

designing **Indian toys** for **International market**

Industrial Design Project II

Project Guide
Prof. U. A. Athavankar

Presented by:
Divya Saxena

07613004
Industrial Design Center
IIT Bombay
Mumbai-400076



Overarching goal/Unique proposition:
Designing for creating a niche in the crowd.

Need :

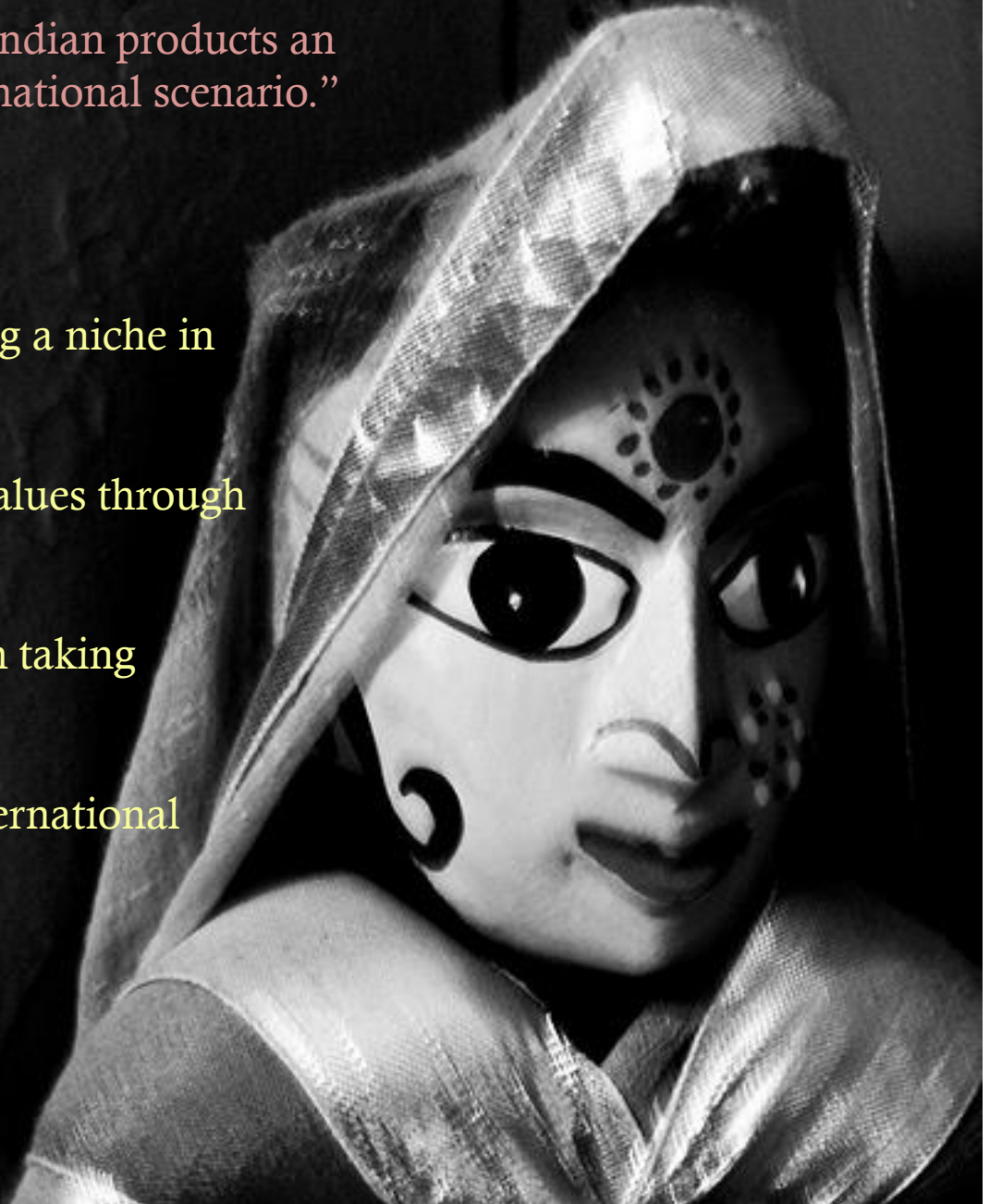
Industrial products are moving towards globalization and in the midst, cultural products are getting lost. Thus to create a stand in the international market, there is a need to design Indian products of international appeal which can create its own identity through its rich culture.

“Culture is to know the best that has been said and thought in the world”

“The idea revolves around giving Indian products an opportunity to perform in an international scenario.”

Abstract

- developing an identity and creating a niche in International market.
- introduction to our rich cultural values through the element of fun.
- learning and experiencing through taking inputs from our culture,
- involves the understanding of international market, its issues and requirements,
- studying the particular user group





Research and data collection

Vibrant colors

Simple street toys

Self Made from scrap

designing

Indian toys

for international market

Lattu(top)

Gulel(catapult)

Patang(kite)

Paper Fan

Pichkaari(water syringe)

Handmade, crafted

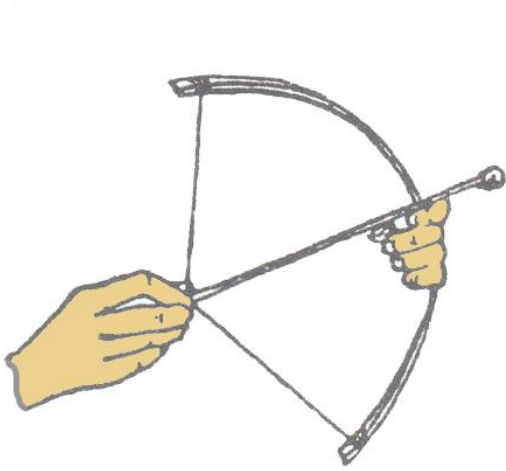
Cheap and easily available

No complexity

Not defined...



Indian Scenario: Existing Indian toy principles and Indian street games



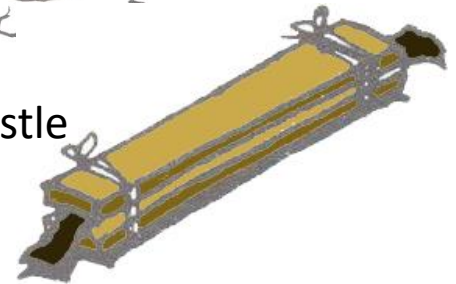
Bow and arrow



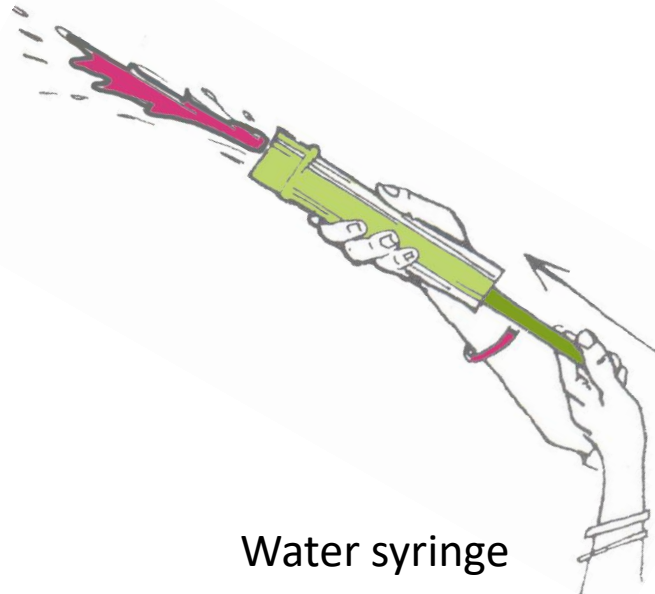
Catapult



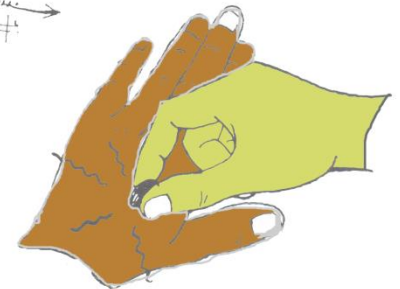
Puppeteer's whistle



Matchbox Drum



Water syringe



Hot and Cold



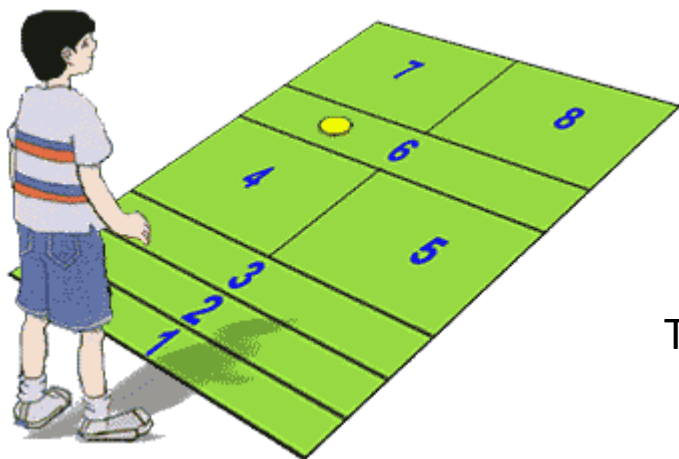
Kite flying



Playing Marbles



Gilli Danda



Hopscot



Top Spinning



Games without any props

•Contemporary toys available

(Cheap and easy availability of toys in a developing country like India)

Cheap and readily available
Mainly plastic- easily manufactured
Some are copy of international toys .
Bad finish.



Case studies: Earthentree: a medium to revitalize Indian Channapatta toys.



earthentree
creative·natural·handcrafted

Earthentree's toys are handmade in India out of sustainable wood and colored with vegetable dyes, meaning no lead paint

Best Sellers



Music Makers



Educational



Cool Games



Strategies followed:

- Using the existing handicraft techniques .
- Providing the traditional craft workers with better facilities and tools .
- Promotion through web sites.
- Promotion through organizing workshops.
- Opening market through specialty retailers.

Evolving new designs with same Indian way of crafting and material.

Prism



Newer designs



Bird whistle



Abacus



Finished improvement is done in the basic designs.



Yo Yo

Top



Music shakers



Wheelo toys



designing Indian toys for **international market**

Very Defined

No possibility of alterations

Mass produced

Well marketed

Remote Controlled

Sophisticated

Plastic

Barbie

Monotonous

Scrabble

Huge range of
customers

Complete look

Standardized...



• **Contemporary toys:**

New materials, Technical finish, Highly detailed, Mechanical, Very defined, High finish end products, High finish packaging.



Creating characters or propagate characters through toys (vice versa)





International market is ready for experimentation: Opening more towards eco-friendly materials, newer designs and concepts with high finished and well packaged products.

Some parent/students lamented that they have generally lost confidence in the quality of most available toys.

Thus this may be the best time to launch a very different identity product...as market is ready to except newer things.

A circular diagram illustrating the evolution of musical instruments. The cycle starts with a simple bow and arrow, moves to a stringed instrument with a green body, then to a drum with black and yellow sections, followed by a red and green mallet instrument, then a colorful, multi-layered drum, then a snail-shaped instrument with green and red sections, and finally to a complex instrument with a yellow body and a red and white circular pattern. The cycle is completed by a black line connecting the final instrument back to the first.

-
- A collage of six images arranged in a circular pattern. The images include two Iron Man figurines (one silver, one red), a Barbie doll in a pink dress, a Rubik's cube, a blue toy car, a yellow Transformer, and a G.I. Joe figure on a dinosaur.

- Open and adopt newer products
- Standardization of products, promotion of product is one of the major concern .
- Transmission of story from the designer's view point to the customers is very necessary.
- At all levels of presentation including packaging it is important to grab attention.

Approach :



“Creating a niche in the crowd”
By projecting India
through Indian toys/games.

Taking basic Indian Toys/Game
principles
and designing it further to
create a full product.

Taking an Indian story and
depicting it through a series of
products.

Taking an Indian Animal/bird
which represents/symbolises
India and creating an interesting
toy out of it.

Or involving all the three to form a
complete kit of toys depicting an existing
story and involving toys with basic
principles. For e.g. :
Mougli, Krishnaa or even
Panchtantra stories.

Thus the design begins...

But...Before conceptualization



Age group??

Toy or a game??

Market issues??

Material restrictions???

Age group??

Piaget's Stages of Cognitive Development

Stage	Age	Characteristics of Stage
Sensorimotor	0–2	The child learns by doing: looking, touching, sucking . The child also has a primitive understanding of cause-and-effect relationships . Object permanence appears around 9 months.
Preoperational	2–7	The child uses language and symbols , including letters and numbers. Egocentrism is also evident. Conservation marks the end of the preoperational stage and the beginning of concrete operations.
Concrete Operations	7–11	The child demonstrates conservation, reversibility, serial ordering, and a mature understanding of cause-and-effect relationships . Hand brain coordination is at initial stage. Thinking at this stage is still concrete.
Formal Operations	12+	The individual demonstrates abstract thinking, including logic, deductive reasoning, comparison, and classification .

User study

AGE

0 - 1 TODDLERS.
 1 - 3 PRE-SCHOOL.
 3 - 5 KINDER-GARDEN.
 5 - 7
 7 - 9
 9 - 12.
 12 onwards. SECONDARY

GENDER

M
F

M
F

(M)
(F)

M

F

M

F

M

F

M

F

TYPE OF FUN.

COMMON → [BIG OBJECTS - WHICH THEY CAN THROW OFF BALLS.]
 ATTENTIVE TOWARDS SOUNDS
 GET BORED EASILY AND SWITCH TO DIFF. TOYS
 MOVING OBJECTS - HOTWHEEL CARS, COLOURED BLOCKS
 DOLLS - MAKE STORIES ON THEIR OWN. (without logic) → OVERLAP REUSE

JOINING GAMES, BUILDING BLOCKS, CATCHING FISHES (GAME)
 BARBIE DOLLS, MINIATURE MODELS OF HOUSE, KITCHEN SETS. (Custom watching)

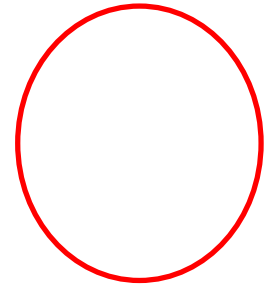
SHOW MORE CREATIVITY, CONSTRUCTIVE WORK, BUT STILL DON'T WANT TO APPLY LOGICS — LIKE MAKING DRAWINGS, SEARCH FOR EVERYTHING WHICH IS VISIBLE.
 BECOME MORE DESCENT, LIKES PLAYING STORY MAKING GAME, DRAWING, IN THEIR OWN WORLD. — DOLLS, TEDDY BEARS, SETS. (watch custom)

EDUCATIONAL GAME → BUT GETS BORE EASILY, OUTDOOR GAMES, SNAILS, SCOTLAND YARD, CARDS - WWF.
 EDUCATIONAL + VISUAL GAMES, — Pictionary, UNO, OUTDOOR GAMES — HOP, CIRCLE GROUP GAMES.
 OUTDOOR GAMES, MAGICAL TRICKS, BIG PUZZLES, STARTING OF VIDEO GAMES.
 OUTDOOR GAMES → BUT NO SO HARSH,

OUTDOOR, VIDEO GAMES, T.V. watching + SPORTS.
 SOFT TOYS — DON'T PLAY BUT KEEP IT, WATCHING T.V. AS A POSSESSION



QuickTime™ and a
decompressor
are needed to see this picture.



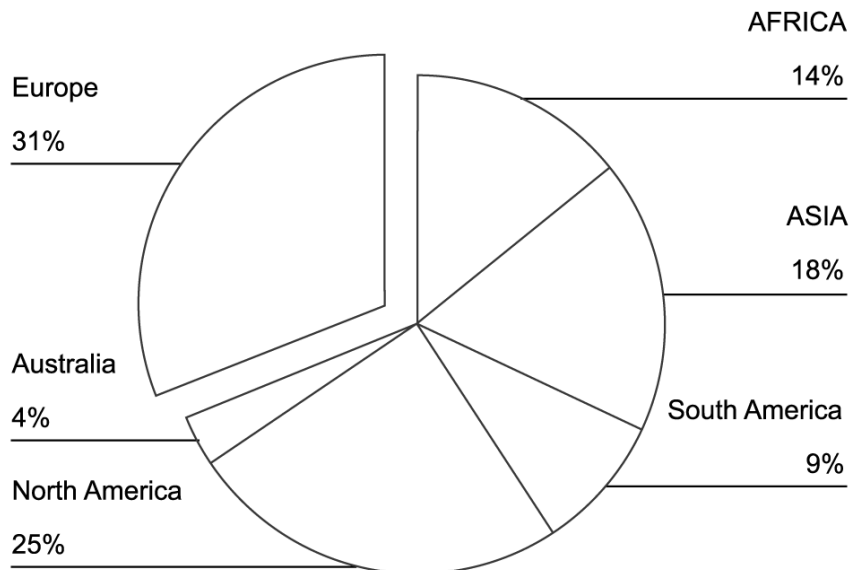
QuickTime™ and a
decompressor
are needed to see this picture.



Market Issues ??

- Export- Overall size matters a lot -finally a compact design should come out.
- High end quality product.
- Following new upcoming trends - eco-friendly, uniqueness.
- Standardization
- Identity hold in international market.
- Visual appeal matters a lot.
- Promotion strategy to be designed carefully.

Where we stand?



Where we stand?

QuickTime™ and a
decompressor
are needed to see this picture.



Outdoor :2.1%

Dolls : 0.1%

Mechanical :0.2%

Learning : 0.3%



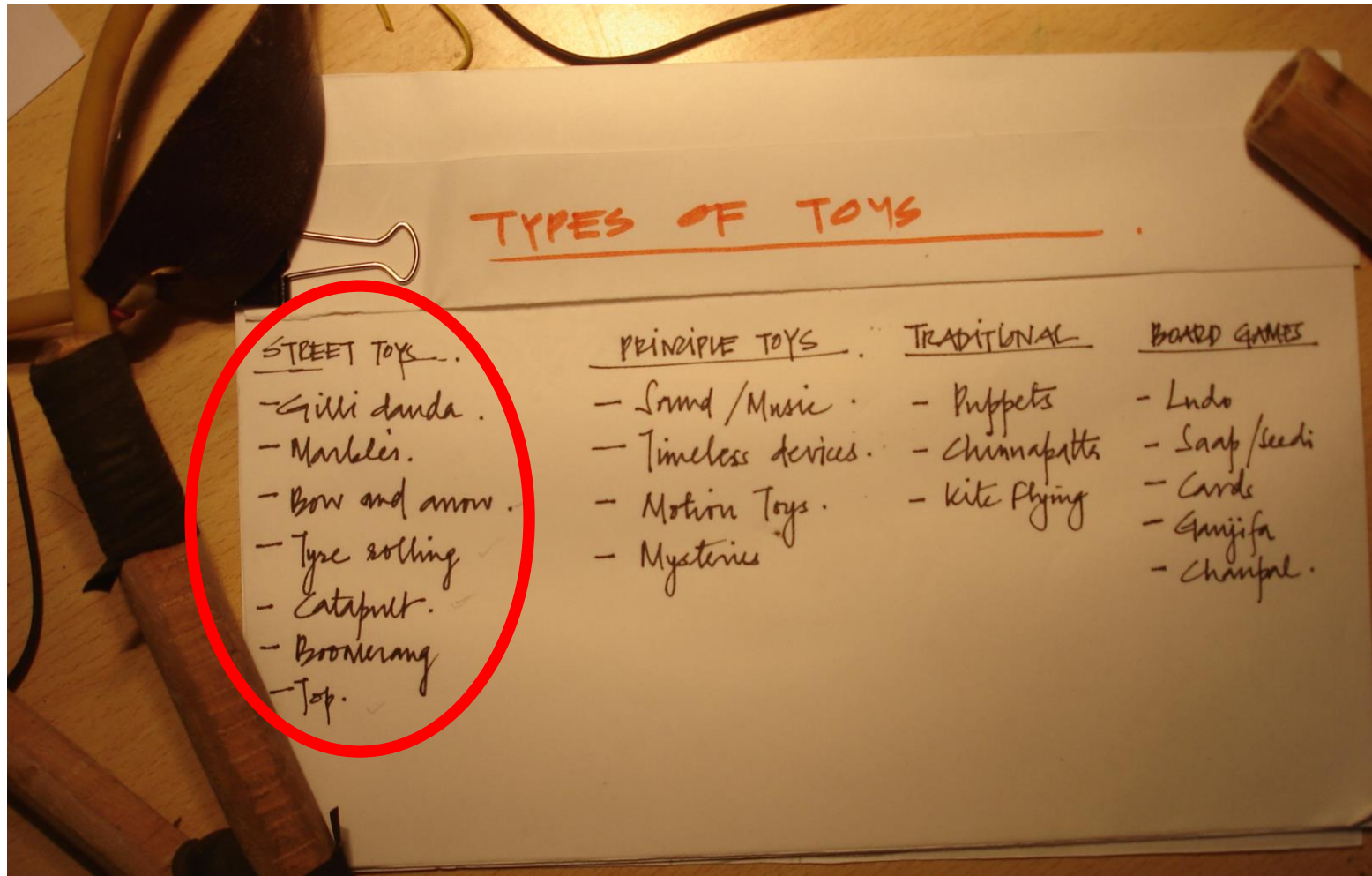
Framing Requirements:

- Age group....7 and above ...psychology, major user audience 7–11
The child demonstrates, serial ordering, and a mature understanding of cause-and-effect relationships. Thinking at this stage is still concrete. Also 61% of games and toys are given to this age group.
- Market Issues...High end quality product, Following new upcoming trends - eco-friendly, uniqueness, Standardization, Identity hold in international market, visual appeal matters a lot.
- Indoor toy/game...India is contributing near to 0% in this particular area...thus it can open up new realms...
- Material specification...Eco - friendly...so basic material chosen is bamboo...

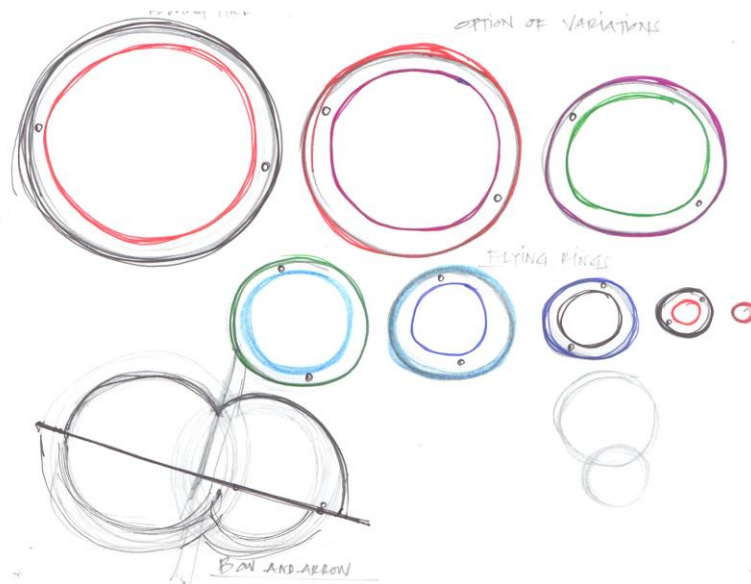
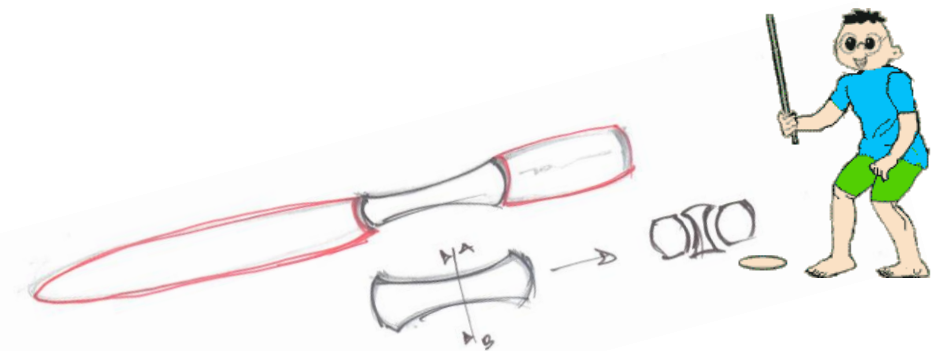


Brainstorming and exploration

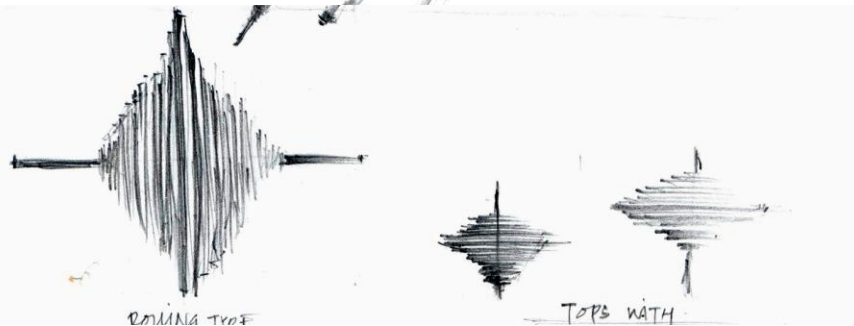
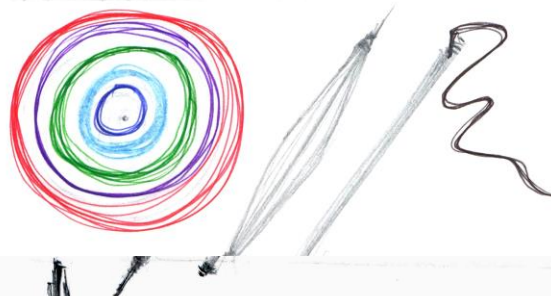
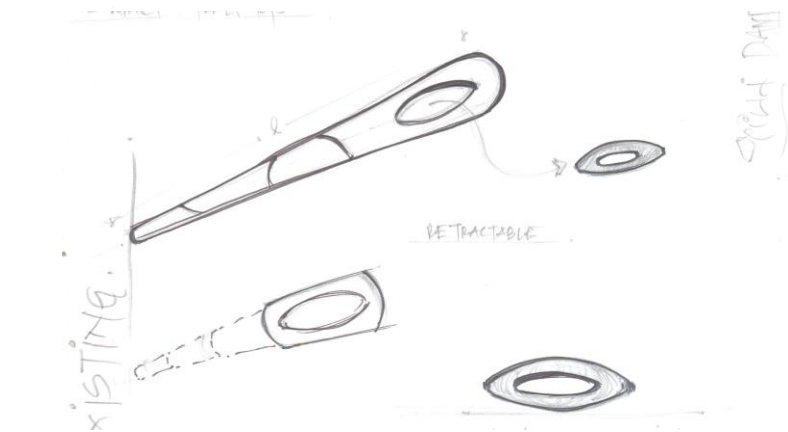
Indian street toys



“upgrading **street toy principles** to produce a compact design for international market...”



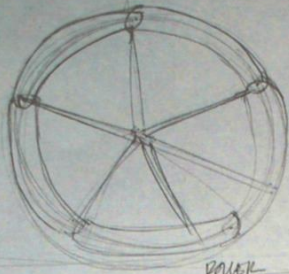
MULTIPLE CHANCES



ROLLING TOP

TOPS WITH

MELESS DEVICES.



POWER



CATAPULT

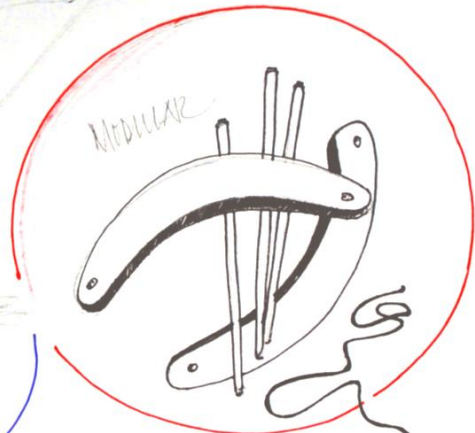


BOOMERANG

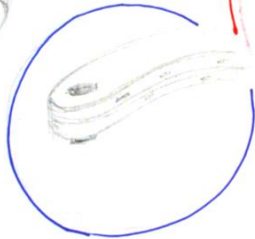
- bow/arrow
- Tyre /rolling
- catapult
- Boomerang

BOW

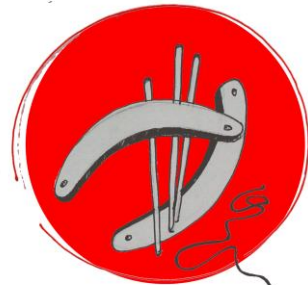
ARROWS



MODULAR

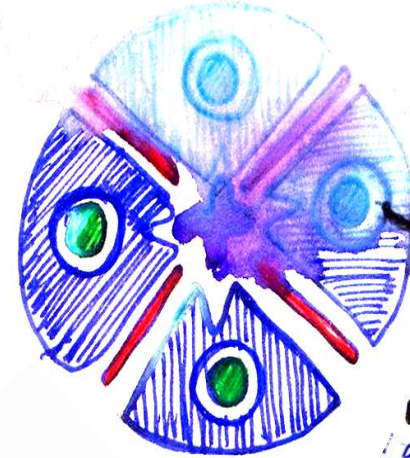


NEW FORMS

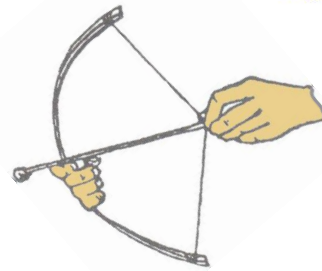


MODULAR

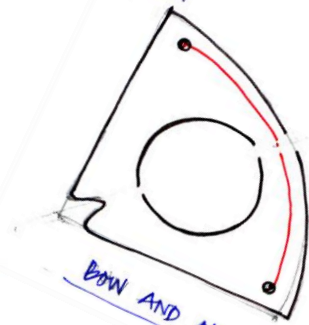
MODULAR NEW FORM



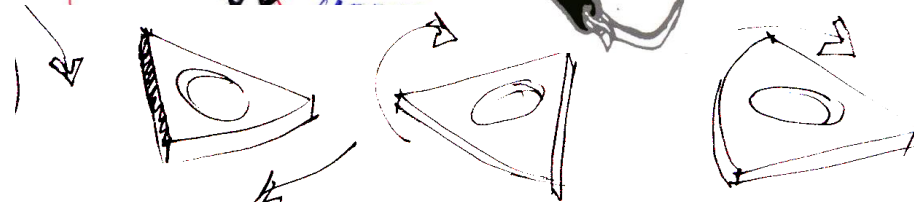
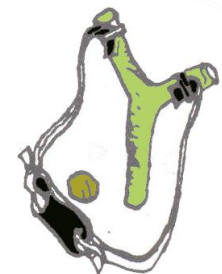
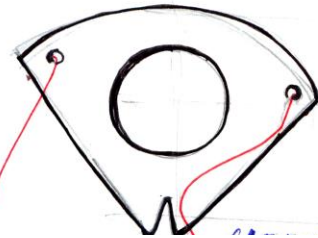
DISK



PEACOCK ..national bird..



BOW AND ARROW

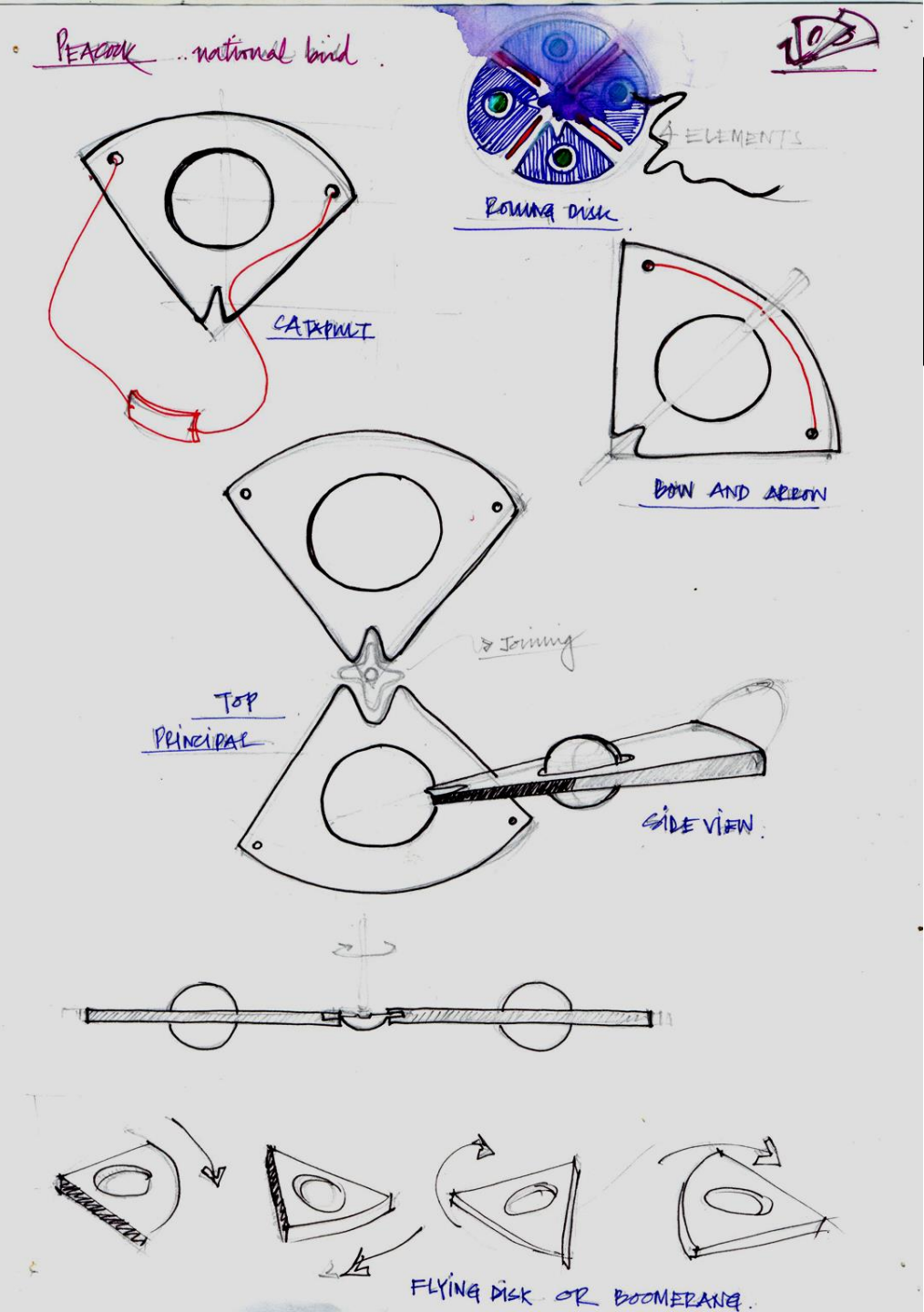


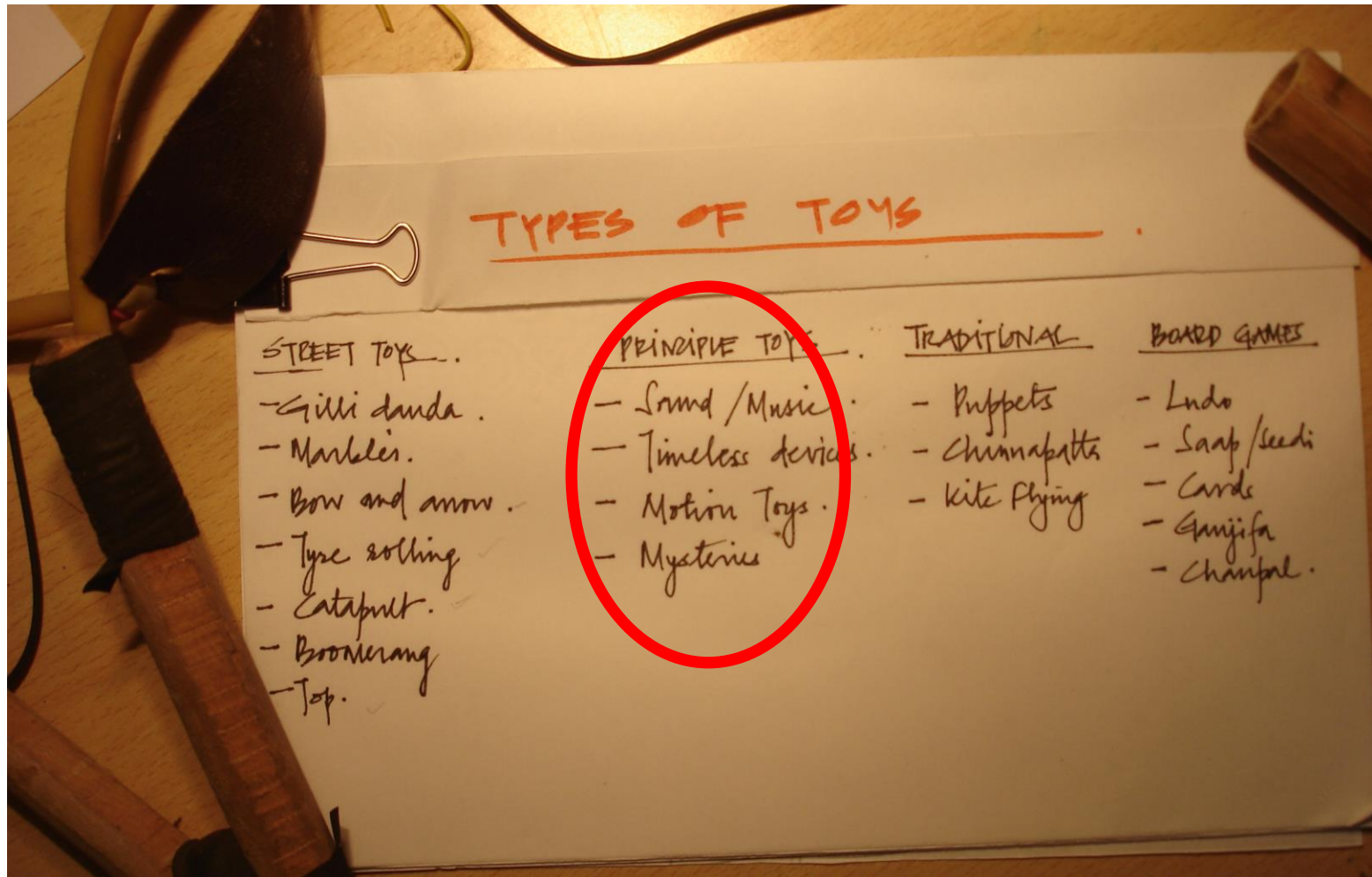
FLYING DISK OR BOOMERANG.

Taking an Indian Animal/bird which represents/symbolises India and creating an interesting toy out of it.

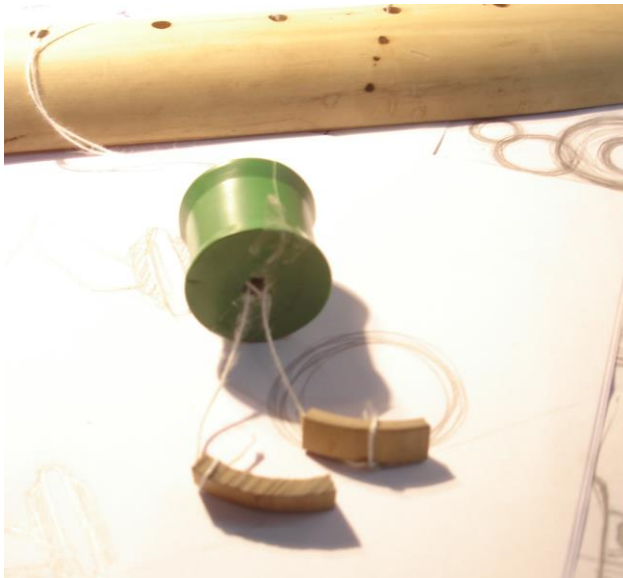
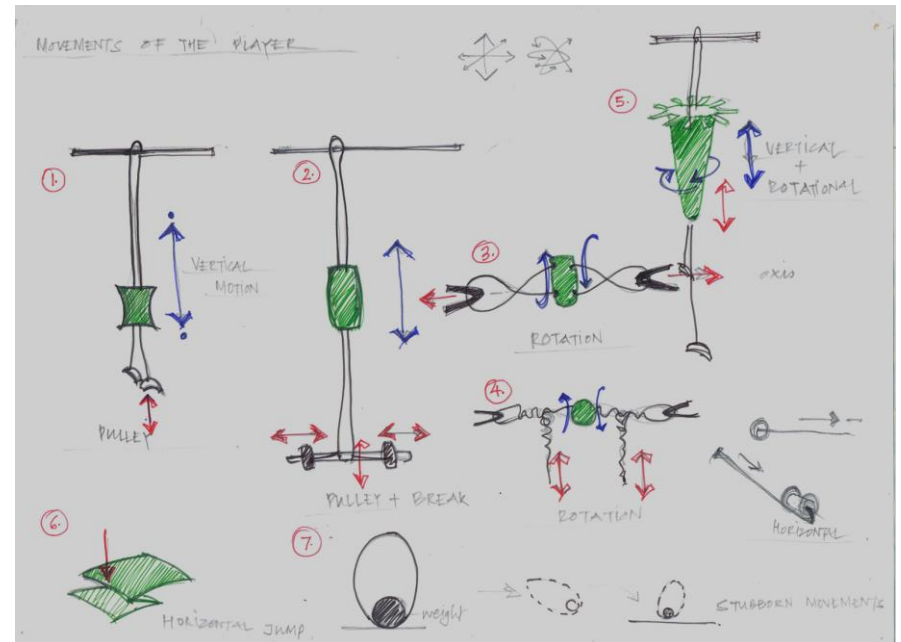
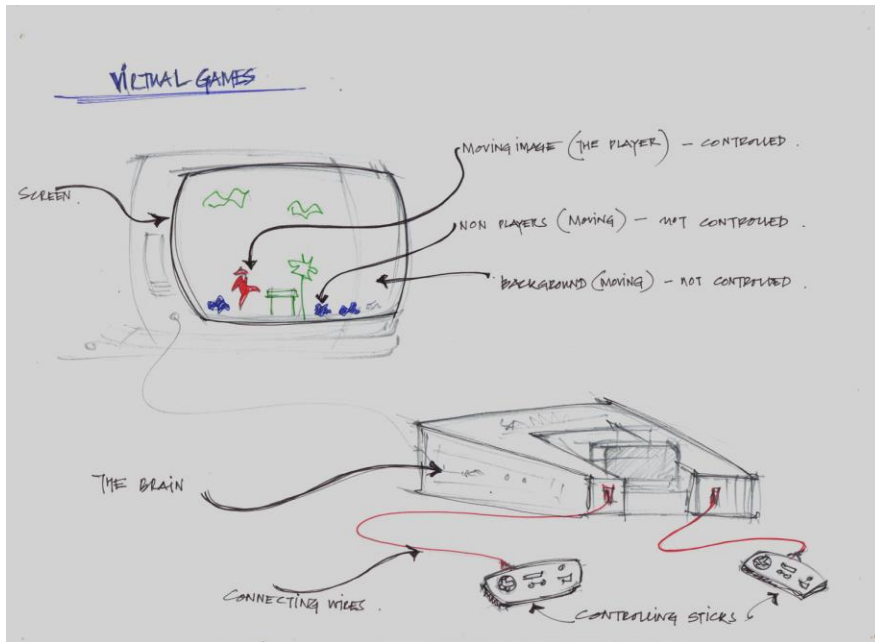


Taking the analogy of our national bird and designing a compact and refined culmination of our street toys...





“Using an existing toy/game principle which is extremely in demand ...
Using a playfulness of traditional toys and applying it to contemporary
way of presentation.



QuickTime™ and a
decompressor
are needed to see this picture.

QuickTime™ and a
decompressor
are needed to see this picture.

Introducing the concept of virtual games into the traditional physical toys.

User's Reaction

QuickTime™ and a
decompressor
are needed to see this picture.

- First Reaction: Great enthusiasm
- They like the way pulley works
- Later it becomes tedious to control and after some time they loose interest in the toy.
- It was not something new to them.
- Failed in seeking attention for a longer duration.
- Sensitivity required to play was above their level of understanding and control.

Introduction of a new material to increase the fun value

QuickTime™ and a
decompressor
are needed to see this picture.

QuickTime™ and a
decompressor
are needed to see this picture.

QuickTime™ and a
decompressor
are needed to see this picture.

QuickTime™ and a
decompressor
are needed to see this picture.

QuickTime™ and a
decompressor
are needed to see this picture.

These experiments were done to
understand the way magnets work.
Further various relationships were realized
through the magnetic movements

Maze and the bug

QuickTime™ and a
decompressor
are needed to see this picture.

QuickTime™ and a
decompressor
are needed to see this picture.

QuickTime™ and a
decompressor
are needed to see this picture.

Using the very famous Panchtantra stories and re-enacting the same using magnets

QuickTime™ and a
decompressor
are needed to see this picture.

QuickTime™ and a
decompressor
are needed to see this picture.

QuickTime™ and a
decompressor
are needed to see this picture.

Task : Monkey has to take the fruits from the tree without falling into the pond where a crocodile is waiting for him to fall.

Choosing the final concept

QuickTime™ and a
decompressor
are needed to see this picture.

QuickTime™ and a
decompressor
are needed to see this picture.

The final concept :

This toy is developed through a way of Indian story telling.

It enhances the capability of hand - brain co-ordination.

It requires lot of patience and concentration along with a great fun value.

It does not only rejuvenate the learning from our culture but also creates interests among kids to know more about these vanishing stories and their values.

Help the kid in understanding the cause and effect relationship.

Revising the requirement of the project

- Age group..... 7 and above ... psychology, major user audience, the child demonstrates, serial ordering, and a mature understanding of cause-and-effect relationships.. Also 61% of games and toys are given to this age group.

- Indoor toy/game ... India is contributing near to 0% in this particular area...thus it can open up new realms...

Final Concept development

Further Tasks:

To complete the story.
(Taking inputs from virtual games)

Overall height has to be increased to the eye level.

QuickTime™ and a
decompressor
are needed to see this picture.

To keep the element of surprise, fruits
need to be inserted while the dome
is hidden.

QuickTime™ and a
decompressor
are needed to see this picture.

QuickTime™ and a
decompressor
are needed to see this picture.

QuickTime™ and a
decompressor
are needed to see this picture.

Closed position

The toy in the form of flower, adds the
surprise and the fun value.

QuickTime™ and a
decompressor
are needed to see this picture.

Open position

QuickTime™ and a
decompressor
are needed to see this picture.

QuickTime™ and a
decompressor
are needed to see this picture.

Section of the petals

Form ideation:

QuickTime™ and a
decompressor
are needed to see this picture.

QuickTime™ and a
decompressor
are needed to see this picture.

Further understanding the way magnets work,
various magnets of different power were studied
and the overall shape was finalized.

QuickTime™ and a
decompressor
are needed to see this picture.

Further detailing the concept

QuickTime™ and a
decompressor
are needed to see this picture.

To keep the beauty of Indian
craft and variety in the same
character, it was decided to make
hand crafted characters. And
then painting it with natural
colours.

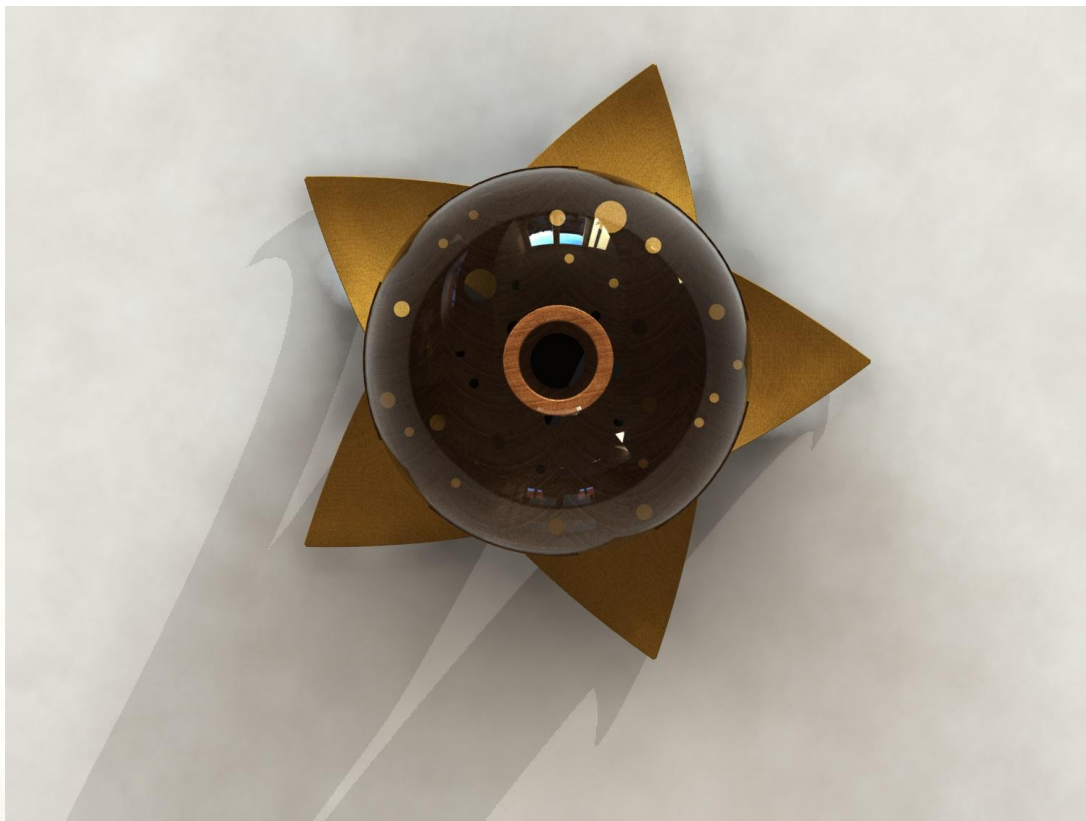
QuickTime™ and a
decompressor
are needed to see this picture.

QuickTime™ and a
decompressor
are needed to see this picture.

QuickTime™ and a
decompressor
are needed to see this picture.

Final renderings



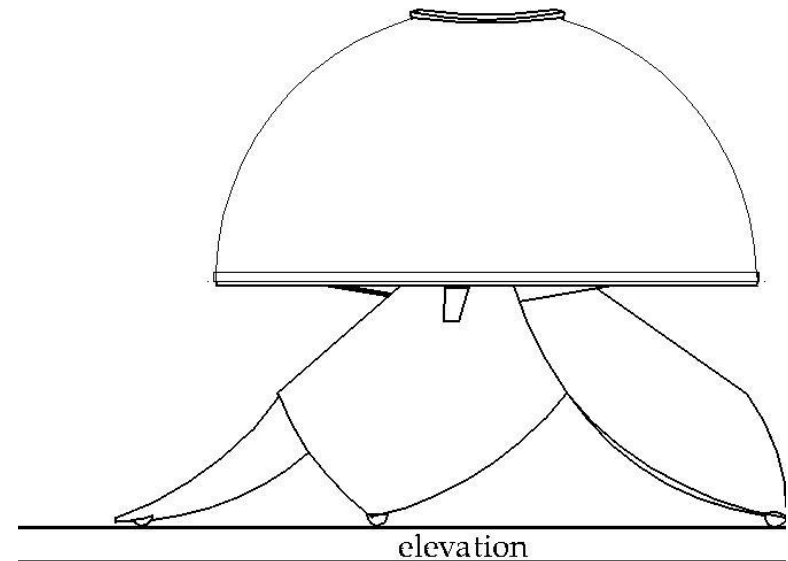
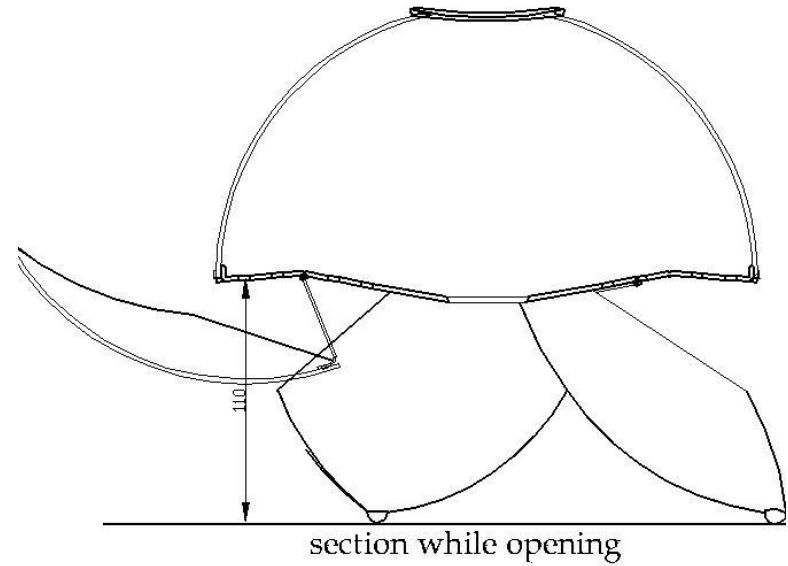
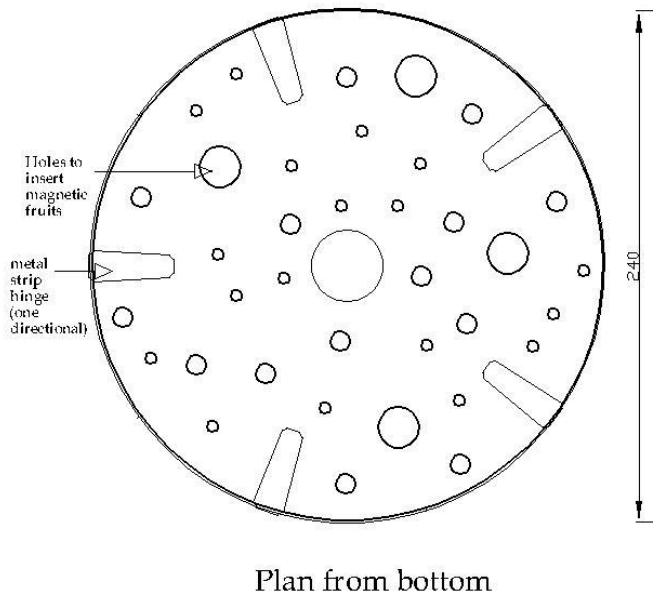
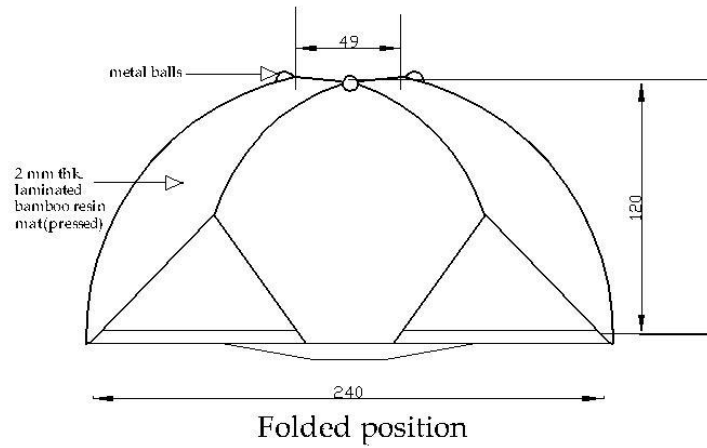


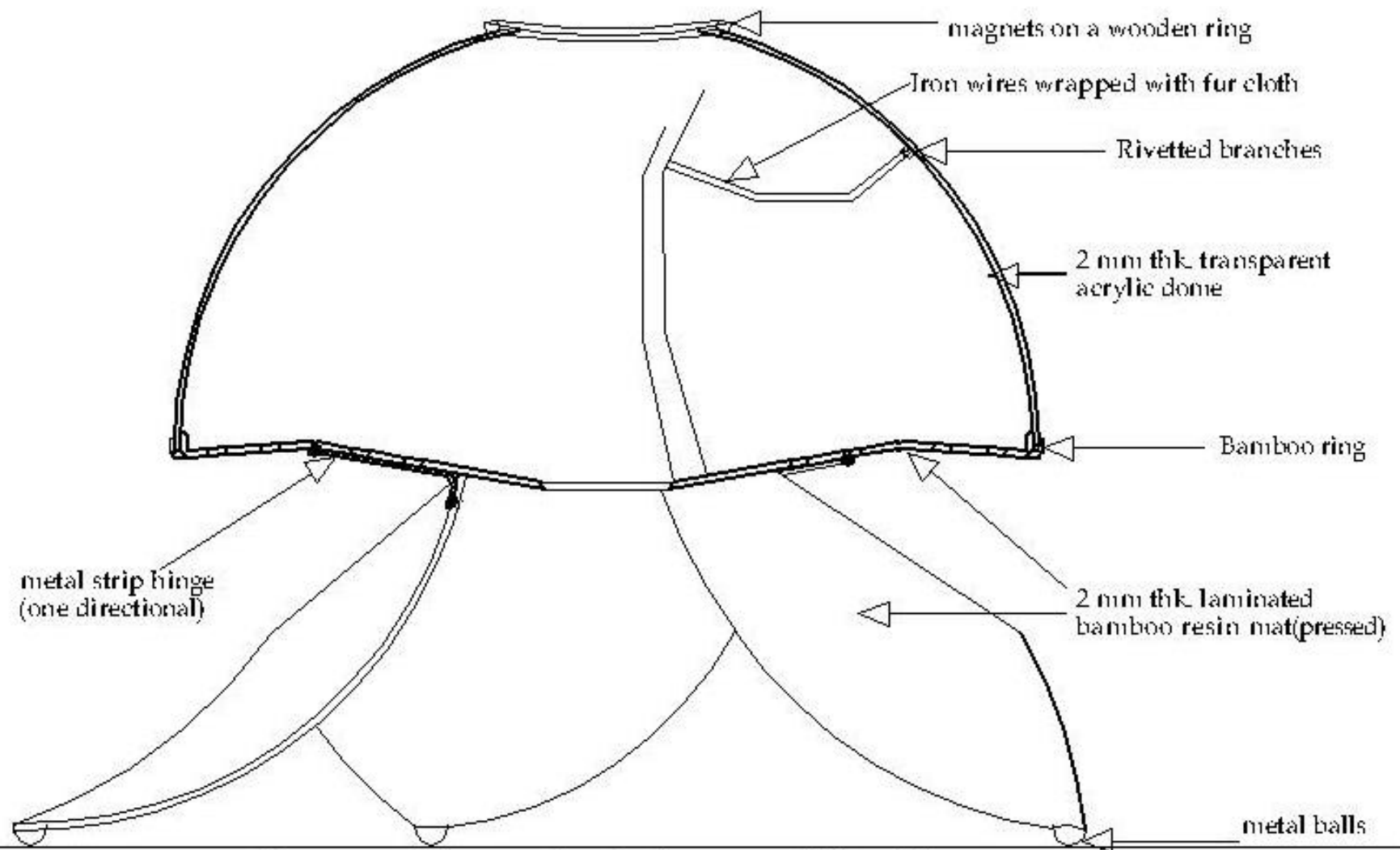
QuickTime™ and a
decompressor
are needed to see this picture.

Product scenario

QuickTime™ and a
decompressor
are needed to see this picture.

Detail drawings and material specifications



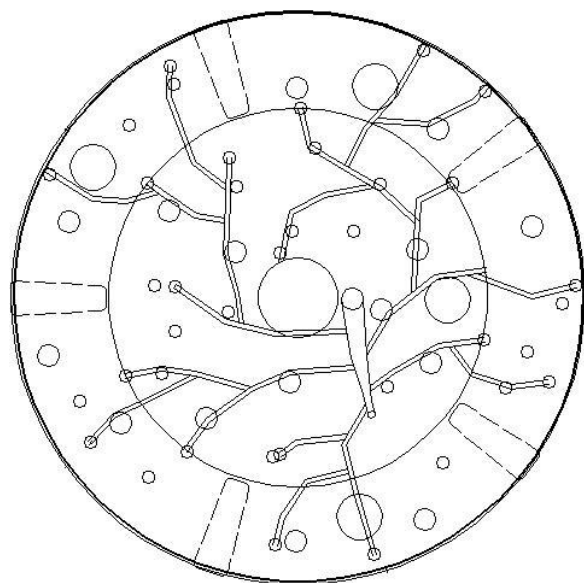


section with materials specifications

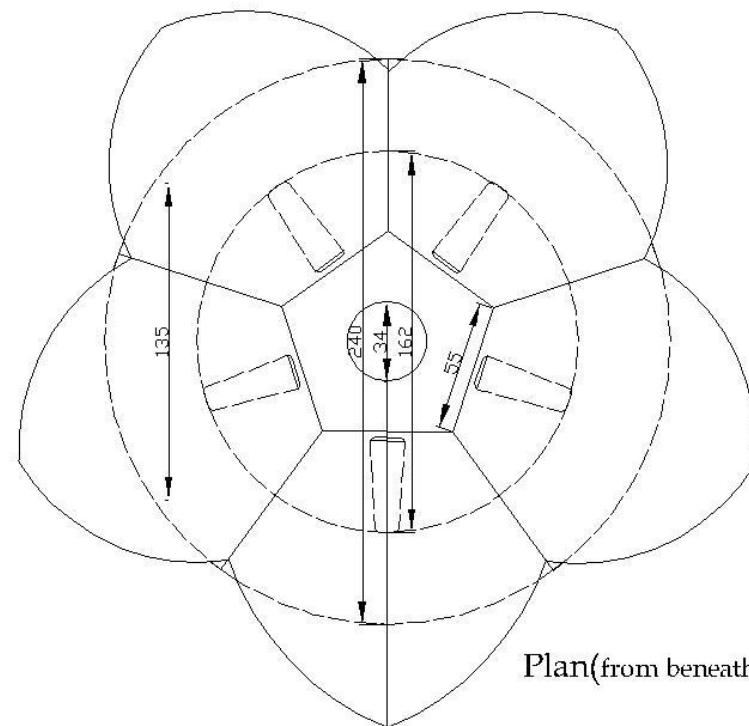
Scale 1:2

Project II : Indian toys for international market

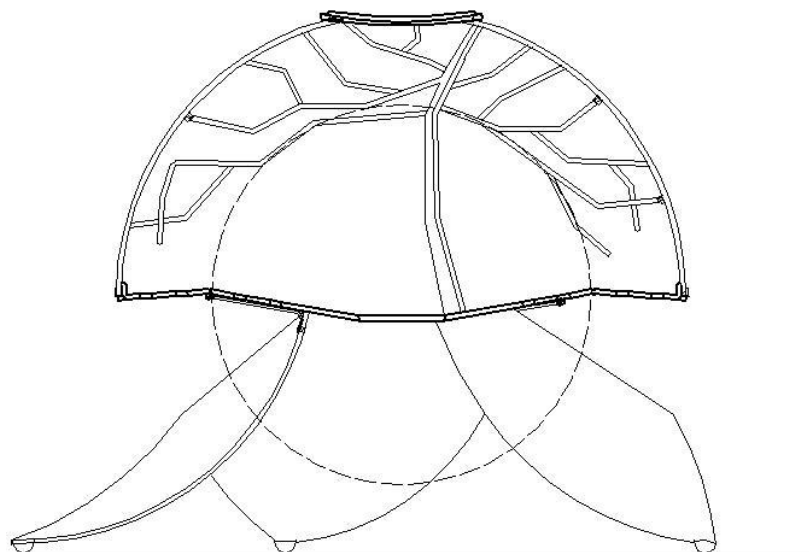
Toy : Panchtantra story of a monkey and a croc



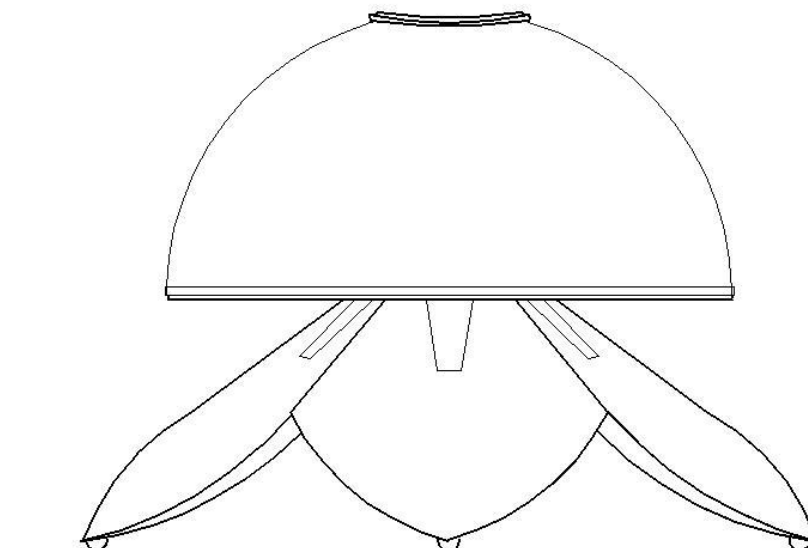
Plan



Plan(from beneath)



Elevation



Scale 1:2

Project II : Indian toys for
international market

Toy : Panchtantra story
of a monkey and a croc

Scale 1:2

Project II : Indian toys for
international market

Toy : Panchtantra story
of a monkey and a croc

QuickTime™ and a
decompressor
are needed to see this picture.

Thanks to...

Prof. U. A. Athvankar

Prof. V. Bapat

Prof. Chakravarthy

Prof. A.G. Rao

IDC workshops

(Patil Sir, Mavade Sir, Rudrapal ji, Samarth)

Abneet, Amey, Bhuwaneshwar, Soumya, Taruja, Milind, Sarang,
Juny, Manoj and all my classmates.

Thank you