

# *Innovations*

**KG 2 4-6 years  
Jayshree  
April-June 2017**

**Love:** singing, whistling, humming, tapping feet and hands, listening

**Need:** sing-along time, trips to concerts, music playing at home and school, musical instruments



**Need:** things to explore and think about, science materials, manipulative, trips to the planetarium and science museum

**Love:** experimenting, questioning, figuring out puzzles, calculating



**Logical-Mathematical**

**Intrapersonal**

**Love:** setting goals, meditating, dreaming, being quiet

**Need:** secret places, time alone, self paced projects, choices

# MULTIPLE INTELLIGENCES

developed by:  
DR. HOWARD GARDNER

**Bodily-Kinesthetic**

**Need:** role play, drama, movement, things to build, sports and physical games, tactile experiences, hands-on learning



**Love:** dancing, running, jumping, building, touching, gesturing

**Spatial**

**Love:** designing, drawing, visualizing, doodling



**Need:** art, LEGOs, video, movies, slides, imagination games, mazes, puzzles, illustrated books, trips to art museums

**Interpersonal**

**Love:** reading, organizing, relating, manipulating, mediating

**Need:** friends, group games, social gatherings, community events, clubs, mentors/apprenticeships



**Linguistic**

**Love:** reading, writing, telling stories, playing word games

**Need:** books, tapes, writing tools, paper diaries, dialogues, discussion, debate stories



**Science**

- Hovercraft
- Seesaw
  - Pulley
- Speed boat
- The Generator

**P.E**

- Gymnastics
- Jogging, stretching & warm up exercises
- Moving Smart activities
  - Tug of war
  - Swimming
- Soft room in class
  - Games

**Cooking with Machines**

- Pancakes-Hot plate
- Gold coins-Oven
- Toasted Pizza-Oven
  - Soup-Blender
- Custard with Jelly-Refrigerator
- Toasted Sandwich-Sandwich toaster
- Chocolate waffles-Waffle iron

***Innovations***

**Language & social skills**

- Class discussions
- Assembly preparations
- Group discussions, deciding song and assembly performance
  - Assembly
  - Field Trip

**Imagination & Creation**

- Assembly Projects
  - Scissor skills
  - Puffy paints
  - Playdoh
  - Seesaw
  - IP creations
- Loose parts inventions
  - A Hovercraft
  - Chalk Art



# How it Started...

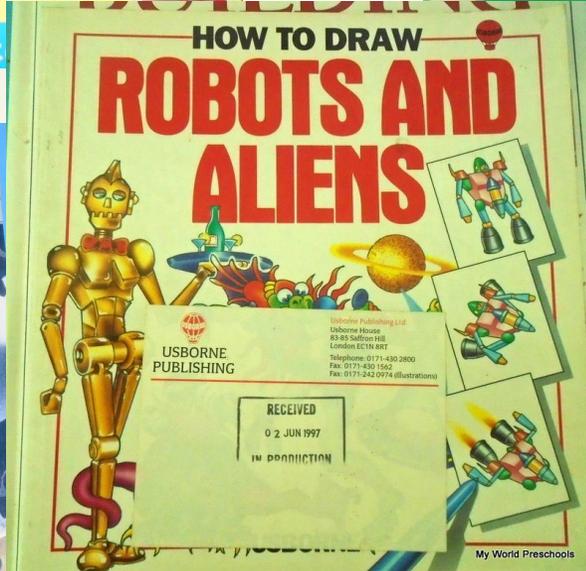
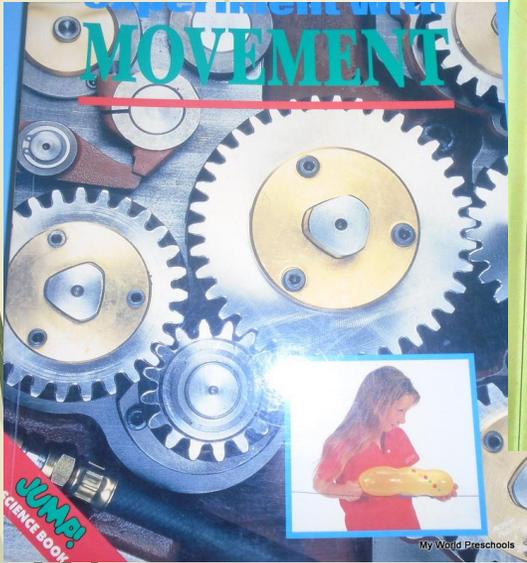
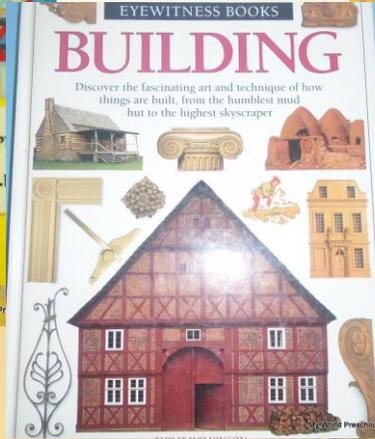
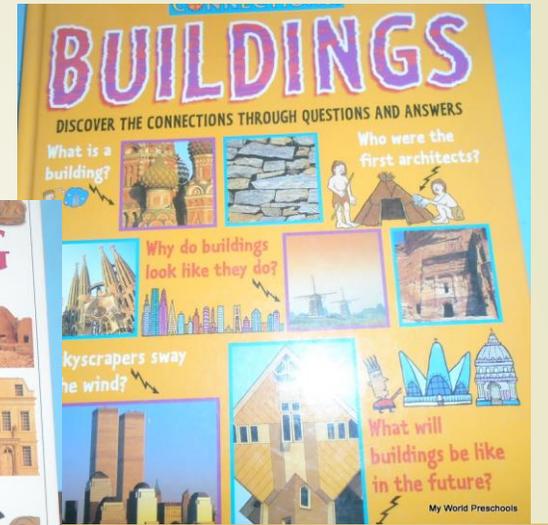
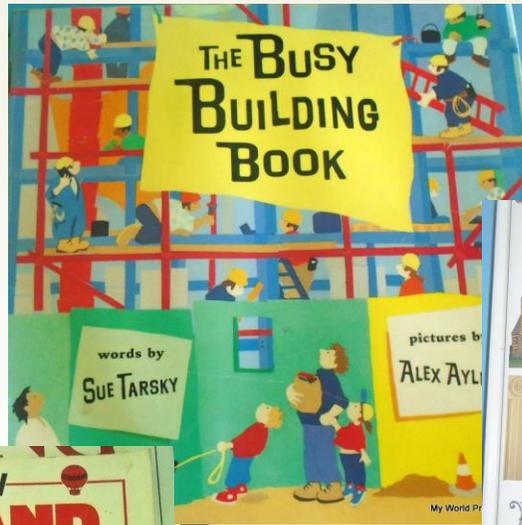
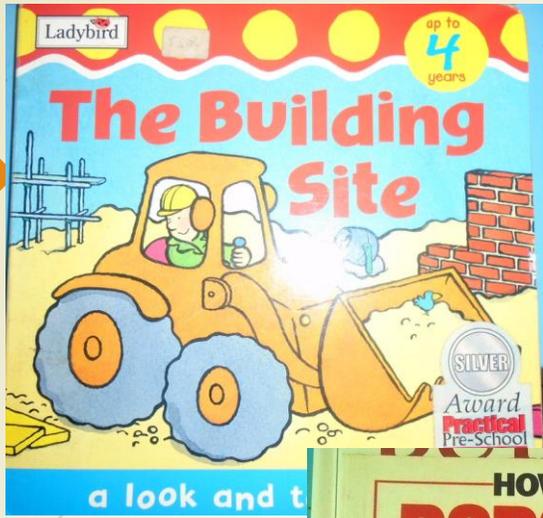


In the afternoon, on the very first day, some of the children complained that they were tired after the hard work in the playground, like digging dam, river and making roads. We discussed about how else can we get all this done with less effort and faster. The children named construction machines like, digger, crane, bulldozer, road roller could make our work easier and faster. Ayaan said, 'I have a big cement mixer at home.' This discussion lead us to different types of machines. We then named a few machines that we use in our day to day life, like hair cutting machine, hair drier, fan, scissor, blender, computer, light table, plane, etc.

The children used their imagination skills to create and invent new machines with amazing features.

Take a peak into our INNOVATIONS😊

Books



Some of the books we read to motivate their creativity and imagination...

Language



An amazing book.  
It built their  
thinking &  
imagination skills.



*One way to engage preschoolers' thinking skills is through reading quality children's books that promote aspects of cognition such as reasoning and problem solving, symbolic play, metacognitive knowledge, memory and social cognition.*



Lavinia's cottage is a pop up book. The children were anxious to see what would pop up as we were reading and making our own story from the pictures of this book. In this book, Lavinia's country cottage and grounds appear in drawings with pop-up parts, tabs, and flaps.



Soup - Blender



Pizza - Oven



Pancakes – Hand mixer and hot plate



Gold coins - Oven



Chocolate sandwich  
- Sandwich toaster



Custard with jelly -  
Refrigerator



Chocolate Waffle  
– Waffle iron

Our class children this term showed a lot of interest in cooking. Every Wednesday they used to be excited to cook and also discuss about what would they like to make the following week. We linked cooking into this theme making use of different machines to make various cuisines. We also used it as an opportunity to talk about and make the children more aware of healthy and unhealthy foods. They learnt what ingredients certain foods and drinks are made up of and how foods change its colour and shape, depending on what processes take place.

An awesome chemical reaction created with vinegar and soda bi carbonate....



We remembered the BLAST when we did our rocket launch experiment. We tried another mind blowing vinegar and bicarbonate of soda experiment to see the movement of a jet boat. The force of the movement of the gas backwards caused a reaction force which pushed the boat forward leaving red colour behind.

**Jet powered Boat**

*Can you think of any other forces which might affect the movement of the boat?*



To make a simple machine seesaw, we took a spool of thread to use as a support, and two spoons to use as the bar. We taped the to opposite sides of the spoons and stuck the spool to the spoon with glue tack. Jahaan was able to balance the seesaw. Joshua experimented by using glue tack to balance his seesaw.

## Seesaw



Balancing



This made a fun science activity for our children!

# Hovercraft

The children excitedly explored the hovercraft with their partners. Hovercraft is a vehicle that travels on water and land. It floats on cushion of air.





We lined the glasses up next to each other and filled them with different colours and different amounts of water. The first had just a little water while the last almost full, the ones in between had slightly more than the last.



Making music



The children experimented by hitting the spoon with all the glasses one by one.



Each of the glasses had a different tone when hit with the spoon, the glass with the most water had the lowest tone while the glass with the least water had the highest.



We introduced a pulley in the class and on the treehouse.. A lot of queries and questions were answered as the children explored the pulley...Does it need to move quickly, does it need to carry weight, go up? down and so on. ... They had a lot of fun and gained a great sense of achievement from this

process.

## Pulley



Pulleys are examples of simple machines. They can help you lift heavier things because ropes or chains support the extra weight.

## Clock



Their were so many questions going on in the little minds. Our young engineers were curious to know how a clock works? What is inside a clock? We brought in a clock and a small screwdriver. We learnt to use a tiny screwdriver, by winding and unwinding it. It built their concentration, hand-eye coordination and fine motor skills.

## Spinner

Spinners looked like the parts of a clock. They experimented with two/more big and small spinners. They realized that you just have to rotate one spinner and the other spinners set together, spin automatically.





Tobiko- Its really big!



We use a generator when there is no power, said Mahi. To which, we all decided to go and see our school generator. The children were excited to see the actual machine and how it works.



## The Generator

Rayyan was surprised and said, 'This machine is so clean. Its nice.'  
Jasmyn found it scary and wouldn't like to touch it.  
KG liked that their were signs and instructions, on the machine to guide us.

## Lava Art

The children really had a great time making lava art in a glass. It was not real lava but it looked like lava lamp. The children learnt about the density of different materials, like the oil floats on top of the water as it is lighter than the water. Since the salt is heavier than oil, it sinks down into the water and takes some oil with it, but then the salt dissolves and back up goes the oil! The fun part of the experiment was to watch blobs of lava move up and down in the glass.



# Creation



It's a fan  
-Lily



A Knife(Sword)

Building and engineering projects are awesome for developing thinking skills and encouraging the ability to design and create.



Its 12 o'clock...  
big and small hand  
together



A can see movie here!

My World Preschools

I'm taking a video. It's my movie camera.  
-Tobiko

Rayyan's selfie stick.



My World Preschools

It's a tool hanger /a tool stand.  
-Jasmyn



My World Preschools

Tomoki's pumping machine & airplane.



A chip cutter..

My World Preschools

A chip cutter



A big plane

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Jahaan's big plane.

Joshua's telescope



Gun

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Pumping Machine

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Business class plane just landed..

My World Preschools

# Blue blocks



Joshua's space ship



Girls together made a petrol station..



Jahaan's bullet Machine & bike



Lily's simple machine – a scissor



Jahaan and Rayyan's Ferrari car.



Tobiko's sleeping car with a remote.

Tomoki's air plane & emirates cockpit



Jasmyn's Ladybug buddy – It brings food for her.



Tobiko's chocolate machine...you put anything in, it turns into chocolate.



# Long cars



It sounds straightforward to 'build and construct a car', but there is a lot of design principles which children learn from this task. Then they need to select the right wheels and gears, balance the structure, position the motors, gear up, gear down. This is an experimentation phase – the children plan the structure of a car to satisfy the requirements and then build it to meet them.



*Building and engineering projects are awesome for developing thinking skills and encouraging the ability to design and create.*



The children made wonderful designs using the paints in the bags. The bags looked like icing bags. The children learnt how to use the microwave as they put their designs in it and were amazed, as it puffed their beautiful designs.



## Puffy Paints



## Chalk Art



We did a chalk and water experiment, where the children enthusiastically explored as they discovered how the water and chalk react together. They first drew on black paper with chalk and then painted over it. The chalk started disappearing. We also tried painting over a wet paper. The colours became much brighter and was smoother to draw.



*Art for the children is all about exploring new materials – discovering how they feel, how they can be used and how different materials react with each other.*

# "Why do we have assemblies?" was our query.

## ASSEMBLY PLANNING

Our thoughts...

We need to show our parents.

Our parents can come to school.

We can perform.

- Teacher : How about building your confidence?

Yes, I was scared. On my 1<sup>st</sup> assembly I didn't come to school. (5<sup>th</sup> assembly) But now I am enjoying them.

- Many of our friends agreed to it...

I'm scared.

My hands were shivering when I was talking.

I am shy to speak in front of everyone.

- To this the others mentioned...

I like talking.

I like to sing.

I enjoy assemblies..... Class together : We enjoyed the play last time.

Assembly

*You will soon see, what we decided to do for this assembly....*

The children work in teams of 3, 4 or 5. They are encouraged to feed off each others ideas and piggy back on top of them. They learn that working collaboratively is not easy but it is powerful. They learn how to listen and take turns. They also learn that not everyone thinks the same, and that thinking differently can be a gift.

## Team work



## Assembly

Imaginative and creative play is a more natural way for children to learn about the world. Children manipulate and touch various play materials. They express themselves through play both verbally and non-verbally. They use all of their muscles and senses to move around. Actively using their large and small muscles as well as their different senses in play, children develop healthy, strong, and complete neurological connections in their brains.



To encourage our children to play imaginatively and creatively, we set up a creative corner with loose parts, like empty boxes, different sizes of tissue rolls, empty containers etc. They invented beautiful masterpieces were displayed in our class on our assembly day. The children confidently described the features of their creations to the viewers.

# Assembly



## Assembly



A Submarine

Kudos to our children for all the hard work and wonderful Assembly performance 😊

Our children showed how various machines like the submarine, seesaw and clock work. They also sang their favourite song "Do re mi..."

We then invited our guest to see the display of their inventions and creations.

Grandfather's clock



Jasmyn thanking everyone!



Singing their favourite song 😊  
"Do re mi..."



KG inviting the parents for their project presentation 😊

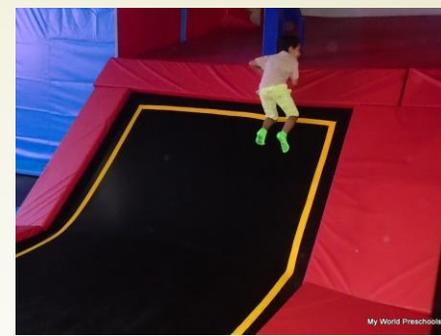


# Project presentation and interaction with parents 😊

## Assembly

The Project display looked awesome. They confidently showed their project to all the parents. They gave the information about the features and functions of their machines.





# Bounce at Mkuki House

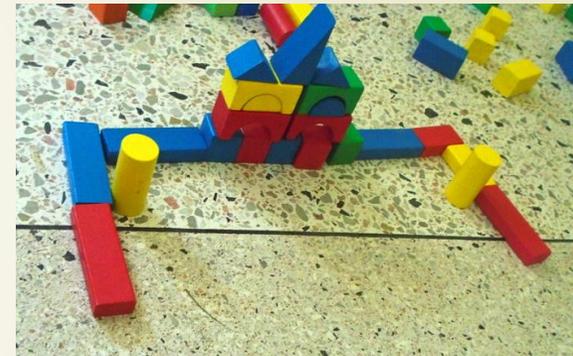
Trampoline a spring device 😊

Our children had a great time at Mkuki House, from jumping, bouncing, basketball, sponge pool to slides. The best part was they all got to jump and bounce on the trampoline together. A last trip for some the children, as they move on with their journey ahead to another school. 🎓



Field Trip

Creative, problem solving, confidence, experimentation, risk taking are the skills the children gained through this theme. These children being our future inventors and innovators, showed interest in Science and Technology this term. We tried to inspire their creativity and imagination. They are our future champions.



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