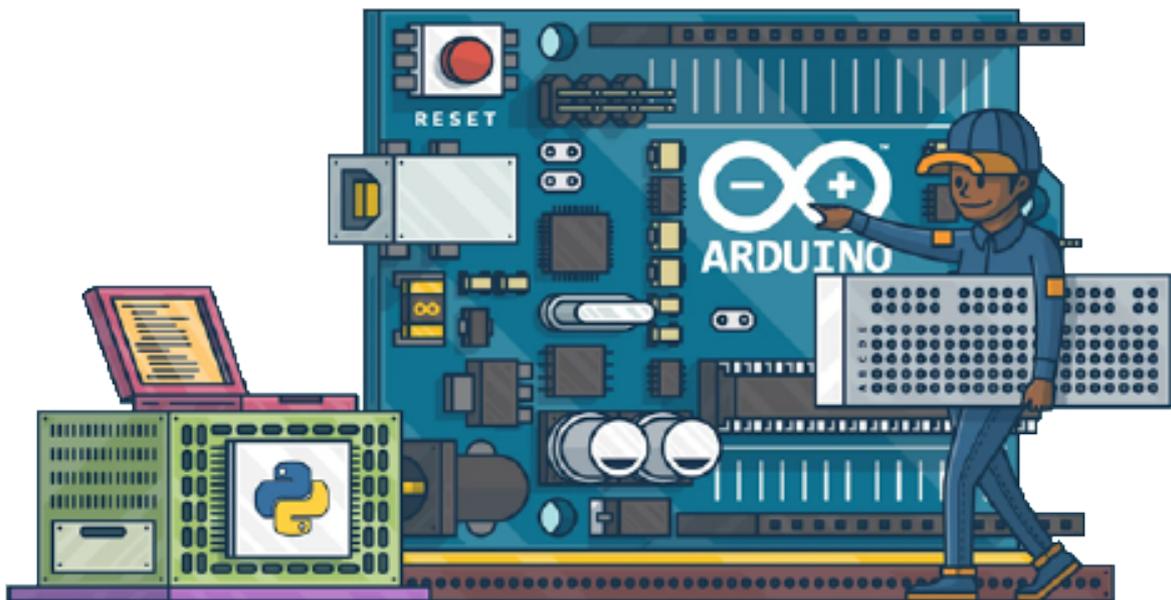


REAL SCHOOL

Programming & Coding

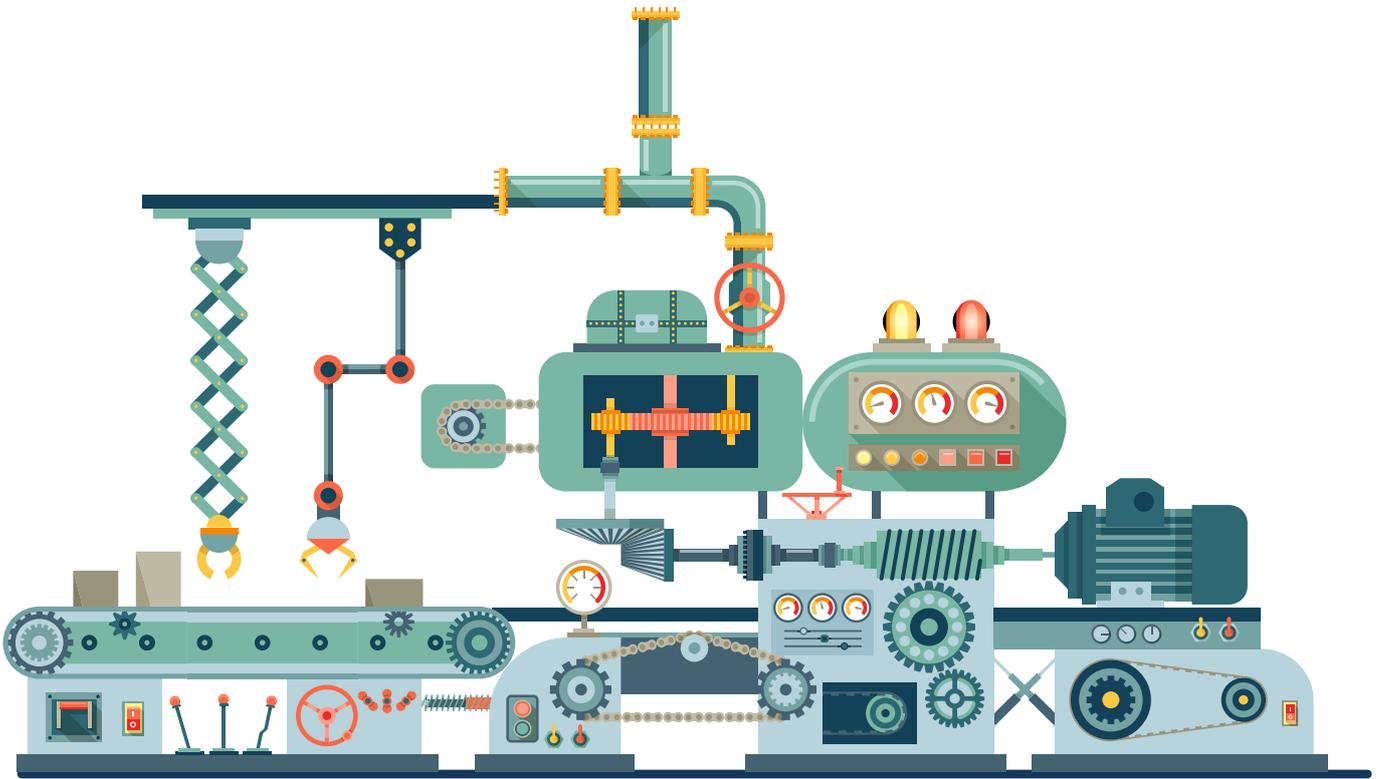
Arduino Programming for Smart Machines

Online. Real-time. Futuristic



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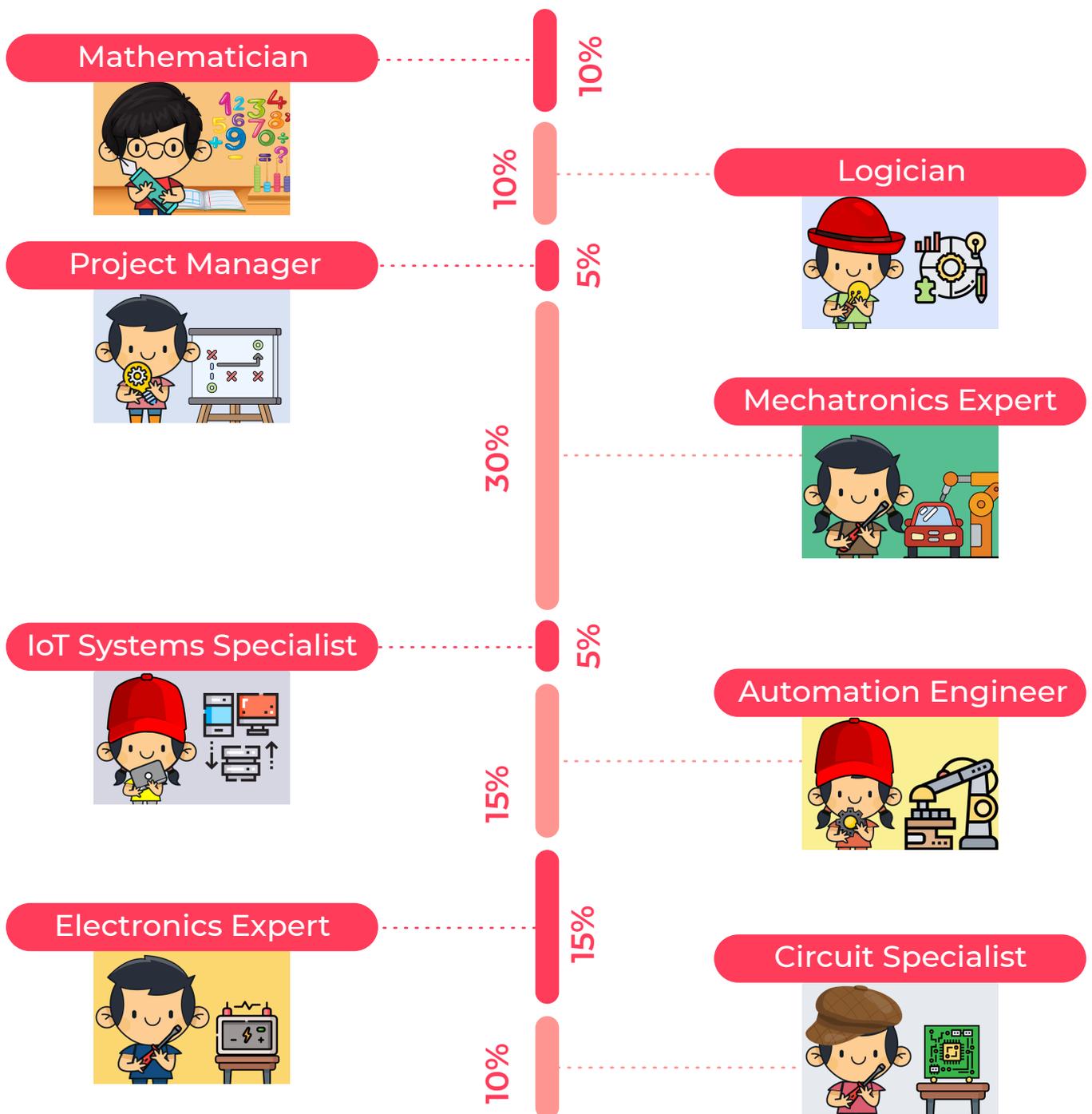


About the Program

The term 'Programming' conjures the image of complicated codes typed on a computer screen. Most do it for developing mobile applications or games. What if we provide an opportunity for your kid to put intelligence into a machine through coding? Arduino Programming for Smart Machines is a course where your kids will see the codes manifested within robots and smart devices for real life applications.

Goals you can accomplish

Real-world challenges are unpredictable and demanding. Super expertise in just one area will do more harm than good. For this reason, each of the Real School programs takes your kids through a range of critical and complementary skills and knowledge domains. This guarantees a holistic development.



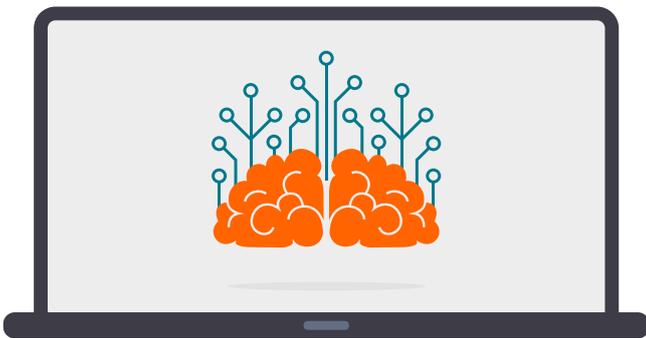
Benefits of the Program



Encourages
Maker-Culture



Develops
Computational
Thinking



Fosters
Constructivism



Develops Skills
of the Hand



What do we cover

The Arduino Programming for Smart Machines is covered in 5 modules taking our students from simple to advanced level concepts in that domain. We ensure that the real-world significance is reflected in every topic we cover and every project that is done in the class.

MODULE 1

Introduction to basic Circuits and Microcontrollers

Concepts covered

1. Introduction to Voltage, Resistance, Current
2. Circuit Designing on Tinkercad
3. Basics of Electronic devices and Breadboard

MODULE 2

Concepts of Microcontroller, and introductory programming using Analog and Digital Sensors

Concepts covered

1. Introduction to Arduino
2. Introduction to Scratch Programming on Arduino
3. Conditional Programming with Basic Sensors over Microcontroller

MODULE 3

Advanced C programming projects using sensors and basic machines

Concepts covered

1. Introduction to Arduino IDE and text programming
2. Applications of Advanced Sensor, Ultrasonic Sensor
3. Libraries and Functions in Arduino IDE
4. Creating Functions and Classes in Arduino IDE
5. Motors and Driver Hardwares

MODULE 4

Wireless Arduino Robotics over Bluetooth

Concepts covered

1. Advanced Conditional Programming on Arduino
2. Introduction to Bluetooth Module
3. Basic App designing for Arduino on Blynk
4. Understanding Data Types of C programming
5. Wireless RC Cars

MODULE 5

Computer Vision using ESP cam and Applications (FOR EXTENSIVE COURSE)

Concepts covered

1. Interfacing ESP cam with Arduino
2. Wireless Robotics over Wifi
3. Object and path Identification
4. Color Identification using ESP Cam

Packages

We offer following package for the Arduino Programming for Smart Machines program:

Packages offered

 Duration	15 Hours
 Months	3 Months
 PTMs	2 PTMs
 Dedicated Course Counsellor	Yes
 Modules Covered	1, 2, 3, 4, 5



Includes Inventors Kit with 300 components

Projects

- Traffic Light
- Voice Controlled car
- Face Detection
- SOS Light using Arduino
- Follow me gimbal
- Bluetooth Dispensing Machine
- Object tracker
- Obstacle Avoiding Robot
- Line Following Robot
- Water Level Monitor
- Wireless Bluetooth Controlled Car
- Gardner bot
- Smart Parking Sensor
- Chasing LED
- Automatic Street light
- Object detection
- Target Launch Radar

Need a customized package or a demo?

Get in touch with us on +91 84339 71759 or visit www.therealschool.in



**Want to go beyond Basic
Arduino?**

Try out Advanced Robotics with
R.A.M.A

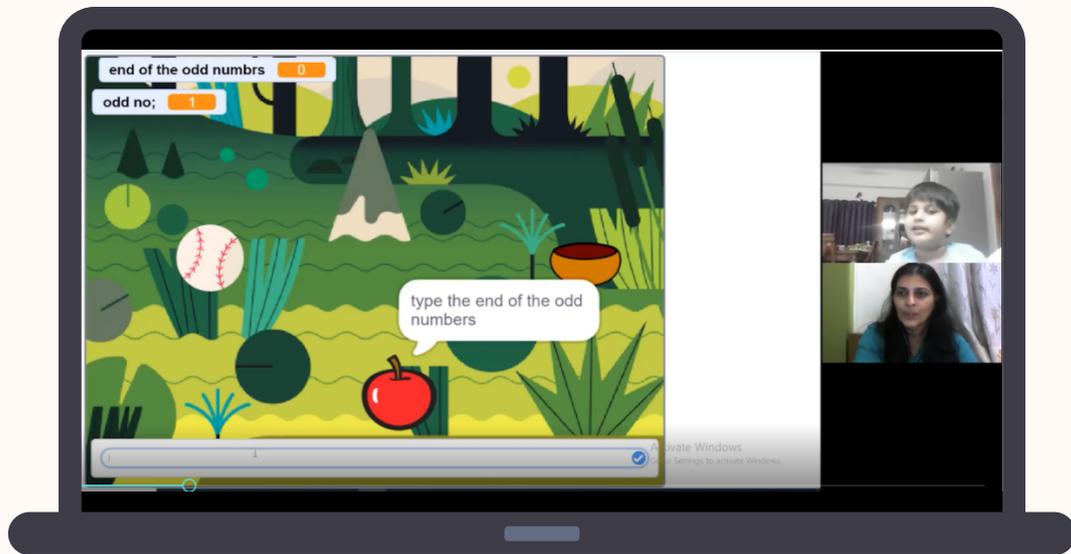
R.A.M.A. - RealSchool Automation Machine for Advanced Robotics is your companion in the journey.

The development roadmap

The Arduino Programming for Smart Machines program aims to bring about a positive change in the kids in a structured way. You will see the following developments as they do more and more projects

- 1 Starts getting familiar with new concepts and terminologies
- 2 Learns ideation and brainstorming techniques for projects. Discovers new tools and methods.
- 3 Introduced to Computational thinking as a key problem solving skill
- 4 Actively participates in brainstorming. Engages in enquiry driven discussions. Starts challenging the Trainer.
- 5 Creates unique ideas and designs. Gathers ability to work independently.
- 6 Comprehends and applies the learnings to create innovative solutions for the projects.
- 7 Develops problem solving aptitude that involves mental, physical and social skills
- 8 Develops ability to identify problems, its root cause and design a suitable solution towards it
- 9 Ability to compete head-on with highly competent peers

Parent Testimonials

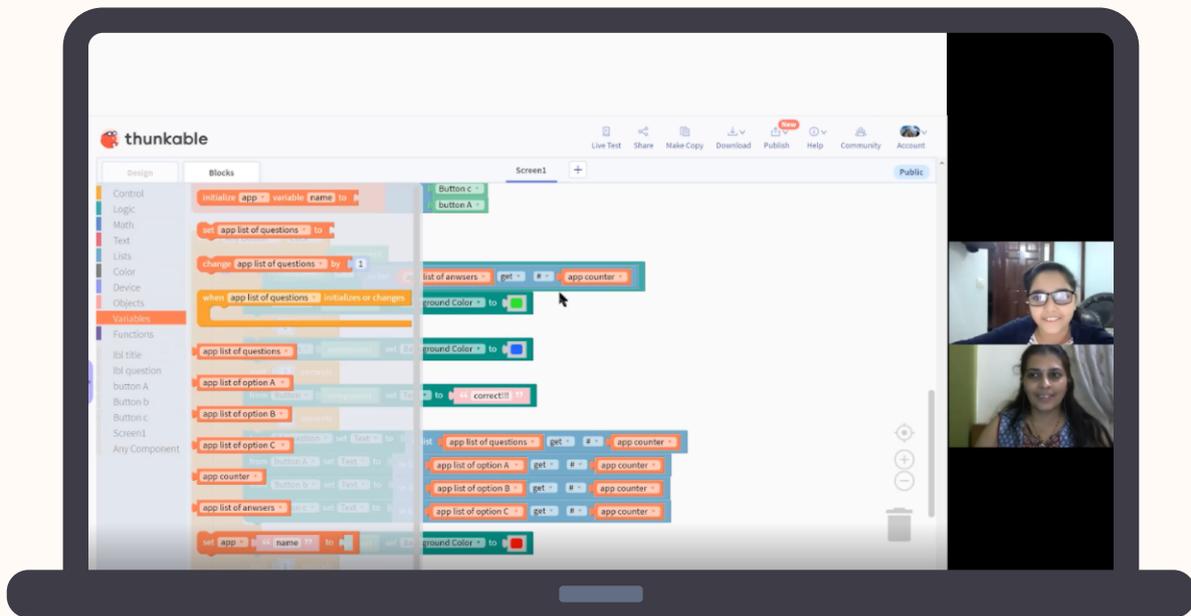


“

“Real School has been a fantastic, constructive experience for Ansh in which he learned much more than what he does at school. It has given him a new and more enthusiastic approach to learning. The Masterclasses are not just fun, they have so much to offer... children and we parents are bound to stay curious!”

Veena Gupta

Mother of 10 year old Ansh
Don Bosco School, Mumbai



“

“My 12 year old daughter has started to think about what problems are there and how she can solve them. She has designed her own version of facemask during this pandemic and I am really amazed! This is all thanks to Real School!”

Sashi Anand

Mother of 12 year old Siya
Christ Academy, Bengaluru

Classroom Experience

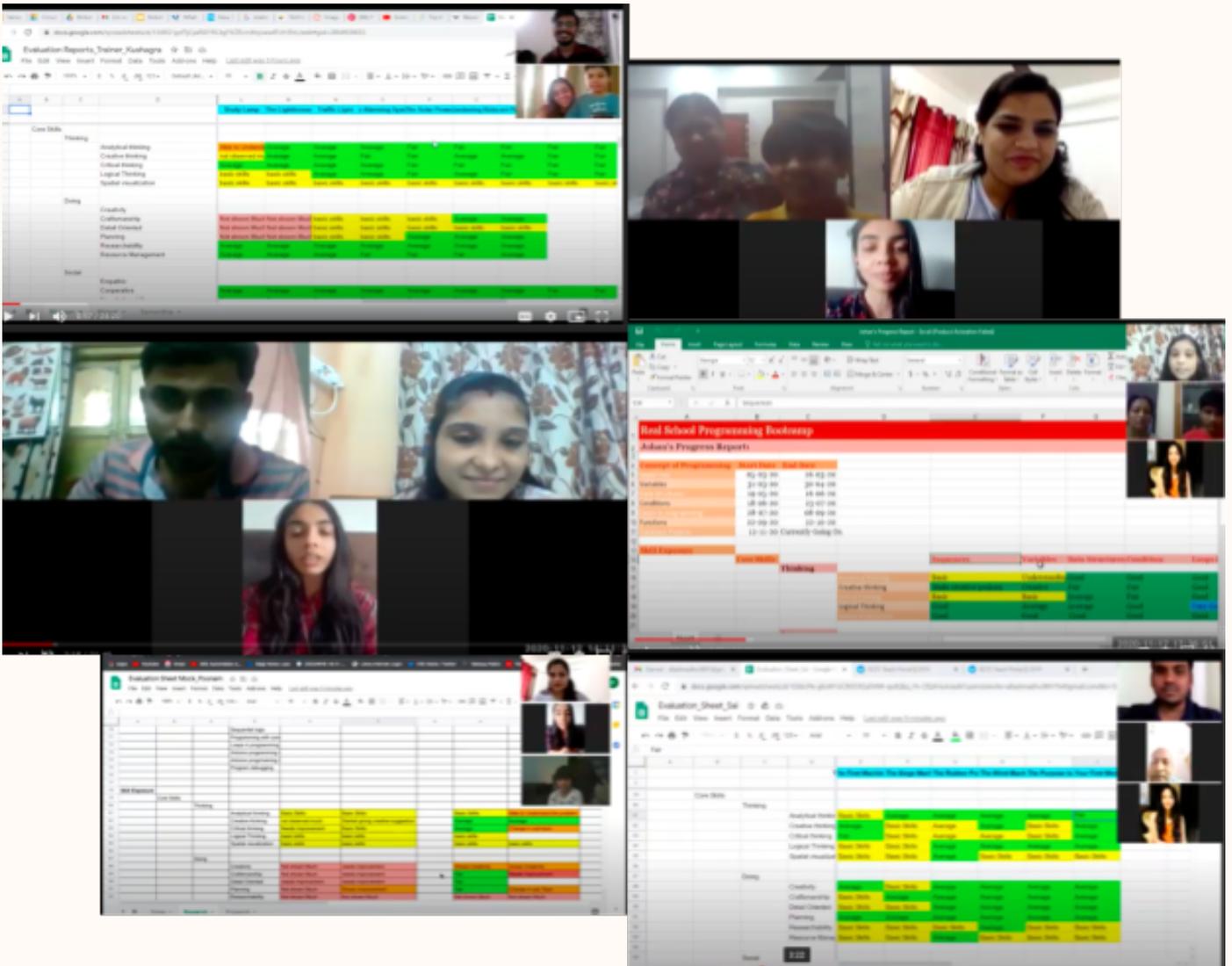
The screenshot shows a Tinkercad workspace with a code editor. The code is as follows:

```
void setup() {  
  pinMode(2, INPUT);  
  pinMode(3, INPUT);  
  pinMode(4, OUTPUT);  
  digitalWrite(4, LOW);  
}  
  
void loop() {  
  int distance = readUltrasonicDistance(2, 3, 10);  
  if (distance > 10) {  
    digitalWrite(4, HIGH);  
    delay(500);  
    digitalWrite(4, LOW);  
  }  
}
```

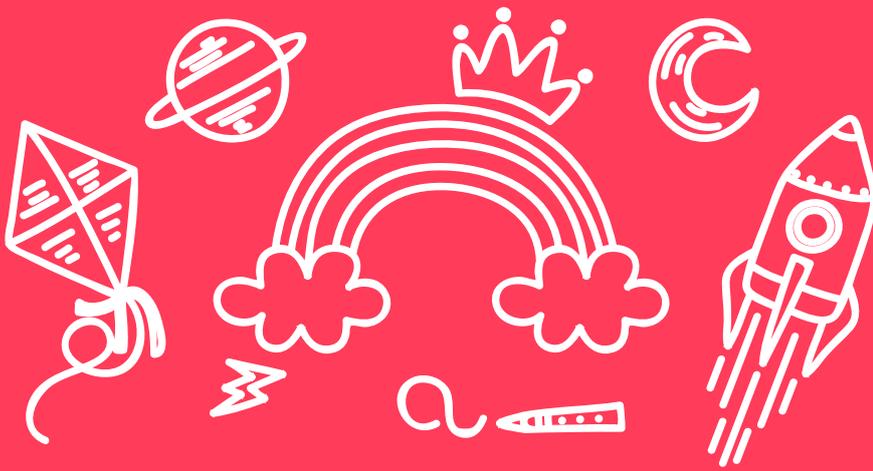
The interface includes a 'Blocks' palette on the left with categories like Output, Input, Control, Math, and Variables. A 'Serial Monitor' is visible at the bottom. A video call window in the top right corner shows two participants.

The screenshot shows a video player displaying a Tinkercad workspace. The workspace features a 3D model of an Arduino Uno board connected to a breadboard circuit. The breadboard contains several resistors, an LED, and a potentiometer. The video title is 'Depak_clas_1.mp4'. A video call window in the top right corner shows two participants.

Parent-Teacher Meetings



Real School conducts parent - teacher meetings for the continuous assessment of a student.



Real School Philosophy

Real School, a product of uFaber Edutech Pvt. Ltd. is an ecosystem that transforms a young curious mind into a highly-skilled problem solver. At Real School, we've turned everything on its head. So, instead of the student going to school, the school comes home! Instead of a compartmentalised subject-oriented curriculum, we use dynamic project-based learning curated to develop skills. Instead of the stress of examinations, our students revel in the joy of discovery and creation! They learn not from books but from experiences, Their knowledge is not graded based on an answer paper but on how they have applied this knowledge to solve a real-world problem.

About Ufaber

uFaber offers courses in life-changing and transformational domains like IELTS & PTE, UPSC, GATE and English Communication. Our customized education solutions for students, professionals, corporations, and colleges are geared towards achieving excellence and high power performance. Our focus is to make Education Easily Accessible and Highly Personalized. While our training techniques continue to evolve, we work with a single aim to get the students and our clients what they need the most: RESULTS!

BeingPro

IELTS NINJA

HOOOP

eMaester

FLUENT LIFE

▶ UPSC PATHSHALA

GATE SCHOOL

REAL SCHOOL

For more information, visit www.therealschool.in

or reach us on +91 84339 71759