# MakersBox October

**Let's look at everything students made in the Maker Space in October**

## Grade 1, Discover Gravity with a Marble Run

**Gravity, Motion, Science**

What is gravity? How does an object move? Students built a miniature marble run with cardboard, glue and straws t discover the same.

## Grade 2, Light up your Paper!

**Electricity & Current, Science**

Students get introduced to basics of electronics and circuitry with the help of paper circuits and explored questions such as- How does current flow? What will happen if we break the circuit path? What is power supply?

## Grade 3, Exploring Gravity once more...

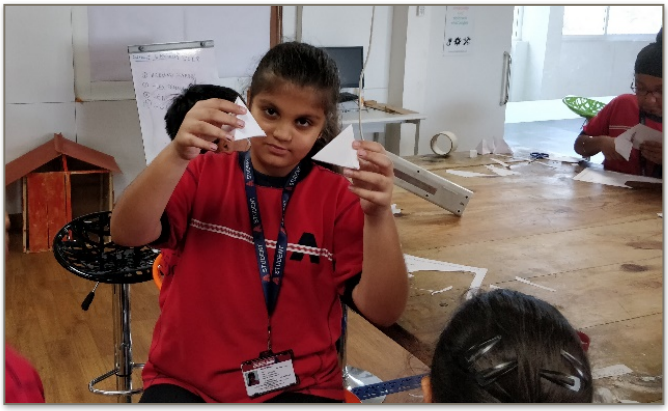
**Gravity, Force, Motion, Science**

Grade.3 students also worked on building their own marble run and pondered over the speed of the marble. What effect will the angle of the slope have on the marble? Why does that happen?

# Grade 4, Paper Polyhedrons

### 2D & 3D Shapes, Mathematics

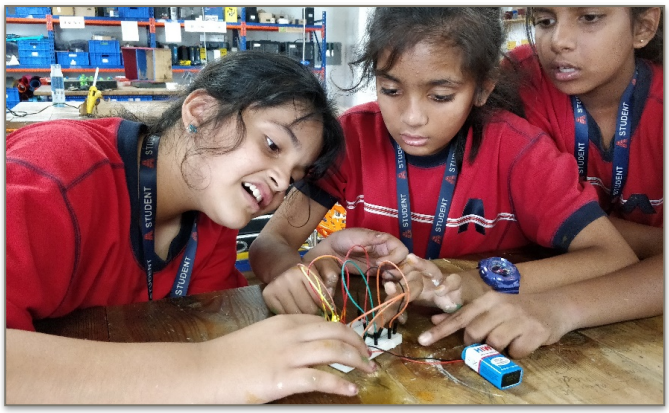
After exploring some 3D designing last month, students explored the same with paper and made some polyhedrons. What are polyhedrons? A solid shape with many faces. Think Cubes, Tetrahedron, Octahedron and more.

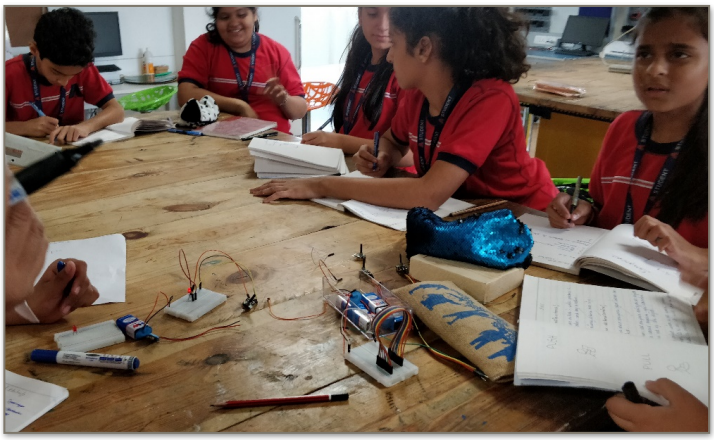


# Grade 5, Color, Code, Circuits

### Light and Electricity, Science

What are primary colours? How do two primary colours form another? Can you use programming skills to control which two colours mix to form another? Students did this and more by building a RGB circuit, this month in the maker space.





# Grade 6, Wear something Smart

### Circuits, Science
### Micro-controllers, ICT

The regular gloves are no fun. Students delve into the realm of wearable technology and are working towards making a Smart Glove- that is controlled using a micro-controller. They also reflected upon what such trends in technology mean for the humanity?

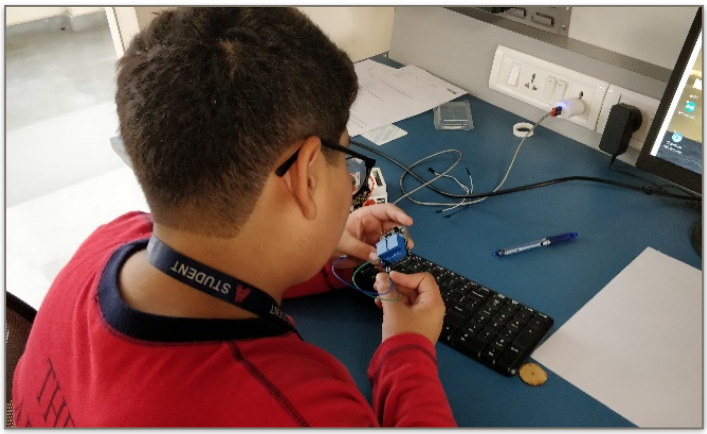
## Grade.7, Mirrors & Magic

**Reflection & Refraction of Light, Science**

Students with mirrors and LCD screens to understand the principle of reflection and refraction of light and are trying to display a screen onto a mirror. They have started working on the activity and are currently working on the ARM processor.


## Enrichment Program

As a part of their Enrichment Activity, students worked with Resin and learnt how to craft and mould it to turn it into artefacts. They are now working on a Home Automation project.




## World Studies, Judaism

The faith in focus for the month of October was Judaism. Both Primary and Secondary Grade worked on projects that had the component of 'Storytelling' in focus.

Primary Grade explored animation as a form of storytelling and worked to build a traditional animation device, Zoetrope.

Secondary Grade built a Human Interface Design, and explored how technology, machine interaction can come together to tell a story.

# Primary Grade: Zoetrope

## Step.1: Ideation & Design

Students began with understanding what is animation and how zoetrope, one of the oldest animation devices, worked. They then started working on making the structure of the Zoetrope, with paying extra attention to the measurement of frames.

## Step.2: Build and Assembly

Once the frames were made, next step to assemble it. The Zoetrope needed a base and students used their woodworking skills to build one and began assembling the same.

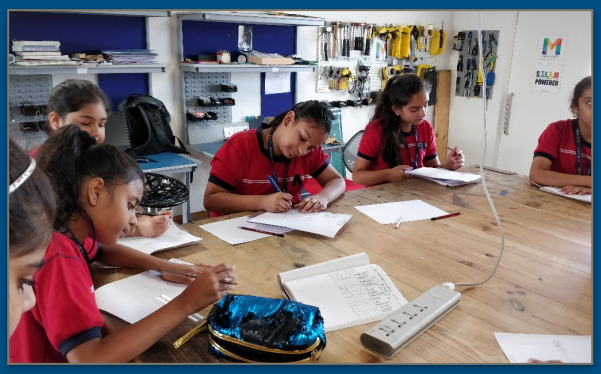
## Step.3: Final Project

Assembled and painted, the Zoetrope was finally ready. Put in your story and see it come alive.

# Secondary Grade: Human Interface Design

## Step.1: Introduction to HID

Students explored and understood that they are different ways to take human inputs and let the machine react. They also started thinking on the questions, if a camera can be used to identify a human motion and use it as a trigger.



## Step.2: Application

After spending time understanding how different inputs can be given to a machine, students started working on building a set up where a video plays after detecting human motions.

## Step.3: Final Installation

After compiling the code and assembling the hardware, students proceeded to complete the installation of the project.

# The Ardee School, Diwali Carnival

Students worked on an old car and thought of ways they can revamp the same. How can we make a car safer? How can we make driving a richer experience? Students also learnt how to change a tyre and worked on a sensor that will detect if the driver is seated at a correct posture or not. They presented all of this at the Carnival that turned out to be a huge success. Check out some of the images:

**Disclaimer:** Safety is priority at MakersBox. We urge all our students to wear proper safety gear before working in the lab. Sometimes, students take out their safety gear to get their pictures clicked.