo0u04'11hwymoclll No, Yffl tis -lfwo pony SAA\$.SotT:t1e "-A Siwyb, _tirlgOIW'1t NI oonw..th.ll.. M- Wwcttno a,,cl-Ollpo,t w:ttt,I It-llN model

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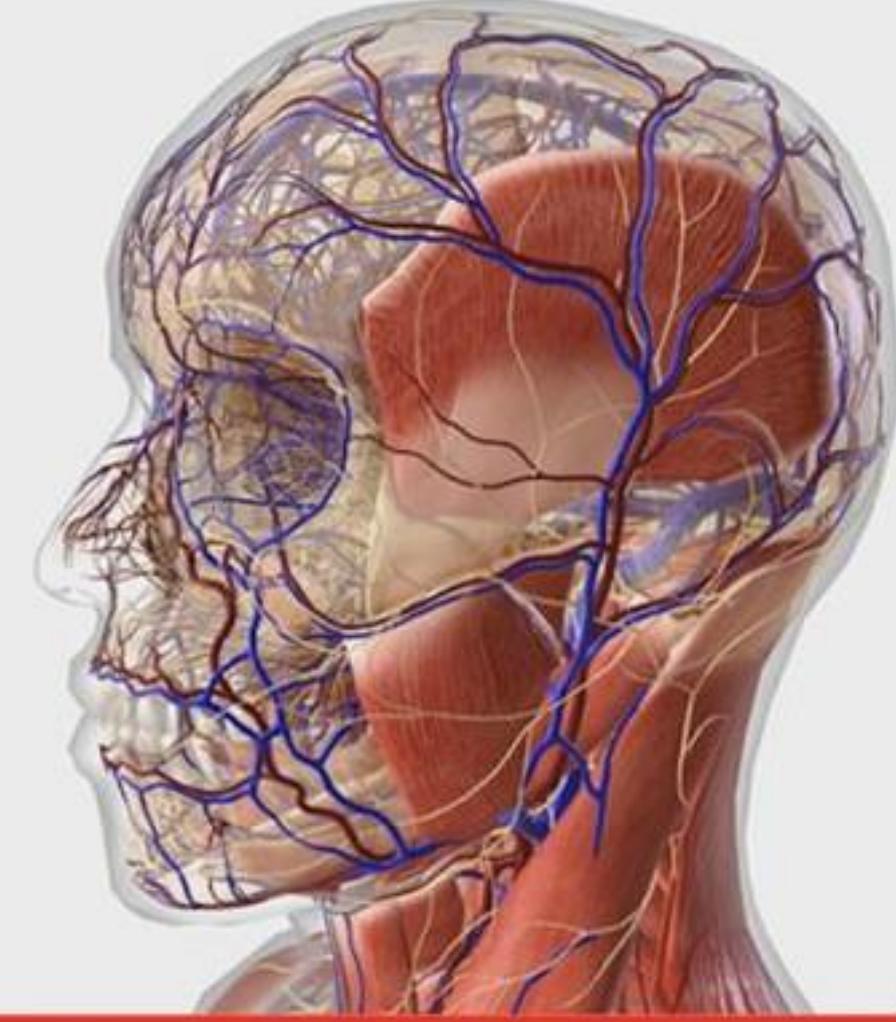
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|| BIODIGITAL

HUMAN VISUALIZATION PLATFORM

PHET

INTERACTIVE SIMULATIONS



Projectile Motion

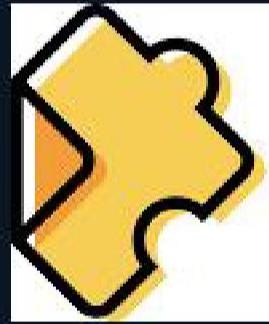
The screenshot shows a projectile motion simulation. A red rocket is launched from a green launch pad at an angle of 30°. The projectile follows a blue parabolic path, reaching a maximum height of 15 m and landing at 11.5 m. The background features a blue sky with yellow stars and a green landscape with a road and a car. On the left, there's a control panel with an 'Initial Speed' slider set to 15 m/s, and buttons for 'Normal' and 'Slow'. On the right, there's a sidebar with tabs for 'Human' (selected), 'Mass: 70 kg', 'Diameter: 0.5 m', and a dropdown menu. The sidebar also includes sections for 'Velocity Vectors' (Total and Components) and 'Acceleration Vectors' (0 ... and Qc: o...). The bottom navigation bar includes icons for Home, Help, Velocity, Drag, and Left, along with the PhET logo.

KHANMIGO

<https://www.khanacademy.org/khan-labs>



<https://www.humata.ai/>



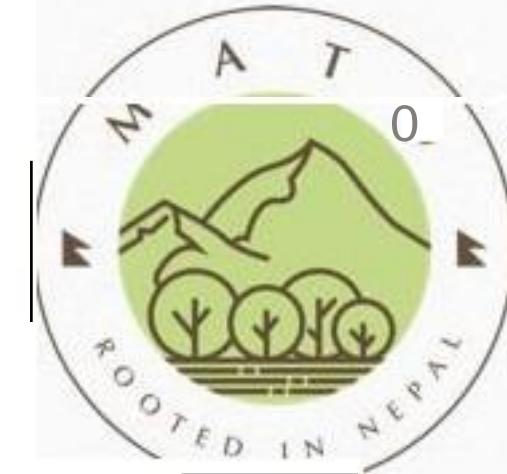
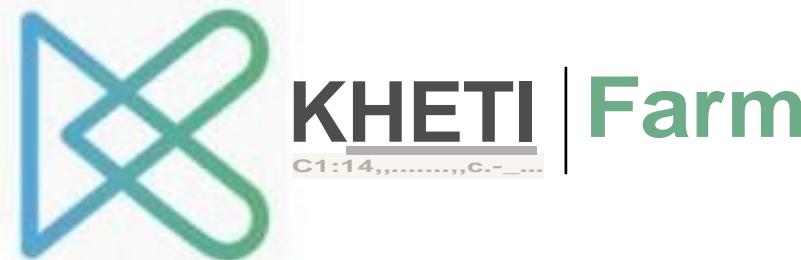
edpuzzle

<https://edpuzzle.com/>

Gamification Tools

\https://quizizz.com/?lng=en

Problem vs. Solution Focused Thinking



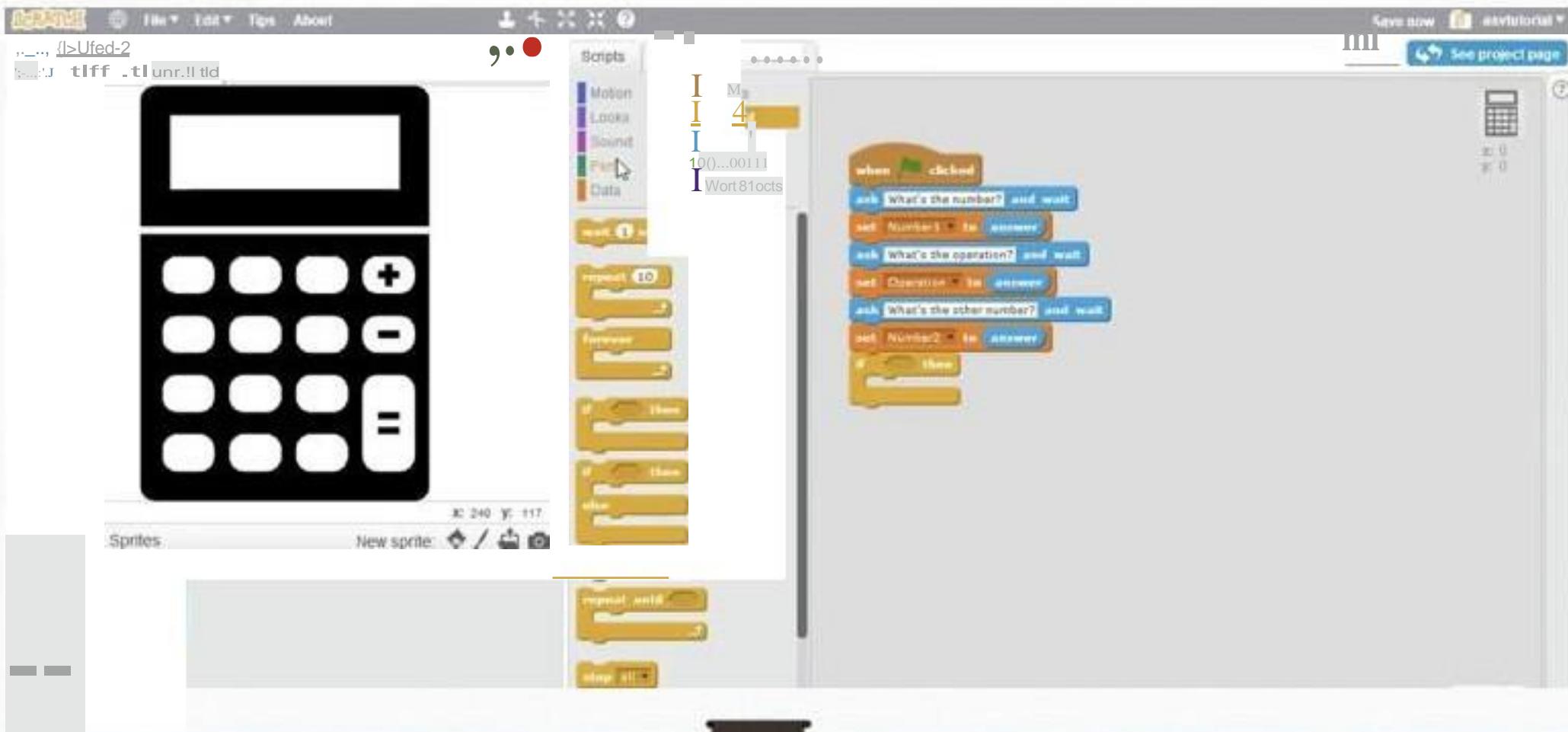
<https://sites.google.com/view/hamrohotelsihotels/3-star?authuser=0>

Established a Robotics Lab

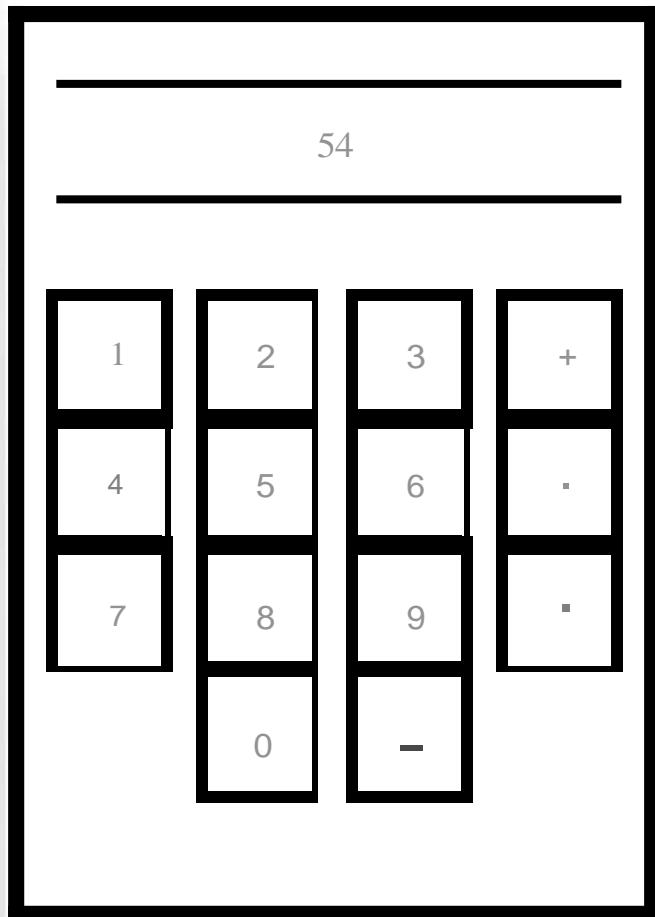


Sample STEIVI Project

I How to Build a Calculator in Scratch



IHow to Build a Calculator in Unitl



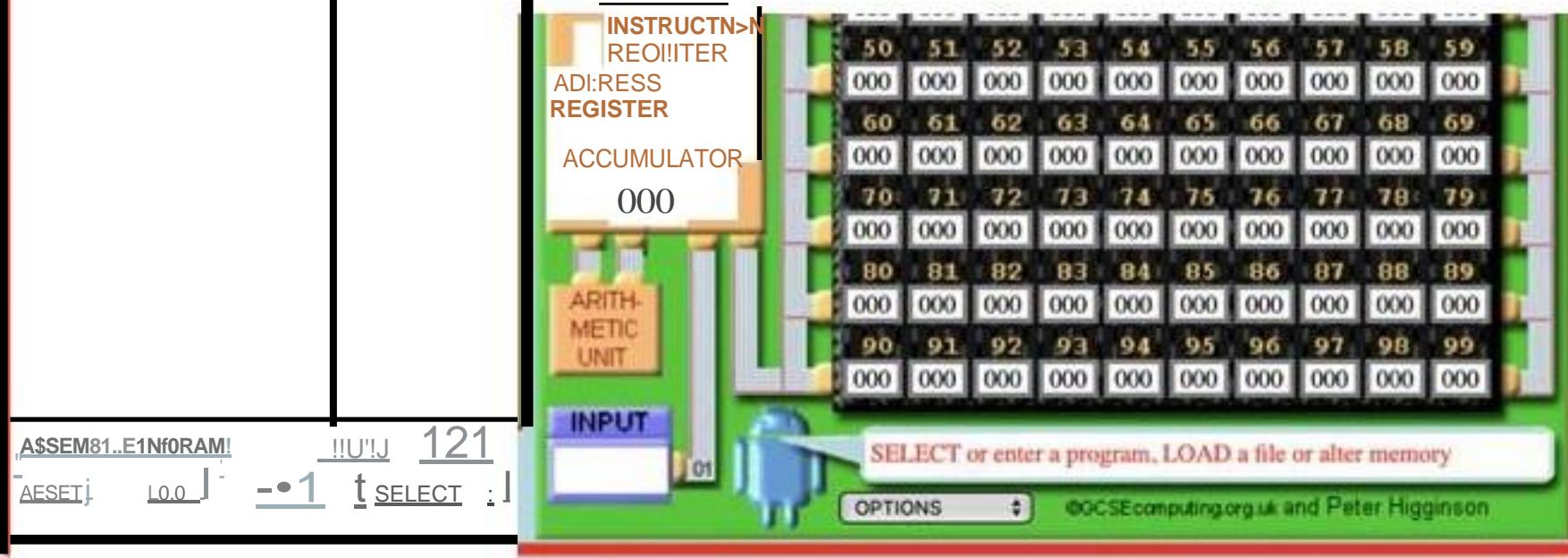
Concept of Computer System:
<https://peterhigginson.co.uk/lmc/>



Aaaamby Language Coda

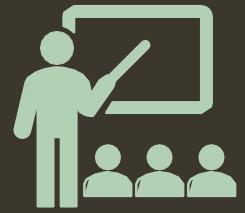
02

CPU



Online Learning/ Teaching Platform

\https://moodlecloud.com/app/en/login



- What if my role as a principal is to make the school innovative and conducive to effective learning?

Developing Xavier Vision 2030



Vision



Mission



Goal

SMART Goal Setting



Objective

Strategic Objectives

- Developing strategy for 2025

Operational Objectives

- Developing Annual Strategy

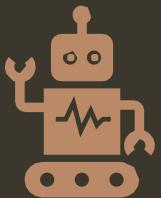


Create annual action plan

Student Side:



STEAM Education



Robotics Education/AI & IoT-Based Learning

Coding and Project Development Workshops
Implementing a concept similar to Islinton College



Designing and Implementing innovative education:

- ^ Project-Based Learning
- Problem-Based Learning
- Collaborative Learning Approaches
- Design Thinking Approach

Student Side:



Implementing Moodle for Paperless Education for academic activities



Encouraging ICT-Based Teaching at All Grade Levels

Promoting Skill-Based Education through ILC (Innovative Learning Center) and providing exposure to life skills

For example, emulating Ullens School and OlgaPuri Foundation

Student Side:



**Connecting Students with
Global Peers**



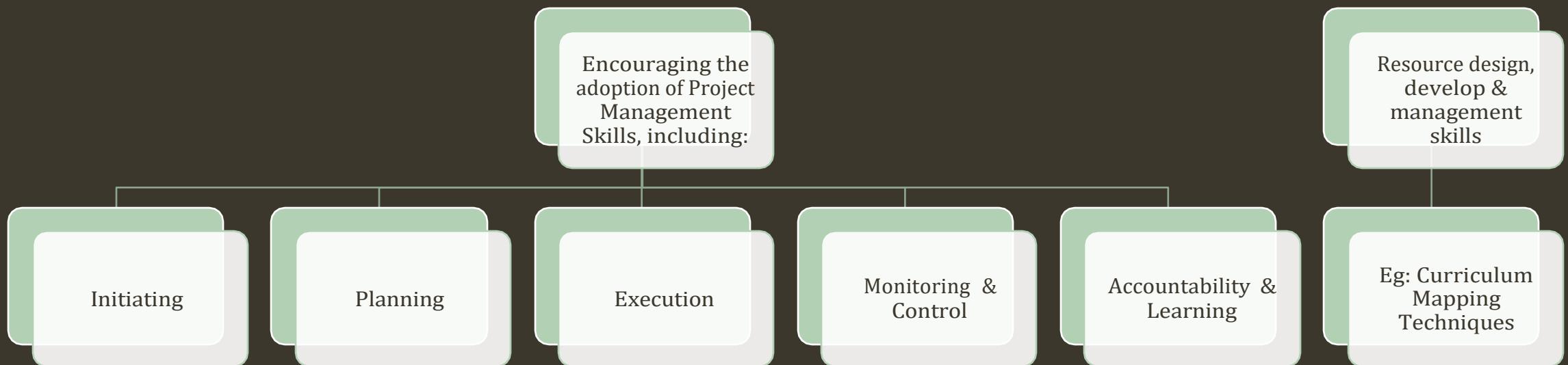
**Focusing more on academic
progress to enhance results**

Providing extra class support

Offering mentorship hours

Implementing a peer-learning approach

Teacher Side:



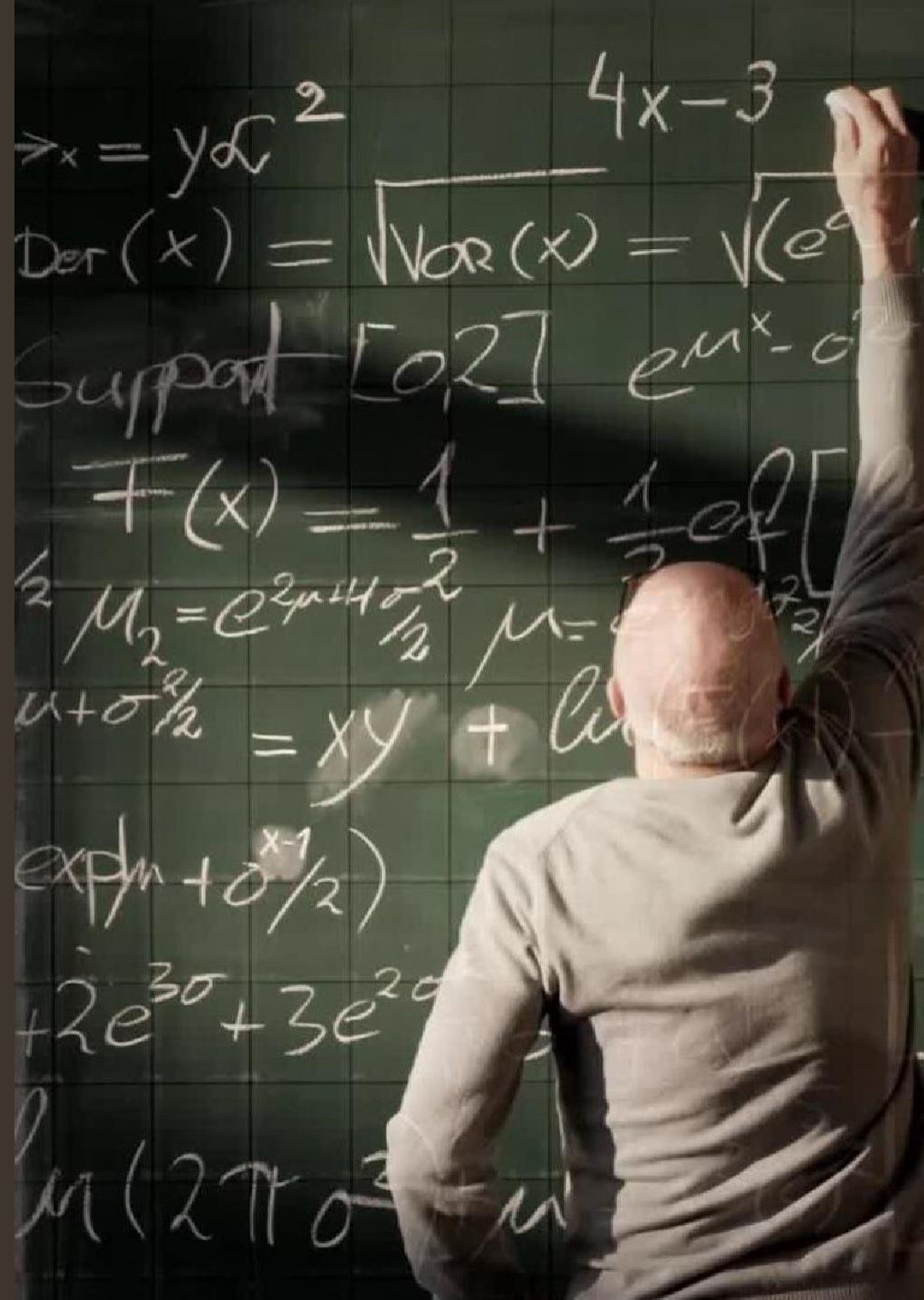
Teacher Side:

- Providing exposure to new technologies, tools, and pedagogy
 - Creating a conducive learning environment within the college by establishing reading clubs for both teachers and students
 - Planning to design short sessions for teachers to nurture their hard and soft skills



Teacher Side:

- Working on teacher motivation in classroom teaching
 - Timely Teacher Training
 - Giving Exposure Through Different Approach



Create different department for learning and growth



**Establishing an
Entrepreneurship
& Innovation
Center**



**OLSR (Office of
safe & Respectful
Learning)**



**Learning &
Growth**

Research & Training &
Development
Data collection, &
management



**Technology &
Future in
Education**



ECA

Case Study I:

As a school leader, how do you envision planning the implementation of the "Future of Education in school" to attract students' attention in education & also make education enjoyable, engaging, and conducive to meaningful learning?

An aerial photograph of a long bridge spanning a wide body of water. The bridge has multiple lanes of traffic, including several trucks and cars, moving in both directions. The water below is a deep teal color with visible ripples.

- Thank You

**"Hey Snapchat,
make my hair pink"**

