



CAMBRIDGE SCHOOL NOIDA

ATL & MEL

MONTHLY REPORT : JUNE AND JULY 2021



Teachers' Training Sessions

Online sessions were conducted on 14th June-15th June 2021 & 21st – 22nd June 2021. Twelve teachers from Science, Computer Science & Mathematics department actively participated in the training. The Topics discussed are as follows-

DAYS	TOPIC	DESCRIPTION
DAY-1	About The LAB	1-What is ATL? 2-ATL Vision and Mission 3-Culture of Innovation & Design Thinking 4-Exploring our Lab 5-Technology in Education 6-Basic Electronics Simulation
DAY-2	Programming and Simulation	1-Introduction to Microcontroller 2-Electronics Interfacing 3-Circuit Building 4-Programming for Inputs and Outputs 5-Sensors and Actuators 6-Prototyping
DAY-3	CAD & Lab management	1-Introduction to CAD & its Importance 2-2D & 3D tools in 123D 3-3D-Printer and Specification 4-3D printing & Slicing 5-Managing Students in Lab 6-Assigning Projects 7-Timetable 8-Inventory Management
Day-4	Doubt Session	



ACTIVITIES TAKEN UP IN TRAINING SESSION (Using Tinker CAD)

1. Blinking of LED using Arduino
2. Working of 7 Segment Display

STUDENTS' SESSIONS

Online Sessions were conducted for students from 23rd June 2021 as per the following schedule:

Class VIII - Wednesday
Class VII - Thursday
Class VI – Friday

SCHEDULE FOR THE SESSIONS-

Class 8th
(Embedded System)

Sessions	Topic
Session 1	<ul style="list-style-type: none">• Introduction to electronics components.• Testing LED intensity with potentiometer.
Session 2	<ul style="list-style-type: none">• Introduction to arduino.• Interfacing of LED with Arduino.
Session 3	<ul style="list-style-type: none">• Introduction to sensors• Interfacing of Sensor with Arduino
Session 4	<ul style="list-style-type: none">• Introduction to C++ programming language• How to use it in Arduino.
Session 5	<ul style="list-style-type: none">• Introduction to Output devices.• Interfacing of Output Devices with Arduino.

Class 7th
(Python)

Sessions	Topic
Session 1	<ul style="list-style-type: none">• Introduction to python.
Session 2	<ul style="list-style-type: none">• Data types.• Variables.• Declaration of variables• Operators.

Session 3	<ul style="list-style-type: none"> • Introduction to loops. • Syntax of While loop.
Session 4	<ul style="list-style-type: none"> • If else statement. • Nested if else.
Session 5	<ul style="list-style-type: none"> • Syntax of for loop. • For loop using if else statement.

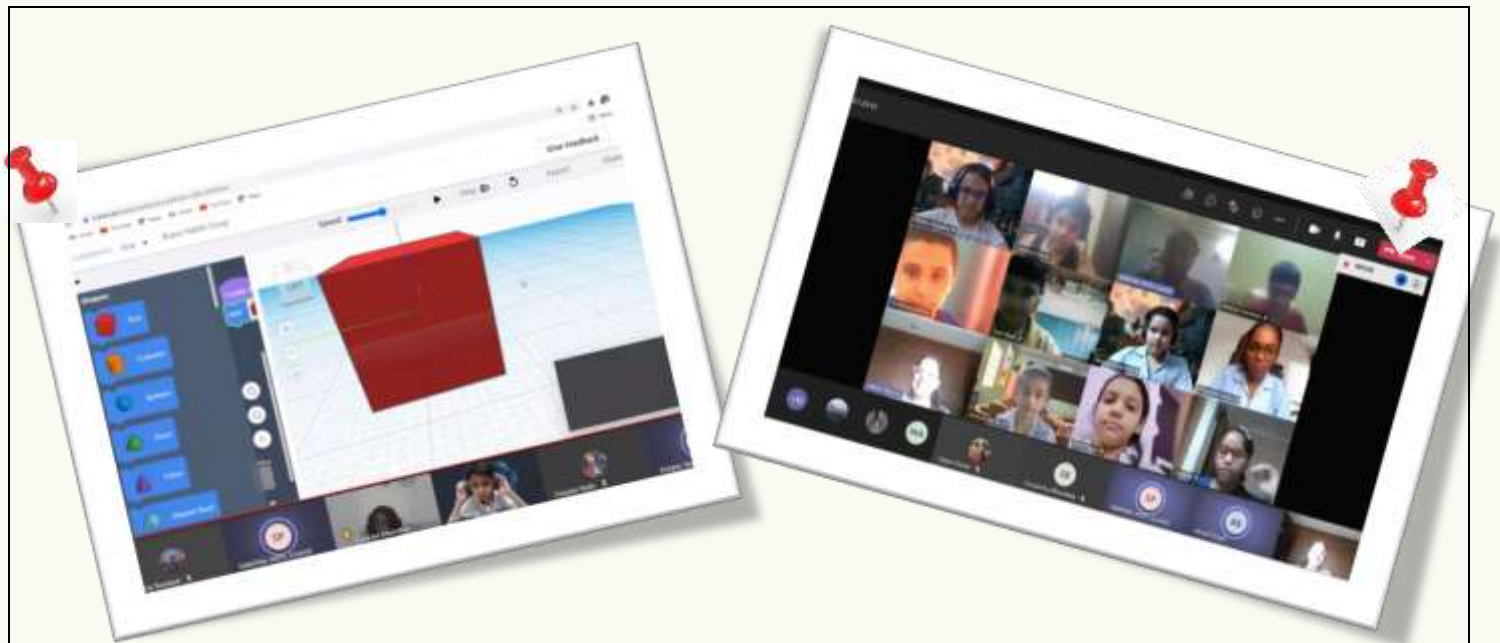
Class 6th
(3D designing)

Sessions	Topic
Session 1	<ul style="list-style-type: none"> • Introduction to TinkerCAD.
Session 2	<ul style="list-style-type: none"> • Designing a plane.
Session 3	<ul style="list-style-type: none"> • Introduction to Axis and planes.
Session 4	<ul style="list-style-type: none"> • Designing cars.
Session 5	<ul style="list-style-type: none"> • Use of gears and Designing.

SESSIONS' REPORT

GRADE VIII-

DATE	NO. OF PARTICIPANTS	TOPIC/ ACTIVITY
23RD JUNE, 2021	117	Simulations on TinkerCAD Working of Basic components like batteries, LED, Potentiometer, Breadboards. Activity- Glowing RGB LED light using breadboard and potentiometer
30 TH JUNE, 2021	105	Working of sensors and different types of sensors. Working of Arduino Uno
7 TH JULY, 2020	111	Assembling circuits using Arduino Uno, breadboards and LED on simulation platform - TinkerCAD



GRADE VII-

DATE	NO. OF PARTICIPANTS	TOPIC/ ACTIVITY
24 TH JUNE, 2021	135	Writing a basic program
1 ST JULY, 2021	146	Operators in Python (Arithmetic, comparison, logical)
8 TH JULY, 2020	145	Operators in Python (while loop and if else condition statement)

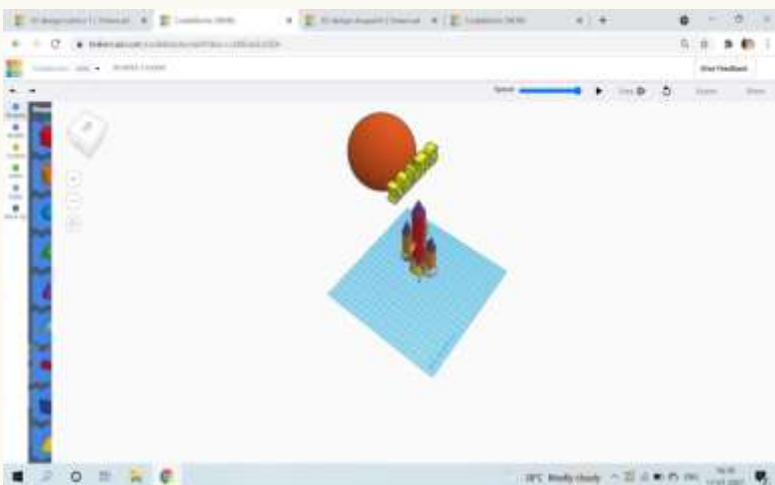
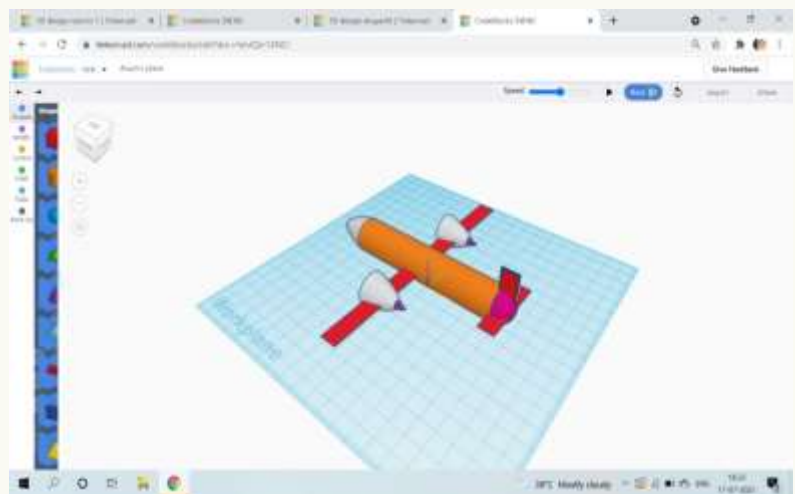
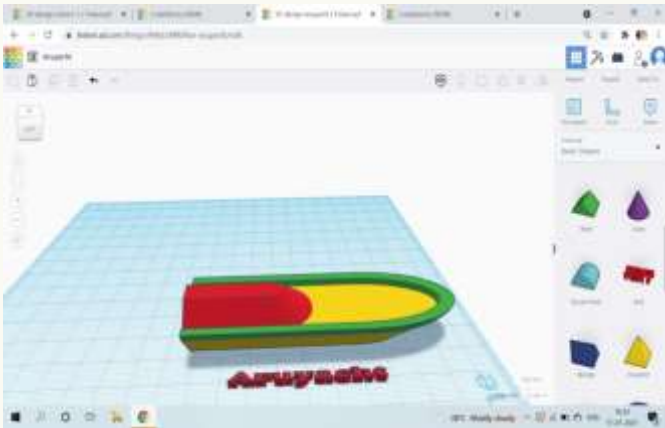
GRADE VI-

DATE	NO. OF PARTICIPANTS	TOPIC/ ACTIVITY
25 TH JUNE, 2021	120	Making a 3D design using TinkerCAD code blocks.
2 nd JULY, 2021	112	Understanding the planes and axis.
9 th JULY, 2020	115	Designing a plane

Students' Feedback:

Feedback forms were circulated amongst students.

The overall feedback is positive, and the students are enjoying the sessions. Based on the feedback, the trainer mends his instructions as required.



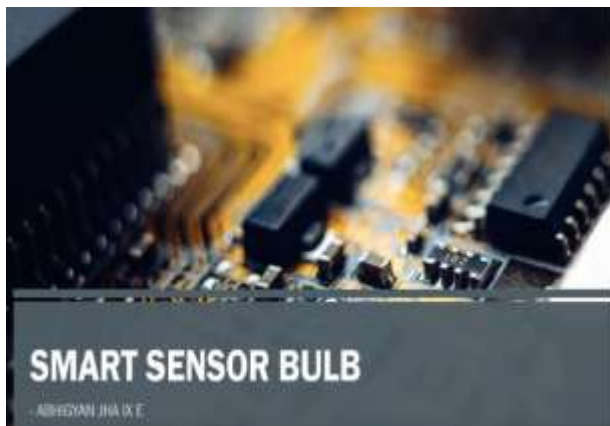
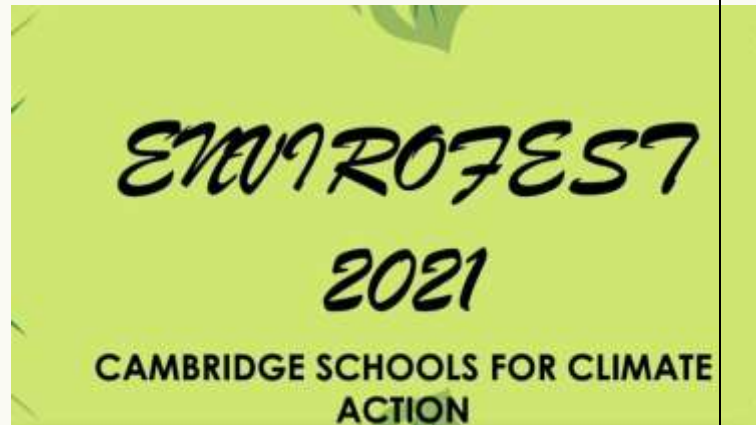
ACTIVITIES

1. An activity was performed on the occasion of *Envirofest* on 5th July, 2021 for the children of class IX where they were asked to think of an innovative idea to save Mother Earth and represent their ideas in the form of videos/models/simulation/ppts.

The children used their knowledge of Electronics and applied it in designing simple yet effective innovations.

Various themes related to sustainability were given to the students -

- Energy Conservation
- Pollution Control
- Conservation of water
- Plastic waste management.



COMPONENTS

The components used are:

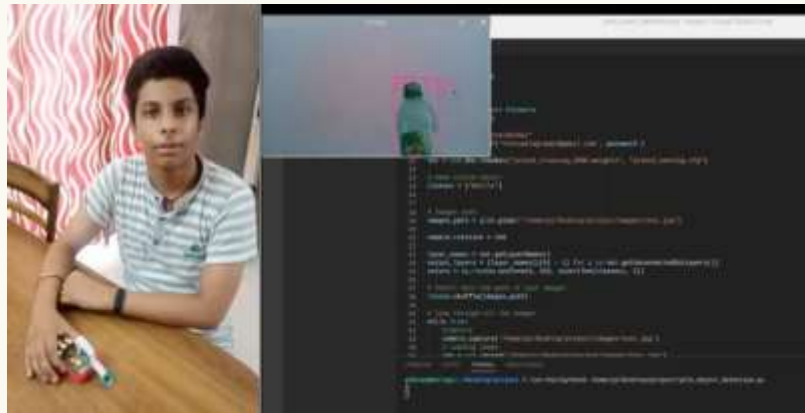
- Arduino Uno R3
- Copper wires
- 2 Resistor
- 1 NPN Transistor
- 1 light bulb
- 1 power supply
- 1 photoresistor



The Shower Head increases water pressure while also reducing the amount of water you use, and it even lets you know when your shower is ready for you by lowering the flow to a trickle once the water has reached the correct temperature. This helps to conserve hot water until you're ready to get in.

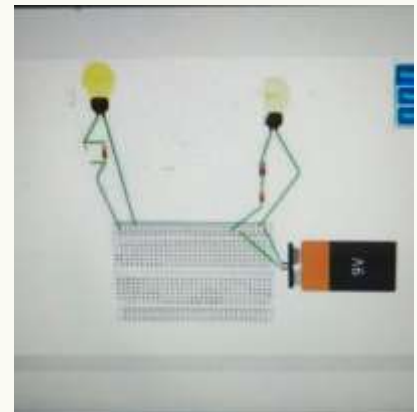


2. A project on detecting plastic bottles and segregating it was developed by Vatsal Agarwal of grade IX.



3. Children are applying the concepts in various projects-

Vatsal Jain of class VIII designed a series parallel circuit which could be used to explain how current is dependent on resistance.



Khyati Jha of class VII designed a simple lamp using battery and LEDs.

