

PROJECT I REPORT: SUMMER INTERNSHIP AT



OUTDOOR PLAY-SPACE : DESIGN & PHASE I IMPLEMENTATION

GUIDED BY

PROF. PURBA JOSHI : PROF. P. SUNTHAR  
INDUSTRIAL DESIGN CENTER : SV COMMITTEE MEMBER

SUBMITTED BY

GOURAB SAHA : PAULANTHONY GEORGE  
136130006 : 136130002

## Sishu Vihar, IIT Bombay

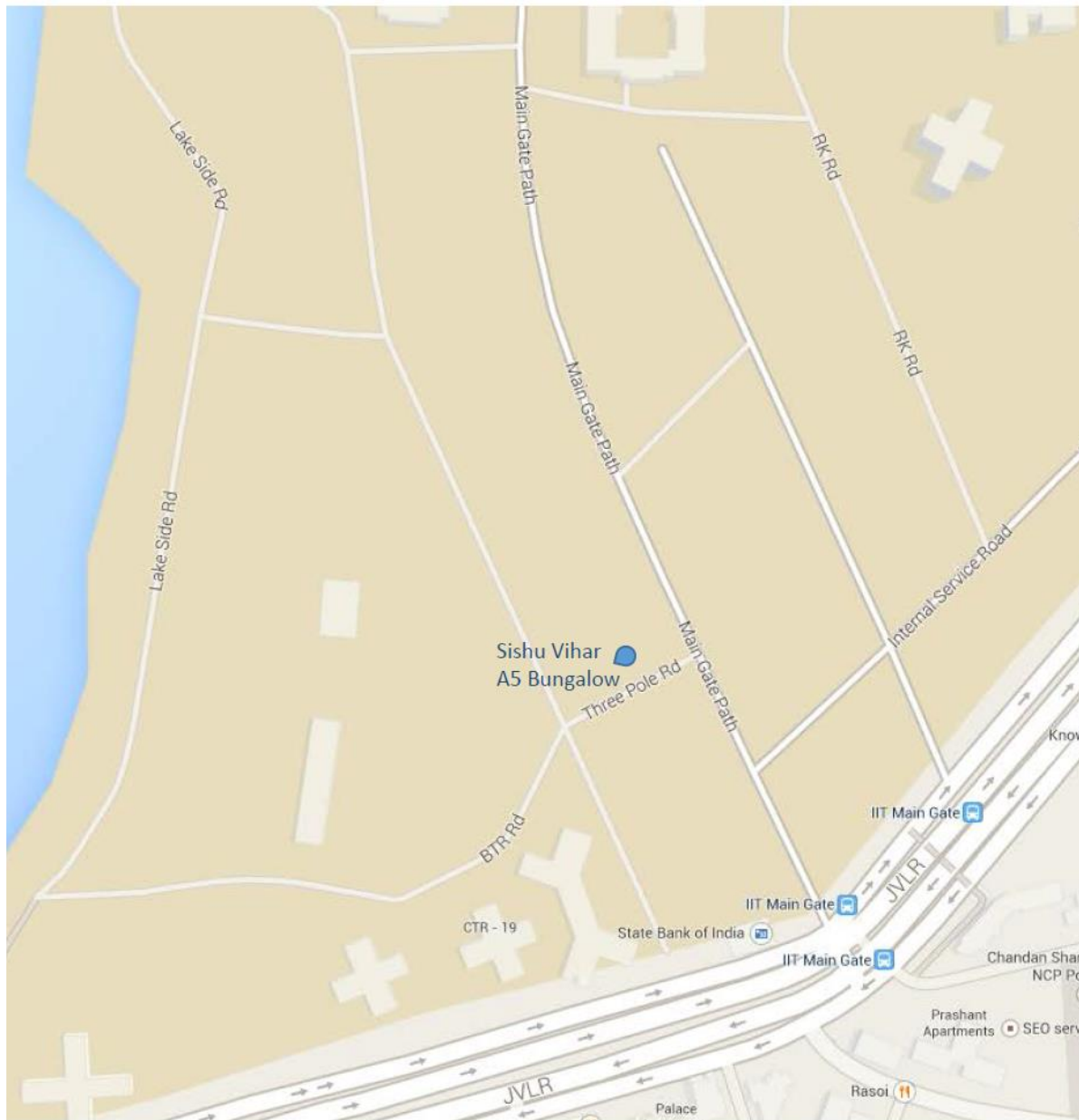


Image source: Google Maps





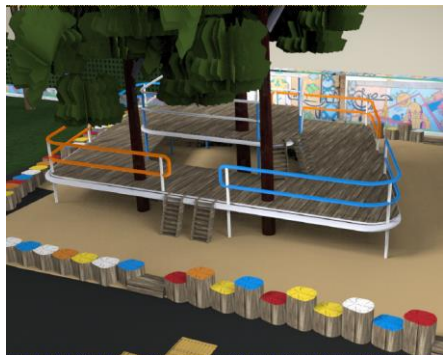
## PD2-Phase 0



Keywords: Field study; Market study; User feedback; Ground realities; Ideations; Concept finalization; Layouts.



## Outcome of PD2 and basis for PI



# PI(Project I), Phase I, Planning and Implementation

Space	Task /Activity	Execution	Design Details	Priority	17th-24th May	24th-31st May	31st May-7th June	7th June- 14th June
Tree Dome	Prototyping	Gourab & Paul	Using Below Details	HIGH				
	Procuring GI Tubes	GI Tube Vendor	Length ,Dia , Wall Thickness	HIGH				
	Bending Structural Members	Bending Vendor	Bending Radii , Arc Length	HIGH				
	Painting / Post-Treatment	Post-Treatment Vendor	Coatings , Colour Scheme	HIGH				
	Procuring Structural Pipe Fasteners + Flanges	Structural Fittings Vendor	Vendor Finalisation	HIGH				
	Assembly & Installation @ Site	Installation Vendor /IITB	Assy. ,Fastening & Grouting	HIGH				
	Procuring Nets	Net Vendor	Material , Mesh Size ,Dimensions & Colour	HIGH				
	Net-Frame Fastening	Net Fastener Vendor	Component , Process	HIGH				
Sand Area	Procuring Tree Stumps & SAND	Baikar / Lumbar Vendor	Height , Dia , No. required	HIGH				
	Transportation of Stumps into SV	Truck/Tractor Hiring	Truck / Tempo Hiring facility	HIGH				
	Finishing & Treatment of Stumps	Woodwork Team	Process Sequence	HIGH				
	Procurement of Stump Fastening Components	Powai Market Vendors	Dimensions ,Fasteners	HIGH				
	Fastening Stumps on site /Proto	Installation Vendor/IITB	Installation Vendor	HIGH				
Wall Painting Area	Cleaning & White-Washing	Mr. Unithan's Team	Finalising Painters.	HIGH				
	Procuring Non-Toxic Paint for Children	Paul & Gourab	Background Research	HIGH				
Open-Turfed Area	Procuring Outdoor Mats , Vendor Finalisation	Matting Vendor	Area Estimation	HIGH				
Vehicle RPG Area	Scooter Procurement Follow-up	IITB / Garage	IIT Security Office	MEDIUM				
	Auto Procurement	IITB / Garage	2nd Hand Cheapest Quote	MEDIUM				
	Child -Proofing	Mech. Fab. Vendor	Vendor Identification	MEDIUM				
	Paint Job	Paint Vendor	Painter Identification	MEDIUM				
	Ground Fastening of Mount	Installation Vendor/IIT-B	Mounting Technique	MEDIUM				
Experiential Area	Cleaning , Levelling & Soil Treatment	Baikar -Estate Maintenance	Estimation of Amounts	LOW				
	Revamping Birdbath	Paul & Gourab	-	MEDIUM				
	Gardener Identification - for 1st batch	Baikar		MEDIUM				
Miscellaneous Elements	Procurement of Fencing	Fencing Vendor	Vendor finalisation	HIGH				
	Grouting & Installation of Fencing	Installation Vendor	Vendor finalisation	HIGH				
	Painting of Fencing	Paint Vendor	Colour Scheme + Paint	HIGH				
	Removal of Barbed Wire	Mr. Unithan's Team	-	HIGH				
	Awning Vendor Finalisation	Prof. Sunthar , P & G	Dimensions ,3 Quotations	HIGH				
	Awning Installation	Awning Vendor	-	HIGH				
	Area Prepn . For Pre-Ordered Equipment	Baikar's Team	-	HIGH				
	Landscaping , Shrubs , Flowers Selection	P & G , Baikar	-	LOW				



Kee Klamps.  
 Kee safety.  
 Inco Industries.

2 - SHELTER ENTERPRISES → STILL NO MAIL  
 More alternatives.

- Mahabaxmi - Gooder's domes: → Not into domes?

Tree

700 16  
 700 24  
 16,000  
 Base Plate Type  
 20  
 25  
 CSK

Snicker Enterprises (Bk) 3 x 6' Awnings.  
 Cones:  
 - Traffic cones  
 - Fire cones  
 - Cones  
 - Funnel  
 - Vacuum form  
 - Dept of cone.  
 Length outside  
 80/ft, 5 days  
 27π = 160 mm.  
 r = 80  
 27π = 110 mm.  
 r = 110  
 27π = 55  
 17.5 mm.  
 1. 8th May '14  
 1 Dome connectors → ○ threaded  
 → single threaded.  
 2 Tepalatin Cover Details.  
 3 Dome Dimensions [Confirmed from SV]  
 4 Fence fastening tech.: idri + refing.  
 5 Eco-Geodesic Vendor search.  
 6 Smith: Estate. Office → To Do list.

→ Mungas - Insurance

- Trees - Logs - No More Contact

- Broken → Tree - Swilling by storm all over  
land → Carpet grass might not be viable  
Harvest + Red Earth Treatment  
↳ Labours

- Hotel Maintenance: Get contact for companies Approved By - MT - Sarawath.

\* = geodesic dome base locations

→ some as canopy  
→ some as sub units.

+ Awnings: - Brewbury - go → MONDAY.

- SATER ENTERPRISES → STILL ITS MOBILE  
before alternatives.

- Mahabam - Geodesic domes: → Not into domes?

e Klamps.  
safety.  
Industries.

700 700  
16 24

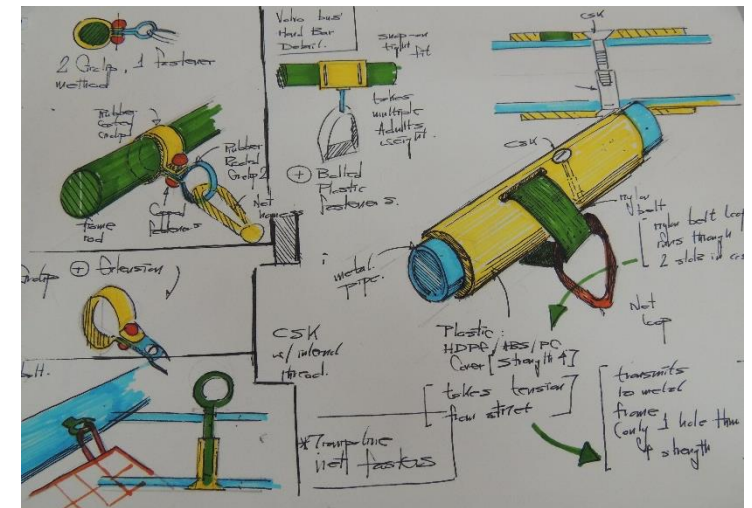
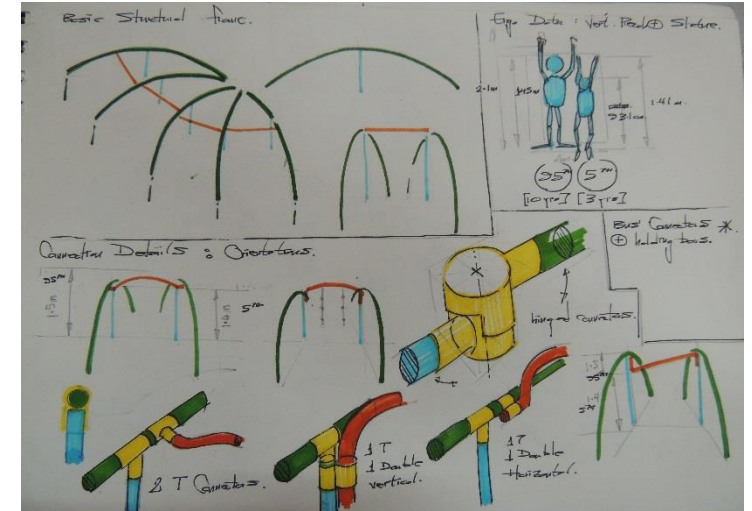
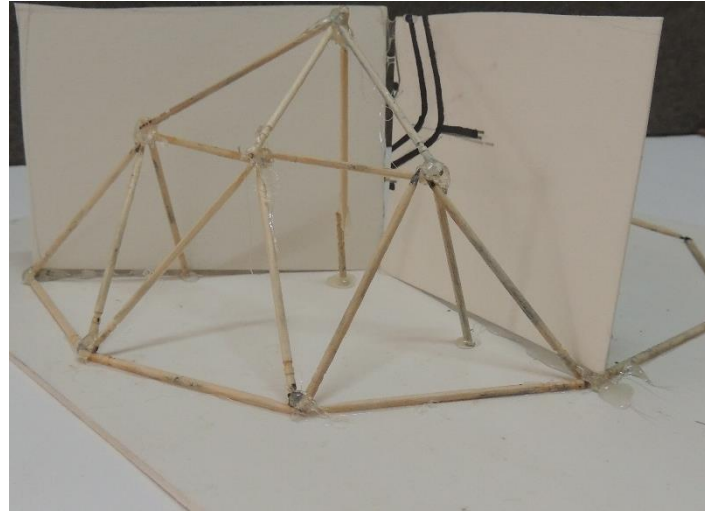
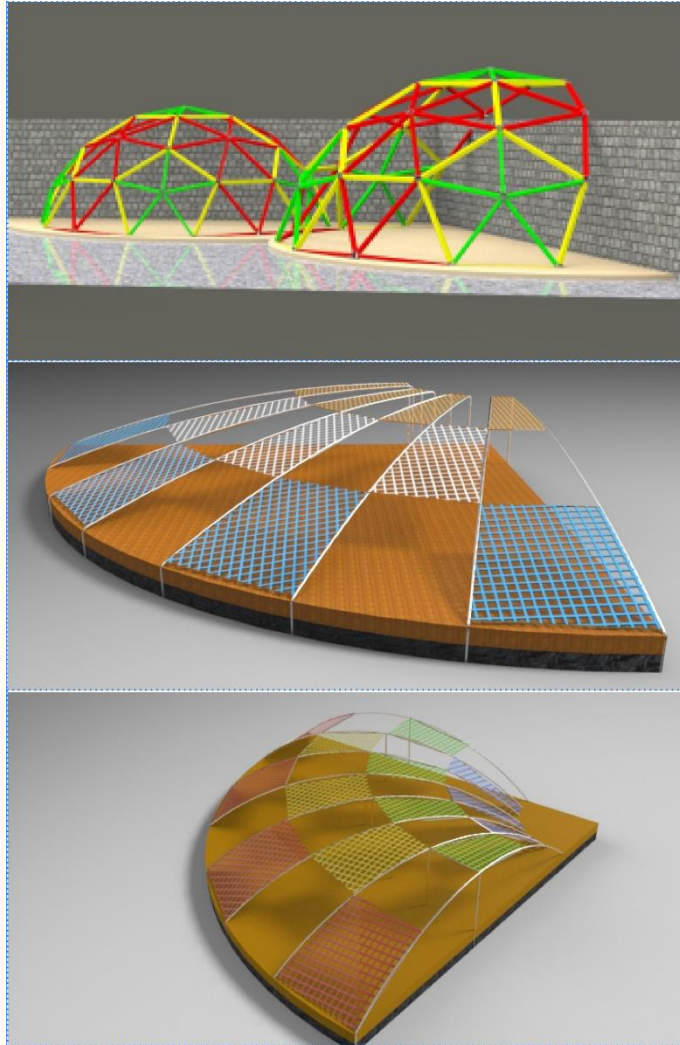
16 Base Plate Type

8 ① Concrete,  
8 ② 11 11

CSK

2' 0"

2' 5"



Keywords: Low cost; Easy to manufacture; Easy to assemble/ disassemble; Child Safety; Multi-purpose; Ergonomic; Visual Surprise; High strength



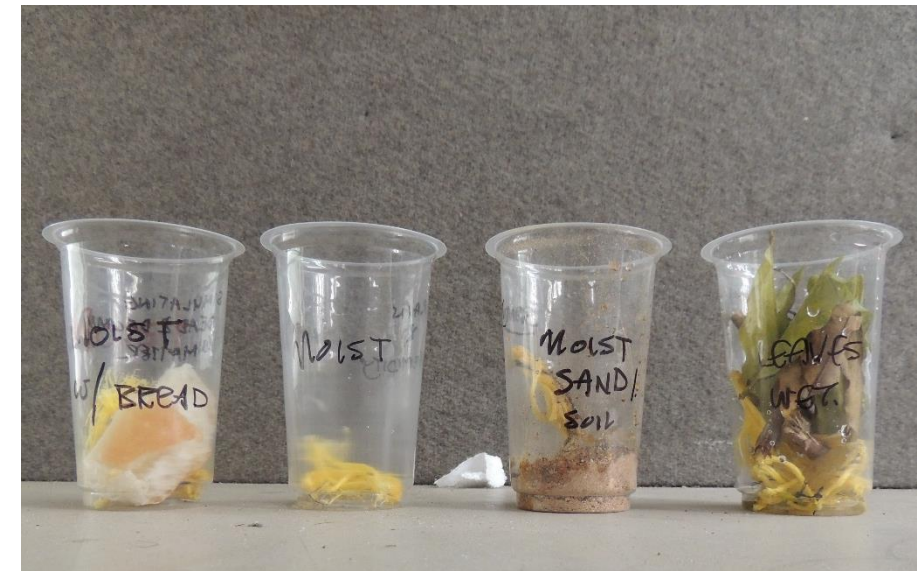
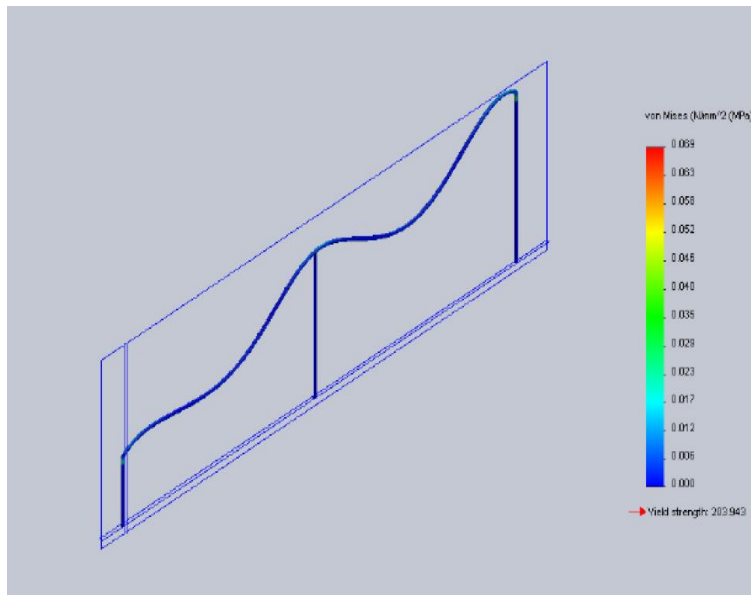
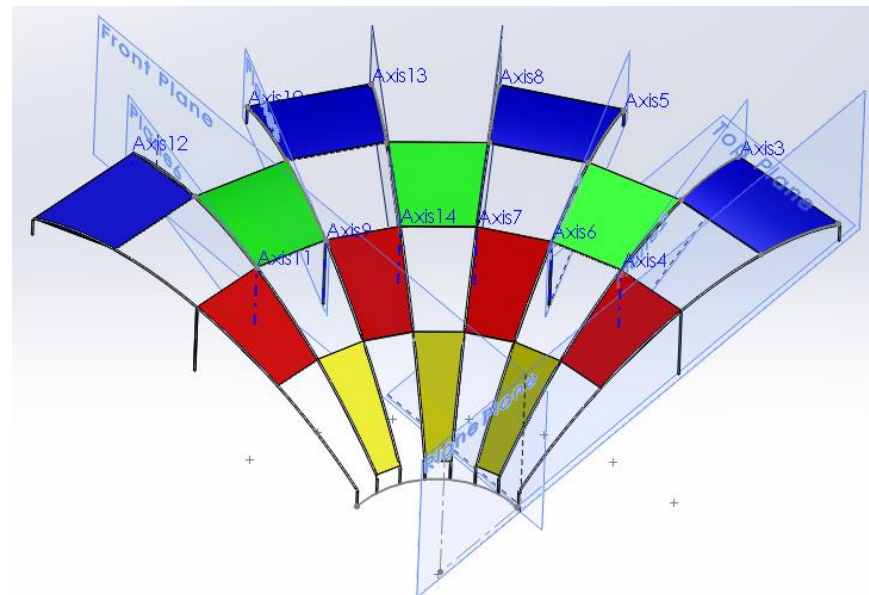
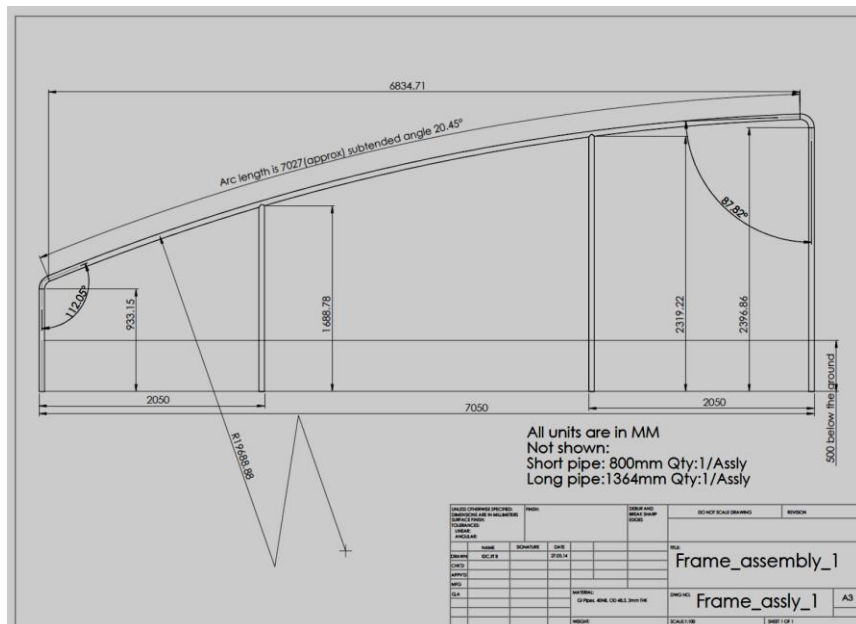


Image source: <http://www.bssindustrial.co.uk/uploads/docs/415.pdf>, As seen on 8<sup>th</sup> July, 2014.



Keywords: Kee Clamp; Kee Safety; Vendors; Turnkey project; Strength analysis; Engineering drawing; Rig testing; Budget constraints.



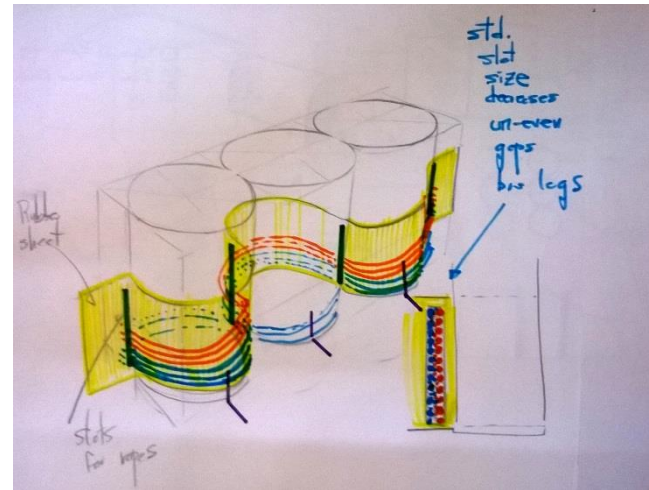
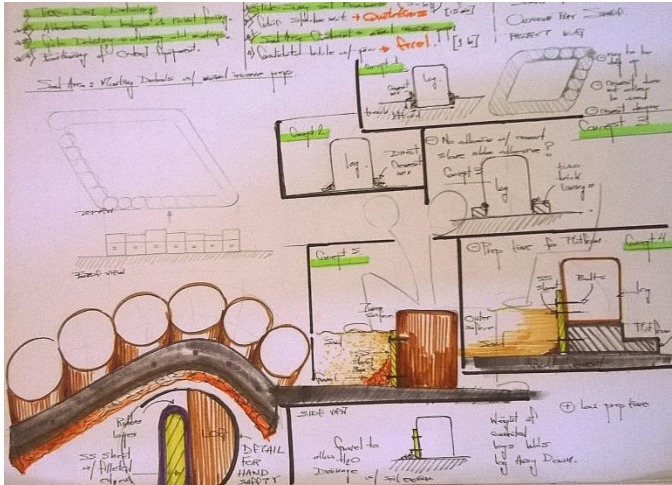
## Log Sandpit



Keywords: Sustainable; IIT Nursery;  
Debarking; Sanding; Wax filler; Lacquer;  
Staining; Rig testing.



## Fastening Logs



**Keywords:** Ideation; prototype; stainless steel; bracket; grouting; EPDM sheet; 4" concrete screw; soil erosion; water percolation; proof of concept.



## Vehicles for Role Playing Games



Keywords: Rust; Reuse; Role play; Disassemble; Mechanics; Grinding; Priming; Child proofing; Putty; Soft; Playful; Pastel; Free paint; Paint Blobs; User feedback; Smiles.



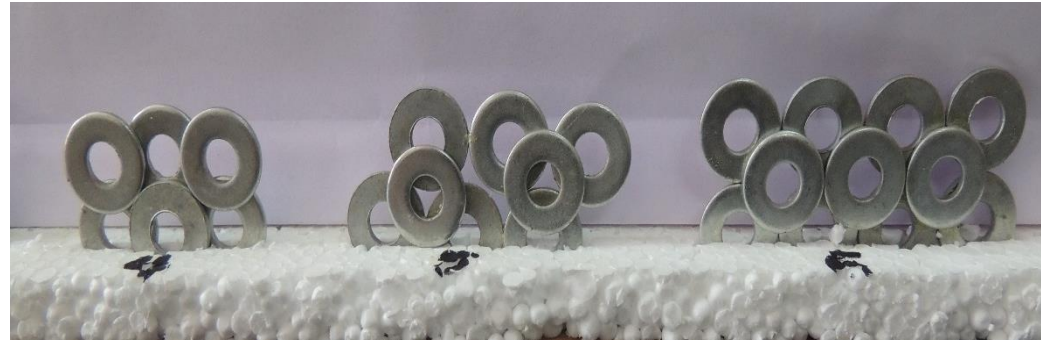
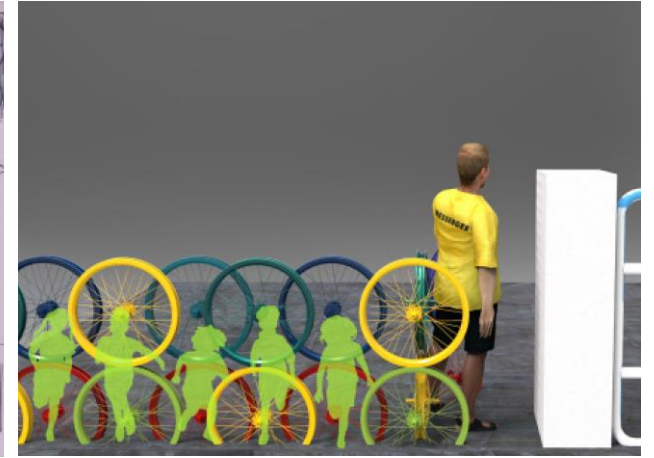
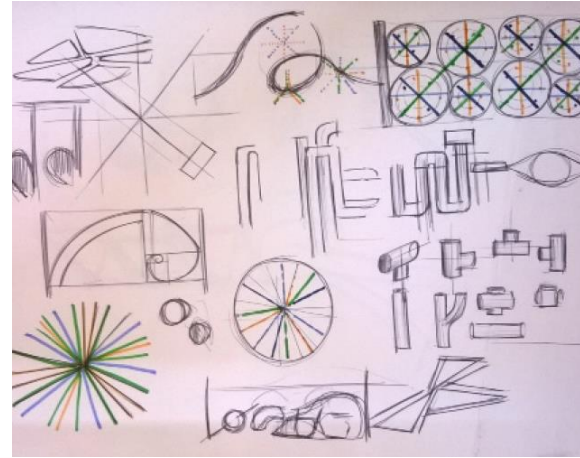
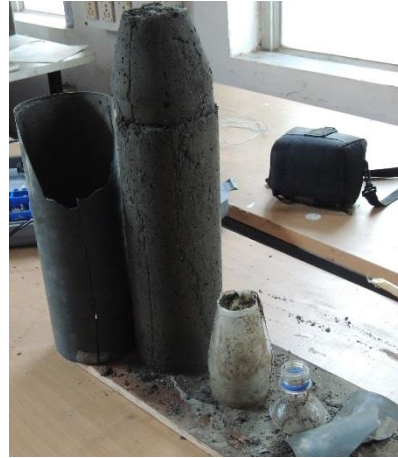
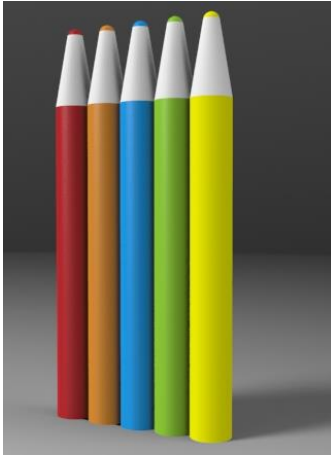
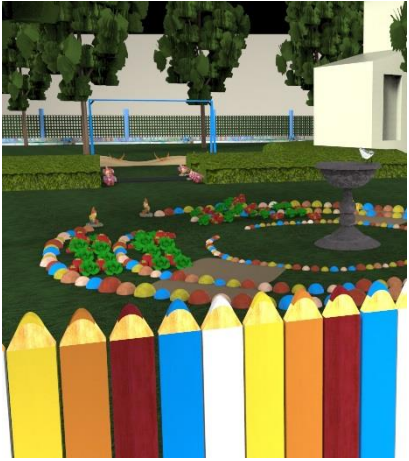
## Vehicle Installation on Site



Keywords: Masonry work; Knee height; Setting time; Material; Man; Midnight; Monsoon.



## Fence



Keywords: Picket fences; Colour pencils; low cost; Bollards; Cement; 3D space; pest resistant; durable; Advertise presence; Wheels; Floral; Weld.



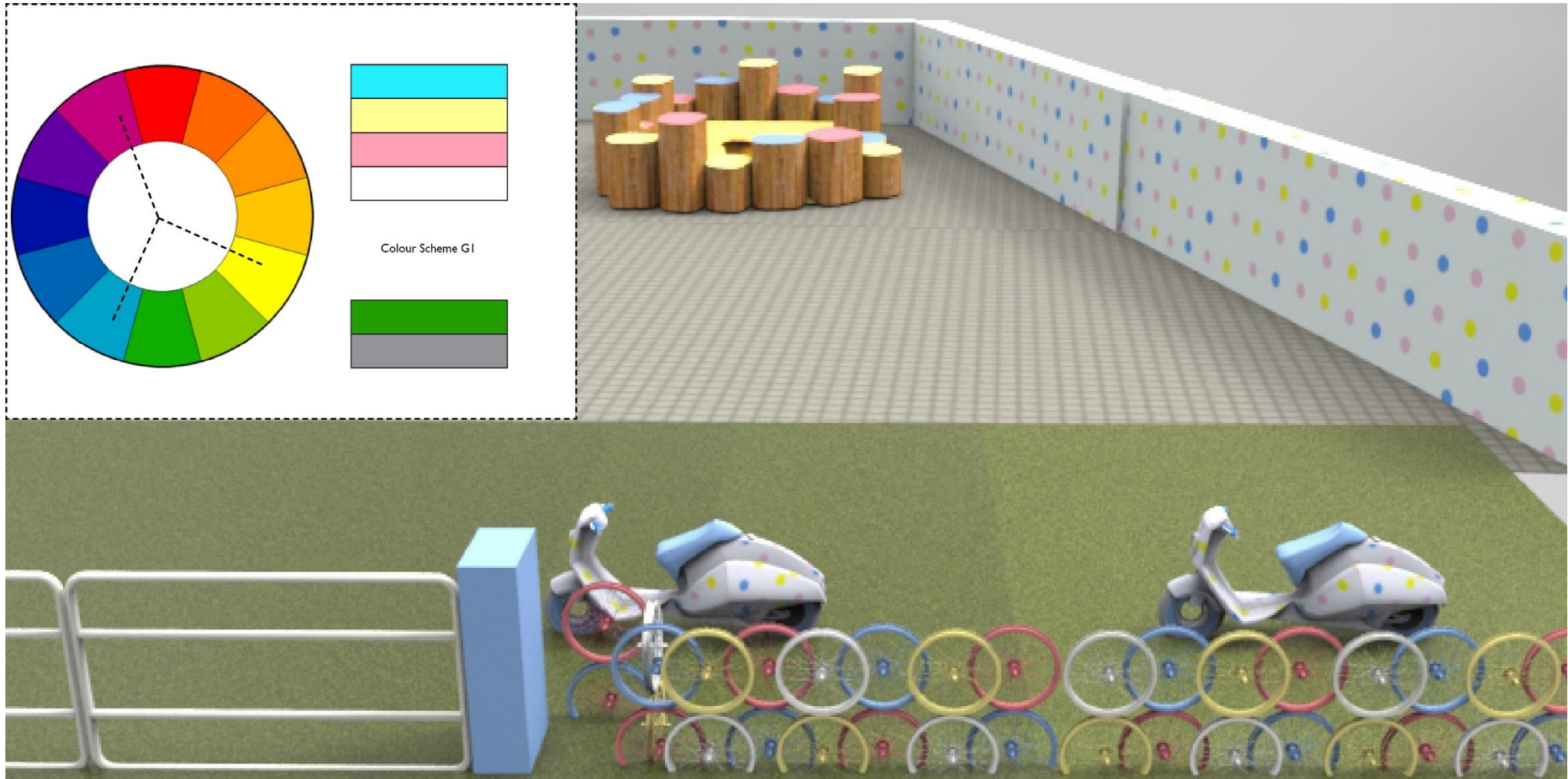
## Wheel Installation



Keywords: Picket fences; 3D space; pest resistant; durable; Advertise presence; Wheels; Floral; Weld; Rust; Powder coat; Masonry; Proof of Concept.



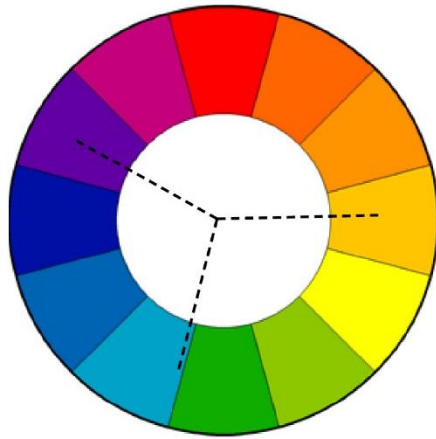
## Colour Schemes, Visual Impact



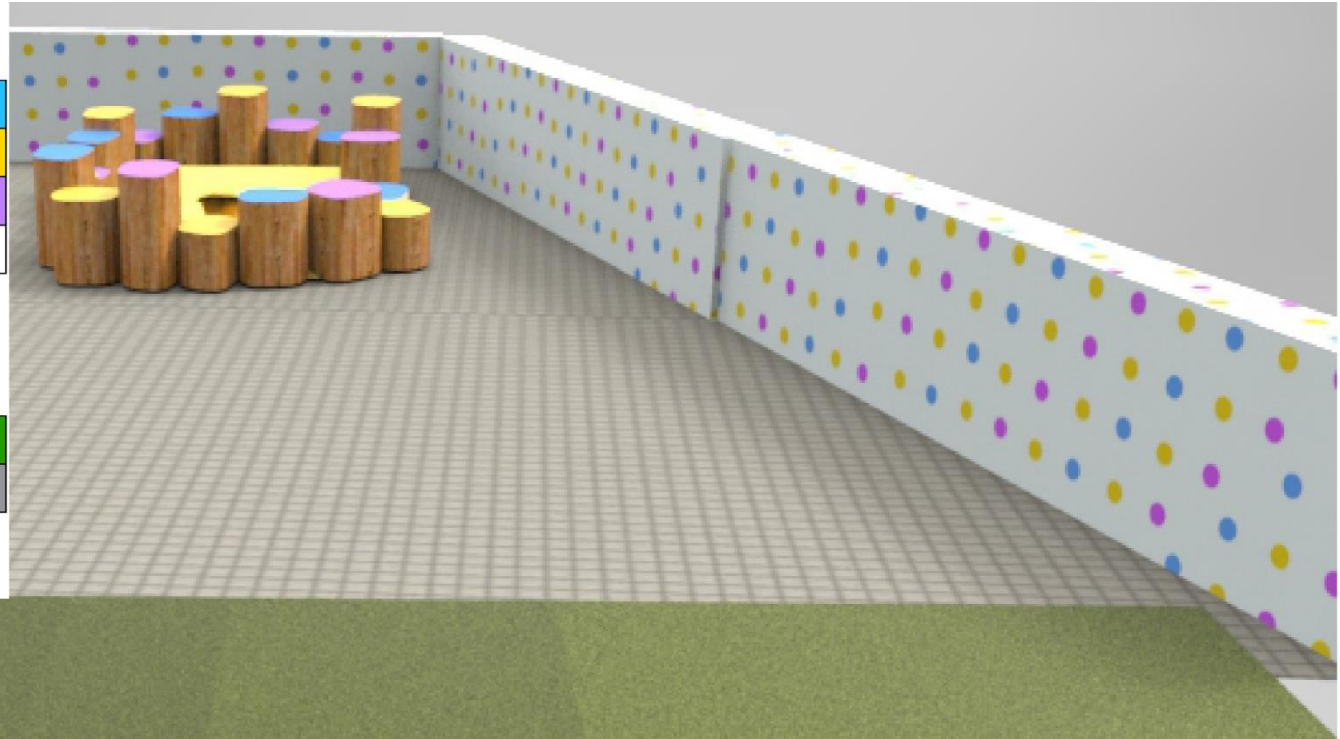
Keywords: Baby colours; Triadic colour schemes; Visual consistency.



## Colour Schemes, Visual Impact



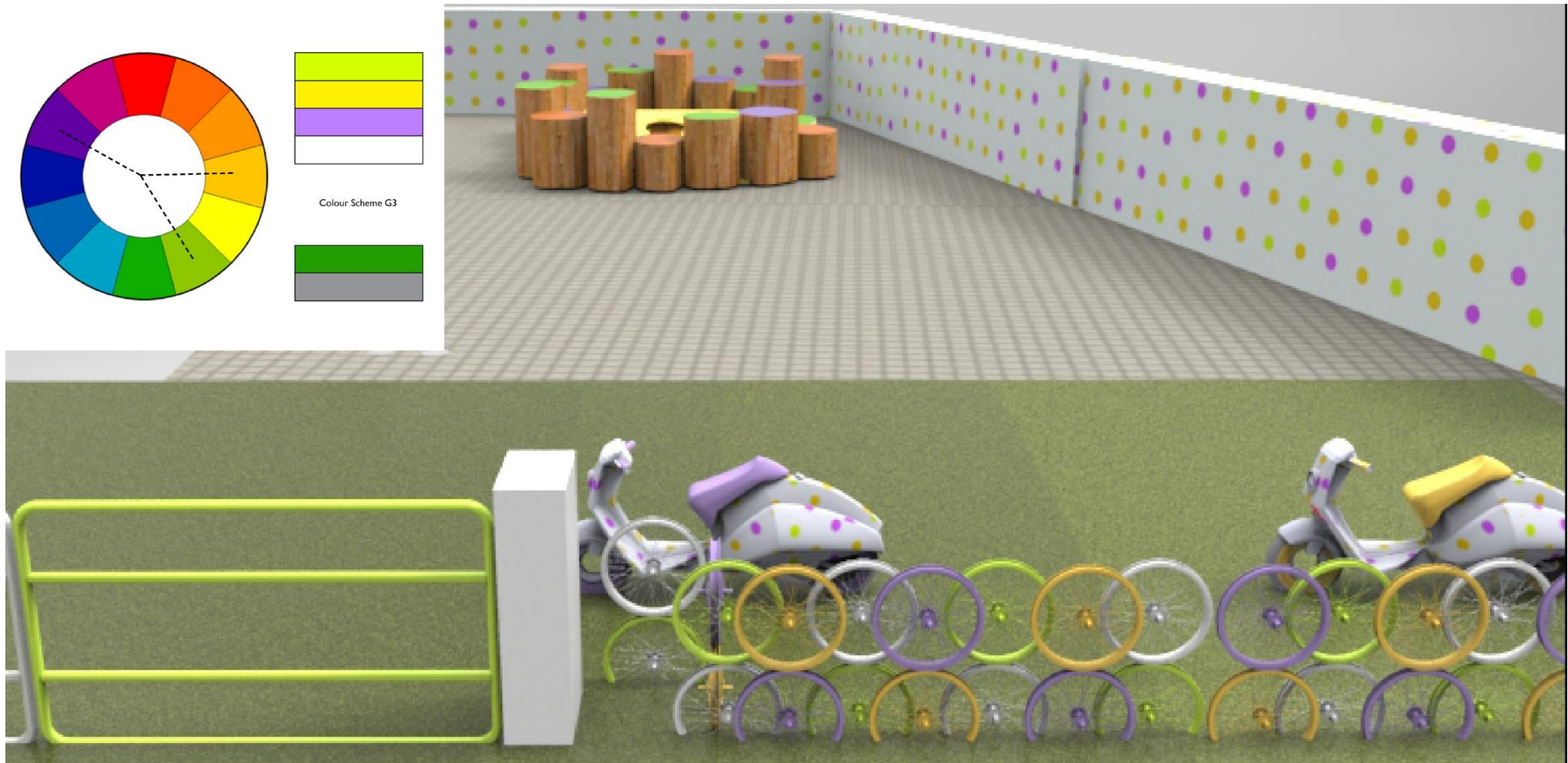
Colour Scheme G2



Keywords: Baby colours; Triadic colour schemes; Visual consistency.



## Colour Schemes, Visual Impact



Keywords: Baby colours; Triadic colour schemes; Visual consistency.



# At the end of the month



Children's needs

Parent's wants

Ideation to Implementation

People management and vendor development

Quick and dirty prototyping

Rig testing

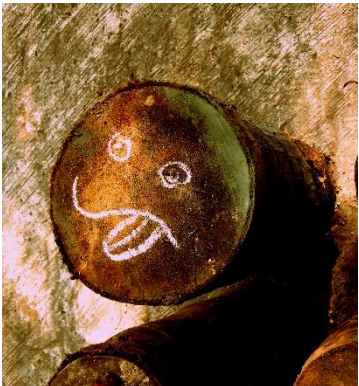
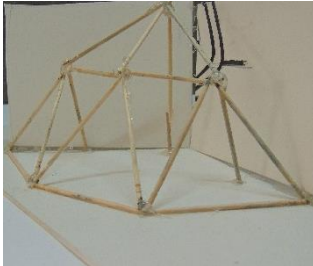
Contacts

Time management

Delegation

Critical Feedback

Enjoy the Process





## Future Scope

Landscaping

More elements

Indoor Space design

Feedback and improvement

Full scale implementation by IIT B



Fin.