GRADUATION PROJECT
LIFESTYLE ACCESSORY DESIGN

Vol. 1of 1

Project Title:

Toys To Narrate Local Folk Tales and Vedic Stories contextualize for children of other all age groups

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Academic Guide:

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KARNAVATI UNIVERSITY

UID

The Graduation Project Jury recommends **Sakshi Mate, Mrunmai Joshi, Somkanta Chatterjee** from **Lifestyle Accessory Design** for Master/Graduation Degree of **Unitedworld Institute of Design (Gandhinagar)** herewith, for the project titled

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ACKNOWLEDGMENTS

SYNOPSIS

Chapter 1 contains understanding the sole purpose of the project we have undertaken and setting a timeline for all the necessary steps required to reach the final goal, along with identifying all kind of limitations. Following **Chapter 2**,contains details about the data collection through various resources. **Chapter 3** ,summarize our understanding of the market to decide a clientele who would directly interact with our brand and another huge mass who can be the sole user of our products. Further developing a brand mood to help with our design process. The next **Chapter 4**,brand development gives a timeline of how we landed upon our brand name, the logo exploration and the brand colour palette in details. Further it also ponders upon the positional aspect of the brand along with listing it's strength, weakness ,opportunities and threats. The soul of the project chapter 5 itself is a timeline of how our designs made to reality through several stages of ideation, conceptualisation and further building prototypes.

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ABOUT UID

Unitedworld Institute of Design (UID) has been built on teaching, learning, innovative and researchexcellence in design education. It offers a diverse range of undergraduate and postgraduate programs inthe area of design. These programs are designed with strong professional emphasis and in closepartnership with industry. Every course has been structured to deliver insights into the importance ofindividual and collective creativity, be it theoretical assessment, design practice, curatorial evaluationsor artistic considerations. UID strives to ensure that each student can maximize this insight and be ableto challenge them to reach their highest potential as an artist, designer and entrepreneur. Eachprogramme by course work leads to the award of bachelors and master's degree respectively, along with professional excellence.UID's continuous growth trajectory is reflected in a number of students selecting it for their skillenhancement. As you will discover, UID is truly an Indian institution that takes great pride in its culturaldiversity. It's a matter of pride for UID to have internationally acclaimed academicians who have beenpart of pioneering design education in India since early 70's.

CONCEPTUALIZERS

We, Sakshi Mate, Mrunmai Joshi and Somkanta Chatterjee, as a team, love to be known as SMS just not because that the popular abbreviation is a combination of the first letters of our names but it stands for three team qualities we peruse for- Sincerity, Meticulousness and Sagacity. Our power lies with our differences in perspective, taste and area of expertise due to our differences in culture, upbringing and geographical location. Therefore, we, as a combination, possess multiple skills essential to perform with comprehensiveness and completeness. The integrality of the team originates from our power of reciprocity manifested when we teach each other, resolve issues through debates and fulfill each other's shortcomings.

Sakshi Mate from Pune, Maharashtra is a final year of Lifestyle Accessory Design from Unitedworld Institute of Design, she realized how design, even minute details of it, can affect our daily living. As she consider herself as a humble and considerate person who strive to help others in every possible way, studying designing has given her a new way to complete her dream by creating products that help people solve their problems and live a peaceful life. She has interned in Atmosphere Workspace Solutions Pvt. Ltd. as a furniture designer.

Mrunmai Joshi is pursuing Lifestyle accessory design from Unitedworld Institute of Design. She is always enthusiastic while learn new things and can assimilate new ideas quickly. Working with different materials and sustainable alternatives are her keen interests. Her 3D visualization and digital renderings skills help her to contribute the team. She worked in Itrana, Kraft-Obench and Nirvana gems and jewels, where she gained knowledge about different client base and their requirements.

Somkanta Chatterjee, from Kolkata, with her background in Science, has acquired expertise lifestyle accessory from Unitedworld Institute of Design. She can competently work with a diverse range of materials like wood, metal, leather, ceramics and so on. Digital illustrations and caricature is a strong skill she have developed within this years of work. Her exposure, as a selected participant, at the programmes like COVID19 Design Challenges organized by WDO (World Design Organization) and internship at Bluestone Pvt. ltd. has helped her contribute to the team.

OUR GUIDE

Shweta Rai, a graduate of Pearl Academy, with ten years of industry experience in luxury jewellery and lifestyle products. She has designed jewellery for celebrities for red carpet events, United States based luxury stores and celebrities. Shweta Rai was a member of the writing team of social incubation projects, funded $50 Millions by Dell Foundation. She has executed Asia's largest non-farm artisans' livelihood development project in Rajasthan by developing jewellery designs for artisan clusters. She has worked closely with Fab-India in developing social enterprise for lifestyle handcrafted products for Dell Foundation and Dastkar Ranthambore. She has five years of design education experience and has presented research in design education and practices in International Design Conferences. Her Design philosophy believes that design intervention may create economic opportunities and have macro impacts.

BACKGROUND

In 2020, the Government of India developed a National Action Plan to boost manufacturing of toys and games with an economic goal for the country to become a global toy hub like China. The huge potential of toys market all across the globe and the opportunities of India to increase its share in global toys market through indigenization and diversification of toys were first demonstrated by the Prime Minister Mr Narendra Modi on August 30, 2020 during his Mann Ki Baat address to the nation. He emphasized on providing platform to the States to develop toys reflecting the history, culture and social identities specific to the States so as to bring indigenous toys at the hands of the children. The global demand for toys has increased by 25% during the pandemic-induced lockdown that caused the children to be locked up inside homes. Moreover, noticeable rise has been observed in the demand for different toy types that augment learning, family bonding, brain storming and sensory development. In spite of its limitations in manufacturing technology-based toys, India has tremendous opportunity to diversify toy products ranging from traditional plush and stuffed toys, construction and building toys, dolls, board games and puzzles to high-end electronic toys, educational toys, rides etc. which can be produced at small, medium and large scales ensuring 50 – 60 percent growth in Indian toys market. Implementation of the plan will also offer impetus to job generation and empowerment at the local level. Other factors which add to India's potential for expansion in toys manufacturing sector include popularization of e-commerce, shifting trend of toy materials from plastics to non-plastics, demand for innovative ideas in designing toys and labour intensiveness of the modern toys industries.

In the above context, the current project was undertaken as an endeavour to assess the challenges in implementation of the action plan and explore innovative approaches to design toys based on Indian folktales, epics and mythology. The project received funding from i-Hub (Govt of Gujarat) and Karnavati Innovation and Incubation Foundation (KIIF, Karnavati University). A good variety of games and toys were designed and some prototypes were developed as the products and deliverables of the project. Episodes in the Mahabharata, popular moral stories from India, stories from Indian mythology like Vikram and Betal were adopted in designing the games and toys in innovative ways. These are expected to improve the quality of time spent by the parents with their children while the children will be introduced to their indigenous cultural heritage in a milieu where they are largely distracted from their own culture for being engaged grossly in the digital world. The games and toys developed under the project will offer opportunities for playful learning to the children from different age groups.

INTRODUCTION

In terms of child population, India is one of the largest countries in the World and, therefore, a potential market for the toys and games. A wide variety of traditional and modern toys are available in Indian markets manufactured by independent, medium and small businesses as well as many foreign brands. However, the changing tastes of the users demand a transition from conventional to creative process of designing toys and efforts in this direction are still inadequate to satisfy Indian toy market. This project is aimed at experimental exploration of toy design ideas from Indian culture and tradition. It seeks to set up a brand that specializes on developing innovative toys and games based on Indian folk culture and mythology and thus to create a sustainable design language that will guide the design of a suite of toy products in a coherent style. Another major goal of this brand would be to showcase the rich cultural heritage of India and make the children aware of it. The brand will emphasize on learning of morals, values and ethics in a playful way in order to guide the children in the path of righteousness. Thus the toys and games to be developed by the brand will function as the medium for transfer of the essences of indigenous culture into the children through active participation of the parents. The economic benefits of successful implementation of the project include creation of job opportunities for local artisans even at the villages and more flow of funds to the basic level of the country's economy. The brand will work to contribute to the toy manufacturing sector in tune with the 'Make in India' initiatives of the Govt of India for the building of an "Atmanirvar Bharat".

CHAPTER 1. PROJECT BRIEF

1.1 Objective
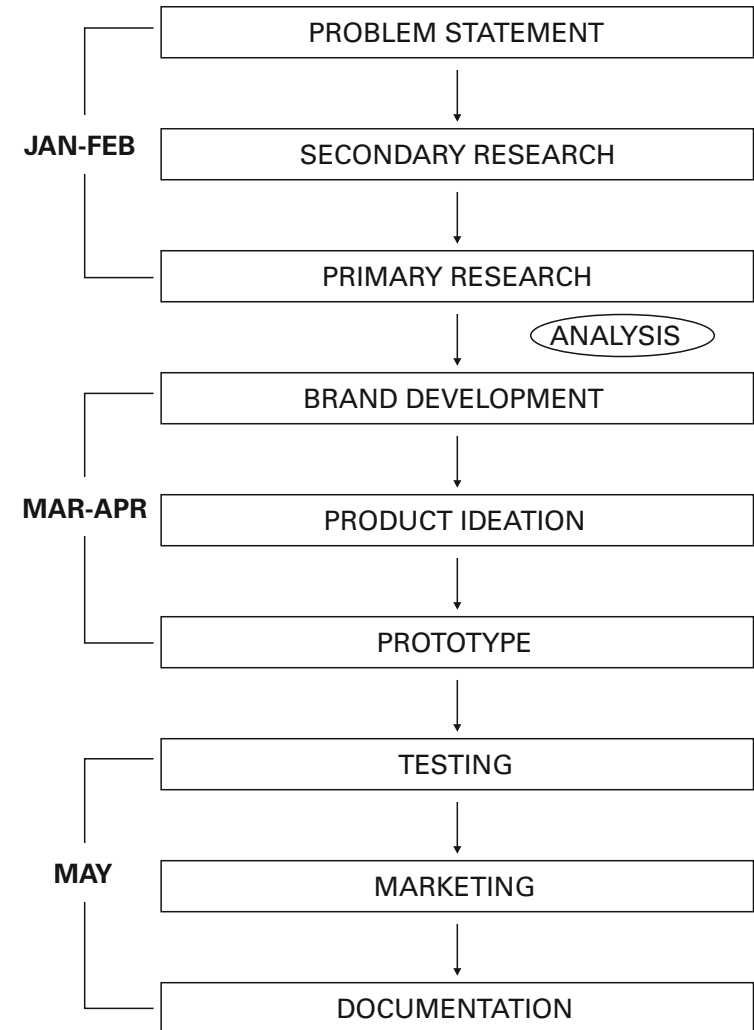
1.2 Hypothesis

1.3 Methodology

1.4 Limitations

The first chapter contains understanding the sole purpose of the project we have undertaken and setting a timeline for all the necessary steps required to reach the final goal, along with identifying all kind of limitations

OBJECTIVE

Objective Diagram

- TOYS AND (center)
- All round developme
- Play
- Cultural knowledge
- Basic education
- Sensory developme

SOCIAL DEVELOPMENT
- Spending quality time
- friendship
- Leadership
- Interaction
- co-operation
- Bonding generation

FINE AND MOTOR SKILL DEVELOPMENT
- grasp
- squeeze
- pull
- push
- holding

EMOTIONAL DEVELOPMENT
- Resolve conflicts
- gain confidence
- empathy
- self regulation

COGNITIVE DEVELOPMENT
- teething
- sorting
- building
- stacking
- memory
- processing speed
- auditory
- visual processing
- logical reasoning

CREATE OWN BRAND
- Toyconomy
- Make in India
- Atma Nirbhar Bharat
- Vocal for local

COLLABORATIO
- With local artisans
- Brands
- Play schools

CREATE AWARENESS
- Value
- Culture
- Environment

METHODOLOGY

JAN-FEB
- PROBLEM STATEMENT
- SECONDARY RESEARCH
- PRIMARY RESEARCH
- ANALYSIS

MAR-APR
- BRAND DEVELOPMENT
- PRODUCT IDEATION
- PROTOTYPE
- TESTING

MAY
- MARKETING
- DOCUMENTATION

LIMITATIONS

For being absolutely new of its kind and operated during a constrained time (lockdown due to COVID-19 pandemic), the project suffered from few difficulties at different stages of its implementation which limited to achieve the **targets at the desired level**.

1.   **Lack of experiences in the field** of toys and games restricted the team from easy application of skill and expertise of the members for the present purpose. Many of the toys required high-end mechanical systems to develop which needed extremely sophisticated scientific laboratories and workshops to be agreed to work in favour of the project. After a long and continuous effort, the Birla Industrial and Technological Museum, Kolkata (Govt of India) kindly extended generous help to meet the technical requirements of the project, but the process consumed a considerable period of time stipulated for completing the project.

2.   The **manufacturers** contacted for prototyping the toys **did not have experience** in developing the designed toys and, therefore, were extremely reluctant to take up the jobs even after getting absolutely clear design provided by the team.

3.   **Lockdown** for multiple times due to **COVID-19 Pandemic** affected the project very badly.

4.   The members of the team **belong to different states** of India and the project had to be carried out away from the College campus. This came in the way of working team members together and challenges due to lack of coordination among the members had to be partially managed by staying at rented houses in different cities of the country, but still it could not help desirably.

HYPOTHESIS

• To create a brand identity

• A unique design language

• Developing a product portfolio

• Creating a manufacturing chain through local artisans

• Applying for funds and grants.

CHAPTER 2. INFORMATION COLLECTION

2.1 Secondary data collection
2.2 Primary data collection

The following chapter contains details about the data collection through various resources. Surveys on both digital and physical platforms, visiting industries, interviewing and attending seminars and webinars was the main tools used for collection of primary data. Whereas going through books, article, research papers and study material available on internet and other digital platforms helped us with the secondary data collection.

2.1 Secondary data collection

-Children and toys
-Toys
- What are Toys
- Types of Toys
- Indian Toys Handicrafts
-Games
- Game Mechanics
- Characteristics Of Games
- Traditional Indian Games
- Types Of Games
-Conceit
- Mahabharat
- Folktales
- Eductaional Toys
- Sensory Toys
-Market Study

2.2 Primary data collection

2.2.1 Visits
2.2.2 Field observation
2.2.3 Seminars and webinar
2.2.4 Survey

SECONDARY DATA COLLECTION

CHILDREN AND TOYS

Growth and development includes not only the physical changes that occur from infancy to adolescence, but also some of the changes in **emotions, personality, behaviour, thinking and speech** that children develop as they begin to understand and interact with the world around them. Following are the general traits observed in children according to their age-

Birth to 2 months -
- **Interest** in face and voice
- Are bombarded by **external stimuli** (shapes, sounds, colors)
- First 2 months- attracted by **light, primary colors, stripes, dots and patterns**
- Music is very important at this age
- Very sensitive to pain
- **Toys**- Activity centers to look at and listen to; mobiles over cribs, rattles, teethers, simple toy musical instruments, playing with water or sand, shape sorters

Age 2-
- Around 2nd year, children can stand, walk, climb stairs
- At this age, **drawing** for them is scribbling with crayons regardless the space
- Enjoys **pushing, pulling, throwing and picking up objects**.
- They enjoy holding a spoon (usually upside down)

- **Toys**- Rocking horse, easy puzzles, make-believe toys (plastic houses and people, toy cars and trucks), crayons and paper

Age 3-
- They can kick big ball-shaped objects and catch a ball with both hands
- Can hold crayon with two fingers and thumb
- They enjoy **building blocks and playing with clay in which the pound, roll and squeeze it.**
- Can pedal a small tricycle
- **Toys**- Tricycle, toy basketball hoop and balls, toy trains with tracks, dolls with bottles and other equipment, toy kitchen equipment, colouring books and crayons

Age 5-6-
- Understands time and seasons
- At age 6, their movements are more precise and they cant stay still
- They enjoy **problem solving activities, puzzles, mazes and stacking** due to the increase in their attention span
- Enjoys **challenge, counting, paper and pencil mazes and games** involving matching letters and words with pictures
- Can fold and cut paper into simple shapes
- **Toys**- Simple sports equipment, books, board and card games, computer games, collections, building blocks

Age 6-10 -
- There is a significant increase in their **problem-solving ability**
- Their short and long term memory gets improved
- They also start understand **moral rules** like difference between right-wrong and good-bad
- Play is no longer fantasy based where **imagination** is the key. Instead they start choosing rule based games where rules are the key.
- **Winning** becomes the main objective
- They can use tools like hammer, screwdriver and are graceful with their movements
- They enjoy **collecting** objects and also play board games.
- **Toys**- Small blocks and building sets, art supplies, activity books, beginning reader books, games, music, books, games, sports equipment. By this age, kids may get particular about their toys according to what is popular with their friends

Although toys are beneficial for children, parents might have a different attitude towards them. Its important to know their thoughts as well. They often blame toy manufacturers for the kind of gadgets that are available in the market. **It is the parent, not the toy maker, who will ultimately decide which toy to buy.**

The **younger parents** spent more money on buying toys for their children than the older parents. The longer the child played with toys, the higher value the mother put on the toy in terms of the child's interests in play and developmental appropriateness.

It is also seen that parents' perception of toys was based on **quality of product, emotional value and suitability of the price**. With regard to quality, they looked for **safety, environmentally friendly materials** and whether they could function properly. In terms of notional value, they looked for **safety and comfort** for children.

In the toy sector, other materials such as wood, textiles and metal are being employed. **Brass and Copper** has been used for making toys in early ages. But wood being a biodegradable material is highly preferred by parents for their kids. At the same time, taking money into consideration, **Plastic toys** are much **cheaper** than wooden toys and hence are sold on a large scale. Toys made with **textile** can provide the perfect mix for developing **sensory skills** and encouraging

social and emotional growth. At the same time, **Plastic** is far more **durable** but also can be harmful as it increases the risk of Cancer and Asthma. **Wood** is indeed a safer alternative to plastic or metal since children tend to stick everything in their mouth. Wood makes a good option for **environmental friendly material.**

Research found that mothers of 3-5 year-olds rarely considered cultural appropriateness and durability of toys, reliable manufacturers and **color** of toys.

Colors are the most commonly used tool by children to **express their emotions and thoughts**. Colors affect the bodily functions, mind and emotions with the energy produced by light. Color could affect the **psychological reactions** as well as the **physiologic health** of children.

Red is the most **dominant color** among all colors. Red has been observed to have a more **stimulating effect on visual activity** and autonomic nervous system functions. **Yellow** is the **most joyful color** on the color scale. It also helps boost **energy and happiness**. **Purple** stimulates the part of the brain related to **creativity**. At the same time it has a calming effect. It is the ideal colour of kids for grabbing attention. Psychologically the cold and comforting nature of blue is the polar opposite of the warmth and excitement of red but at the same time this color brings a very drowsy or lethargic feeling thus should be balanced very wisely. **Green** is reminiscent of **peace, calm and quiet**. The yellow in green lends an elegant character to this color while the blue renders it warm. **Orange** is the mixture of **optimistic of yellow and vitality of red**. Orange physically represents **self confidence, independence** and to a certain extent competition.

Now-a-days, parent attitudes show a uniform trend of agreement that toys are one of the **necessities** or dispensable luxuries. They are aware that **children love toys** and that there might be different toys appropriate for different age groups.

TOYS

Toys are simply objects that children use to entertain themselves while simultaneously exploring the world around them, educating themselves, role-playing, and learning to express their emotions. They are often used as symbols for other things and therein lies their great potential for helping children grasp bigger concepts.

Toys that can be played with in a multitude of ways help your child's brain expand and get them thinking in narratives. This, in turn, helps them to see the world more broadly. When items as simple as blocks, dolls, animal toys, balls, mini-cars, or pretend food are handed to a child, they will take these as invitations to start creating stories and living out scenarios in their mind. Even with objects that aren't initially designed to be toys, kids will quickly re-assign them as such, especially if that is all they have available.

Benefits of open-ended play:

Creativity and Imagination - Children can come up with their own ideas of how to play

OPEN-ENDED TOYS

with them and make up stories to go along with them.

No Rules - Especially after a period of structure, such as school, open-ended toys can be a lovely reprieve and calming for children who just want to play without any rules.

Processing events and stories - Open-ended toys and pretend play in general is such a great way for children to work through events, friendships. It is also a way to retell stories or make up their own.

Independent Play - Often this type of toy is the best for long periods of play while we get our own tasks done. With room for creativity, mess, and imaginative play, children can really get lost in their own little world with this kind of play.

Less pressure- With no predetermined outcome, open-ended play eases off the gas pedal of achievement and allows children to focus on creating based on inner inspiration. During play, children have choices and decisions to make. This format offers great potential for self-discovery.

No errors- Since trial and error is part of open-ended play, unintended mistakes cause children to pause and wonder. "Errors" produce fascination and foster new creation. Self-initiating behaviours are developed.

Liberty- Open-ended play gives children a sense of freedom and autonomy to develop initiative and self-confidence. They enjoy making choices themselves, affirming their ability to be responsible and self-directed.

CLOSE-ENDED TOYS

With close-ended materials, there is one specific purpose and way to use them. Close-ended include materials such as knobbed cylinders, a puzzle, tracing, object to picture matching, or one-to-one correspondence. Often a lesson is given before the child interacts with the material.

Benefits of close-ended toys

Purpose - Young children love nothing more than having a purpose. There is a clear purpose to each toy, which gives children a sense of ownership and accomplishment.

Challenge - These type of toys can be chosen to provide just the right level of challenge for a child. There is something so satisfying for children (and adults) when working through a problem that is tough but not out of reach.

Mastery - With that purpose and challenge comes the satisfaction of completing the work. Children feel the sense of "I did it" when they master it, particularly for the first time. They can then even go on to teach a younger child how to use the toy.

Concentration - As children work through these toys and challenges, there is often a look of "in the zone". When children are deep in concentration in this work, they often want to repeat over and over even after mastering.

Self-correction - Many close-ended materials allow for self-correction, meaning they indicate when something is wrong, rather than an adult telling them so.

Order - Young children crave order, as order gives them a sense of security in a world that feels so big. Close-ended materials give them this sense of order, which is attractive and inviting to them.

Specific Skills - Each material aims at teaching or owning a specific skill, whether that's size discrimination, shapes, writing, or colors. By isolating one skill at a time, children can really focus and master that skill.

Sequencing - Often, close-ended materials involve multiple steps, which helps young children learn how to sequence steps and plan ahead. They memorize a specific order to the steps, and gradually add on more steps with age and experience.

Cleaning Up - Part of the sequencing involves taking a tray off the shelf and putting it back on after. Even toddlers get practice with the full cycle of an activity: Taking the tray off the shelf, putting the toy on a work mat, using it, putting it back on the tray, and back on the shelf. These are wonderful habits to develop.

It's important to note that just because a material is close-ended, doesn't mean that it will always be used in the way intended. If no one or nothing is getting hurt, there is typically no problem with the toy being used creatively. Lots of "close-ended" materials end up being used in an open-ended way.

OPEN-ENDED

CRIB MOBILE TOYS

TEETHING

BLOCKS

PUPPETS

DEXTERITY

TOY ANIMALS

SPINNING

AR TOYS

SORT AND STACK

PUSH PULL

PRETEND PLAY

SENSORY

REMOTE CONTROL TOYS

SOUND

DOLLS AND FIGURINES

CLOSE-ENDED

SOFT BOOKS

CONSTRUCTION TOYS

DIY KITS

STEM TOYS

PUZZLES

INDIAN TOY HANDICRAFTS

India has a rich legacy in toy-making. Historically Indian toys date back to 5000 years. The excavated toys and dolls found in Harappa and Mohenjo-Daro included small carts, dancing woman, etc. India has a rich culture of storytelling through its toys. Our ancestors have been preserving this culture by making toys which show a perspective of life. The religious influence also led to a different set of toys depicting stories from epics like Ramayana and Mahabharata.

There are traditional toy clusters in in parts of India sucha as Channapatna in Karnataka, Kondaplli in Andhra Pradesh, Thanjavur in Tamil Nadu, Dhubri in Assam, and Varanasi in UP—are places that have their own toys. Commerce and urban development ministries will look at exhibiting the toys better, while the MSMEs will look at ways to make the industry sustainable, which right now is small scale, traditionally handicraft-based and spread across the country industry.

Above images 1) Tanjavnur dolls (Tamil Nadu), 2)Channapatna toys (Karnataka), 3) Kondapalli toys (Andhra Pradesh), 4) Puppet dolls (Rajasthan) 5) Wooden toys (Varansi), 6) Covonut fibre toys(Odisha), 7) Terracotta toys (Assam), 8) Sawantwadi toys (Maharashtra)

GAMES

A game is a structured form of play, usually undertaken for entertainment or fun, and sometimes used as an educational tool. Games are sometimes played purely for enjoyment, sometimes for achievement or reward as well. They can be played alone, in teams, or online; by amateurs or by professionals. Toys generally allow for unrestricted play whereas games come with present rules.

Key components of games are goals, rules, challenge, and interaction. Games generally involve mental or physical stimulation, and often both. Many games help develop practical skills, serve as a form of exercise, or otherwise perform an educational, simulational, or psychological role.

GAME MECHANICS

| GAME MECHANICS | → | GAME PLAY | → | GAME EXPERIENCE |

GAME MECHANICS:
Game mechanics is the architecture of the game. They are the set of rules designed for interaction of players, those rules are the basics of all kind of excitements and frustration one experience during the process of play. Such frame includes the definition of the players, the goal, the process, the conflicts, the result and the dramatic peaks of the process. These "action of plays" are crucial; they let the player discover new space, it's possibility and restrictions.
Common game mechanics :

Board:Area Control & Area Influence | Area Enclosure | Area Movement | Hex-and-Counter | Modular Board | Pick-up and Deliver | Point to Point Movement | Rondel |Tile Placement | Cards:Deck Construction | Card Dealing | Card Drafting | Card Drawing | Card Driven Campaign/Battle | Hand Management

| GOAL DEFINITION/ ACCEPTANCE | → | EVALUATION OF ENVIRONMENTAL CONDITIONS | → | PLANNING | → | EXECUTION OF PLANNING | → | EVALUATION OF OUTCOMES |
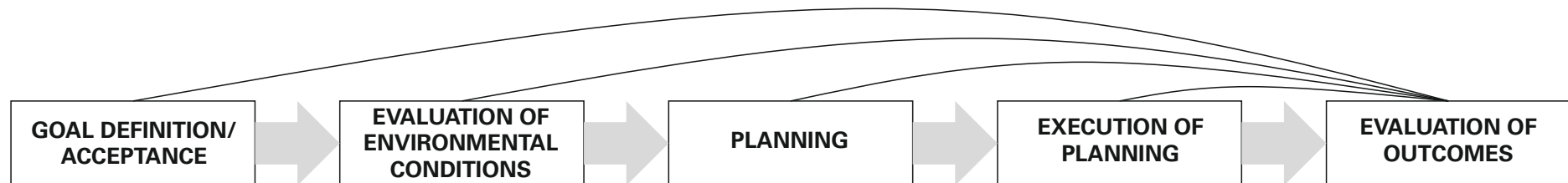
GAMEPLAY:
Game play is an iterative process of interaction with reality driven by environmental feedback.Human activity can be conceptualised as a multiple loop process through which a subject self defines or accepts externally defined goals; evaluates environmental conditions which leads to operating a course of actions to attain goals, accounting for the evaluated accounting for the evaluated conditions;execute the plan;and evaluate results.

This chain further forms a loop which leads to re-formulation of goals and plans,or re-evaluation of conditions and outcomes.

GAME EXPERIENCE:
When people commit to a game,they become players and thus part of the game.It does not only depend on the spatial layout of the game level but a part of it depends on the visual experience of the game model.It is a close relationship between game rules and game space subjected to the form of visual presentation which ultimately determines the quality of the interactive experience.
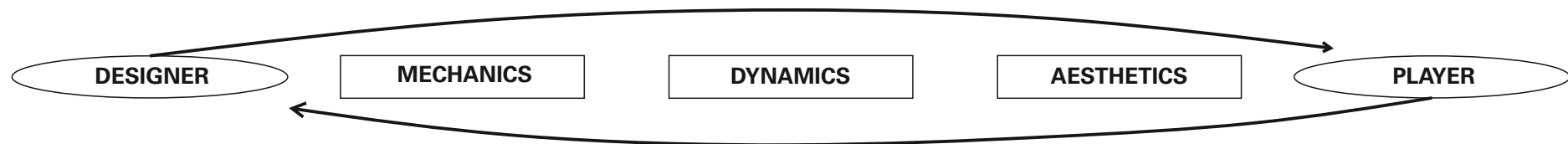
MDA FRAMEWORK:
- Mechanics- "material"of the game, basically the rules, data and structure

- Dynamics-behavioural aspect of the game i.e how the player interact with the game.

- Aesthetics- Design perspective of the game, it is the emotional responses evoked in the players that may be the ultimate target of the designer.

CHARACTERISTICS OF GAMES

The following information is summary of the book **'Characteristics of games'** by **George skaff Elias,Richard Garfield & K.Robert Gutschera.**

Summary:
The book characteristics of games offers a great understanding on types of games and game mechanics, the books covered topics on game rules, number of players, game infrastructure, game politics, choices made in games and how such characteristics helps a player to understand and enjoy any game process.
The book explained what all genres of games-board games, card games, computer games, and sports have to teach each other. It also includes exercises and examples of various classic and modern games that helps the reader to connect to the topics.

HISTORY OF GAMES

Research say that board games existed way before written language making them prehistoric. Early origin dices discovered prove this fact where they were created by painting a single dice of flat sides. After tossing the sticks, the number of painted sides facing upside would be the total points. Various materials were used in early dices from Mesopotamia. Board games began to take a spiritual turn at around 3100 BC mark. Such turn was seen in a game called Senet that was featured in several illustrations from Ancient Egyptian tombs.

At around 3000 BC, growing popularity of board games got tied up with religious beliefs one of which was Mehen. The longest game known to us that is still being played is The Royal Game of Ur(2600 BC). This game features equal proportion of luck and strategy. Around 1300 BC board games started getting inspired from real life situations. One of then was a strategy game called Ludus Latrunculorum which was widely played throughout Roman Empire. Similar to but far more complicated than chess, the game resembled real military tactics of the Era.

After this the famous game of snakes and ladders was originally used as moral instructions for children. At around 400 AD there was an Germanic and Celtic strategic game called Tafl. This game is said to have gone through many modern changes and was similar to Chaturanga- an Indian strategy board game of Gupta Empire. Evidence say that Checkers is similar to an Egyptian game called Alquerque that races back to 1100 AD where the French decided to finally place the game on a chess board. Go is traced back in China at some 4000 years ago which was then taken to Japan in 5000 CE. In the early 20th century, there was a steep rise in the popularity of Mahjong where it was played more Chess. But it's historical record dates back to the end of 19th century.

Through this whole research it can be concluded that board games has been influencing people since historic times. Their genres have seen multiple changes. Right from religious, spiritual turn to being a medium of education for kids, board games have done it all.

SOME INDIAN TRADITIONAL GAMES:

AADU PULI AATAM
Lambs and Tigers Game locally referred as "Meka puli aata" (Telugu) or "Aadu puli aatam"(Tamil), or Aadu Huli aata (Kannada) or Pulijudam. It is a strategic, two-player (or 2 teams) leopard hunt game that is played in south India. The game is asymmetric in that one player controls three tigers and the other player controls up to 15 lambs/goats. The tigers 'hunt' the goats while the goats attempt to block the tigers' movements. This has been the most ancient game.
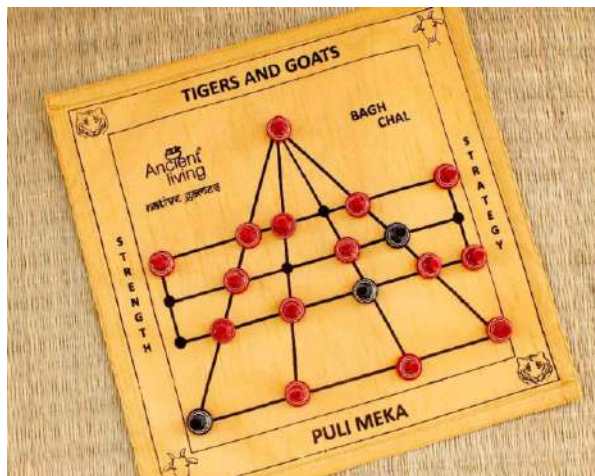
Chauka bhara
It is one of the oldest board games of India that is still played in some parts of the country. It is known as Chowka Bara in Mysuru and as Chakaara or Chakka in north Karnataka.

This game is similar to ludo and can be played by 4 players. It is a game of chance that is played with cowry shells (called kavade in Kannada). The players attempt to race their pawns from the starting point to the safety of home. The game improves eye-to-eye coordination and teaches to make strategies.

SAALU MANE ATA
Saalu Mane Ata or Jodpi Ata or Char-Par in Kannada and is popular as Navakankari in various parts of India. This alignment game requires 2 players. Each player is given 9 coins and they try to achieve as many points as possible by getting 3 coins in a row on the game board. It is a complex game that requires strategic thinking.

DAYAKATTAI
It is a dice game played by 2 or 4 players. It originated in Tamil Nadu and is comparable to another dice game from the country called Pachisi. There are many types of Dayakattai. The word Daya is derived from Tamil word "Thayam" meaning firstone. The game employs a pair of long dice that are shaped like long cuboids, the Dayakattai. These dice also go by other names such as Daayam and Daala

TYPES OF GAMES

- Abstract games- Games that have no theme, can be strategical
Ex.- Onitama, Patchwork, Honeycombs

- Area Control games- Players compete to dominate/acquire the space on the board
Ex.- Risk

- Dexterity games- Rely on physical skill like stacking, building, placing, balancing, tossing
Ex.- Rhino Hero, Drop it, Mikado
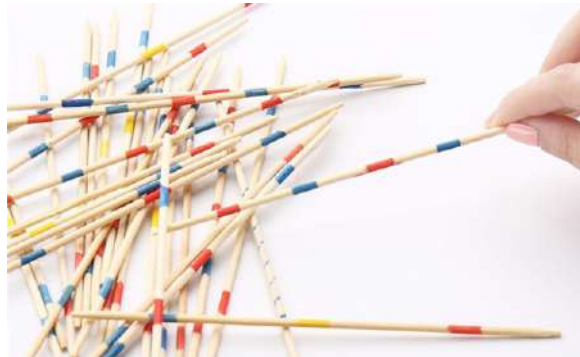
- War games- Collect armies and eliminate opponents armies with combat usually decided through dice or cards
Ex.- Yudhbhoomi, Axis and Allies, My kingdom

- Roll and Move games- Roll one or more dice and move on the path leading to specific actions
Ex.- Can't Stop, Merchant of Venus, Basari

- Co-operative games- Players team up to play against the game itself, newer version of board games
Ex.- Pandemic, Horrified, Grizzled

- Mystery games- Has a storyline, involves detective work
Ex.- Clue, Mysterium, The Exit

- Euro games- Strategy focused games with limited randomness, usually competitive
Ex.- Gloomheaven, Ticket to Ride

- Engine builder games- Exchanging existing resources for gaining more which in turn form victory points
Ex.- Wingspan, Splendor, Scynthe

- Worker placement games- Strategical placement of workers(tokens) on the board to compete with opponent
Ex.- Agricola, Rajas of the Ganges, Targi

CONCEIT

MAHABHARATA

The Mahabharata is literally a great epic of the Indian people (Maha = great, bharata = India). It was originally delivered in Sanskrit and later translated into other dialects and languages, spreading by word of mouth from village to village, from kingdom to kingdom. It was used to convey abstract truths and philosophy to the simplest of people, to provide entertainment, to honor kings, and to accompany merchants on their travels to Europe and beyond. The great Indian epic, is among the most important works of literature in South Asia and also the source of the spiritual, cultural, sociological, and political and the artistic inspiration for ages for the people of India.

The epic transports the reader to a world where landscapes, animals, men/women, gods/goddesses interrelate, change forms, and perform feats of magic and illusion. There are stories of grief and sorrow, loss of a kingdom, a long exile, a disastrous war, and the destruction of a race.

LEARNINGS FROM MAHABHARAT

STRATEGIC MANAGEMENT
Indian sages, in their instruction to the king, insisted upon the proper planning, strategy, decision making human and natural resource management, agriculture and trade. Training to be a pious person starts in a family and should continue throughout the journey of life.

PREPARATION
You need to do proper preparation
"Turn your weakness into your Strength."
Pandavas, for the war did a proper preparation & turned their weakness into their strength
For example: During exile, Arjuna set out on a mission to acquire divyastras, Yudhisthira acquired teachings from different Rishis.

ALLIES
It deals with interpersonal relationship. Maintain good relation with everyone in the organization. Also build a good network with the outsider of the organization as because you never know who will be helpful to you in future.
For example: Pandavas; No wealth. No power of their own. But they had made powerful allies all over India.

TEAM SPIRIT
All should be trained to achieve a common goal. There should be a feeling of team spirit, if it is not present in the team then they will work individually not as a team.
For example: Kauravas were not having team spirit as all of them fought their individual wars.

INDIVIDUAL MOTIVES
There should be a common goal but the individual should have their individual targets, their own agendas which should become one with the teams' agenda.
For example: Pandavas had given all the individuals their goal, they had decided who will try to kill whom.

RIGHT MANAGER
How to become a right manager must be learnt from Mahabharata as Krishna & Yudhisthira both are said as a right manager. A right manager knows the competitors weaknesses and exploit them. Takes calculated risks. He is a person how can answer all the question of the team why, when & how etc. Good managers need to analyse all the aspects and then take the action.
For example: Yudhisthira low-key strategist on the first day of the War, went over to the enemy side to seek blessings from Elders. In reality he made a covert deal with them, wherein all of them agreed to help him.

WOMEN EMPOWERMENT

Any team without women is unbalanced as masculine traits of aggression and dominance due to which decisions taken may get wrong so to balance Feminine traits of harmony and Sustenance need to be there in a team decision.

For example: Kunti was the authority supreme for the pandavas & draupadi was a companion in whatever the pandavas did whereas on part of kauravas no women was there in decision making process Gandhari retreated to the Inner Chambers. Nobody listened to her.

LEADERSHIP

A good example of distributed leadership is seen in war of Mahabharata, A good leader will always share responsibilities so that he/she can focus on their work & achieve the goal.

For example: Pandavas had distributed leadership. Seven commanders for the seven divisions (1 man command 1 akshauhini)

COMMITMENT

If one is not committed towards their goal than will not achieve it.

For example: Abhimanyu, a 16 year old kid ventured beyond enemy lines alone. This was suicide mission but he still went in alone, and defeated a great part the army down with him. It took the combined efforts of the 7 Maharathi to take him down.

Morality is a key characteristic of the epic.

A REVENGEFUL INSTINCT CAN ONLY LEAD TO ONE'S DOOM

Mahabharata may revolve around the war of duty. But we cannot escape the fact that the major reason behind the destruction of all was revenge. The Kauravas lost everything to their blinded desire to ruin the Pandavas.

STAND BY WHAT'S RIGHT; EVEN FIGHT FOR IT

Arjuna was initially hesitant to wage war against his kin. But Krishna reminded him that one has to stand by Dharma (duty),even it meant going against one's own family. Therefore, Arjuna had to fulfil his responsibility as a great warrior of Dharma.

HALF KNOWLEDG CAN BE DANGEROUS

EArjuna's son Abhimanyu teaches us how half knowledge can have an adverse impact. While Abhimanyu knew how to enter the chakravyuh, he did not know the way out.

DON'T BE SWAYED BY GREED

What did Yudhisthira win out of greed? On the contrary, he lost everything he possessed from his kingdom to his wealth. And to gamble away a woman in the pursuit of hubris! How can one possibly justify that ?

WE CANNOT GIVE UP ON LIFE DESPITE ALL HURDLES

Who can be a better example for this than Karna ? Right from his birth , the 'sutaputra' battled his way through life, fighting discrimination and disgrace at every stage. He almost became a puppet in the hands of fate. But no obstacle could ever deter him from pursuing his goal. And his devotion towards his mother knew no bounds, to the extent that he even gave up his Kavajkundal (his life saving power) on her demand.

BEING A WOMAN DOES NOT MAKE YOU A LESSER INDIVIDUAL

Draupadi was manoeuvred into taking five husbands, she was humiliated by the Kauravas for the fault of her own husband. She was violated but she was bold enough to take a stand. She ensured she got justice by vowing to wash her hair with the blood of Duryodhana and Dushasana perhaps another reason that led to the war. A women like Draupadi will not be passive, she will be fiery, she will fight for herself. So many moral lessons we could learn from an epic the Mahabharata.

THE ETERNAL BOND OF FRIENDSHIP

The friendship of Krishna and Arjuna is something all of us look up to. It is perhaps because of Krishna's unconditional support and motivation that the Pandavas managed to survive the war. None of us can forget the epic dice scene where it was Krishna who came to Draupadi's rescue while her husbands gambled her away to disgrace. The friendship between Karna and Duryodhana, on other hand , is no less inspiring.

FOLKTALES

Folk tales are stories passed down verbally from generation to generation. Our English word 'folk' comes from the German word volk, meaning 'people.' So, folktales are stories about everyday life and the day-to-day issues of humanity. There are many different kinds of folk tales, with thousands of regional and cultural variations, but they all share a few common characteristics. At the most basic level, we can say that a folk tale is a story passed down orally from generation to generation. Sometimes the stories involve supernatural elements, teachings of wise conduct of life, humour etc. Generally speaking, folk tales originated among peasants and villagers without much formal education. Thus these stories were shared among generations as a way of presenting everyday life lessons and useful information in an easy-to-understand format which also helped connect listeners to the common cultural values of a particular tribe, ethnic group, or culture. Originally they are part of an oral tradition, stemming from a preliterate age before the invention of writing, but fortunately today, we have evidence of documents written by some famous writer of the age which helps us reliving and reviving our culture.

India is a land of rich culture. Storytelling has always been a very prominent part of our Indian culture. Books like Panchatantra, Hitopadesha, Jatak Katha, Akbar Birbal, Vikram Betal which dates to about 200 BCE and more is a living proof of how this culture has been embedded in our Indian history. Panchatantra, Hitopadesha is considered to have stories of wise conduct of life fabricated through animal and birds characters whereas, Jataka contains stories of previous lives of Gautam Buddha. The tales of famous court of Akbar and Birbal have never failed to bring laughter to the readers and listeners, while Vikram Betal story written in 11th century have always been the legendary tale of the famous king Vikramaditya and the witty ghost Betal.

SENSORY TOYS

Sensory toys are designed to stimulate a child's five senses: sight, sound, touch, smell, and taste. They might include elements such as bright, contrasting colors, sounds, or different textures. These toys are meant to help children develop their senses in a safe and natural environment using play. Sensory toys and tools focus on promoting touch, increasing concentration, reducing anxiety, developing fine motor skills and encouraging language skills.

EDUCATIONAL TOYS

Educational toys are designed to teach people, typically children, about a certain subject or help them learn a skill as they play. An educational toy is expected to educate, instruct, promote intellectuality, emotional or physical development. An educational toy should teach a child about a particular subject or help a child develop a particular skill. Such toys not only intend to develop one's motor or cognitive skill but also has an approach to aware the kids about general knowledge. Educational toys in particular tend to reflect the cultural concerns of their time, such as a doll can be considered as an ancient educational toy as it teaches a child how to take care of a child in a form of a pretend play whereas a dissected map gives geographical knowledge.

Montessori learning is a very effective used learning model developed by Maria Montessori which focuses primarily on tactile and perceptual learning. She emphasized practical exercises using ready-to-hand materials such as pouring rice or tying a shoelace. She also developed sets of Montessori sensorial materials, manipulatives for learning mathematics and other skills and concepts. Today, Montessori's methods are used in both homes and schools, and her manipulatives have been extensively studied.

MARKET STUDY

The Toys and Games segment includes all kinds of toys for toddlers and kids like dolls, construction sets, card games and puzzles, as well as video game consoles. According to the latest available date, India's share in the global toy market is less than 1% and is worth Rs. 5,000-6,000 crore. A report by the IMARC, a market research company, stated that the Indian toy sector will cross the US$ 3.3-billion mark by 2024 at a CAGR of 13.3% between 2019 and 2024. Games and puzzle segment dominated 1/6th of total market share in 2017, growing at a CAGR of around 9% during the forecast period.

Market Growth drivers:

Huge consumer base:
India's population today stands at 1.38 billion or 17.7% of the global population. In 2019, about 26.62% of the Indian population fell into the 0-14 age category.

Purchasing power
The Indian middle class has emerged as a force to be reckoned with in the consumerist world. Purchasing power of the Indian middle class has been considered equivalent to the entire European economy. With rising disposable income, their spending patterns have also changed.

Rise in online purchases:
Recently, online sales channels have also witnessed boom in India with the evolution of smartphones and other digital media. As quality and features of products can be discussed among shoppers and prices can be compared on various platforms, online sales channels have appeared to be one of the fastest-growing distribution channels for toys in India.

TRENDS
STEM-based toys are one of the most advance trends in the toy manufacturing industry. It focuses on providing fun and education to children and making it relatable to the real world. According to the Toy Association report in 2018, 67% parents believe in STEM-focussed toys as their primary way to encourage science and math development in young children. After the pandemic, the sales of board games and puzzles also increased.

Challenges in India Toy market:

Invasion of foreign toys in the Indian market
The inflow of cheap toys, toy molds and parts used in board games that started flowing into the country with the liberalisation of the Indian economy surpassed the traditional toy and game market in a matter of years, overrunning the market with low-quality Chinese imports. As a result, many toy factories closed in the past 30 years as they couldn't compete with China-made toys.

Quality certification accompanied with challenges for traditional craftsmen
The government has mandated the Bureau of Indian Standard (BIS) certification for toys.

Speaking of the challenges, Sreekala Kadidal, Independent Director, Channapatna Crafts Park has highlighted that, "The initial testing costs is up to Rs. 2 lakh per family of toy makers. This is excluding yearly reassessment, repeat testing of toys, etc."

Highly unorganised sector
While organised manufacturers can scale up by automating or hiring more labour, about 60% of India's 3,500 toy manufacturers operate in the unorganised sector—from small units with sometimes as few as five employees. They do not have the capital to suddenly increase production.

Insufficient capital
Manish Kukreja, CEO and Director of Shinsei Toys and President of the All India Toy Manufacturers Association has also raised concerns stating that manufacturers complain of retailers not giving enough space to Indian toys, as they earn better margins through Chinese toys.

Future of Toy Industry in India:
Currently, 90% toys sold in the country are est. to be imported. With the duty increase, a positive change in the Indian toy industry will be witnessed. While the sector will take some time to churn the benefits, it will be beneficial for businesses, economy, and international trade relations and foreign exchange in the long term.

TOY MARKET SHARES

Legend:
- Funskool
- Mattel
- Hasbro
- Lego
- Bandai
- Leap Frog
- Others

Pie chart values: 30% (Funskool), 20% (Mattel), 9% (Hasbro), 4% (Lego), 4% (Bandai), 3% (Leap Frog), 30% (Others)

Revenue generation divided by segments

Revenue generation divided by segments (in million USD (US$))

Year	Total
2013	18,266
2014	21,699
2015	23,931
2016	27,193
2017	32,395
2018	33,868
2019	38,202
2020	47,513
2021	53,082
2022	52,442
2023	57,651
2024	62,889
2025	68,285
2026	73,801

Legend:
- Total
- Card Games
- Construction Sets & Models
- Dolls & Stuffed Toys
- Plastic & Other Toys
- Puzzles
- Toys for Toddlers & Kids
- Video Game Consoles

PRIMARY DATA COLLECTION

VISITS

SPPU (Savitribai Phule Pune University)

Seeking mechanical guidance for our toy Pyasa Kauwa, we visited the IUCAA department of SPPU(Savitribai Phule Pune University) in Pune on 4th January 2022. IUCAA is an autonomous research institution funded by the University Grants Commission (U.G.C.). The IUCAA has been conducting special activities for school children and teachers for the last two decades. Here, we explained our toy design project for which we needed guidance. Rupesh Labade, Ankit Bhandari, Maharudra Mate, Shivani Pethe, and Atharva Pathak guided us through different mechanisms applicable to our toy. Out of all the options, they specifically suggested using two of them i.e. Hydraulics and Lever mechanism considering various aspects like manufacturing, durability, and toy ergonomics.

BITM (Birla Industrial and Technological Museum)

To develop the prototype of Pyasa Kauva, we needed technical and lab support. We found the best place to help us was BITM (Birla Industrial and technological museum) Kolkata a famous organisation well known for its scientific displays. We collaborated with BITM under the direction from our Institute. We

visited BITM hoping to find a solution for making our design workable. Mr Rajib Nath(curator F),Tarun Kumar Das(technical officer"c"),Amit Kumar Mandal (curator c) and other honourable council members of the organisation heard us and suggested using the principle of hydraulics in our project. We started developing the prototype on 28th January 2022 in the lab under the guidance of Mr. Meghnath Purkait (technician c). We could develop our first workable prototype on 3rd February within 1 week. Besides the first prototype we had to develop some other alternative options that could make the product to be more user friendly. Thus we had to brainstorm out some alternative mechanics. With the help of Mr Abhijit Bala we came up with the lever mechanism to operate the toy, again with the help of Mr Meghnath Purkait we could develop our desired prototype.

SSPU

BITM

WEBINARS

PLATFORM:
ADW(Ahmedabad Design Week)

SPEAKER:
Abhijit Avasthi (Sideways)
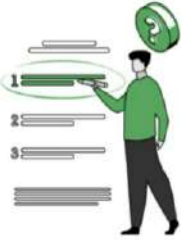
TOPIC:
Understanding Play x India

PLATFORM:
NEN Activate Program

SPEAKER:
Rajan Anandan (Angel Investors)

TOPIC:
Fund Raising

PLATFORM:
NCRT Department of School Design,
Government of West Bengal, State Council,
Educational Research and Training

SPEAKER:
Shri Hirak Kumar Banik et al.

TOPIC:
Training workshop on including children with
specific learning disabilities and autism
spectrum disorder in regular schools.

SURVEY REPORT

ABSTRACT

India is a land of rich culture and tradition which teaches people kindness, generosity, and tolerance. Indian culture is a unique blend of modern western culture and historical traditions. But it has been a long-standing complaint that Indian youth are highly influenced by western cultures due to which they are unaware of what our Indian mythological stories and folktales provide. Having faced the same problem, we decided to take action against this and develop tools through which we can educate about Indian stories and folktales.

This paper presents an overview of different studies examining the criteria for the selection of Toys and Games which can be the most interesting and fun way of learning things regardless of the age of the players.

INTRODUCTION

A survey was conducted over a total population of 200 people including all age groups ranging from 13-62,out of which more than 50% of the population reported playing all kinds of games,only 48% of the population says to have a rare interaction with games.

AIM

The aim of this survey is to understand people's views and interest in board games.

OBJECTIVES

How much are they aware of Indian mythologies and folklores
What are their views on the youth having knowledge about our Indian culture
Specifically what population is into playing TABLETOP GAMES
What motivates them to play a particular game
How have been their experience playing games and any experience they would like to improve
Are they open to playing games inspired from Indian culture

HYPOTHESIS

H1:The full mass are into playing games in their free time

H2: All the children are into playing video games

H3: Not many people knows about benefit of playing games

H4:Maximum population are only into playing multiplayer games

H5:The total mass of population surveyed will be interested in playing games inspired from Indian culture

RESEARCH METHODOLOGY

A thorough research from books and internet and a questionnaire made in google form urging people to ask for their own perspective about the games and board games,which helped in collecting information and data on the chosen topic.

DATA ANALYSIS

Total 200 people of age group from 13 to 62 participated in this online survey.When gathered together with family and friends most of the time people like to chat chit while some like other activities such as watching movies and playing games. 99% people think that children nowadays are more into video games than playing games with their friends and family.

Are you aware of the fact that playing games can develop your physiological, social and mental skills?

It is said that people get realized or unrealized positive psychological benefits from playing board games with the important people in their lives. Board games bring families and friends of all ages together to connect, strategize, compete, and have fun. Playing board games often leads to interesting

Legend: Yes, No, Somewhat — 83%, 13.5%
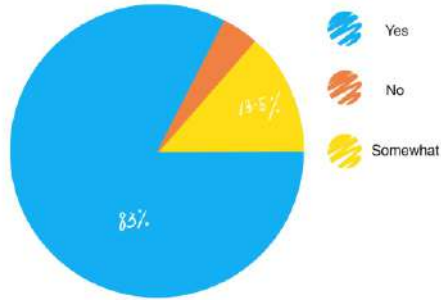
conversations, which also strengthens relationships among people. According to research, specifically playing board games (over other types of games) helps strengthen the hippocampus and prefrontal cortex in children's developing brains, which leads to improved cognitive functions such as problem-solving, logic, reason, memory, planning, attention, and IQ.

Do you know about Indian mythological stories and folktales?

Legend: Yes, No, Maybe — 50.5%, 34.5%, 15%
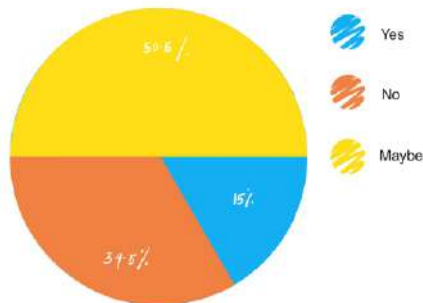
73% of the population knows about Indian mythological stories and folktales while 24% people have heard about it. People learnt about these stories from mixed mediums such as friends and family, TV shows, social media, books, schools and movies.

Legend: Yes, No, Heard abo — 73%, 24%
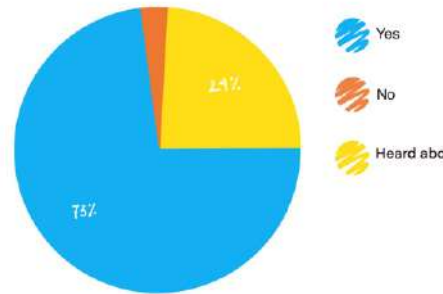
The same question was asked keeping children as the subject. Here, around 34.5% people think that nowadays children don't have any knowledge of Indian stories and folktales while the majority voted for maybe which justifies that children might know about it.
Indian mythology contains a varied collection of ancient tales, which are still relevant, entertaining, and can help cultivate useful morals. It is important for children to learn the who, the what, the when, and the why behind festivals and customs that are so integral to Indian culture. Mythology answers questions kids have about numerous traditions and satisfies their curiosity.

Do you think children nowadays are more into video games than playing games with their friends and family?

When asked if children nowadays are more into video games instead of playing games with family and friends, almost everyone voted for yes. This has been a rising issue that needs solving. According to research, children spend an average of 7 hours per day using electronic devices, which is 5 hours over the recommended amount. Technology can be distracting and gets in the way of creative thinking and that's not ideal for our mental and physical health.

Legend: Yes, No — 99%
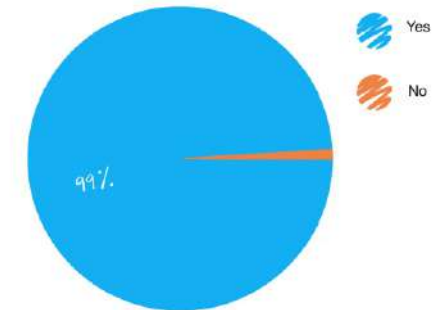
What type of games do you prefer?

87% of people prefer playing multiplayer games, 8% like two player games while 5% people prefer solo games.
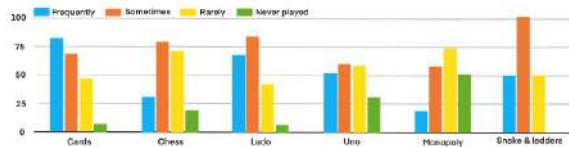
Which game do you like? How often do you play them?

Excluding the above mentioned games people also played the following games

Carrom	Othello
Scrabble	black gamon
Sequence	Scotland Yard
Chinese checkers	Char chitti
Clue	Sagargote
Catan	Kachapani
Life	Axis and Allies
Jenga	Mafia
Mechanical	Housie
Chausath	Hungry hippo
pokemon trading	mouse and cheese
cards	Pictionary
Brainvita	BINGO
Pinball	Twisters
Mavla board game	Marbles
Chowka Bara	mikado stick game
Words life	Mental Math Magic
Word play	Kaach kavdya
Crossword	
Puzzle solving	

What factor attracts you to play board games?

65% people like to have complexity and strategy in games as playing strategy games stimulates brain areas that are responsible for memory formation and complex thought processes for all ages. At the same time, 44.5% of people like to have a good look and feel in their games. Sensory elements are always important for attracting customers. People also inclined towards playing games that have a good storyline as the votes were upto 38.5%.

How difficult would you like your game to be?
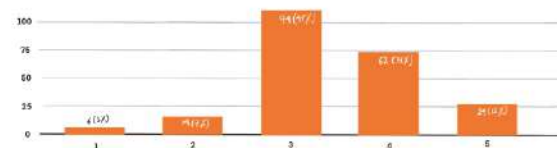
About 47% people prefer their games to be of medium difficulty as high complexity games can sometimes lead to unhealthy competition and the fun element disappears. But on the contrary there are about 31% people who prefer difficulty level 4 in their games. Around 12% people prefer difficulty level 5 games as some games involve complex rules and scenarios that require in depth analysis in order to win or progress in the game.

Who would you like to compete with?

Playing with same skilled people gives equal probability for the players to win the game hence is preferred by around 70.5% people. On the contrary, professionals provide us with
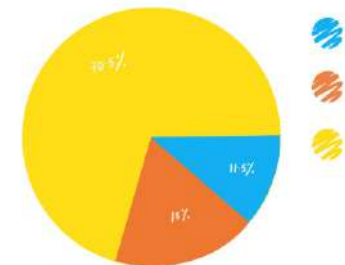
experience and hence teach us new skills and techniques which is why 18% people chose to compete with professionals rather than with same skilled people. Around 11.5% people opt to play with beginners.

Are you open to playing games inspired from Indian culture?
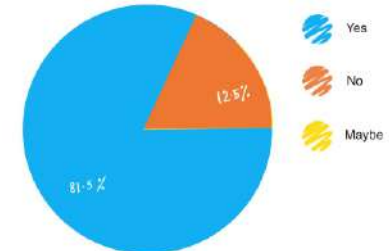
As it can be seen, the majority of people i.e. around 81.5% would be open to playing games inspired from Indian culture but at the same time around 12.5% people are still uncertain regarding these types of games. There are around 6% of people who are totally against this idea. These types of games are being developed to make people aware about Indian culture and provide them experiential learning of the same.

CHAPTER 3. ANALYSIS AND SYNTHESIS

- Client board

- User board

- Mood board

The objective of this chapter is to summarize
our understanding of the market and decide a
clientele who would directly interact with our
brand and another huge mass who can be the
sole user of our products.Further developing a
brand mood to help with our design process.

CLIENT BOARD

Experimental

Crafty

Family oriented

Conscious parenting

Age: 30+
Income: 10-20 lakh per annum

USER BOARD

MOOD BOARD
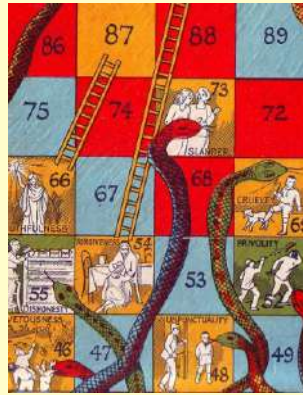
CHAPTER 4. BRAND DEVELOPMENT

- Brand Identity
- Logo development
- Competitors
- Positioning
- SWOT Analysis

The chapter brand development gives a timeline of how we landed upon our brand name, the logo exploration and the brand colour palette in details. Further it also ponders upon the positional aspect of the brand along with listing it's strength, weakness ,opportunities and threats.

BRAND IDENTITY

OUR MISSION
Our mission is to develop a range of products that involves skill of artisans of India making the product high quality yet cost effective which imbibes the idea of sustainability.
The product range targets improving motor and cognitive skills of all age groups.

OUR VISION
We create quality handmade toys and games that involves families and carry forward the legendary folklore stories of India

OUR PHILOSOPHY
To create toys and games that provide experiential learning for the kids.

OUR GOALS
1. Developing a brand of toys and games inspired by Indian mythology and folktale.
2. Collaborating with local artisans, educational institutes
3. Collaborating with multinational brands.

INDUSTRY
With the expanding popularity, toy industry stands on the cusp of significant opportunities in every toy segment such electronic toys, puzzles, construction toys, dolls, ride-ons, outdoor play toys, infant/pre-school toys, and activity toys.

OUR TARGET AUDIENCE
People living in urban cities of India.

LOGO DEVELOPMENT
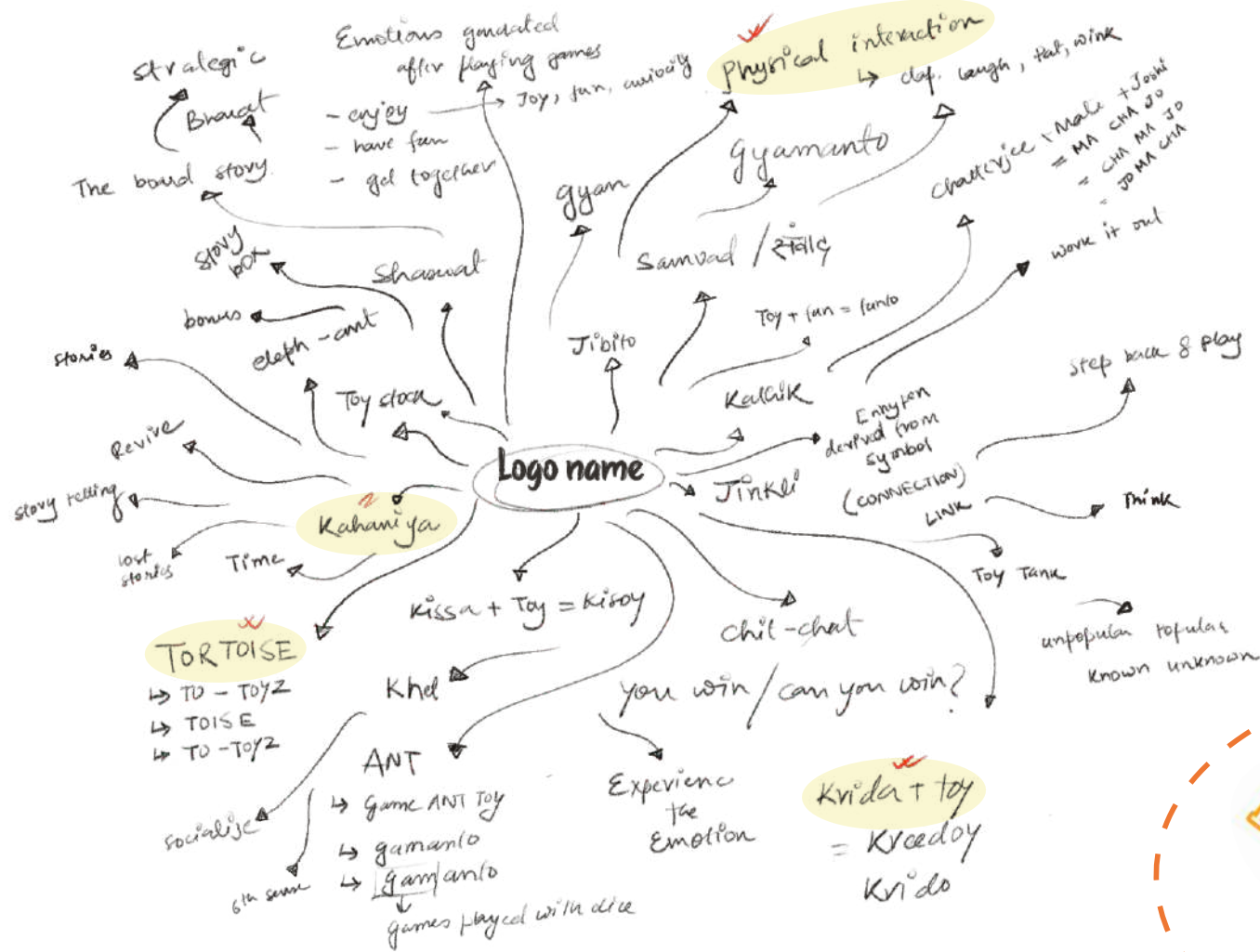
Kahani bani khel
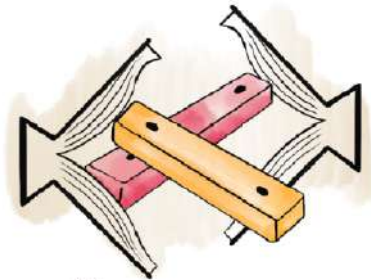
Krida + toy = Kreedoy Krido

Kreedoy

क्रीडा

Kreedoy

Nreedoy

KREEDOY

Kreedoy

(Kreedoy)

Kreedoy

KREEDOY

Kreedoy Kreedoy

Kreedoy

Kreedoy

Taali

Taali

Taal

Taal

Taali

taal

toli

Taali

Taali

Taali

Taal

Taal

Taali

Taali

FINAL LOGO

Aa

Zz

Taali (clap) is a beautiful way of expressing emotions by striking palms together, creating a distinct sound. Just while you win a round or you could eliminate your opponent or made your best possible move, could you ever resist yourself from clap instantly? on the other hand a kid can't stop clapping after throwing a ball. Thus "taali" is the most common gesture one makes after an achievement. Our brand mainly promote individual being happy, excited, joyful while interacting with us. So what is more better than starting and ending every move with a taali?

Our logo features an old man framed through the initial "T" and a kid framed through the end letter "I"of "TAALI", who are clapping. That signifies how simply "taali" help bridging the generations by making our granny's story live interacting with us. It also tells "taali" is for one and all, there is no age boundaries to give a taali!

COMPETITORS

India has over 800 toys and game manufacturers producing toys locally. Funskool, Lego, Mattel and Hasbro are major four companies with international presence.

Preschool toys such as dexterity toys, puzzles and wooden toys are manufactured by brands like Ariro, Desi toys and Indian brands such as smartivity, brainsmith and skillmatics work on

STEM toys and creating innovative and holistic ways for children. Brands like Varnam work on traditional Indian toy crafts, trevive the age old craft.

Brands of international presence.	
Brand	Brand Description
Funskool	Funskool, powered by the MRF Group, is the first Indian toy manufacturer to get certified by the BIS for safety of electric Toys.
Lego	Lego Group is a privately held, family-owned company with headquarters in Denmark. The brand specializes in blocks.
Mattel	Barbie dolls and Hot Wheel racer cars are sold under Mattel. the company is engaged in designing and selling games, toys for children since 1945.
Hasbro	The largest publicly traded toymaker worldwide, Hasbro Inc., has licenses for some of the most popular franchises such as Frozen, the Transformers and the Avengers.

Top Indian toy companies	
Brand	Brand Description
Brainsmith	Offers innovative toys for children to play, learn and grow by designing an exclusive, child-safe assortment of early learning experiences.
Dice Toy labs	"Bengaluru, Karnataka based Dice Toy Labs on a mission to make cool toys for Indian kids. Their toys are designed with high quality material.
Varnam	An award-winning social enterprise that trains and works with women Channapatna artisans to revive the 200-year-old toy craft.
Ariro	Founded in 2016, Ariro offers developmental toys such as rattles, teethers and indoor gym.
Desi Toys	Desi toys offers traditional Indian toys and games to expose the tech-savvy generation to India's age-old collection of toys and games.

INDIRECT COMPETITORS

The toy and game brands available in the market compete with the brand identity, but there are also indirect competitors which compete with the overall product range of toys

and games. Other than playing with toys and games, kids indulge their time other activities such as playing video games, reading story books, watching TV and playing outdoor

games. These indirect competitors are hard to beat specially when it comes to mobile games and tech based activities.

POSITIONING

DISTRIBUTION CHANNEL

E-COMMERCE

B2B DIRECT SALES

ADVERTISING

As the startup is in the initial phase the major distribution channels would be online selling platform such as amazon, flipkart, etc., website, social media platforms such as instagram and facebook.

Website
Social media marketing
Content marketing
Search media optimization
Print marketing(flyers, brochures, business cards, etc.)
Trade shows
Public relations

SWOT ANALYSIS

STRENGTHS

Involving local artisans
Focus on consciousness and sustainability
Unique story telling capacity
Originality of the concept
Promoting Indian culture in a fun way

WEAKNESS

Lack market experience
Small team
Small principle fund
Members belonging to different places may effect communication

OPPORTUNITIES

Ability to collaborate with multiple Indian toy brands
Potential to build diverse portfolio
Ability to sell anywhere through e-commerce platform

THREATS

High competition in the domain of toys
Video games
Smart toys
Outdoor activities

CHAPTER 5. PRODUCT PORTFOLIO

5.1 Collection.1 - Mahabharat
- Chakravyuh
- Mahabharat: The Board Game
- Vyuha

5.2 Collection.2 - Folktales
- Concept Development
- Pyasa Kauva
- Batuni Kachua
- Khatte Angur
- Murkh Raja
- Matsyavedh
- Chalak Bandar
- Vikram Betal
- Nakalchi Bandar

5.3 Collection.3 - Educational Toys
- Food Chain
- Atrangi
- Mausami Fal
- Sehat

5.4 Collection.4 - Sensory Toys
- Felt Book

COLLECTION.1 MAHABHARAT

TO DESIGN BOARD GAME INSPIRED BY THE INDIAN MYTHOLOGICAL STORIES OF MAHABHARATA.
AGE GROUP: 5 AND ABOVE

CHAKRAVYUH

This game is a playful way of explaining one of the strongest strategies of Chakravyuh formation used in the war of Kurukshetra. It is a multiplayer game where the player has to reach the center of the chakrayuh to claim the title of being the real hero Abhimanyu.

AGE-5+
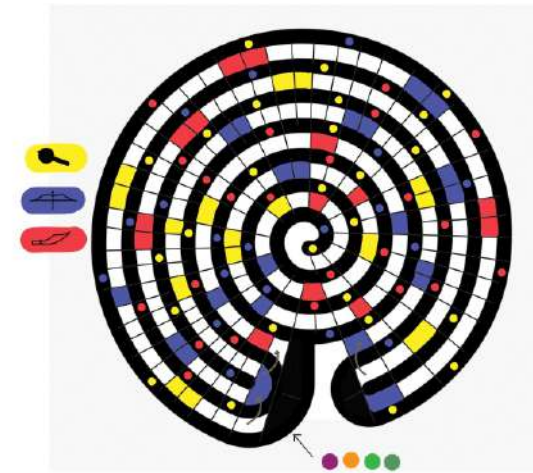
Chakravyuh

Chakravyuh was a defensive formation used by kauravas to defeat pandavas. The strategy involved soldiers moving in the circular path like a spinning wheel.

Abhimanyu

Abhimanyu was the son of Arjuna and also one of the only two people who knew how to enter the chakravyuh. He was the only one who entered this deadly formation and fought with bravery and valor against all the kaurav warriors.

RULES:

- Players take turns to enter the game through yellow box on the left and going in an anticlockwise order.
- Player must roll 12 on the dice to enter the game.
- Player moves in anticlockwise direction around the track given by the number thrown.
- Each colour on the board represents a particular weapon, ex- yellow- mace, red- sword, blue- bow and arrow. Once the player lands on the colour, he/she will collect that weapon.
- The figurines on the board are kauravs. They too are represented by 3 colours. They can only be killed by the weapon represented by the same colour.
- If the player lands up in front of a kaurav and doesn't own the similar colour weapon, they get killed and have to start the game again.
- The first person to reach the centre of the chakravyuh wins.
- The remaining players continue the game to determine the runner-ups.

TOY COMPONENTS

Abhimanyu Wooden Pegs (Nesting Toy)

Pasha (Wooden Dice)
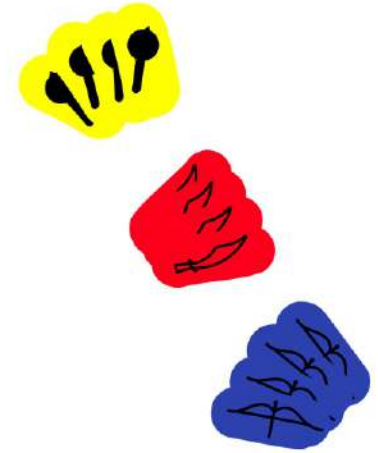
Weapon Cards
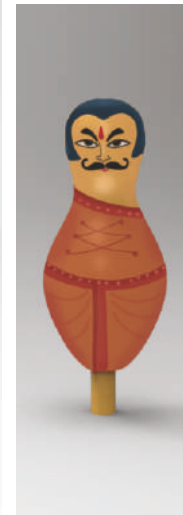
Kaurav peg
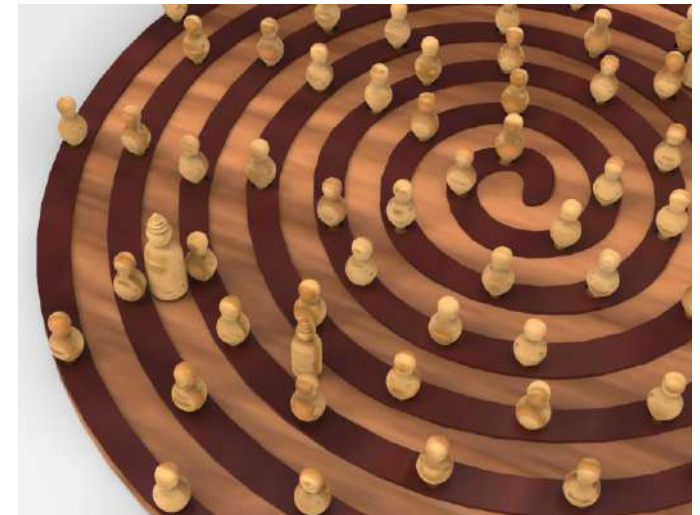
Chakravyuh pathway board

CHAKRAVYUH
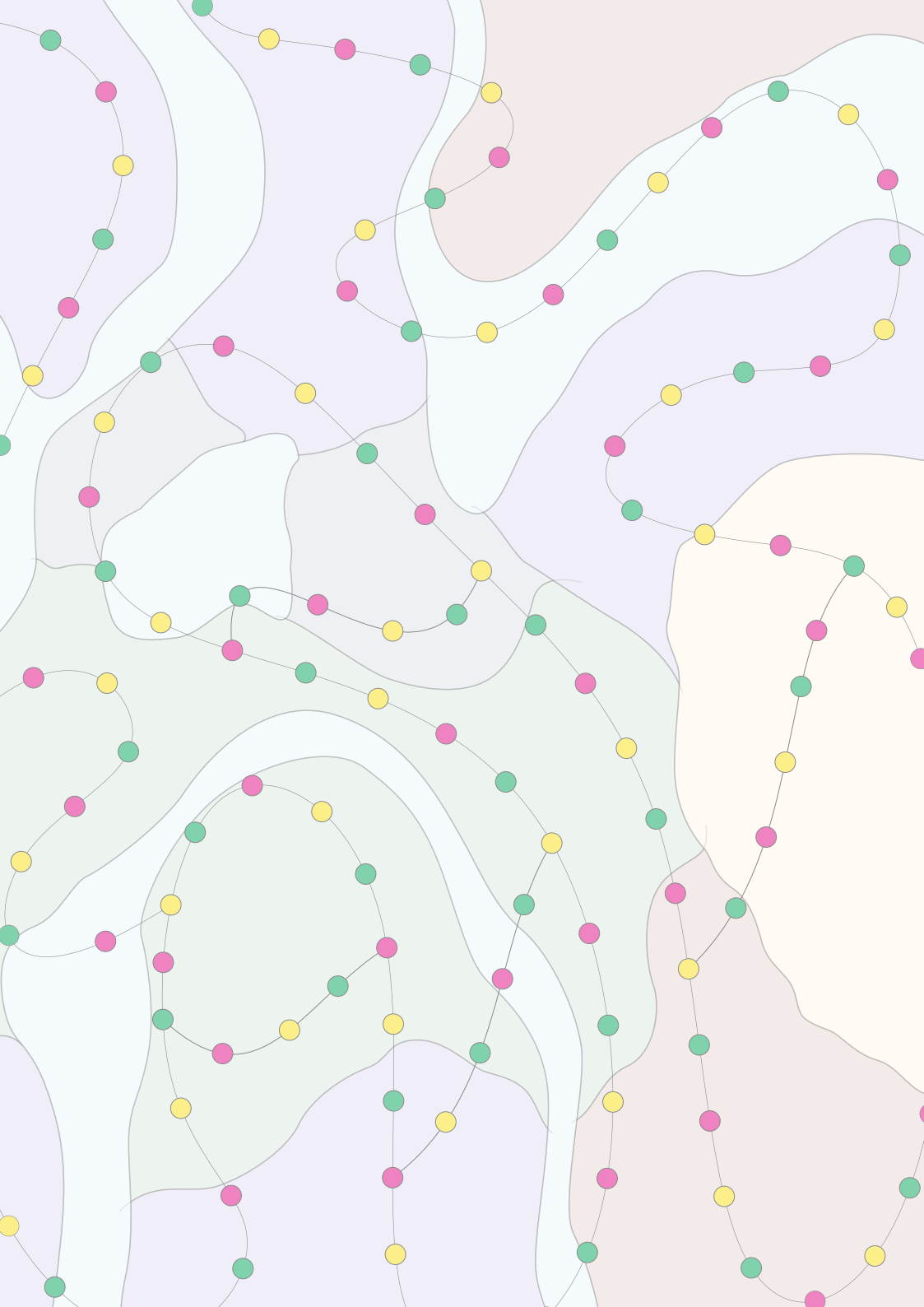
MAHABHARAT:
THE BOARD GAME

Collect power, make of allies and be the true warrior just like Pandavas and Kauravas did in the legendary Mahabharat. This game gives a living experience of how it used to work in that times where you have to fight ample of battles and gain friends as well as enemies and reach the end by collecting powers.

AGE- 10+

STORYLINE:

Once there was a king who had 2 princes. After his death, there came the time to decide who will be the next king, this led to a huge fight between two prince over who will be coronated. As they are not able to decide, the elders give both of them 12 years to gather powers and allies and prove their worthiness as a king. After 12 years there will a war which will decide the next king. Hence, the two of them individually started their journey through Bharatvarsha to gather powers, build allies and get boons from the Gods and rushimunis by pleasing them. During the journey they face many challenges, where they have to live like a common man search for food, find shelter to save themselves from wild animals, serve rushimunis, please gods, build allies and fight with the wild creatures.

After the commencement of 12 years, they started the preparations for the great war, where the entire Bharatvarsha would take part. Now the players have to use strategies and help their prince win the great battle.

randomizer which either gives you boon or bane.

- When 2 players land up on the same space, they have a battle where you use the characters cards you have gained. In this situation, the players use their best cards and try to win the battle. The player with highest power character card wins the battle as well as the card of the opponent player.
- The resources and army are required in some situations in the journey throughout the board. For example, when you pass through the forest, you get attacked by a demon. Here you can use your army to protect yourself. Resources are required when you pass through a kingdom where festival is being celebrated and you have to make donations for the same.
- The board consists of a few shortcuts and long routes. The player gets to choose between these two routs where the shorter is full of hurdles whereas the longer has few of them but eventually takes time to complete.

RULES:

- The game starts with players throwing the pista shells that act as a dice. The number of shells facing upwards are considered as the number of spaces you move ahead.

- Every space has a specific color- Pink, Green and Orange. When you land up on Orange color, you get a character card. On Green you get a choice between Resource and Army. On Pink, you get to spin a

GAME COMPONENTS

5
ARJUN
Strength
Archery, Intelligence

4
BHEEM
Strength
Strong, Resistance to poison

5
DRONACHARYA
Strength
Intelligence, Archery

4
DURYODHAN
Strength
Strong

Option Card

◯ Resources
food, water, wood

⬜ Sena

1   5
7   10
4   3
2   8
6   9

CHARACTER CARDS

- Includes main characters from Mahabharat
- Showcases their strengths and power points
- Characters- Arjun, Bheem, Yudhishtir, Nakul, Sahadev, Duryodhan, Bhishma, Dronacharya, Shakuni, Abhimanyu, Ashwathama, Dusshasn, Jayadrath, Karna, Drishtadhyumna, Kripacharya
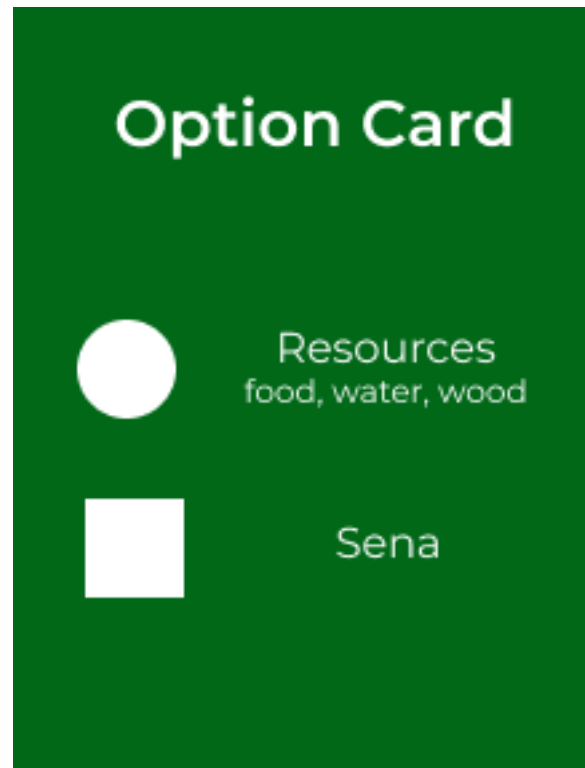
OPTION CARDS

- Player gets option between resource and army.
- Both have a crucial role throughout the game.
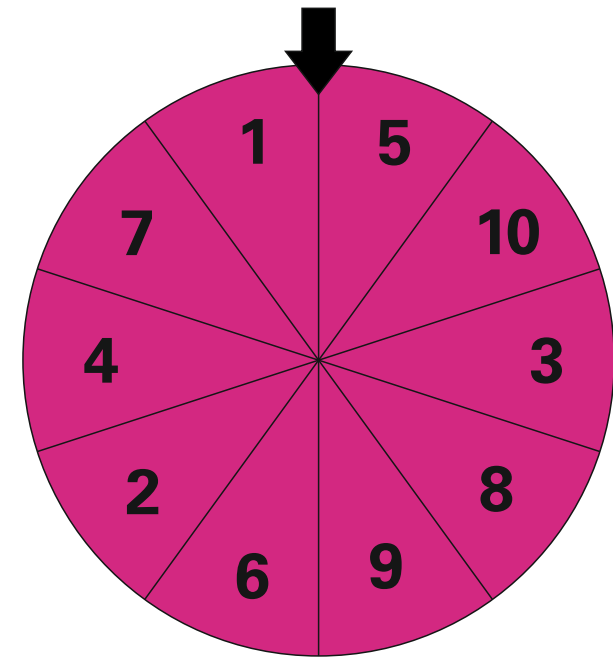
RANDOMIZER WHEEL

- Will either be beneficial for you or can cause trouble in your play
- Includes skip a turn, take another turn, exchange character card, ability to move opponents pawn backwards, etc.

VYUHA

Fight the legendary war of Kurukshetra from Mahabharat with Vyuh Rachna. In this game, you have to follow the battle formation(vyuhs) and defeat the Maharathi of the opponent's team. This game helps in developing strategies as well as analysing skills.

AGE- 12+

A "Vyuha" is an arrangement of the army divisions to attain a specific objective at the end of the day's war. Every day the commander in chief of each army will arrange the army in a specific formation, so that his army can attain the objectives of that specific day. Depending on the objective, risks, threats, opportunities, the choice of "Vyuha" was made. A "Vyuha" is dynamic in nature and it continuously adapts itself to the position and situation of the war.

If one of the Generals dies, the Vyuha is technically designed in such a way that every other general knows what needs to be done to re-structure the "Vyuha" and maintain it's formation. If one of the wing is taking huge casualties, the other parts of the "Vyuha" would re-structure itself and save the formation. If the goal of the "Vyuha" is to capture a key personnel of the enemy, the "Vyuha" would constantly change and adapt itself so as to ensure that the target is met. The opponent will counter with their own "Vyuha" and hence the position of the key personnel would continuously change. Hence the "Vyuha" of the attacking army has to be designed in such a way, that the final objective is met through continuous re-structuring, adapting, re-organizing and re-in forcing.

STRATEGIC MOVES

Magar vyuha	Shakat vyuha	Kronch vyuha	Padma vyuha
Kurma Vyuha	Ardhachandra vyuha	Trishul vyuha	Suchimukha vyuha
Mandal Vyuha	Garud vyuha	Dev vyuha	Chakravyuha
Vajra vyuha	Aurami vyuha	Sarvatomukhi vyuha	Shringatka vyuha

Vyuha rachna is a two player war game. The players have to save their maharathi and kill the opposition's one. Each player gets a number of cards for his strategic move which he has to discard after every move and take another card.
The board is a simple square grid on which we play the game.

There are three types of pawns.
- Rathi: It is the warrior with a chariot having common powers and weaponry.
- Atirathi: Atirathi is more powerful than rathi.
- Maharathi: Maharathi is the the most powerful among the three of them.
- In the game:
- Rathi soldiers have small 1 block or 2 block moves. (pros and cons: can easily move at nearby places but can't go too far)
- Atirathi soldiers have bigger moves in all directions. (pros and cons: can take bigger movies but has less smaller moves)
- Maharathi soldiers have far away moves. (Pros and cons: can take long jumps but can't move to nearby blocks)
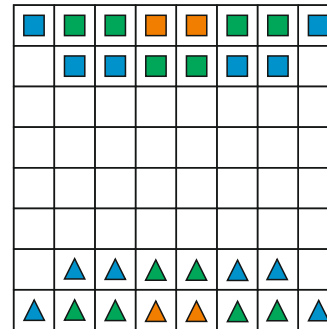
Vyuha rachna BOARD-1
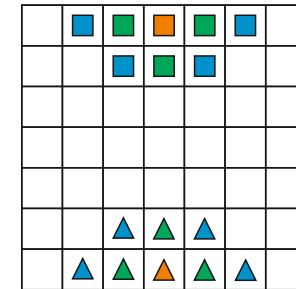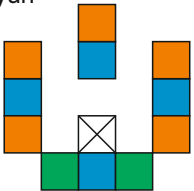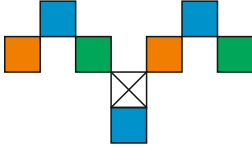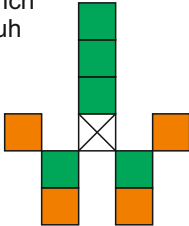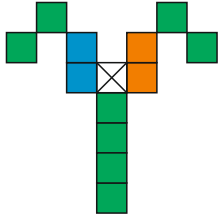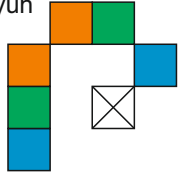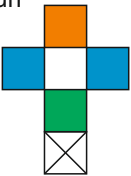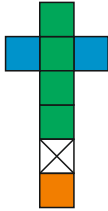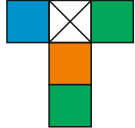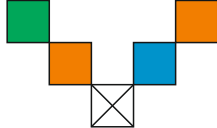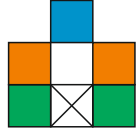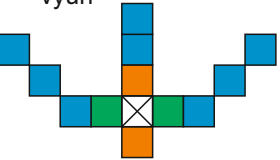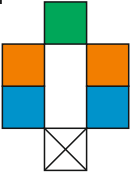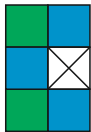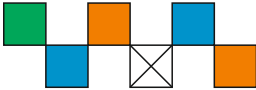
Vyuha rachna BOARD-3
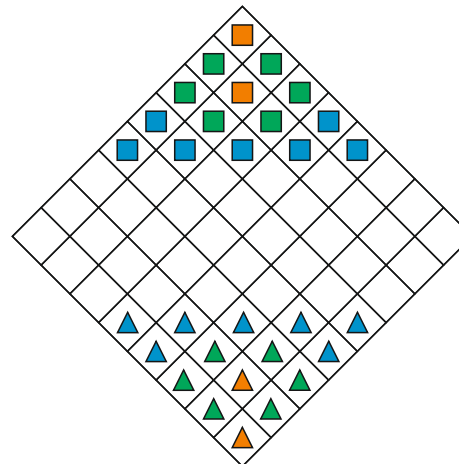
Vyuha rachna BOARD-2

MOVE CARDS

Suchimukha vyuh

Shringatka vyuh

Trishul vyuh

Kronch vyuh

Kurma vyuh

Garud vyuh

Chakra vyuh

Sarvatomukhi vyuh

Vajra vyuh

Shakat vyuh

Ardha chandra vyuh

Padma vyuh

Dev vyuh

Magar vyuh

Mandal vyuh

Aurami vyuh

Your Position

Maharathi

Atirathi

Rathi

GAME DEVELOPMENT

TRIAL	PROS	CONS	CHANGES IN RULE
1	Strategic utilization of the concept, Easy heuristics	Randomness in moves, Moves overlap, Very long moves, Many move options, Less challenges, No checkmate point	Introduction of atirathi pawns Each player has 2 cards instead of 3
2	Atom at the end of the game	Initially the game is played only for clearing the board.	Board changed from straight to diagonal.
3	———	Difficult moves, Hard playing experience, Moves misunderstood	Board changed back to straight
4	———	Too big board , Too many pawns, 2 maharathi's are difficult to kill, Only killing element with no winning point	Board Grid changed to 7x 7 squares.
5	Checkmate possible	Pawns movement is rare in backward direction	More backward moves introduced Pawns reduced
6	———	Once the player starts loosing there are less chances of him winning	All 3 colors introduced in all the moves, Once a player gets check, he can use his 4 power cards
7	———	Gametime too long	Even after power cards, there no winning or losing point, hence the power cards got discarded.
8	Checkmate possible, Appropriate gameplay time frame	Checkmate easily possible only once one has practised the game for a period of time.	———

VYUHA: THE BOARD GAME
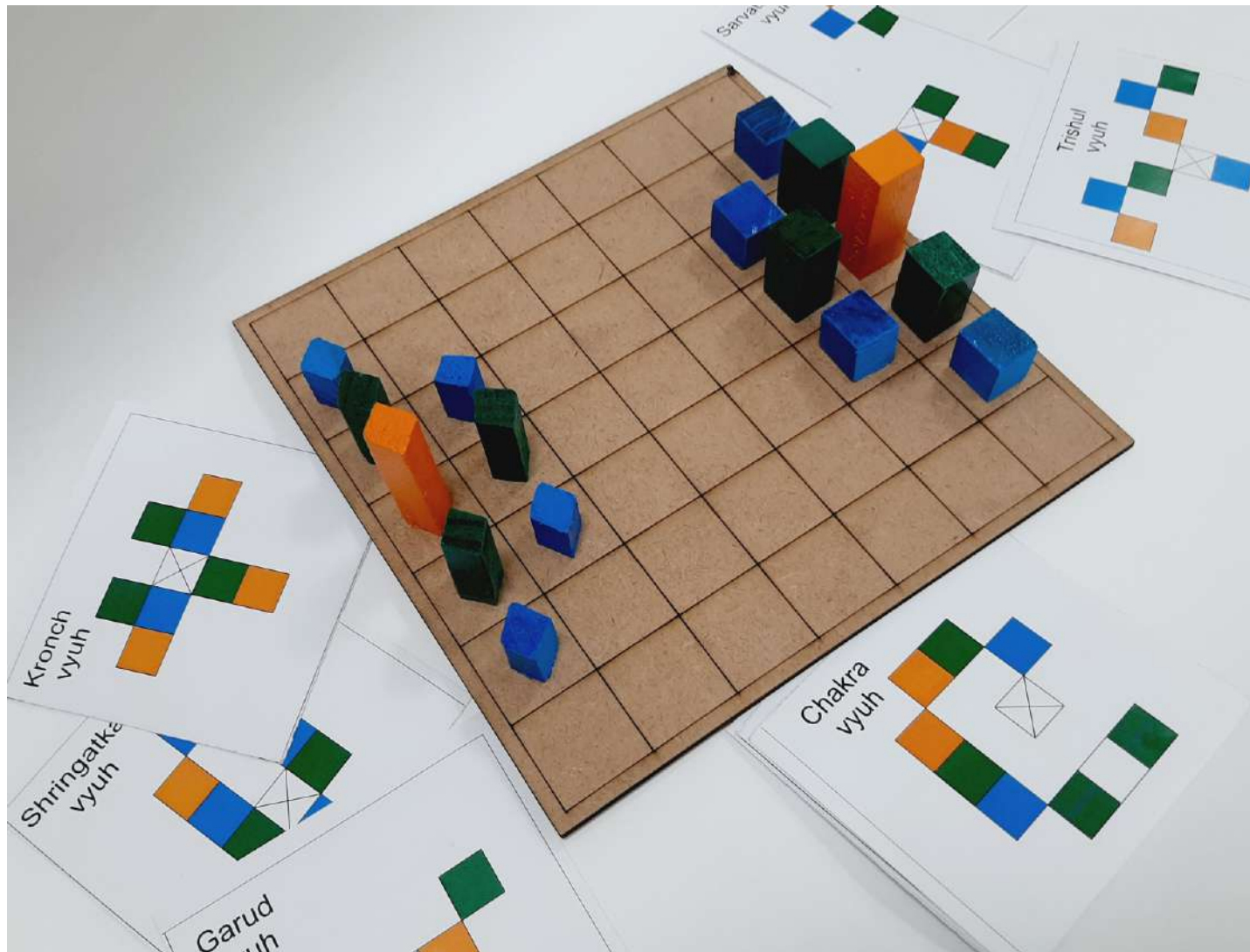
COLLECTION.2 FOLKTALES

TO DESIGN TOYS INSPIRED FROM PANCHATANTRA AND OTHER INDIAN FOLKTALES FOR AGE GROUP- 3 YEARS AND ABOVE

CONCEPT BRAINSTORMING

CONCEPT DEVELOPMENT SKETCHES
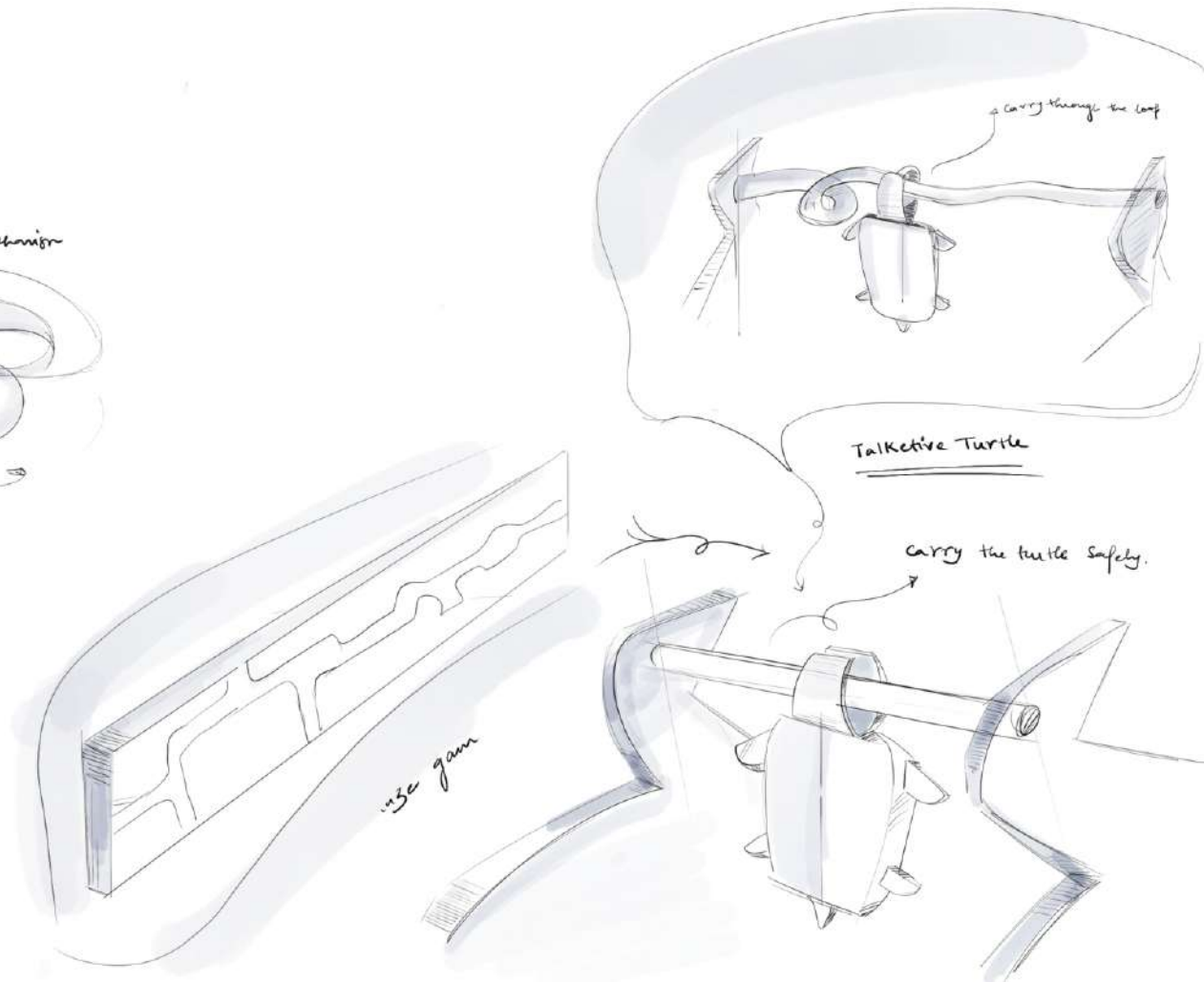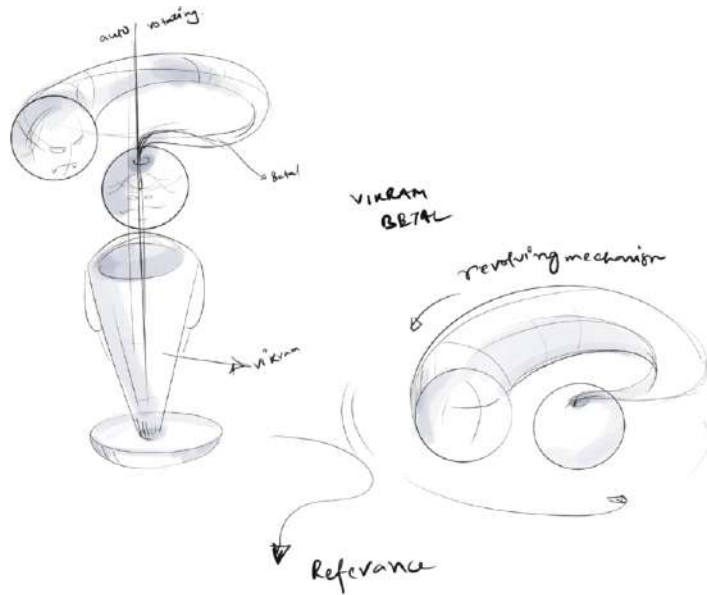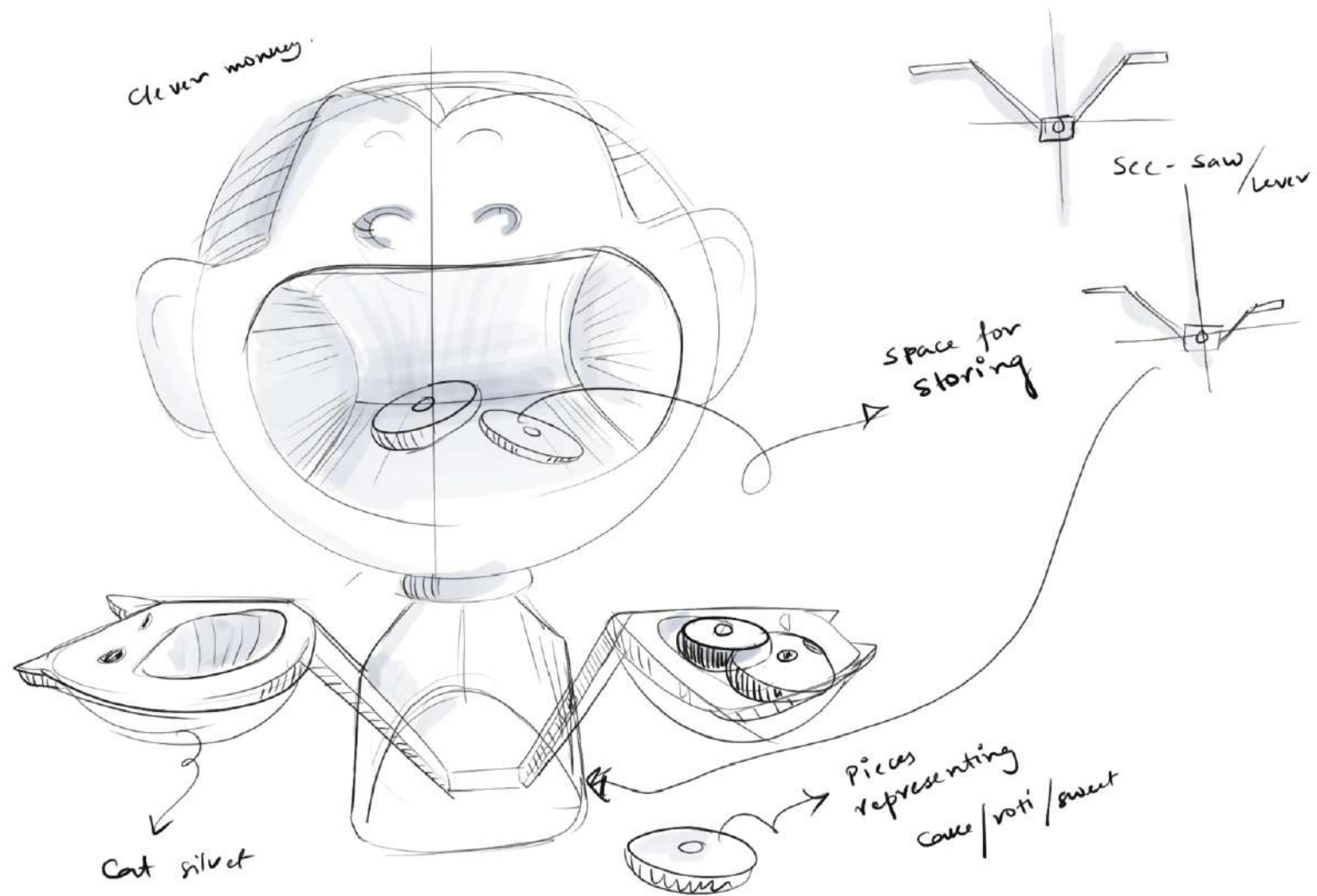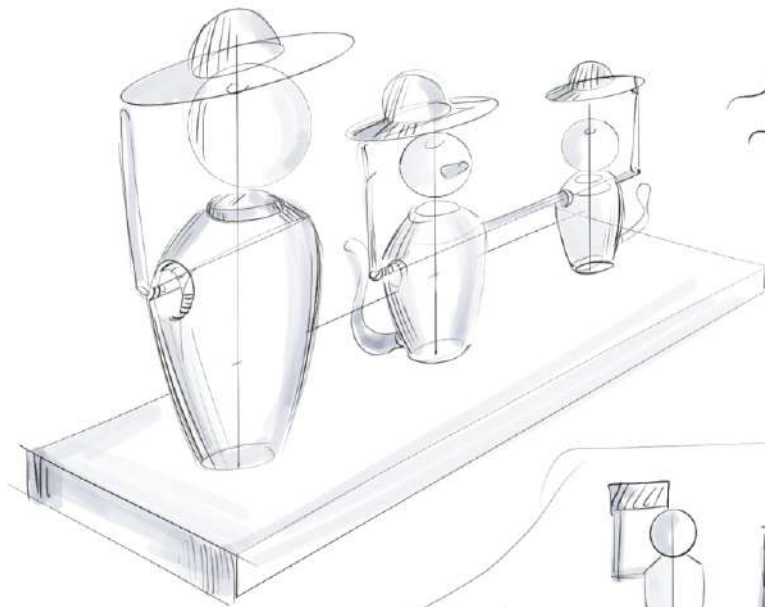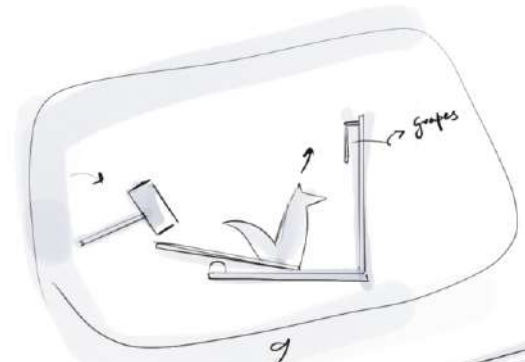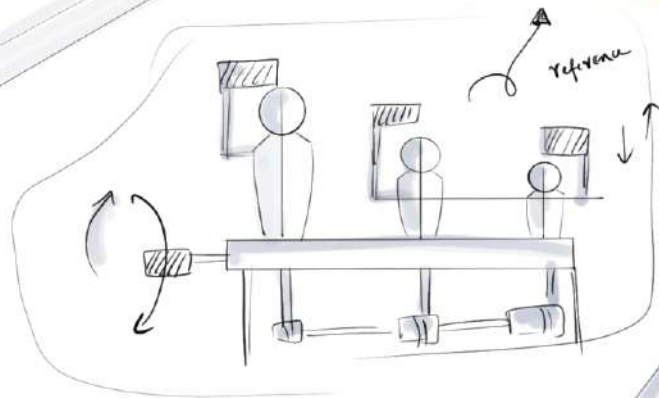
Clever money.

space for storing

See-saw/lever

Cut silver

Pieces representing
cake/roti/sweet

Cap seller & monkey.

simultaneous hand movement
fun to watch

reference

FOX & GRAPES

grapes

grapes

PUPPET SHOW BOX

slit for movement

Controler

Suitable graphics

Dangling figurines

FLASH CARDS
— with any story

fox &
stock
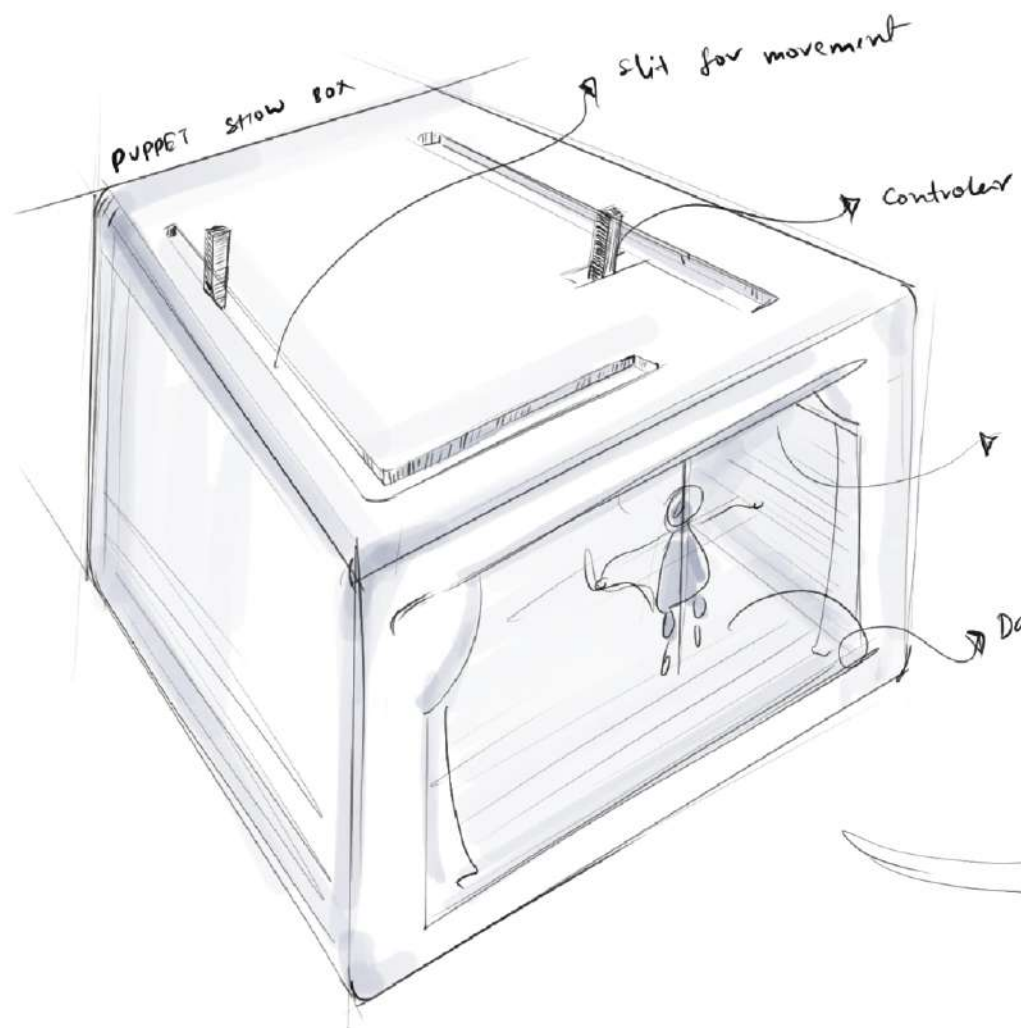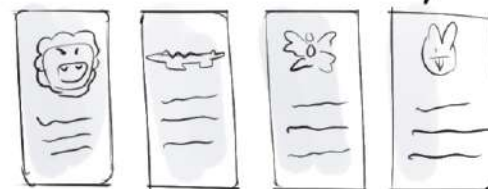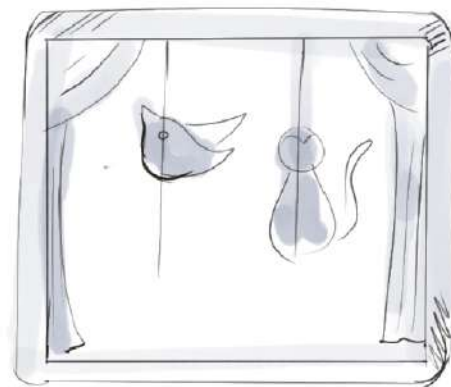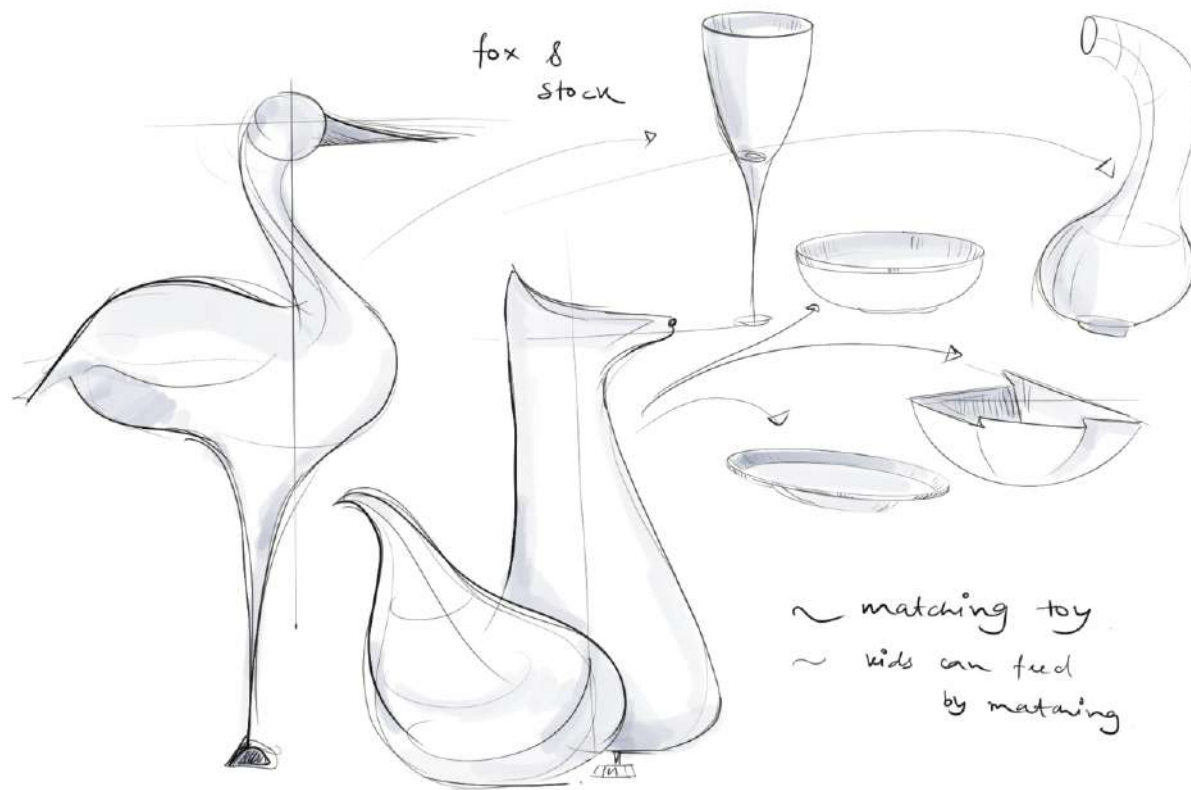
~ matching toy
~ kids can feed
   by matching

The King & the
monkey
~ kill the fly
~ mole game

crow

→ Spring mechanism
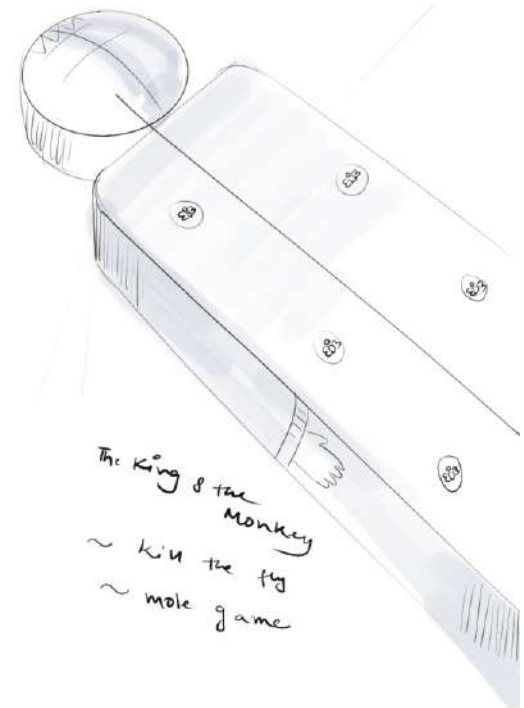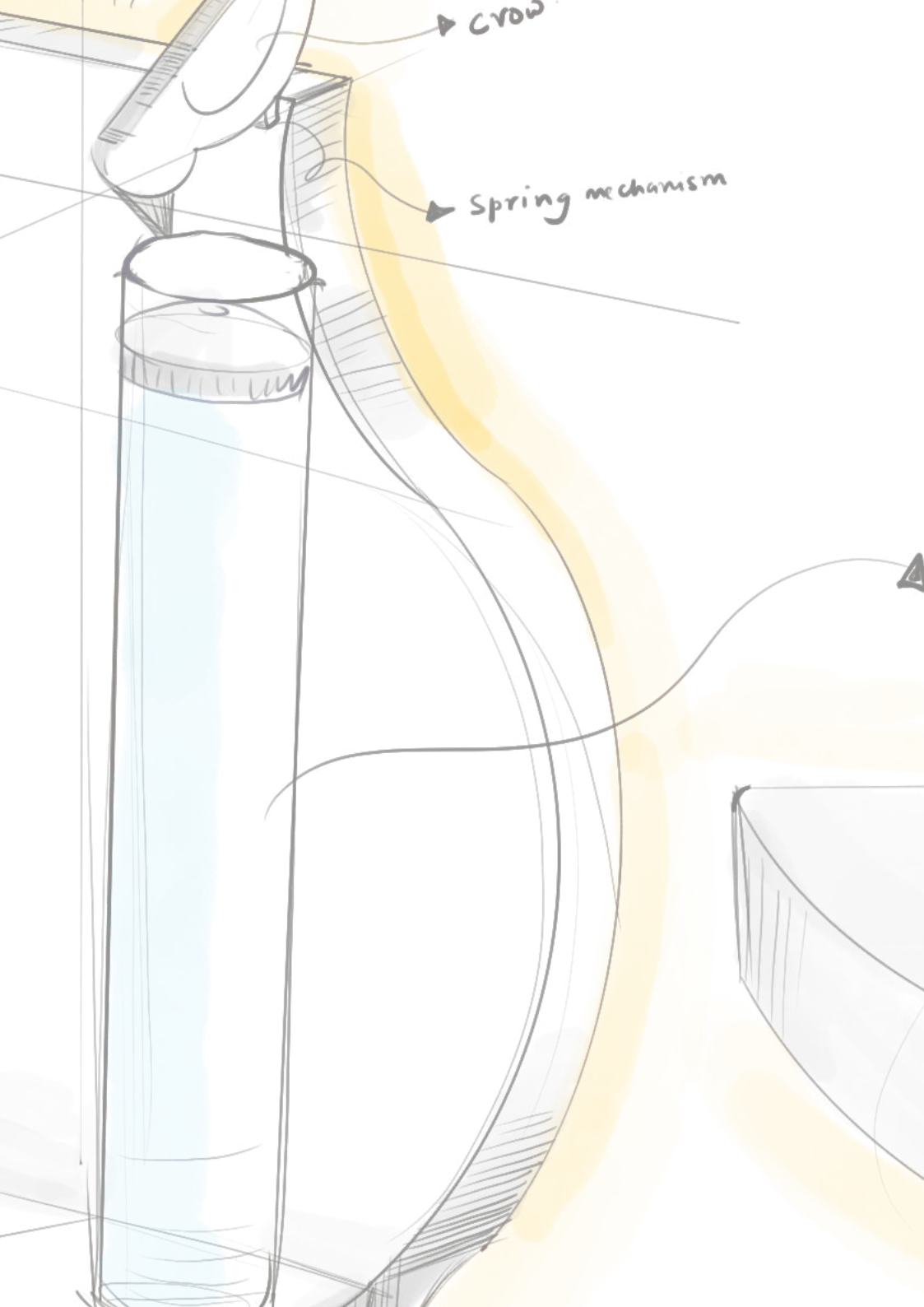
PYASA KAUVA

Once, a crow was very thirsty.
The crow searched for water everywhere.
"Kaa, Kaa, Kaa...
At last he saw a pot with very little water in it.
He put his beak inside. But he could not reach
down the water. The crow thought of a plan.
He picked some pebbles and dropped then
into the pot one by one.
The water level rose.

Inspired from the story of 'thirsty crow', pyasa
kauva is a fun educational stacking toy where
the kids has to stack the 'pebbles' into the rod
to increase the water level to win

AGE- 4+

CONCEPT SKETCH

stacking STONES

cron

Spring mechanism

HYDRAULICS

PRESSURE

Disk holding stones

Displaceable cover

Water/displacement / nontoxic fluid

The cron sits one the cork touch it's beak

PYASA KAUVA

TIMELINE-

Jan 21'
concept development

|

Jan- March 21'
Exploring mechanisms theoretically

|

March 21'
Working on pulley mechanism

|

Nov 21'- March 22'
Working on hydraulics mechanism

|

Jan 22'
Exploring mechanisms to replace with solids

|

Jan- Feb 22'
Exploring and furnishing lever mechanism

|

March 22'
Exploring gear mechanism

Exploring Mechanisms

PULLEY
A pulley is a simple machine that uses grooved wheel and ropes, where the rope is passed the grooved wheel making the mechanism worthy for lifting weight when force is applied unidirectionally. Pulley mechanism has a significant use in flagpole, cargo lift system, wells, elevators etc.

HYDRAULICS
The hydraulic system works on the principle of Pascal's law which says that " the pressure in a fluid at rest is transmitted uniformly in all directions". Basically hydraulics is a fluid based mechanism that uses applied pressure to a contained fluid that is transmitted undiminished. The purpose of the system may be controlled

LEVER
Lever is the most basic machine which works with minimal effort. Lever includes elements like fulcrum, force and weight. The types of lever depending upon the position of the fulcrum, the force and the weight.

GEAR
A gear is a rotating circular machine part having cut teeth or, in the case of a cogwheel or gearwheel, inserted teeth (called cogs), which mesh with another (compatible) toothed part to transmit (convert) torque and speed.

PULLEY

Pros:
Smooth
Cost effective
Easy to construct

Cons:
Sensitive mechanism

REPLACING FLUID WITH SOLID

Pros:
Clean set up
Cost effective
Sturdy mechanisms

Cons:
Hard to overcome friction

HYDRAULICS

Pros:
Direct interpretation of the real story

Cons:
Hard to control
Complex built
Sensitive mechanisms
Messy

LEVER

Pros:
Clean set up
Cost effective
Sturdy mechanisms
Simple to build

Cons:
Deviating from the original story
Friction
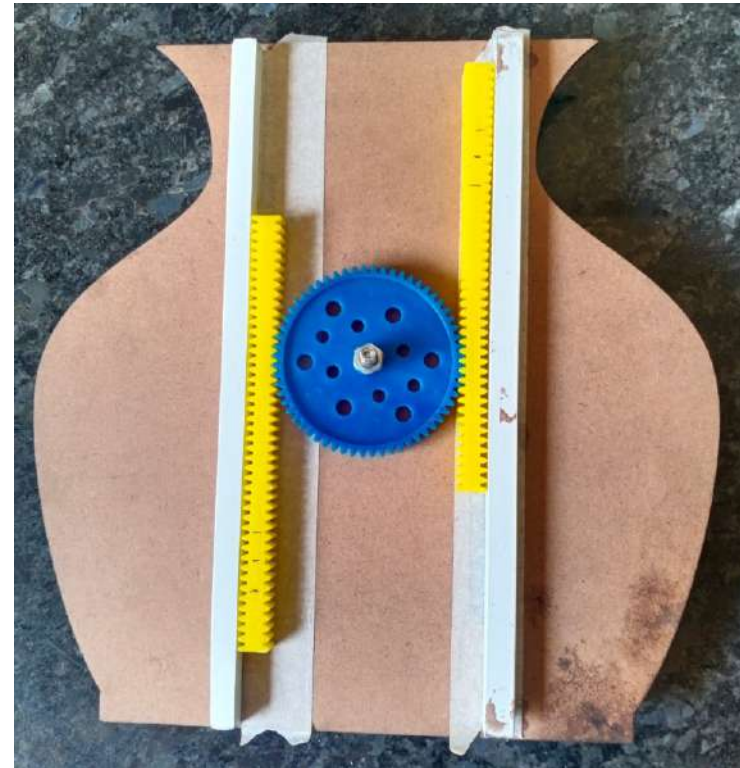
GEAR

Pros:
Eliminated friction
Easy to manufacture
Precision

SPEC SHEET

TOP VIEW

240

180

PERSPECTIVE VIEW

FRONT VIEW

75

SIDE VIEW

320

65
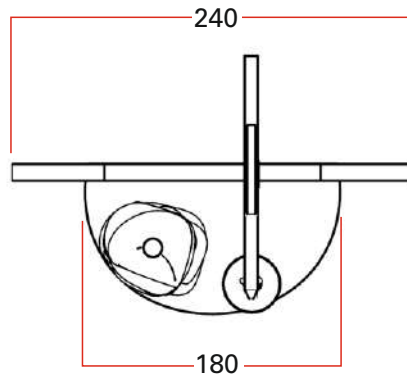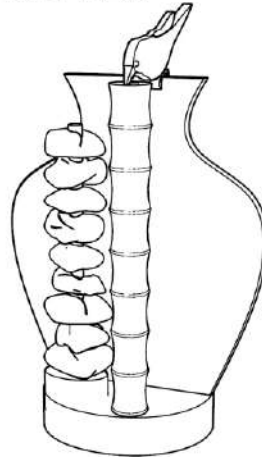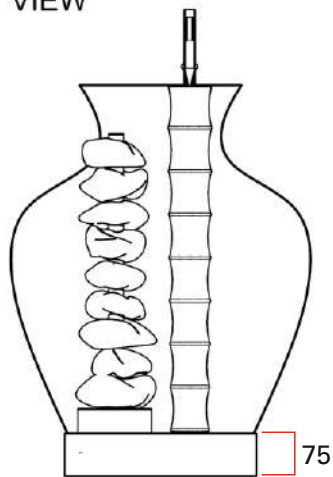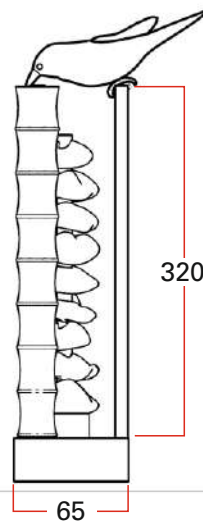
All dimensions are in mm.
PRODUCT NAME: PYASA KAUVA
DIMENSIONS: 65 x 180 x 445
MATERIAL: MDF
MANU. PROCESS: CNC Laser cutting

GRAPHICS
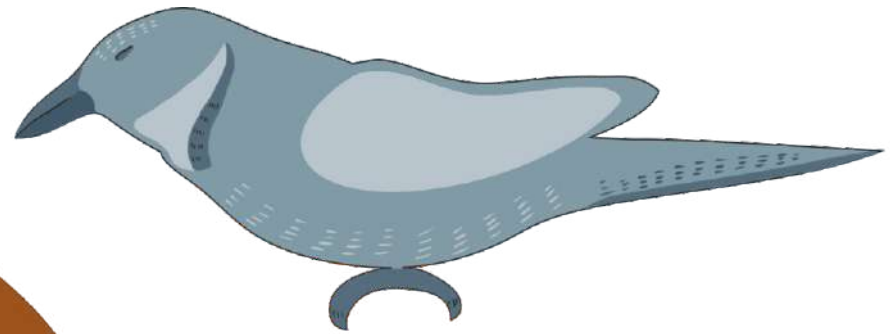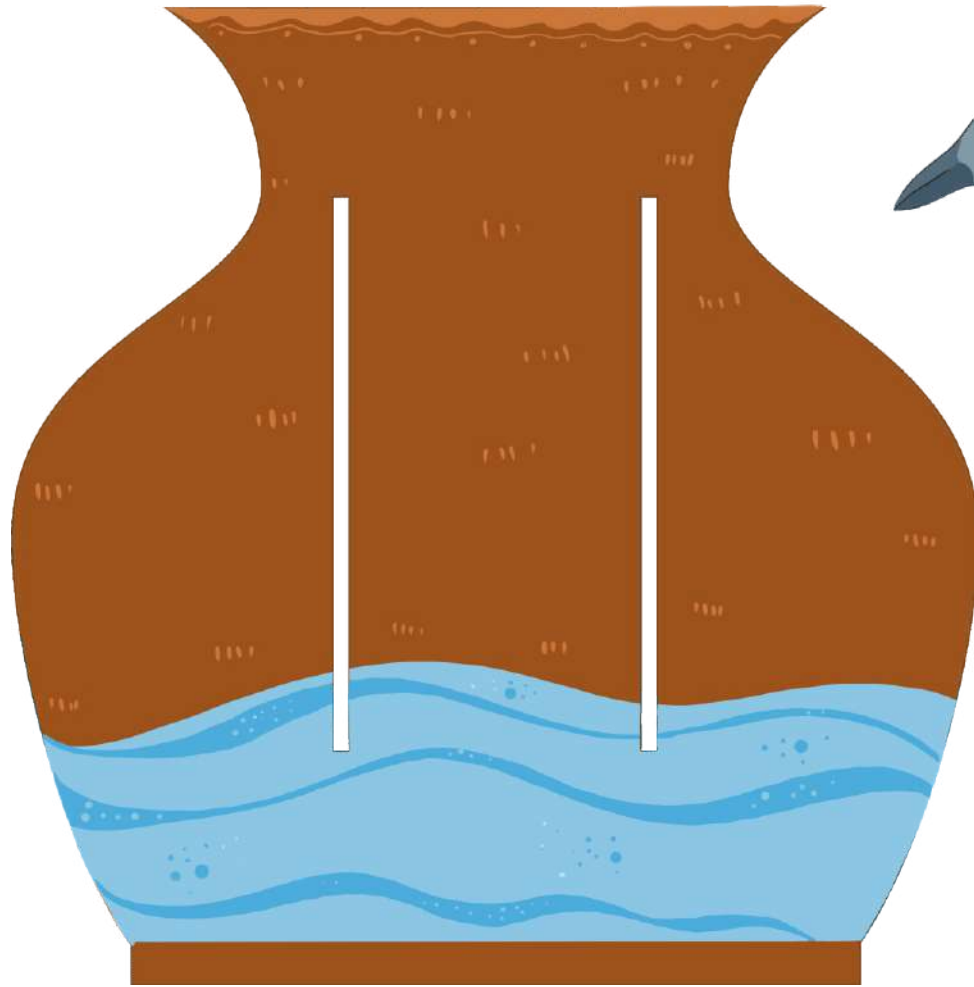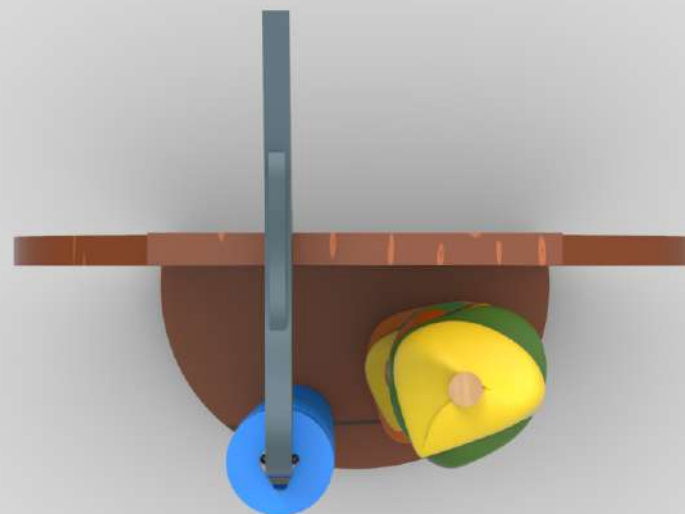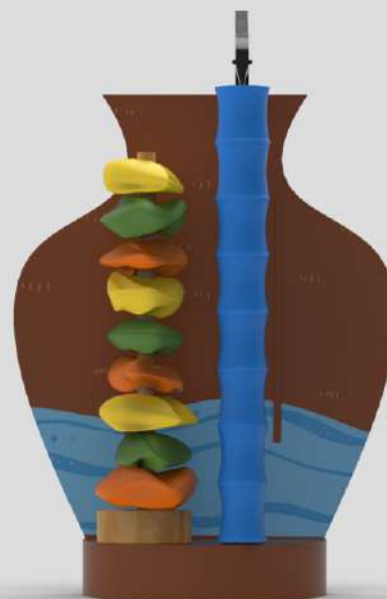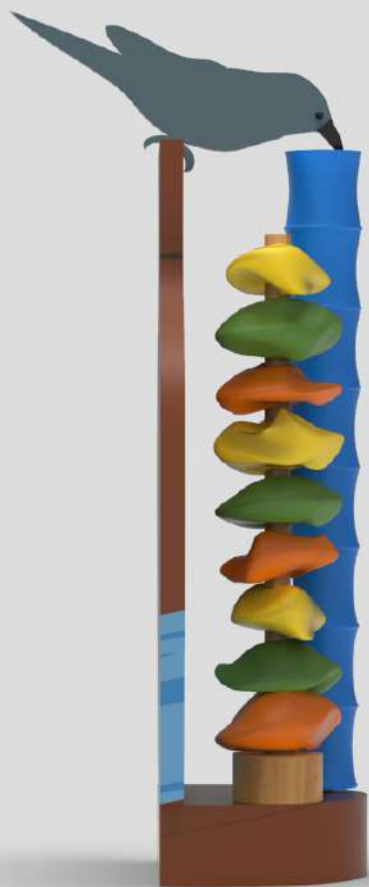
PYASA KAUVA
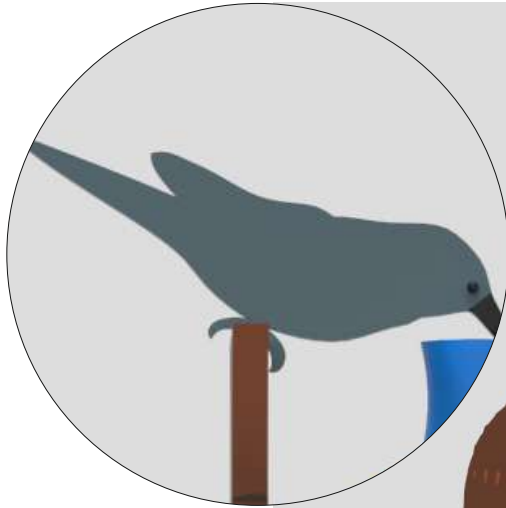
Understanding concept

Brain development

Scientific thinking

Motor skill development
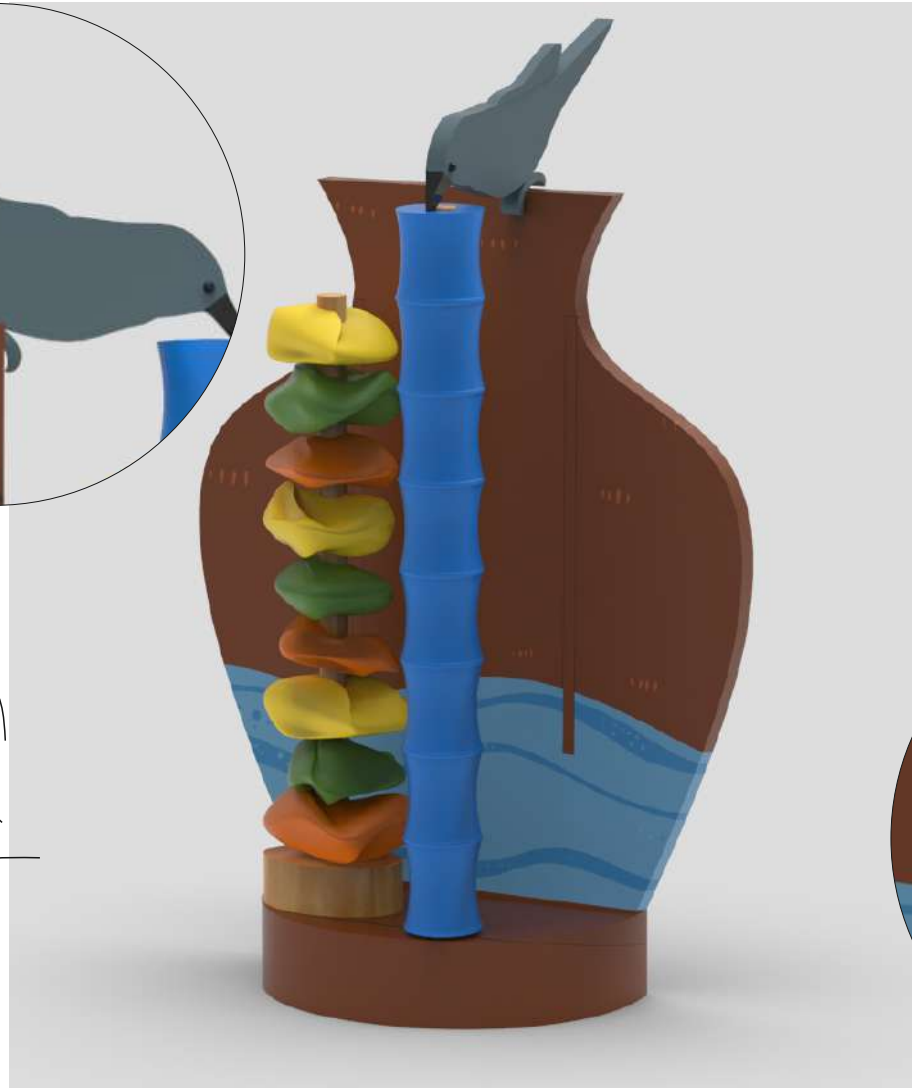
The toy contains:
- A set of 9 pebbles
- An assembled pot shaped platforms with a crow silhouette at the top edge.

How to play:
- Kids have to stack the pebbles top of each other in the left rod for water level to rise up in the right tube.
- Once the water level rise the floating cork on the right tube rise up to touch the bird silhouette beak leading the silhouette sit upright straight.
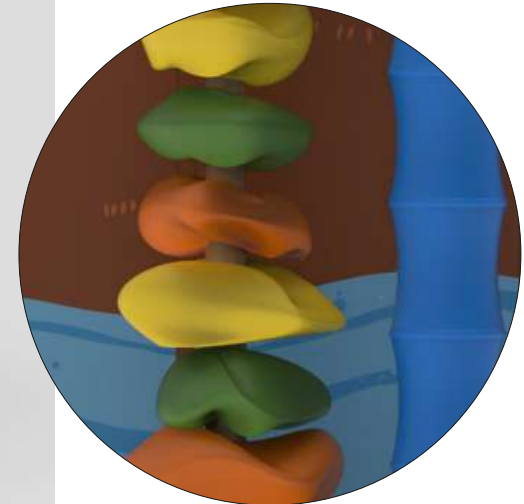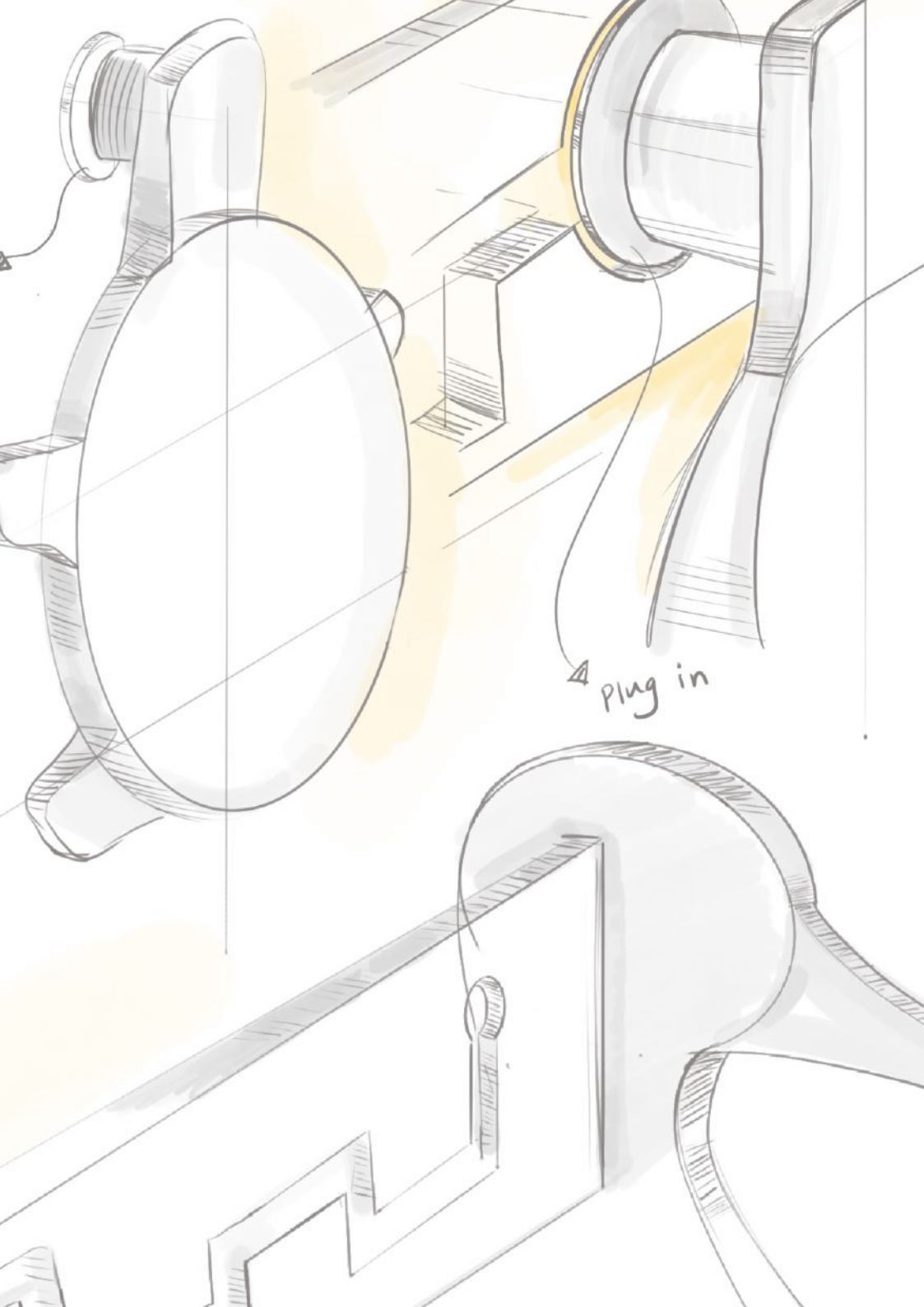
BATUNI KACHUA

A tortoise and two cranes were Best friends. They met at a lake every day. One year, it rained very less and the cranes were worried. The green spoke about another leg on the other side of the mountain. They decided to go there and invite the tortoise to join them. He told Them that he could not fly, but had an idea. He asked them to hold a stick in their beaks and he would hold the stick in the middle. The crane agreed but warned him not to open his mouth as the flu. As the flu, they crossed a city. The people were excited by the site. The tortoise wanted to see something and opened his mouth. He fell and was badly hurt. **Moral**: always pay heed to the advice of the wise.

Build up your concentration and cross the maze or else you'll fall just like the tortoise in the story of Tortoise and the Crane from Panchatantra. Batuni Kachua is a puzzle toy inspired by the same story that increases concentration and hand-eye coordination.

AGE- 6+

plug in

CONCEPT SKETCH
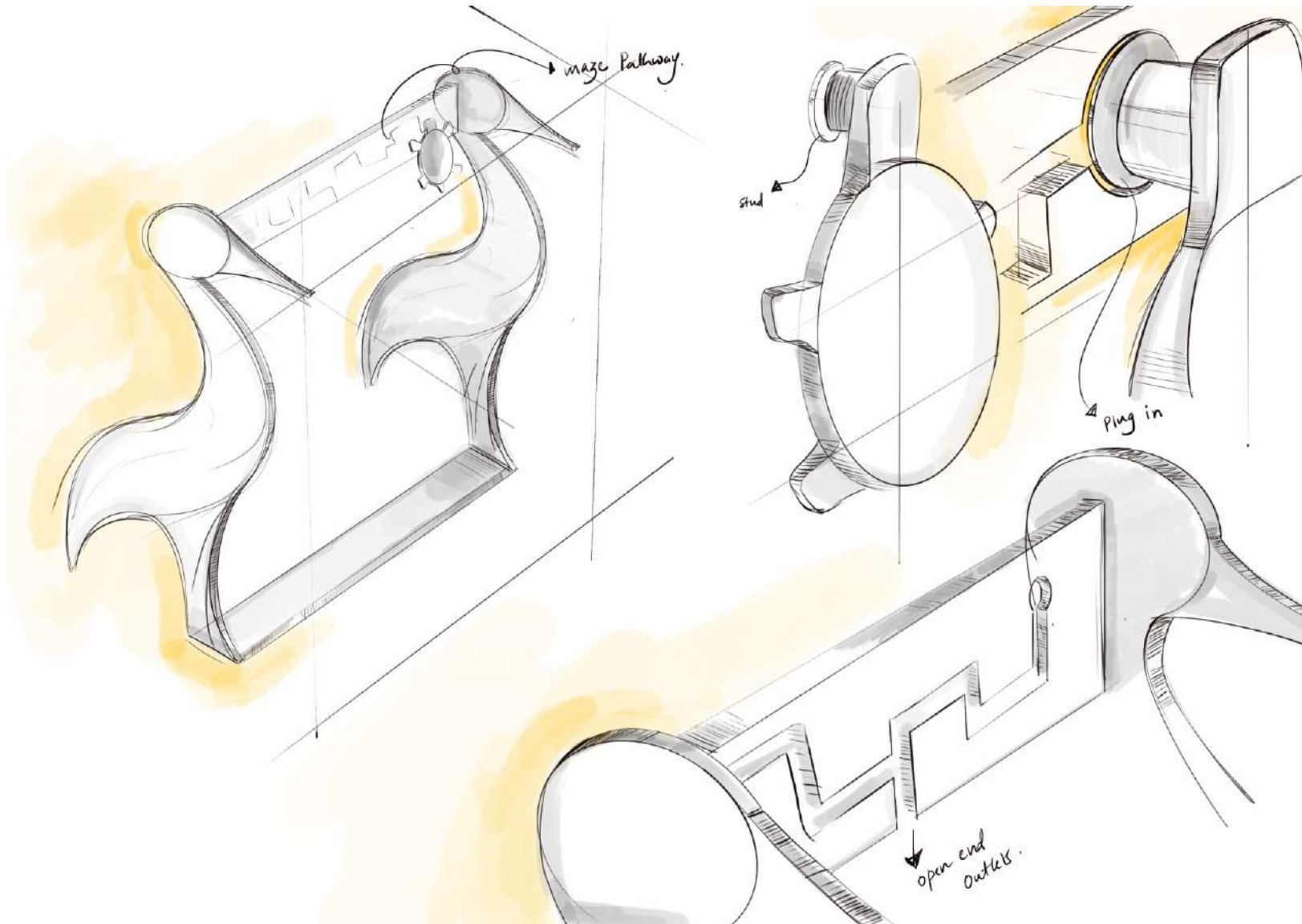
SPEC SHEET

CRANE & TORTOISE

TOP VIEW

6

175

6

9

PERSPECTIVE VIEW

FRONT VIEW

450

D15

85

5

57

444

SIDE VIEW

380

110
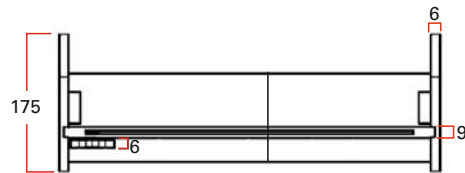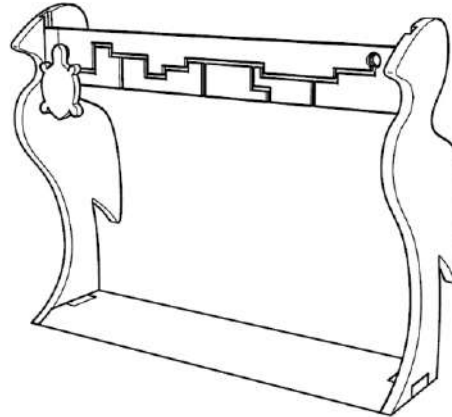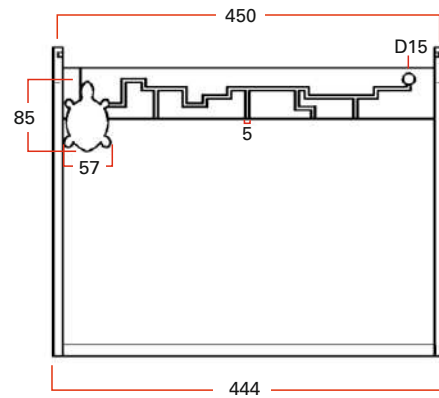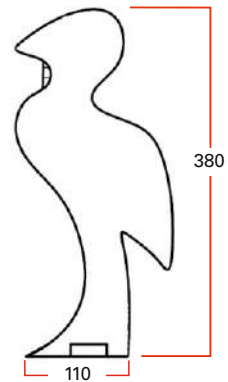
All dimensions are in mm.
PRODUCT NAME: BATUNI KACHUA
DIMENSIONS: 175 x 450 x 380
MATERIAL: MDF
MANU. PROCESS: CNC Laser cutting
COSTING: 1000 INR

GRAPHICS
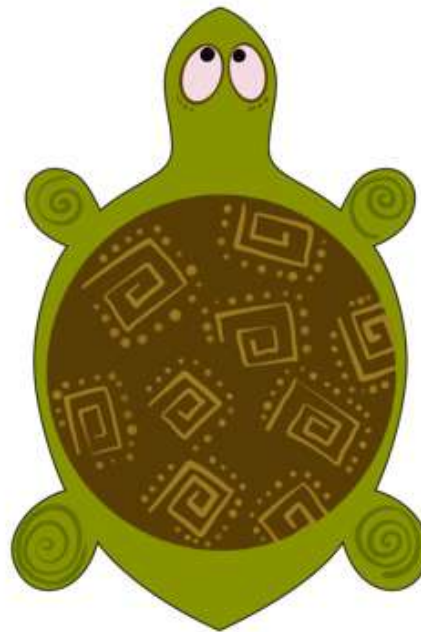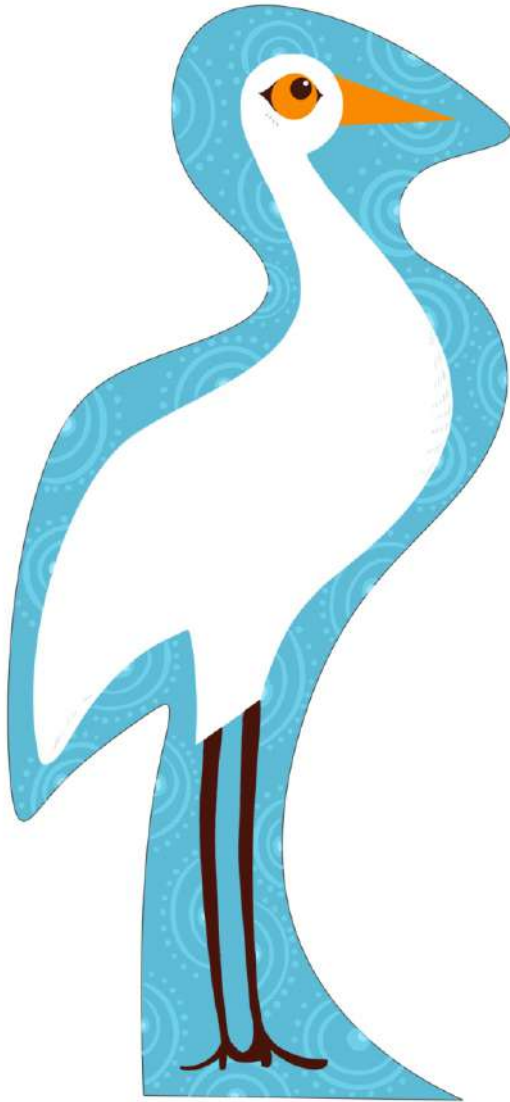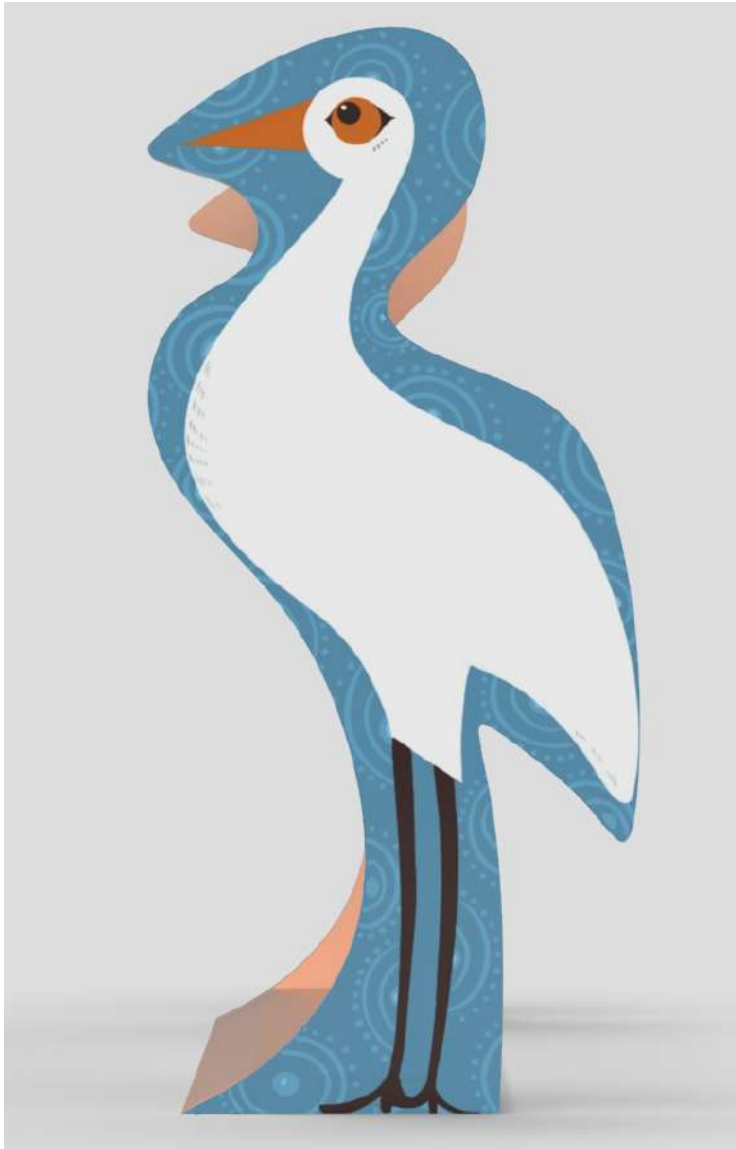
BATUNI KACHUA

Toy contains:
- 5 components parts of a 1 tortoise silhouette,2 crane silhouette,1 maze panel,1 base panned.

How to play:
- Kids have to construct the 5 component as shown in the figure
- Insert the tortoise silhouette in the starting point and slowly carry the silhouette through the maze carefully
- Twist: a wrong move can lead the tortoise to fall through the maze
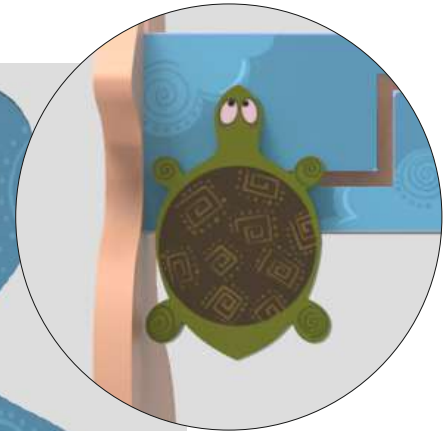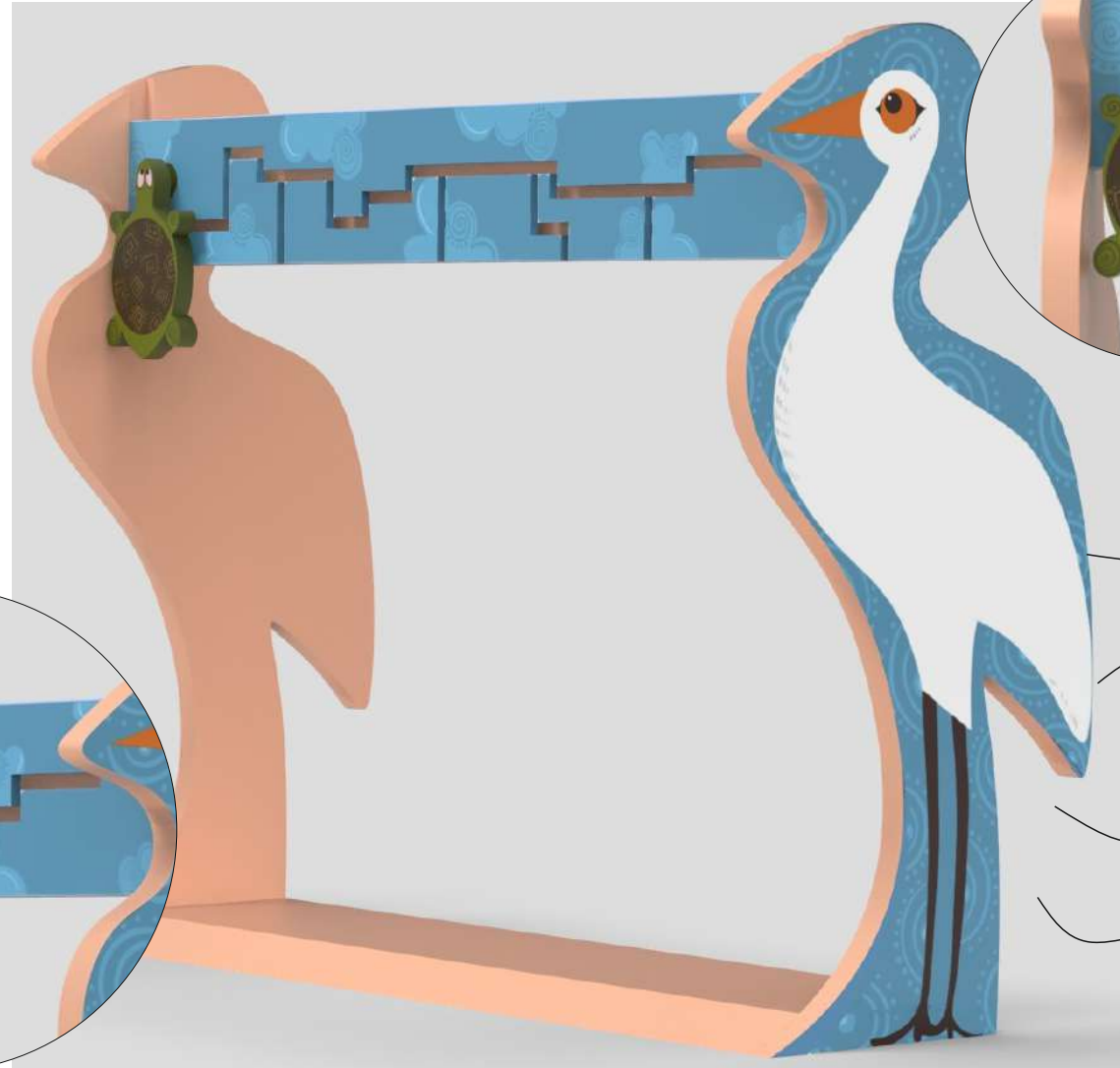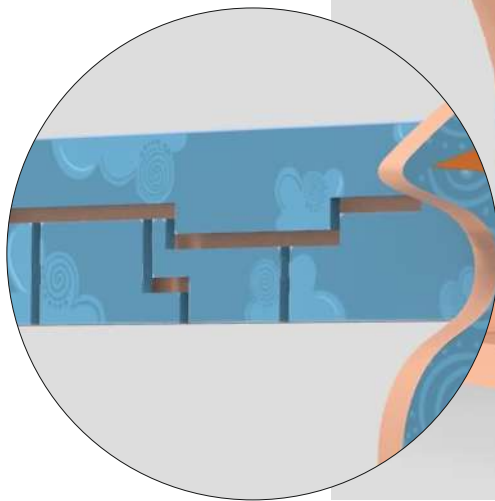
Understanding concepts

Boost confidence

Brain development

Motor skill development

Grape

fox
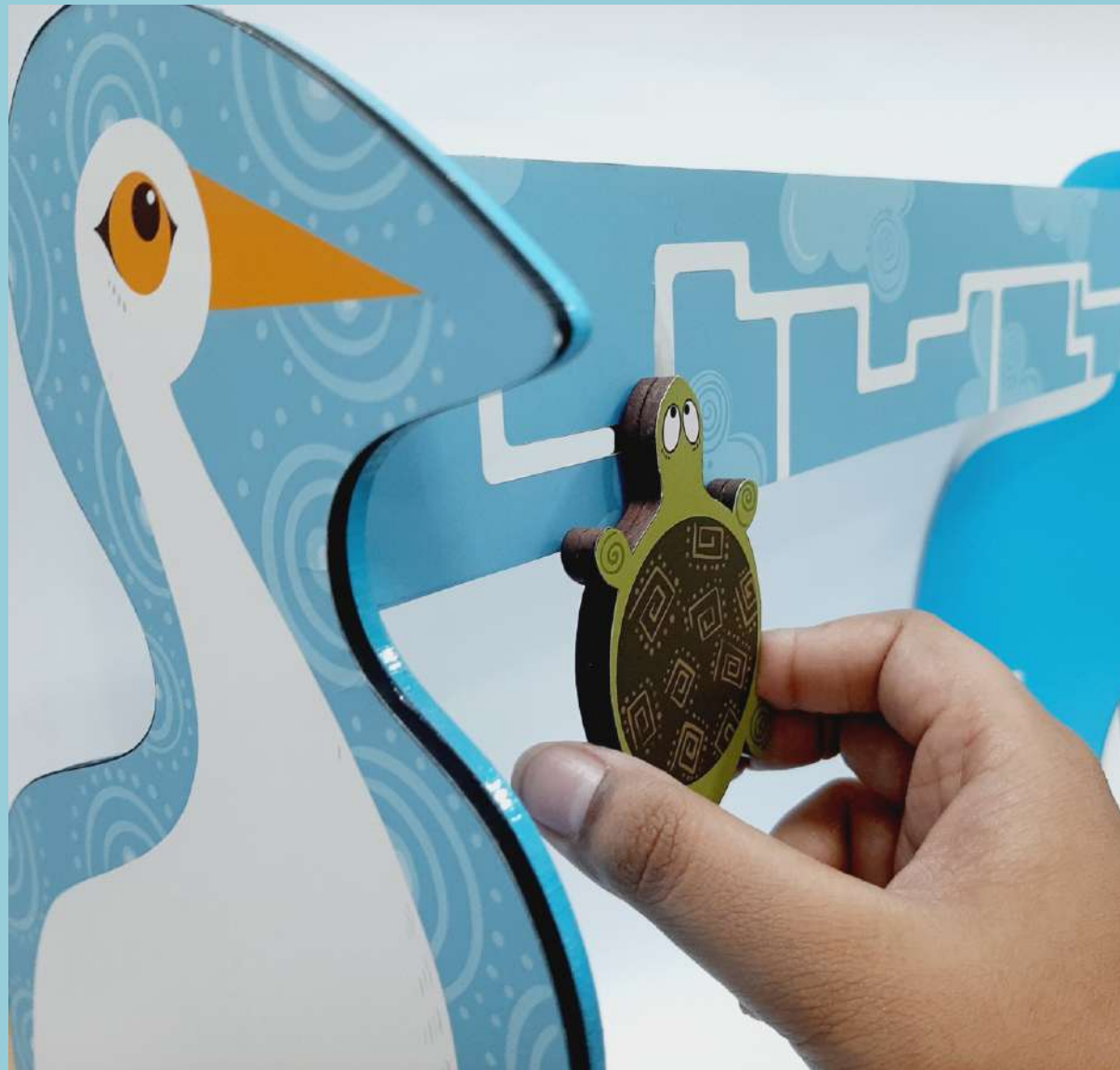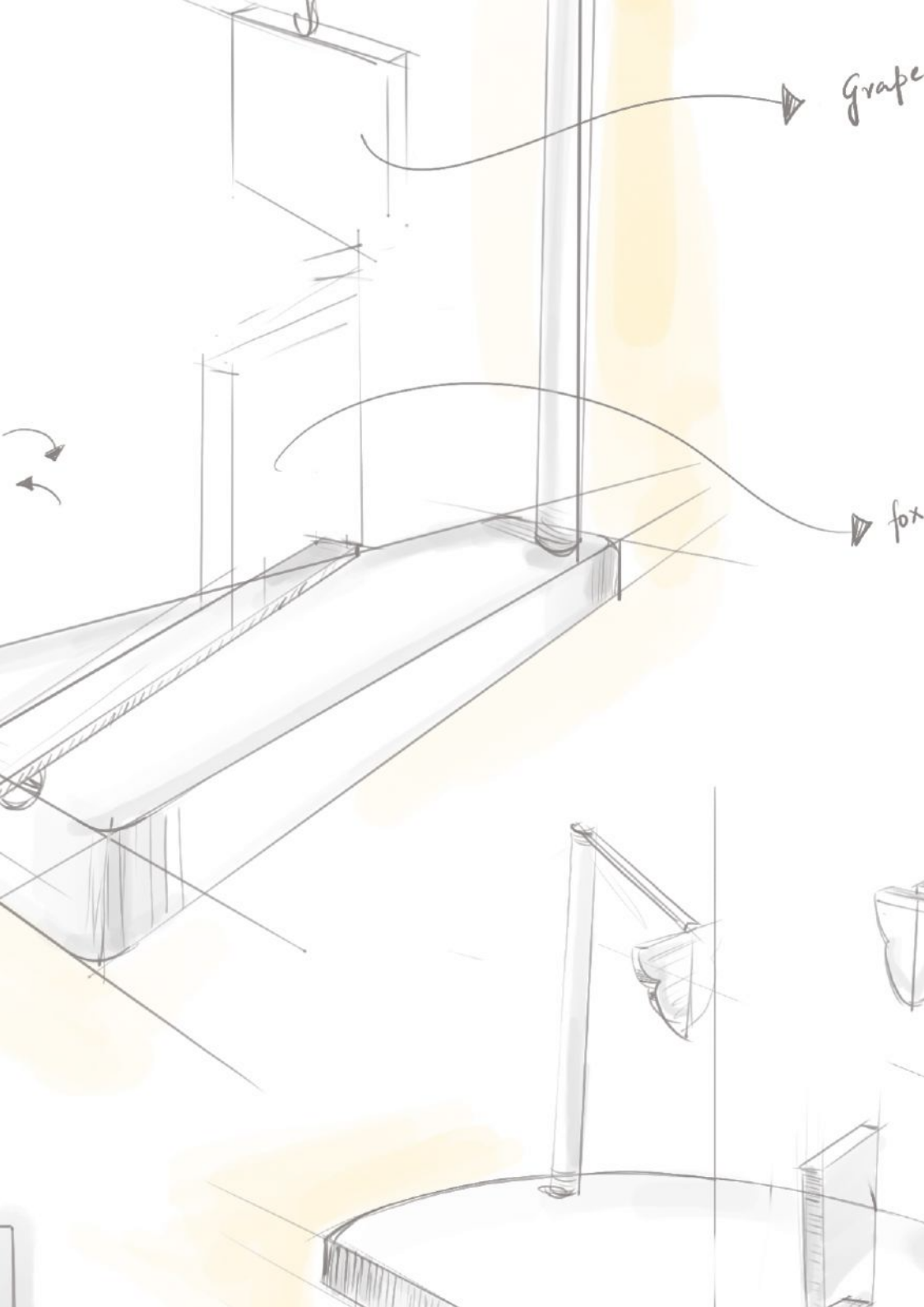
KHATTE ANGUR

One afternoon, a fox was walking all by himself through the forest in search of food. He was so hungry that he could hear his tummy rumble. After searching for the whole day, he came across a vineyard. His mouth water when he saw the plum, right, and juicy grapes. They looked tasty. The grapes wear on a high brunch. So, the fox took a few steps back and jumped. But he missed it. He decided to try again. He jumped again but still couldn't reach the grapes. The Fox said to himself, "they sure look tasty, but I am sure that they are sour anyways!" Seeing this, he walked away.

Moral: It's easy to despise what you cannot have

Khatte Angur is a fine motor skills development toy inspired by the story of Fox and Grapes. Children have to guide the fox to the grapes and decide whether they are sour or sweet!

AGE- 5+

CONCEPT SKETCH

grape silhoutte

fox silhoutte

Lever
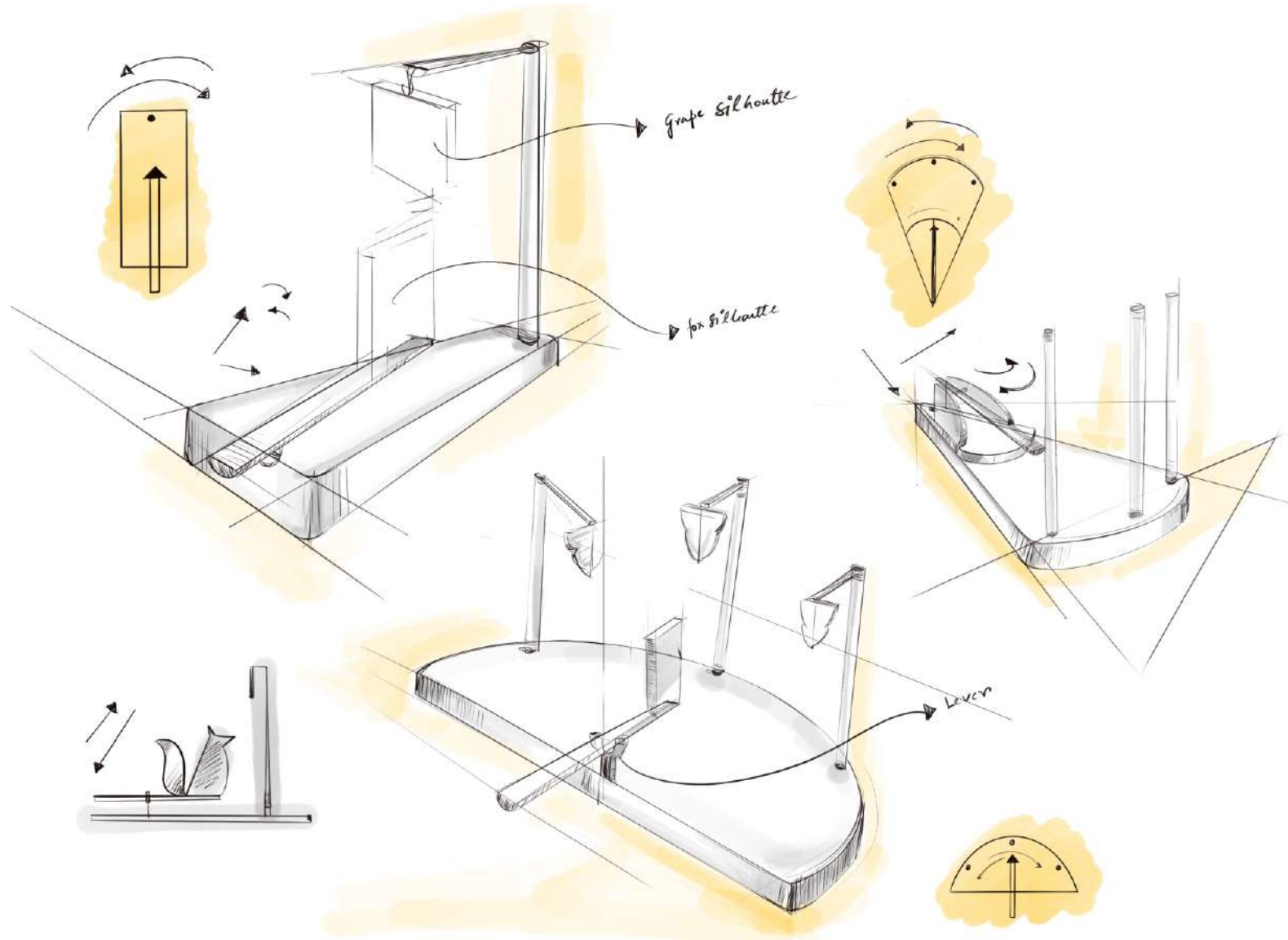
SPEC SHEET

FOX AND GRAPES

TOP VIEW

66
3
77
3
51

PERSPECTIVE VIEW

FRONT VIEW

17
21
95
22
165

SIDE VIEW

4
165
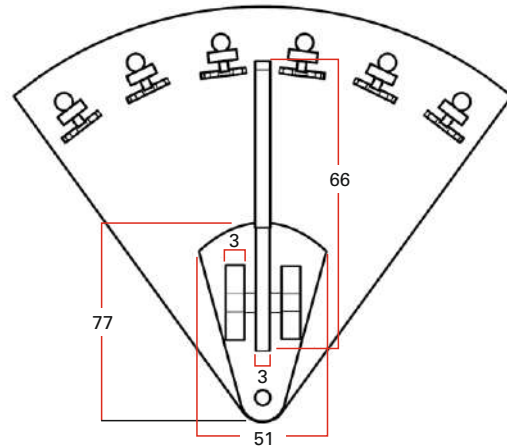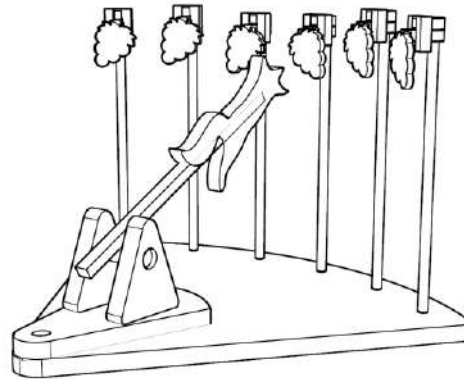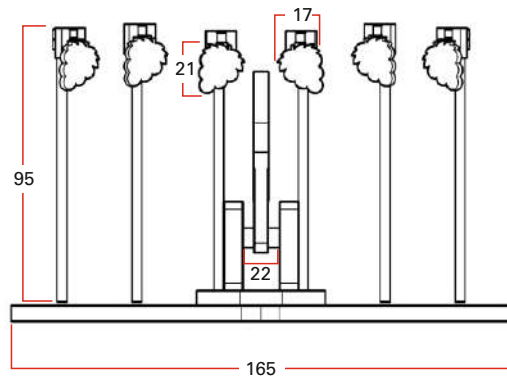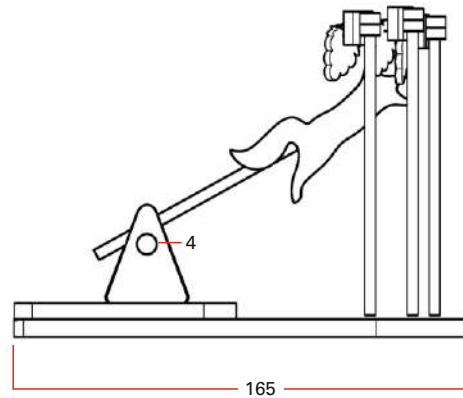
All dimensions are in mm
PRODUCT NAME: Khatte Angur
DIMENSIONS: 165 x 165x 98
MATERIAL: MDF
HARDWARE: Rivet
MANU. PROCESS: CNC Laser cutting
COSTING: 850 INR

GRAPHICS
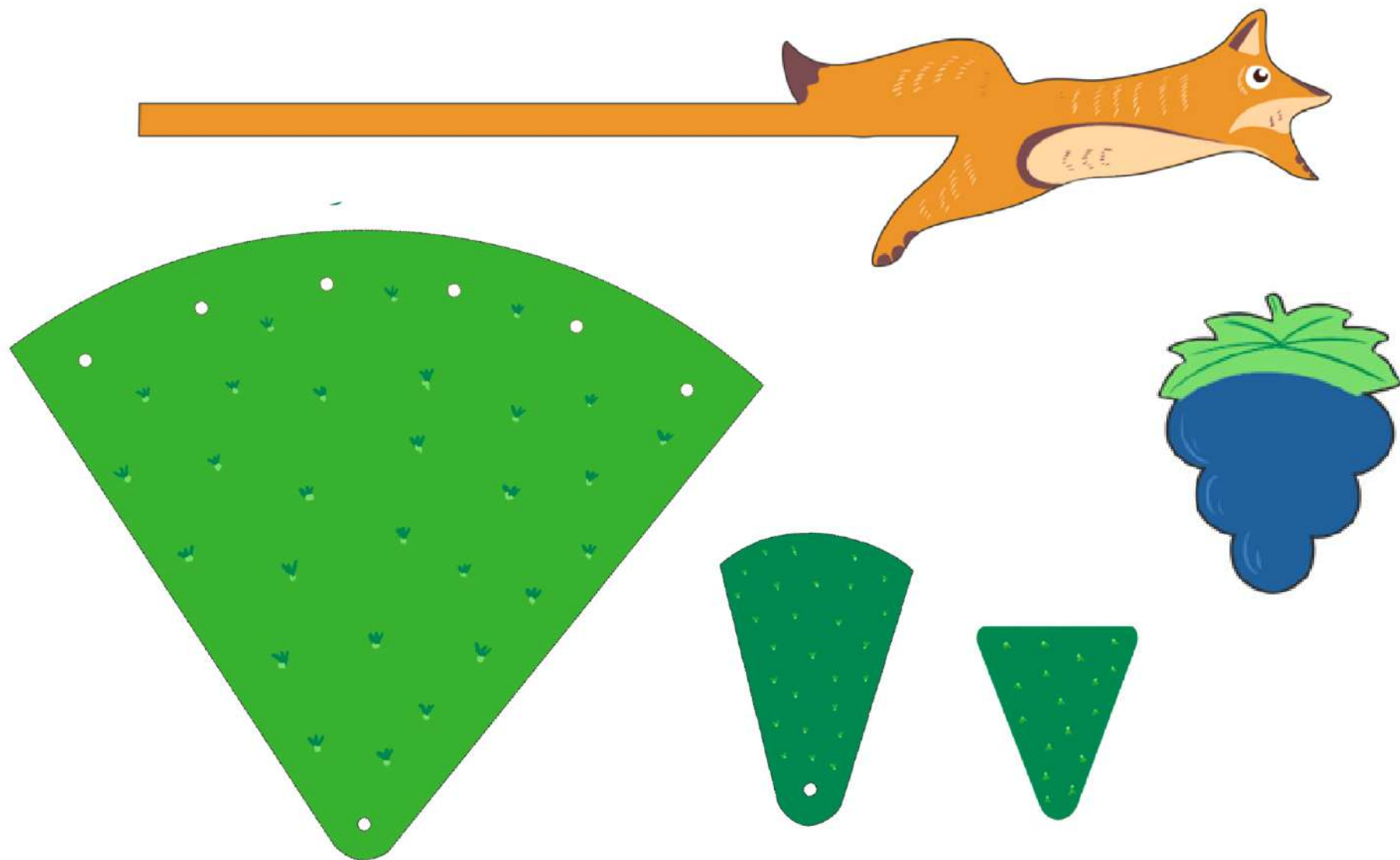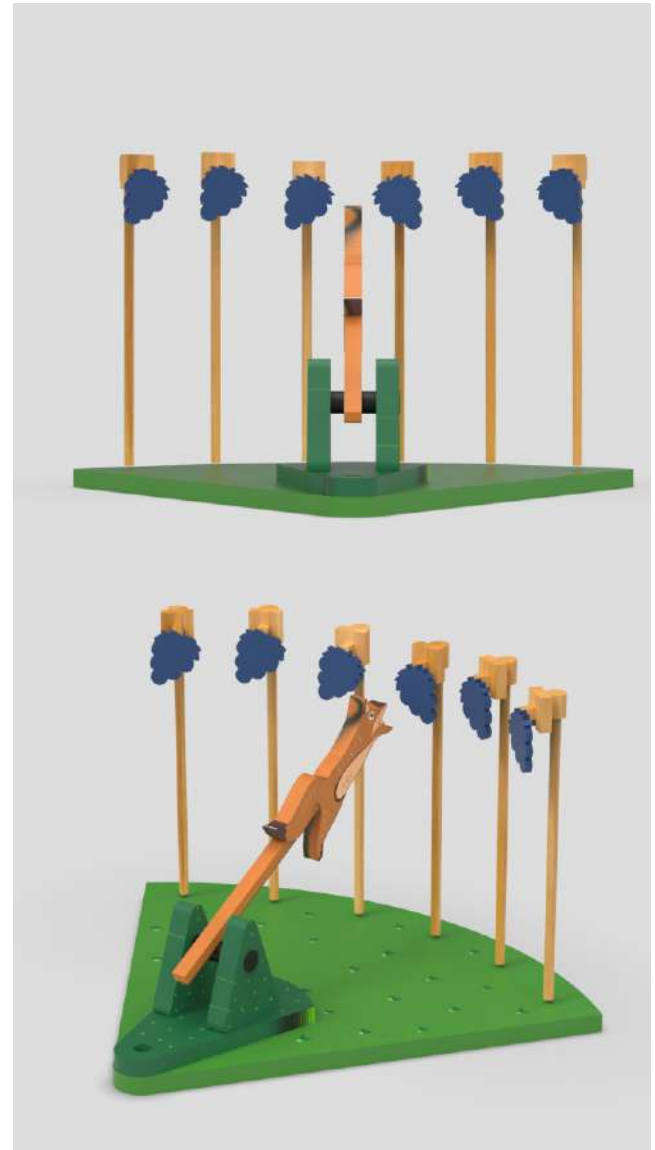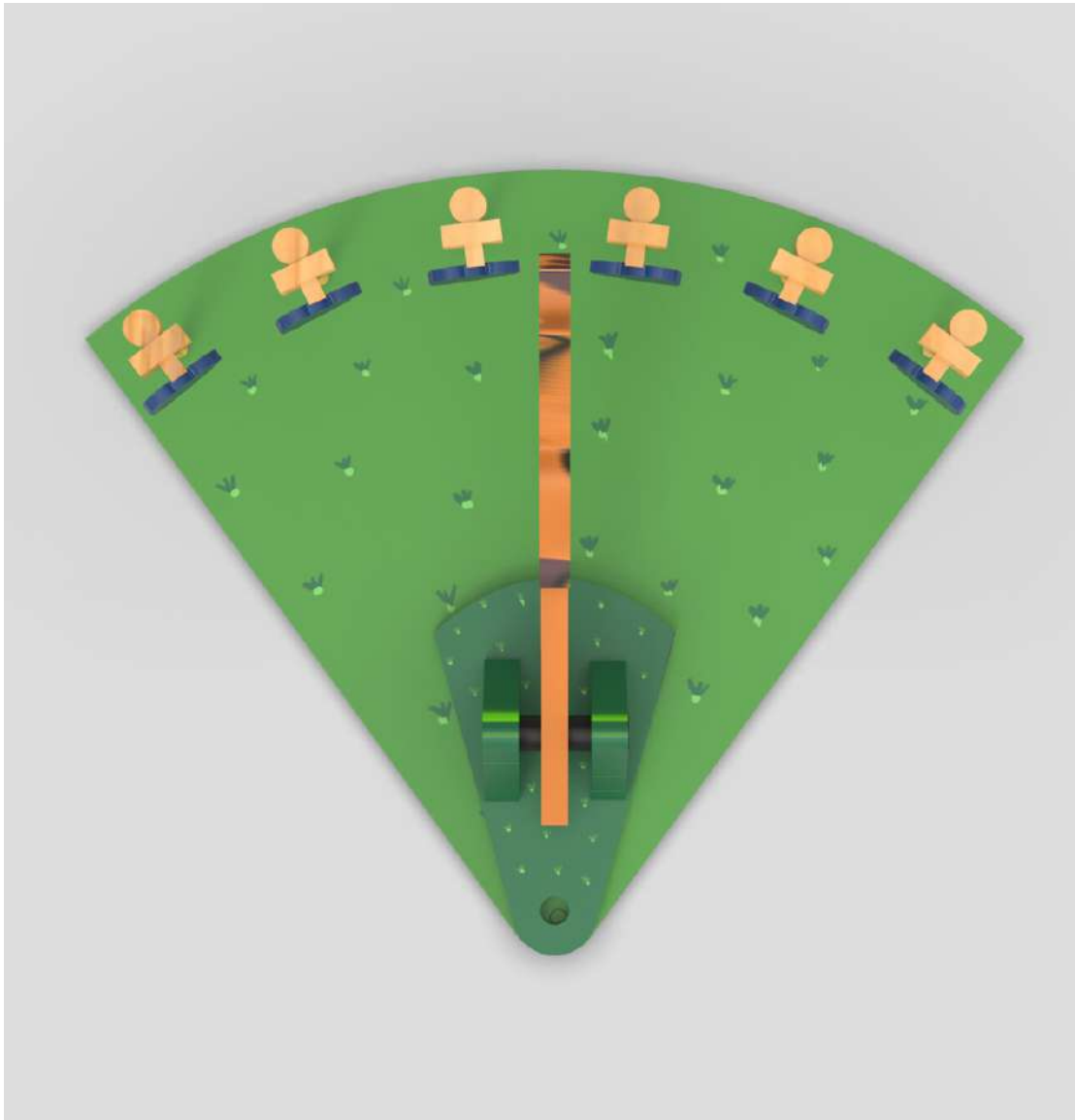
KHATTE ANGUR

The toy contains:
Assembled set up of a grape vineyard
- a fox silhouette on a movable platform
- 3 set of magnetic grapes silhouette

How to play?
- Kids have to adjust the fox, movement can be right left and top bottom to reach the grapes
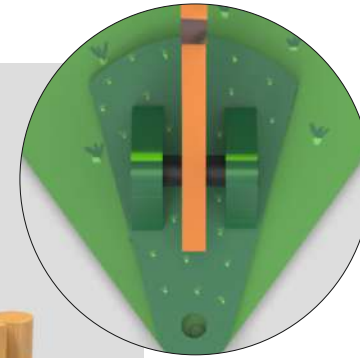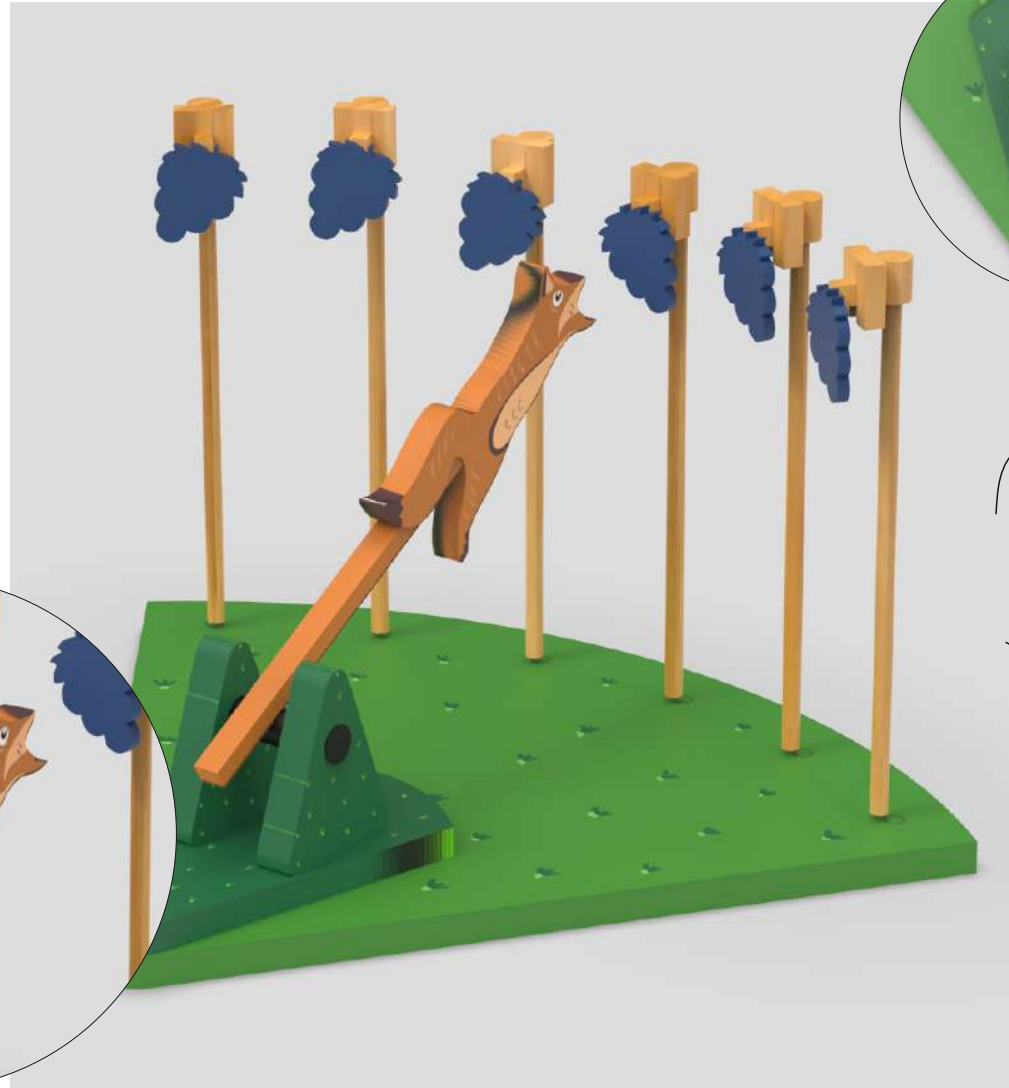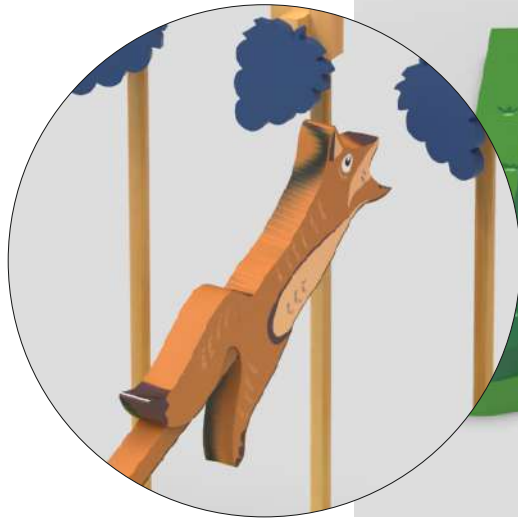
Spatial awareness

Motor skill development

Eye hand coordination
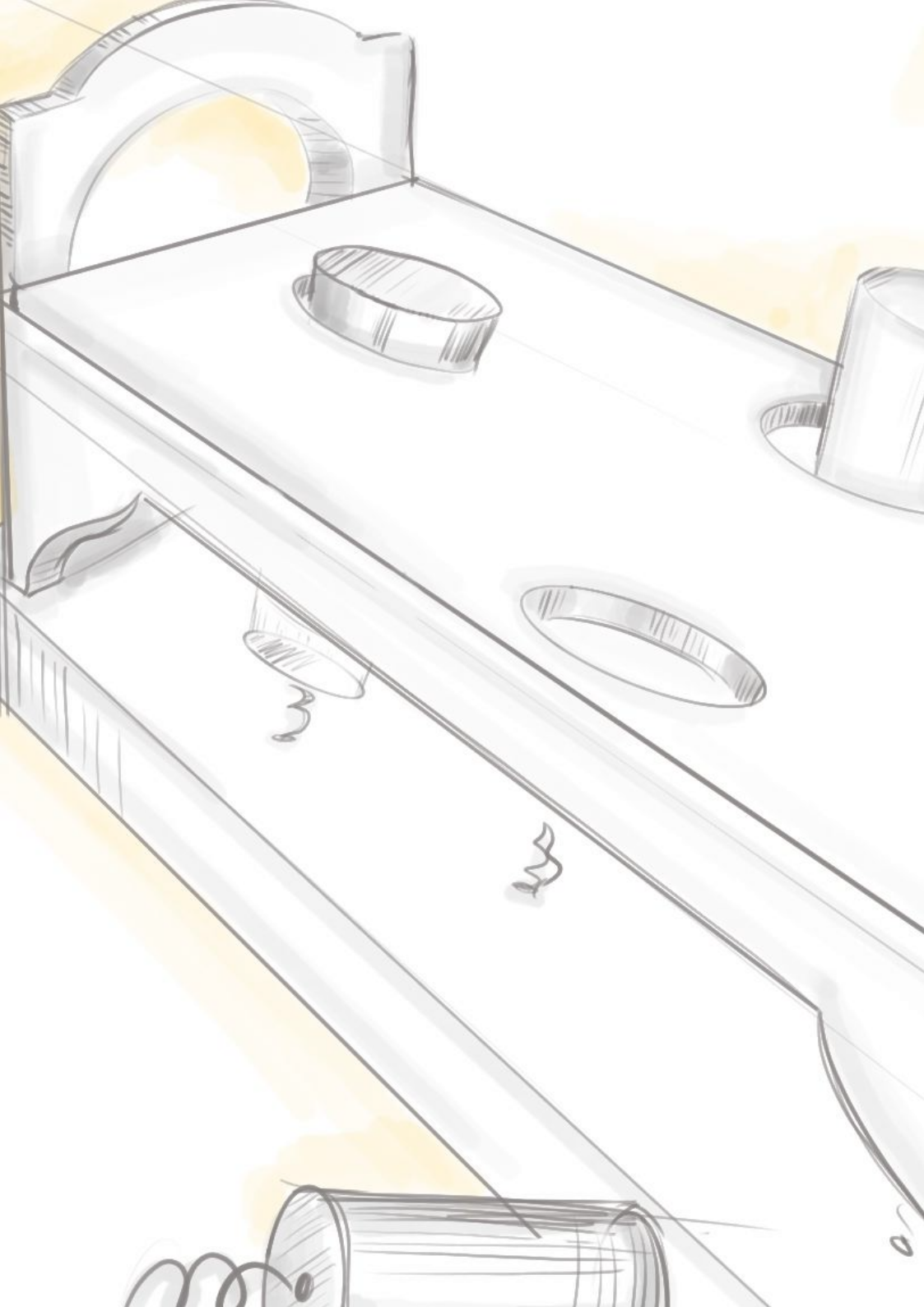
MURKH RAJA

Once, a king had a pet monkey, who served as his servant. The king's Minister did not like the king giving the monkey much importance and tried to speak to him about it. But, the king did not listen to what they had to see. One afternoon, when the king was taking a nap, he told the monkey not to allow anyone to disturb him. The monkey suddenly noticed a fly on the king's bed. His efforts to drive it away failed since it would return. He decided to teach the fly a lesson. Taking the king's Dagar Ki Hit to fly. It flew away and he ended up hurting the king. The monkey did not know what went wrong.
Moral: One who trust a fool is doomed

Murkh Raja, inspired by the story of Monkey and the Foolish King, is an interactive toy that helps in improving one's coordination and motor skills playfully. Here, kids have to hammer the pegs over and over and have fun living the story.

AGE- 1+

CONCEPT SKETCH
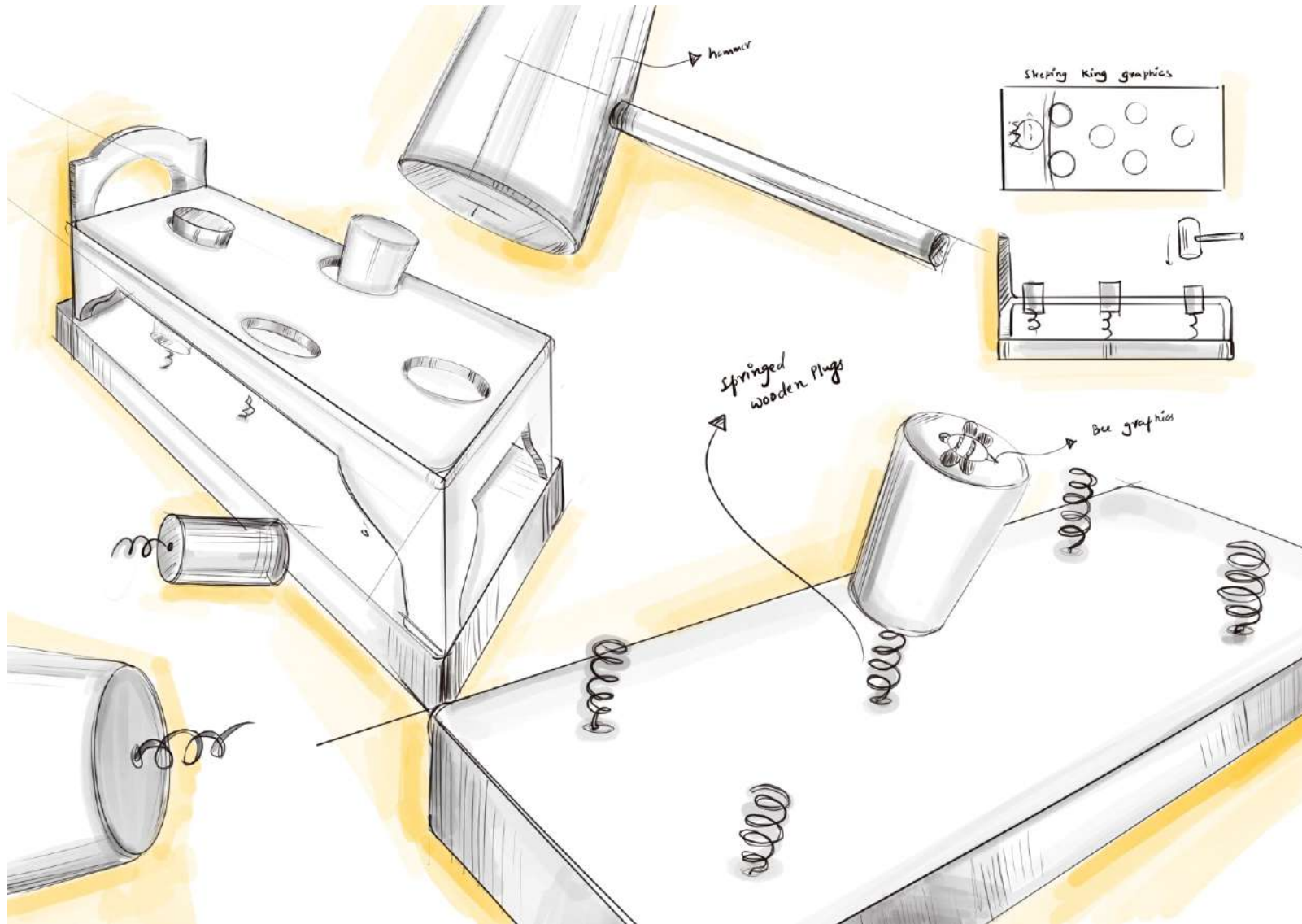
hammer

sleeping king graphics

springed wooden plugs

Bee graphics

SPEC SHEET

TOP VIEW

19 15

94

203

PERSPECTIVE VIEW

FRONT VIEW

17

38

SIDE VIEW

58.5

17
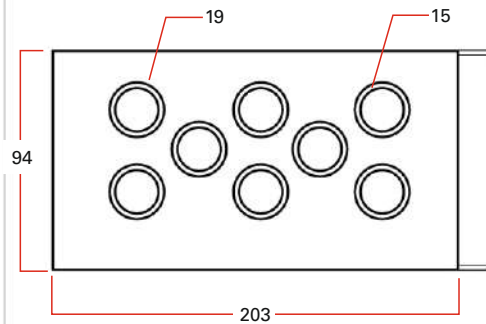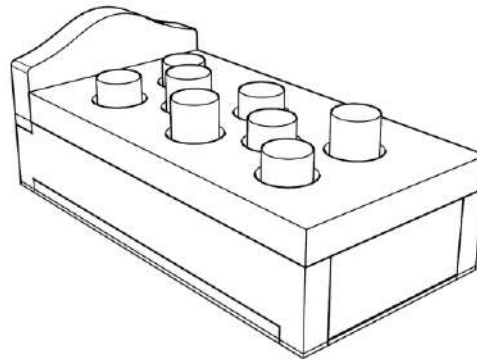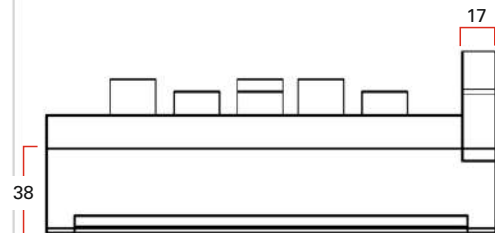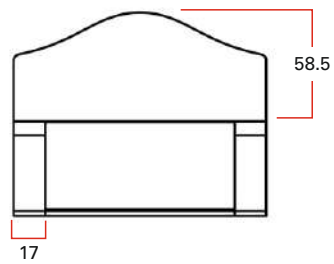
All dimensions are in mm
PRODUCT NAME: Murkh Raja
DIMENSIONS: 220 x 94 x 96
MATERIAL: Pine Wood
MANU. PROCESS: CNC Router Cutting
COSTING: 900 INR

GRAPHICS

MURKH RAJA

Spatial awareness

Concentration

Motor skill development
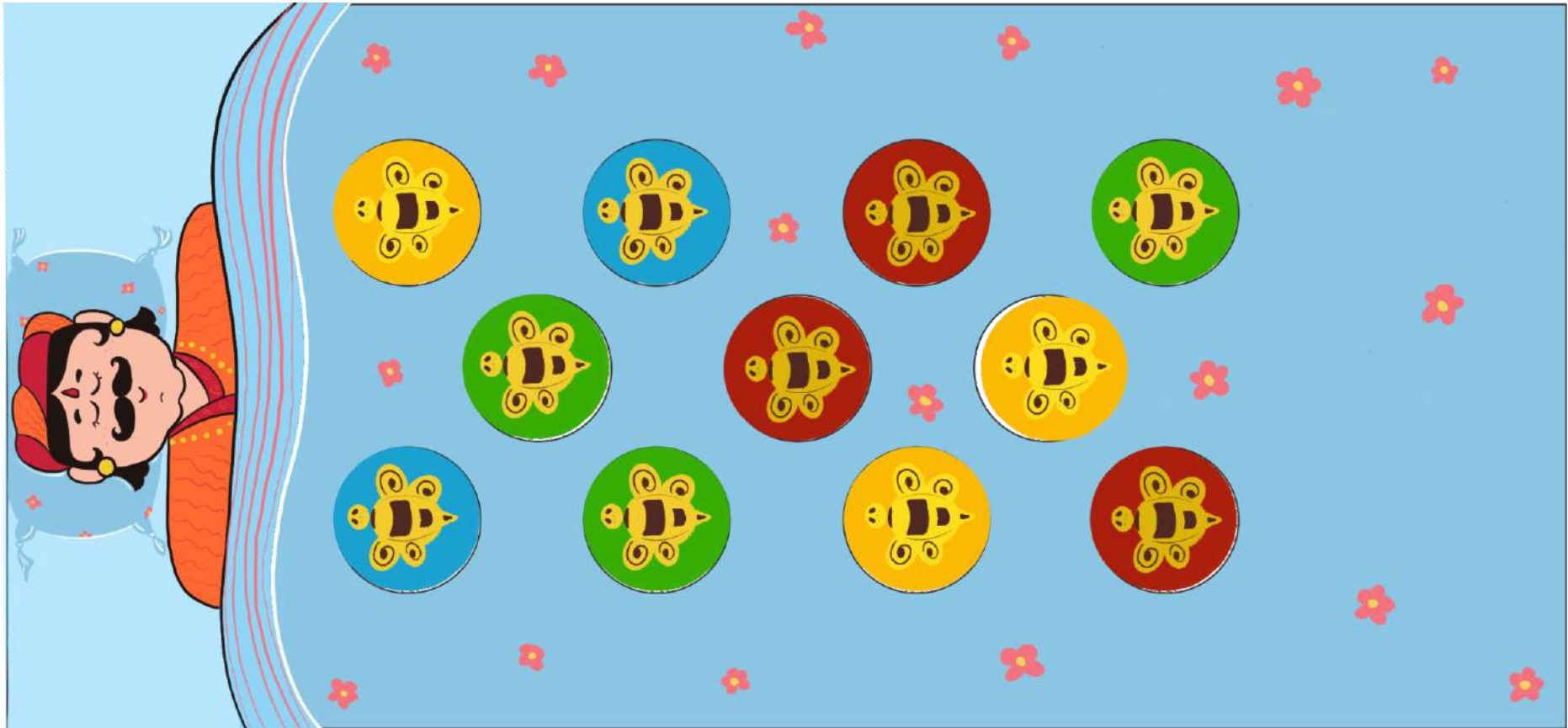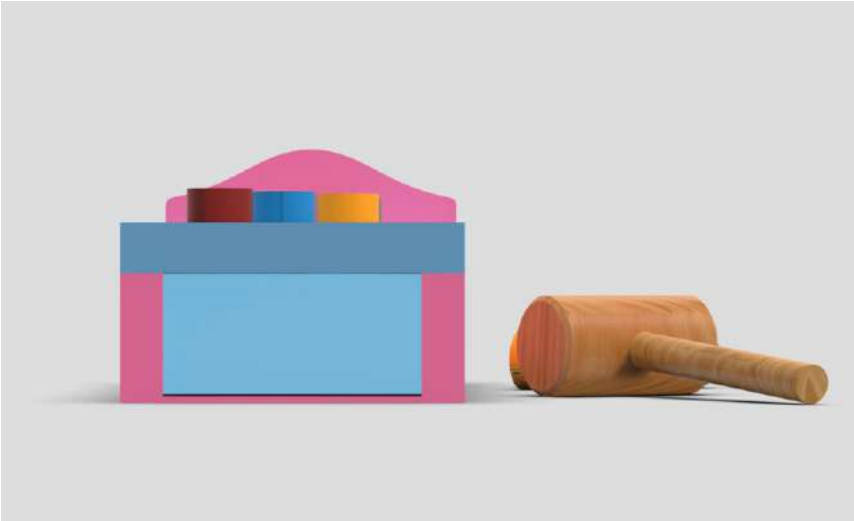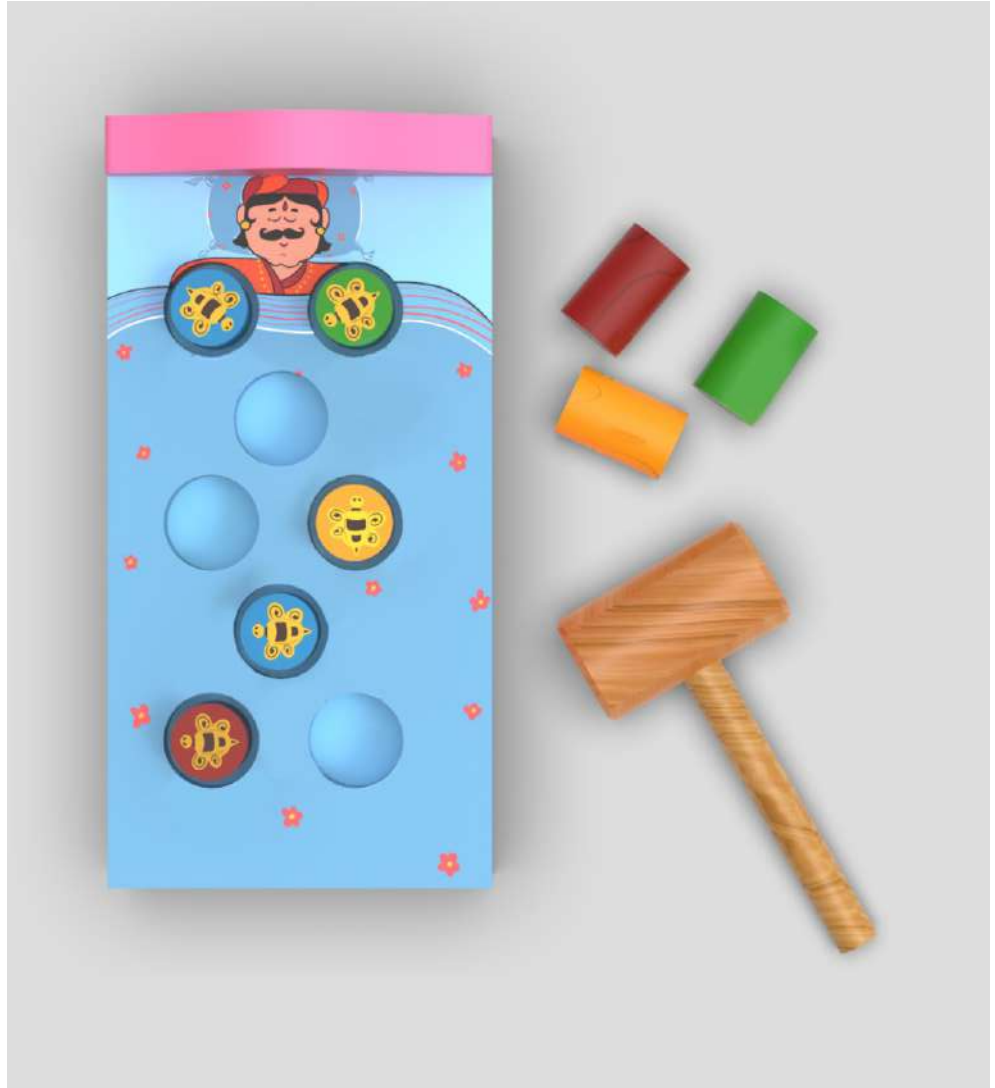
Eye hand coordination
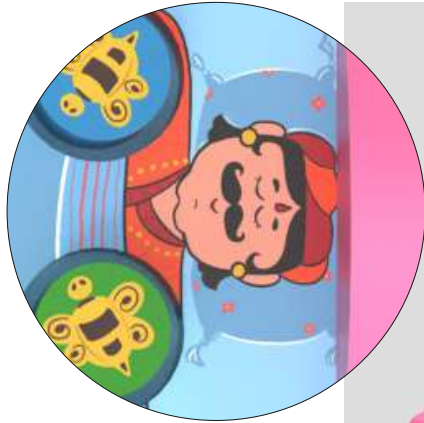
The toy contains:
- 11 wooden pegs
- wooden hammer
- wooden bed

How to play?
- kids have to set all the wooden pegs through the holes
- hammer the pegs
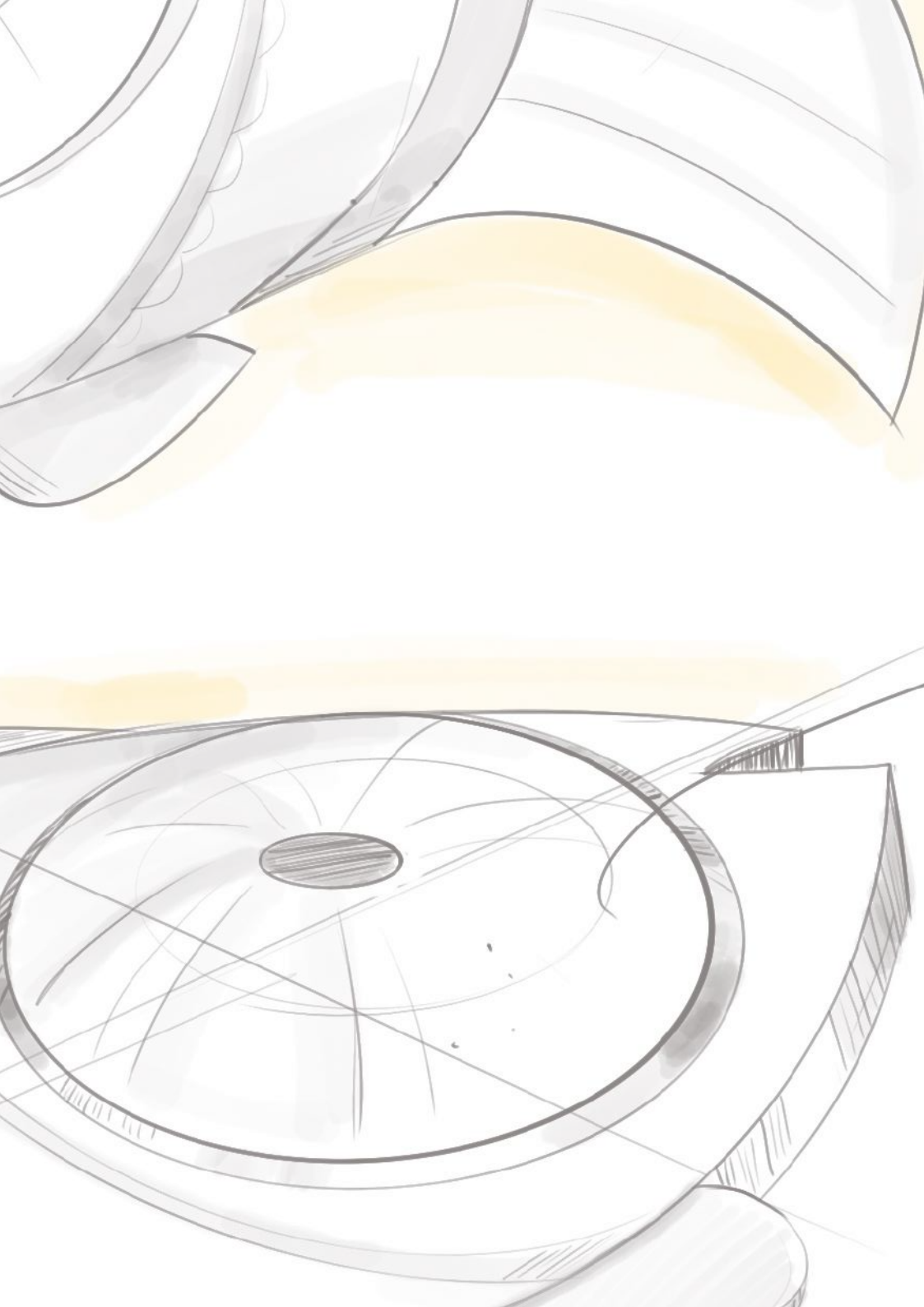
MATSYAVEDH

Learn archery and aim for the fisheye just like
Arjun did in the Indian epic Mahabharat.
Matsyavedh is a toy that provides a bow and
arrow as well as a board in the shape of a fish
for kids to get a feel of living in the epic.

AGE- 5+

SPEC SHEET

406

482
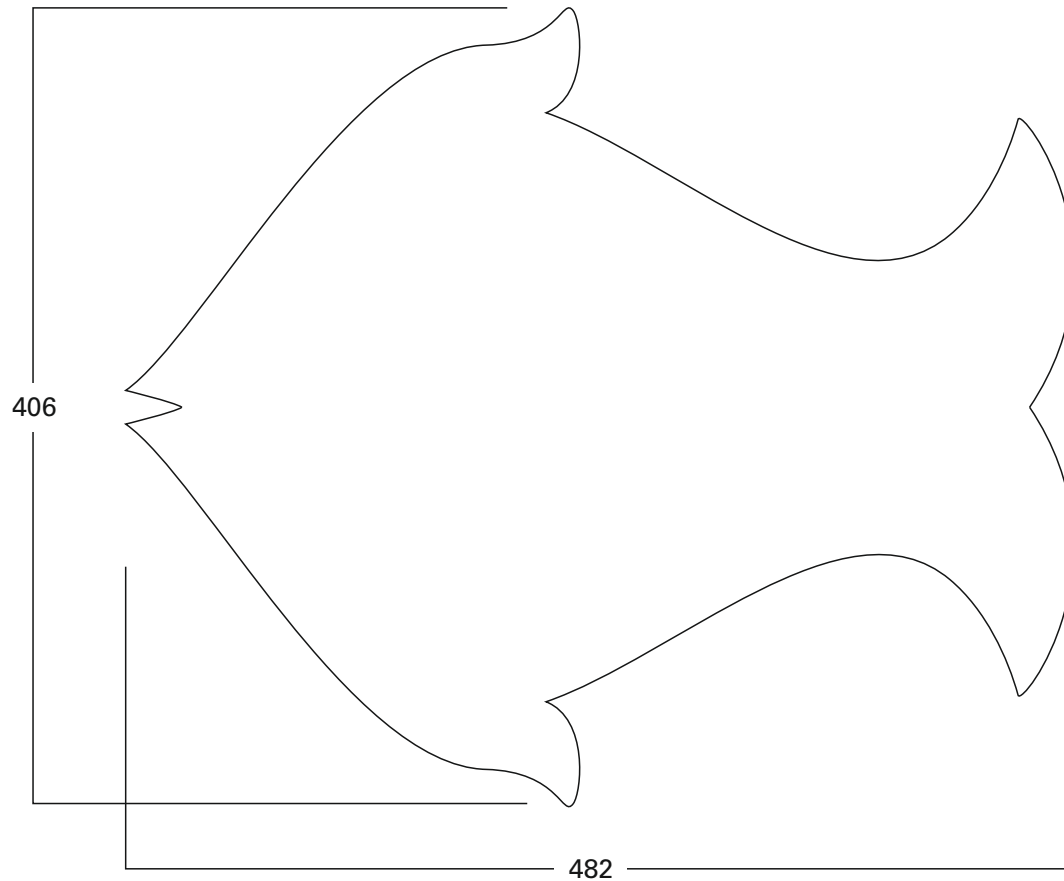
All dimensions are in mm
PRODUCT NAME: Matsyavedh
DIMENSIONS: 406 x 482 x 3
MATERIAL: MDF
MANU. PROCESS: CNC Laser Cutting
COSTING: 450 INR

GRAPHICS

MATSYAVEDH

Understanding concept

Increases attention span

Motor skill development

Spatial awareness

Concentration

Eye hand coordination

Toy contains:
- A MDF fish silhouette
- Bow and arrow

How to play?
- Be Arjun and target the fish eye
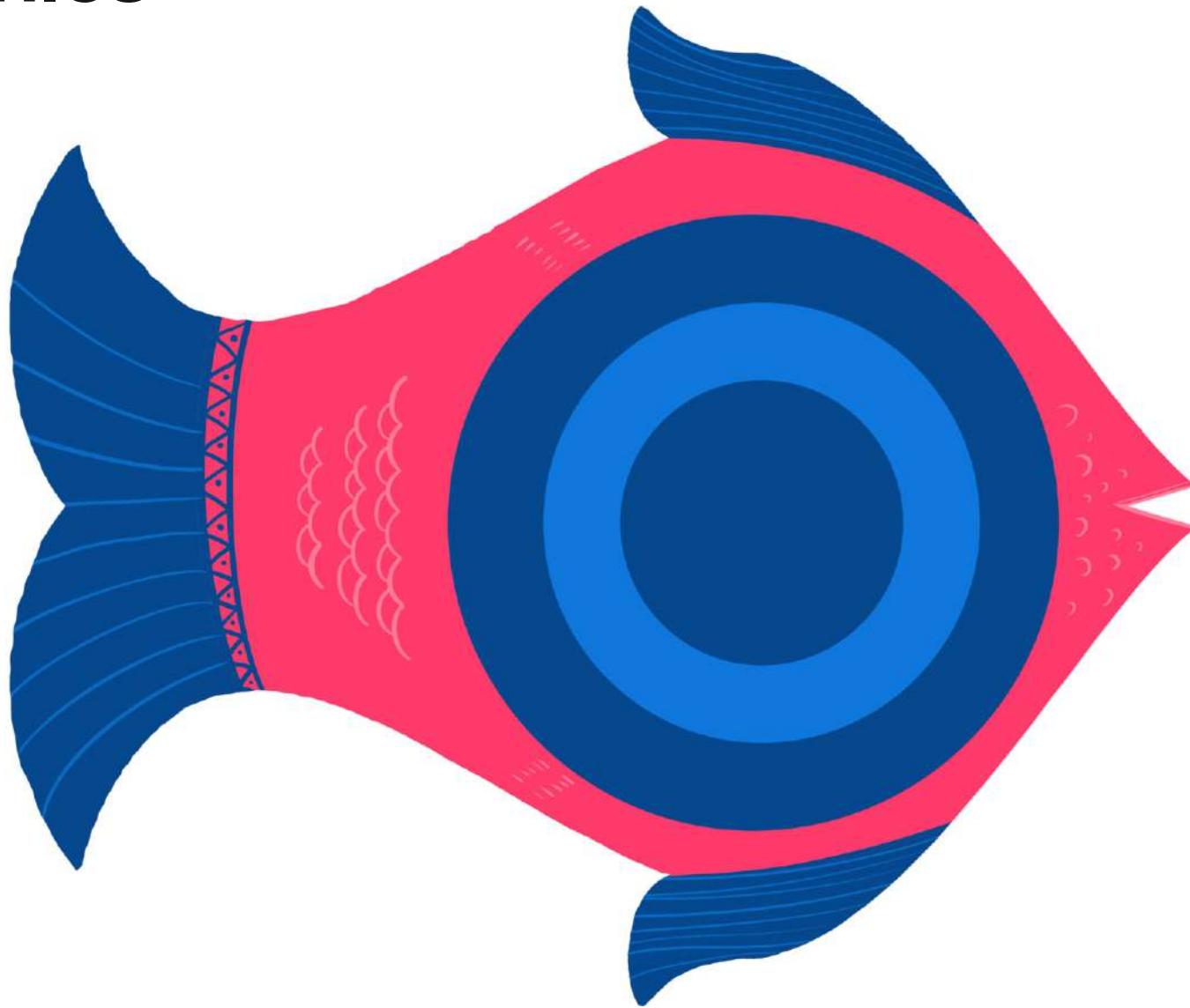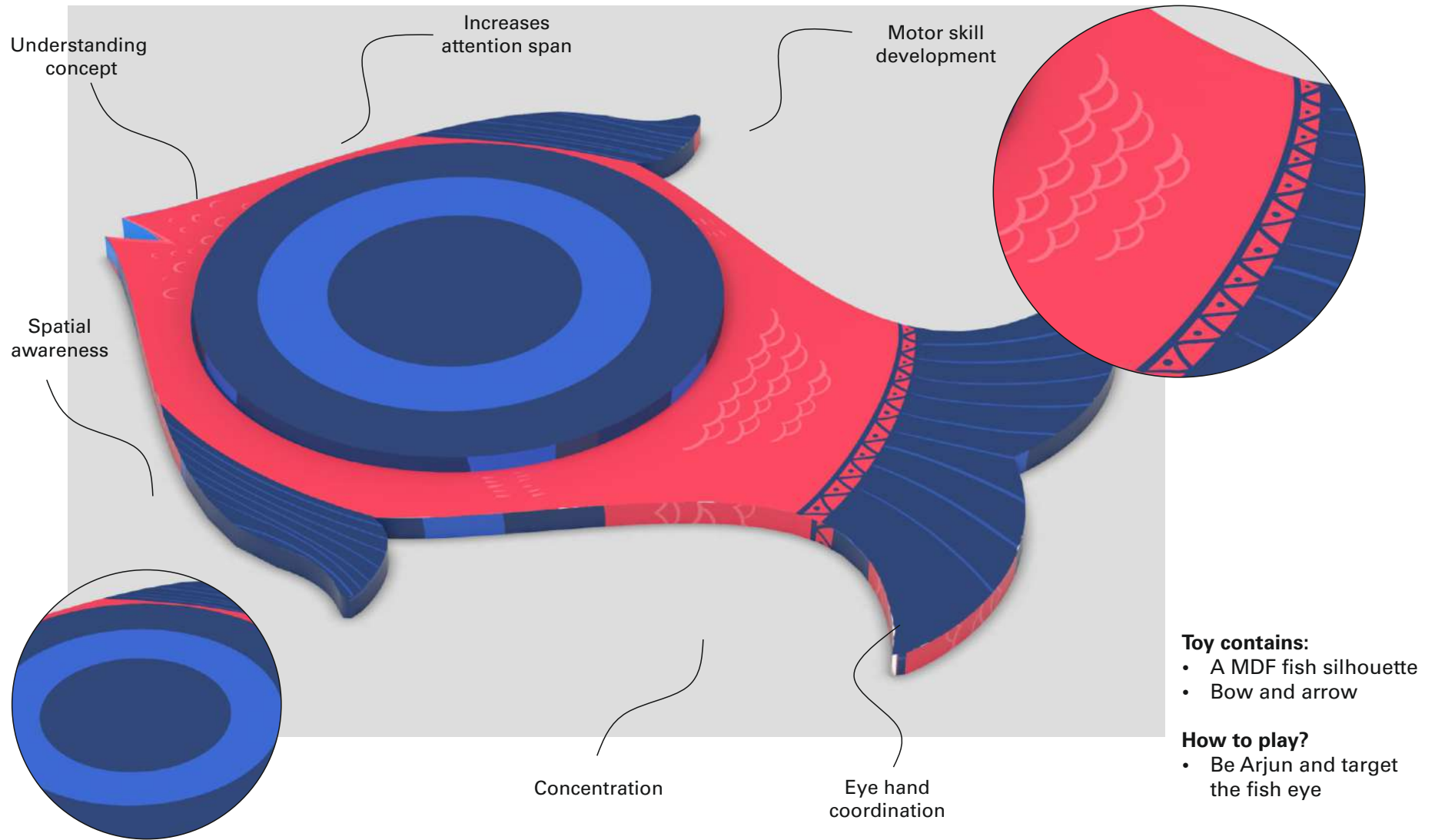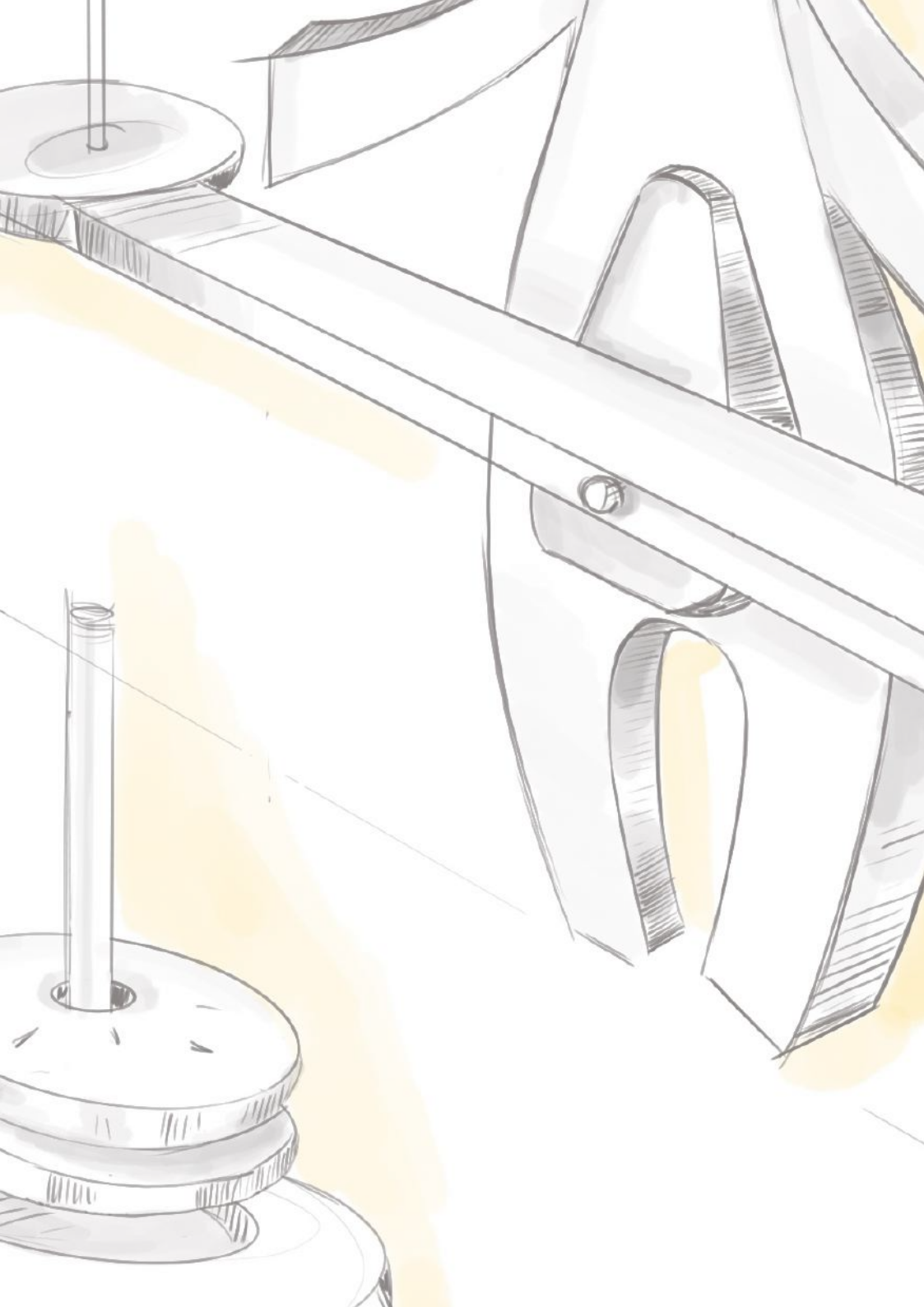
CHALAK BANDAR

One day two cats found a loaf of bread. Both the cats wanted the bread so they started fighting. They clawed at each other and fought for long time. Along came a monkey. "Why are you fighting? " he questioned. The monkey asked, "Why don't you share it?" The cats said, "We don't want the other to get more, so we are not able to share it. "The monkey tore the loaf into two. One bit appears much bigger, let me get them to the same size, " he said, and ate a little of one of the pieces of bread. Then the other part looked bigger, and so he ate a bit of it. The cats were so occupied fighting each other, they did not be aware of the monkey eating the bread. The cats could not get any bread, simply because they were busy fighting. When the cats found the monkey running away, they realized that they should have worked together and shared.

Be the clever monkey and solve the fight between the cats by dividing the food with Chalak Bandar, a toy inspired by the story of Clever Monkey and Two Cats. This toy helps children in understanding the basics of weights and balance in a fun way.

AGE- 5+

CONCEPT SKETCH

Lever.

Stackable Pieces.
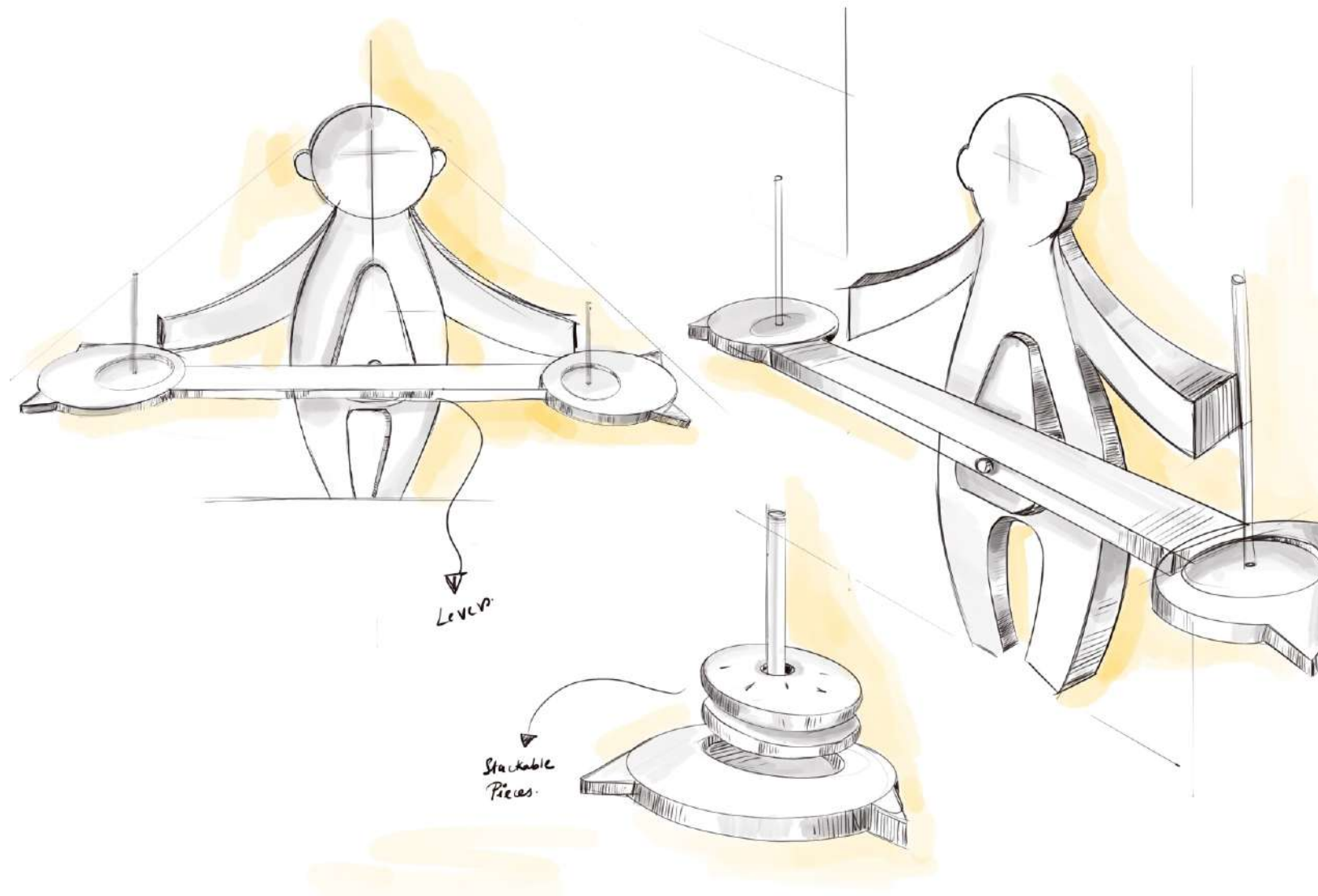
SPEC SHEET

MONKEY AND CAT

TOP VIEW

165
74
74
R-1.3

PERSPECTIVE VIEW

FRONT VIEW

13
13
228

SIDE VIEW

165
75
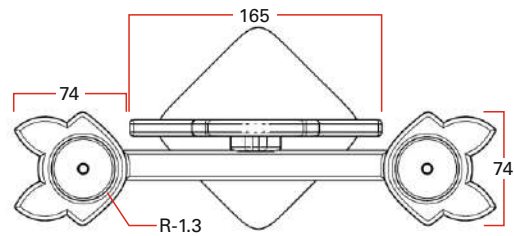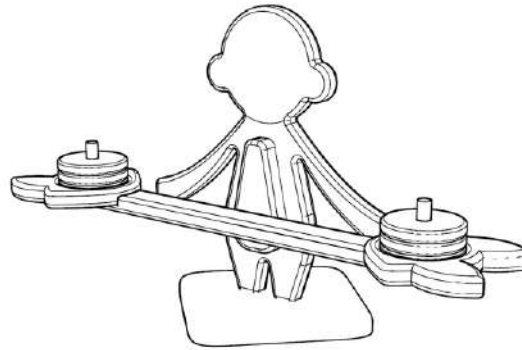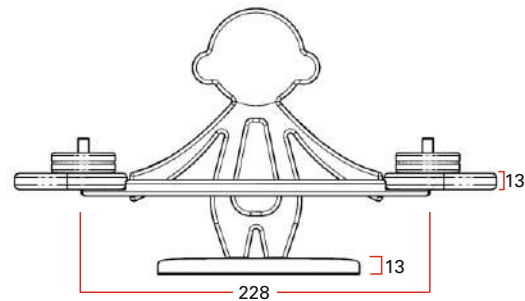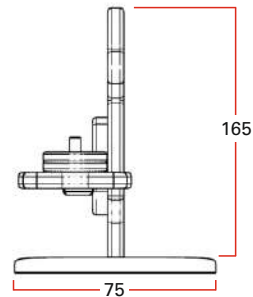
All dimensions are in mm
PRODUCT NAME: Chalak Bandar
DIMENSIONS: 75 x 313 x 178
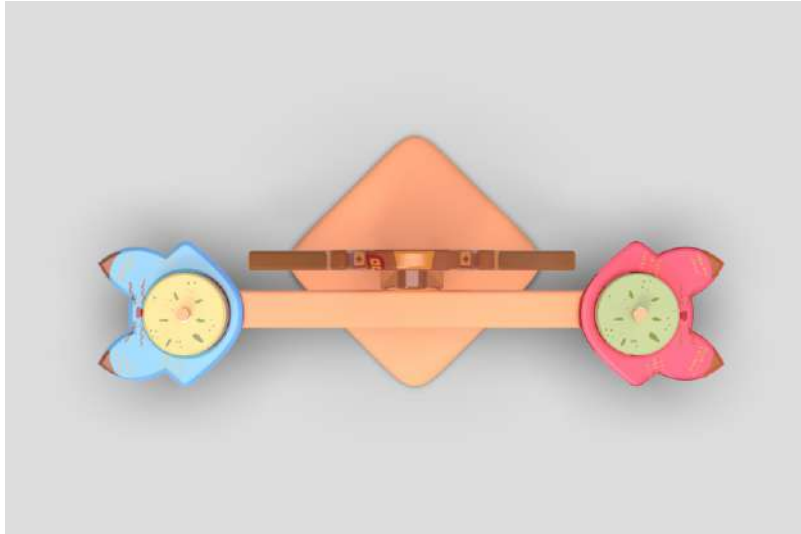**MATERIAL:** Hardwood (Babul)
HARDWARE: Rivet
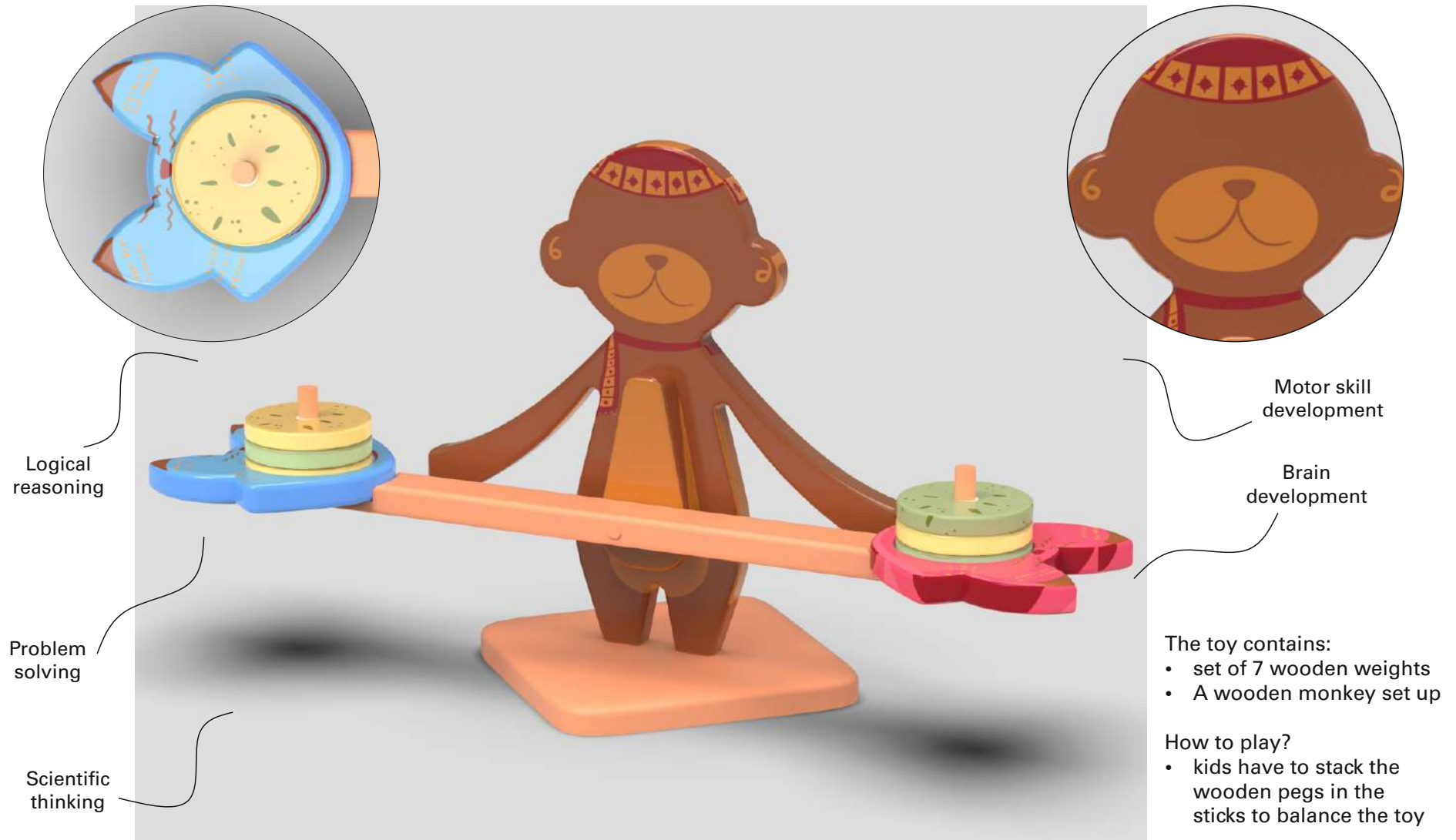**MANU. PROCESS:** CNC Router Cutting
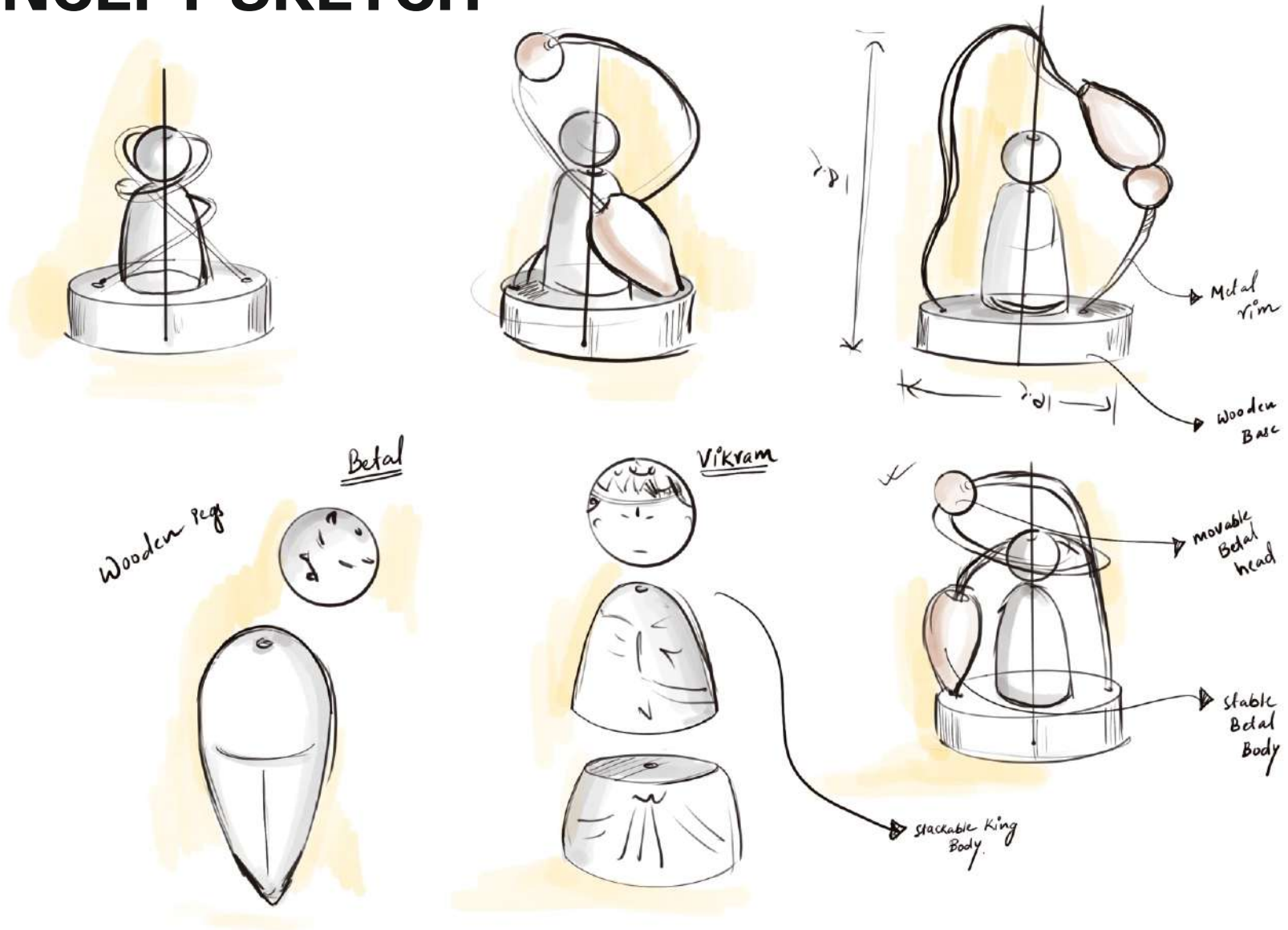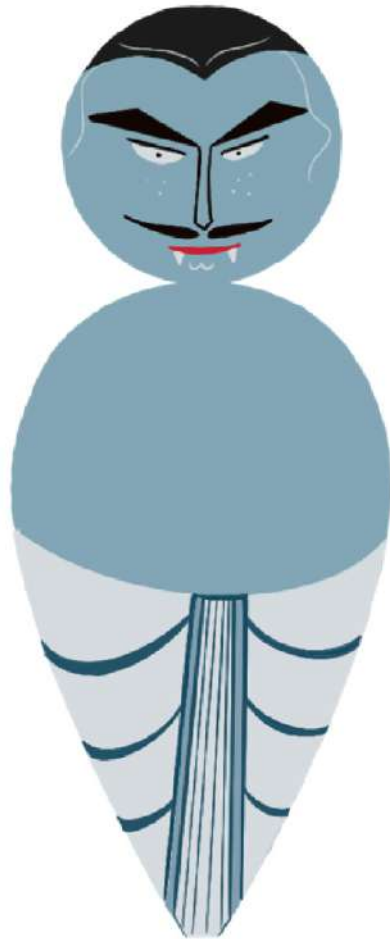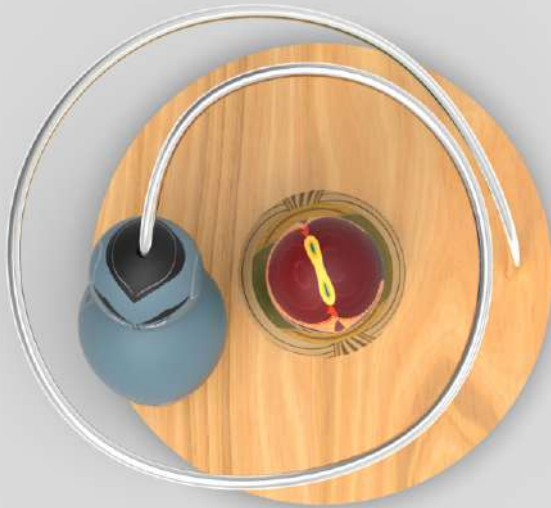**COSTING:** 1500 INR

GRAPHICS

CHALAK BANDAR

Logical
reasoning

Problem
solving

Scientific
thinking

Motor skill
development

Brain
development

The toy contains:
- set of 7 wooden weights
- A wooden monkey set up

How to play?
- kids have to stack the
  wooden pegs in the
  sticks to balance the toy

VIKRAM BETAL

Vikram

The story of Vikram Betala is based on a king named Vikramaditya, who was not only famous for his courage and bravery but also for his wisdom and justice. Message sends King Vikramaditya on an impossible mission to get a corpse from the middle of a jungle. The corpse that Vikram is after is possessed by a ghost named Betaal, a very clever ghost who loves to tell stories and pose questions to the king Vikram in order to test his wisdom and sense of justice

Live the story of Vikram and Betal through this toy, kids which has a stacking Vikram tower in the center and a frame above it over which Betal revolves around just like the original epic.

AGE- 12 Months+

CONCEPT SKETCH

Metal rim

Wooden Base

Wooden Peg

Betal

Vikram

movable Betal head

Stable Betal Body

stackable King Body.

SPEC SHEET

VIKRAM VETAL

TOP VIEW

110

PERSPECTIVE VIEW

FRONT VIEW

R12
R12
30
55
70
35

SIDE VIEW

200
13
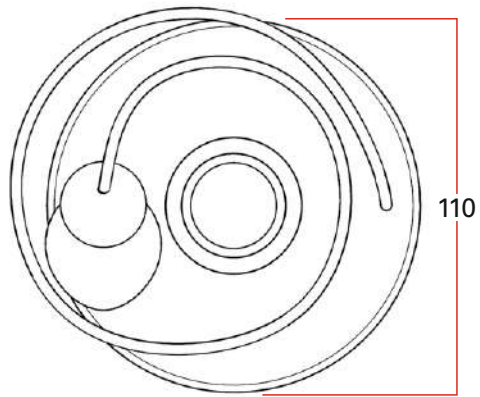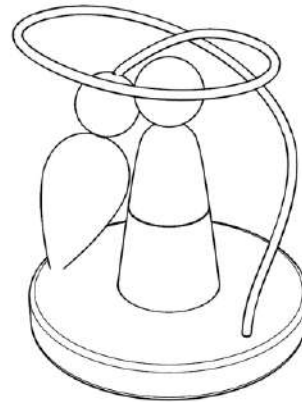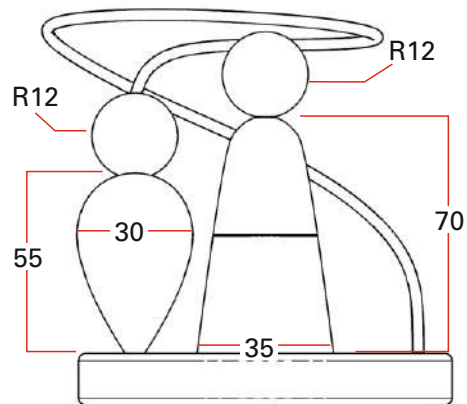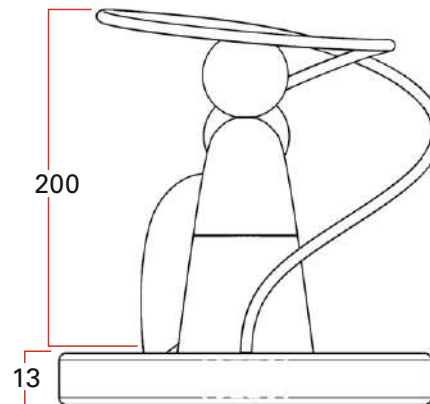
All dimensions are in mm
PRODUCT NAME: Vikram and Betal
DIMENSIONS: 110 x 110 x 213
MATERIAL: Hardwood (Babul)
HARDWARE: Metal wire
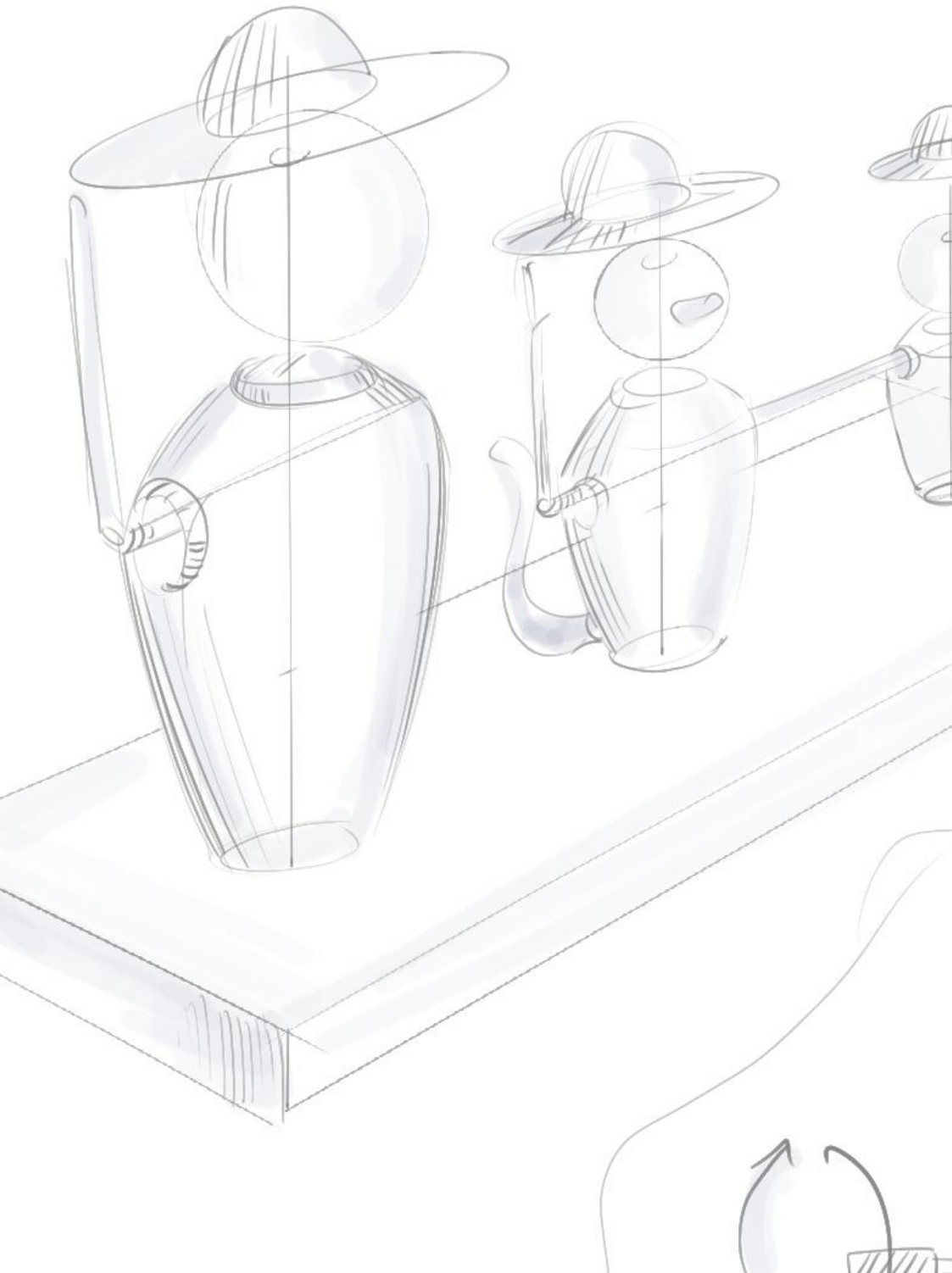**MANU. PROCESS:** Lathe Machine
COSTING: 950 INR

GRAPHICS

VIKRAM BETAL

Gross motor skill

Concentration

Eye hand coordination

Communication skills

How to play?
- Enjoy gliding the Betaal head through the wire frame and telling the story

NAKALCHI BANDAR

Once, there was a cap-seller in a town. On one fine day, he was selling caps. After he made a few sales of caps, he became very tired. He decided to sit under a big tree to rest for a while. Soon, he slept off. There were many monkeys on the big tree. They saw the cap-seller sleeping under the tree. The monkeys were sitting on the top of the tree. The monkeys came down, took the caps from the cap-seller-bag and wore them. Then they climbed the tree again. When the cap seller woke up, he was shocked to see his basket empty. He searched for his caps. To his surprise, he saw the monkeys were wearing them. He found that monkeys were imitating him. So, he started throwing his cap down and the monkeys also did so. The cap-seller collected all the caps, put them back in his basket and went away happily.
Moral : Wisdom is better than weapons of war.

Nakalchi Bandar, an automaton toy, is inspired by the story of Capseller and Monkey. Here, the monkeys get into a neverending loop of removing wearing caps as we revolve the key attached to it.
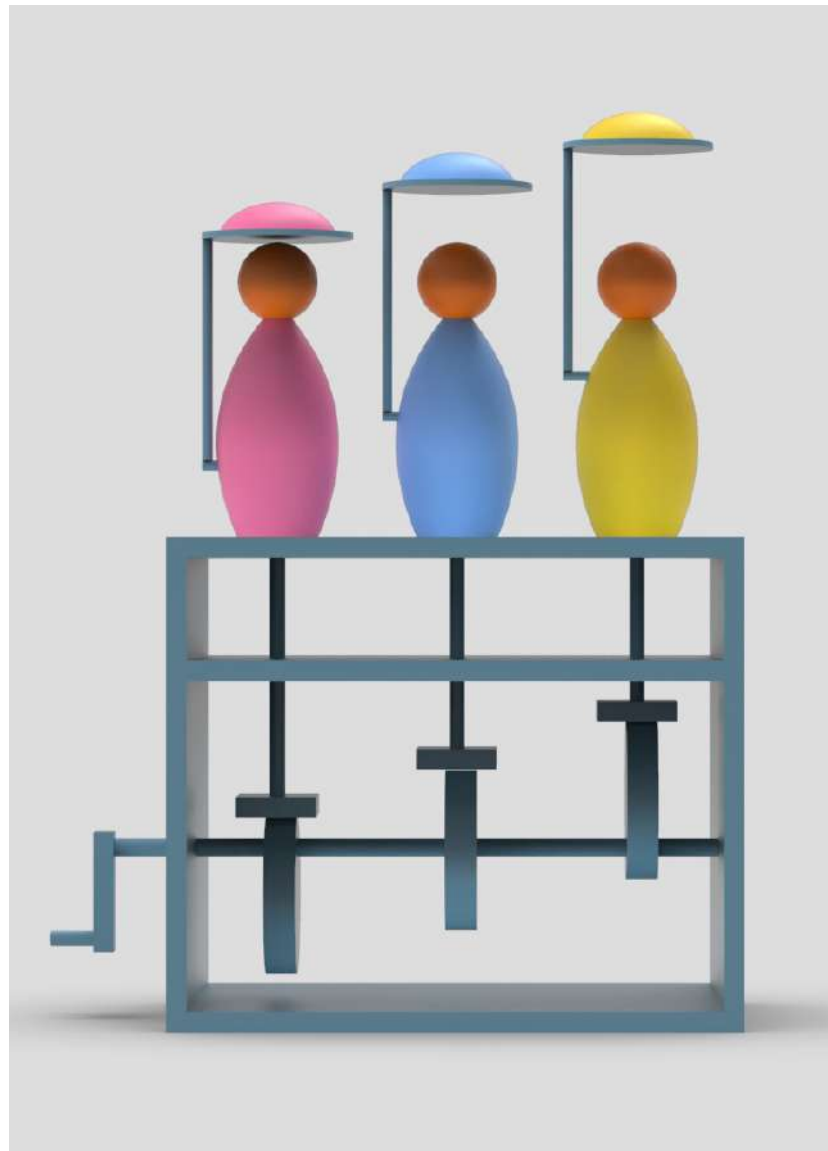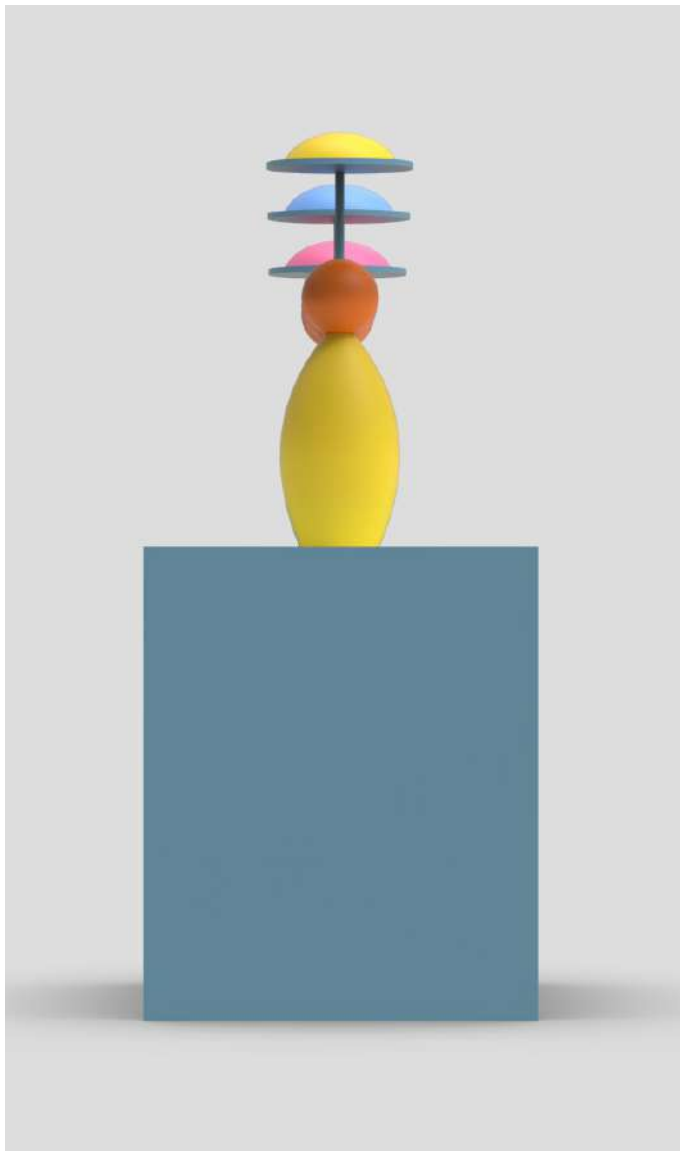
AGE- 2+

Cap seller & monkey.
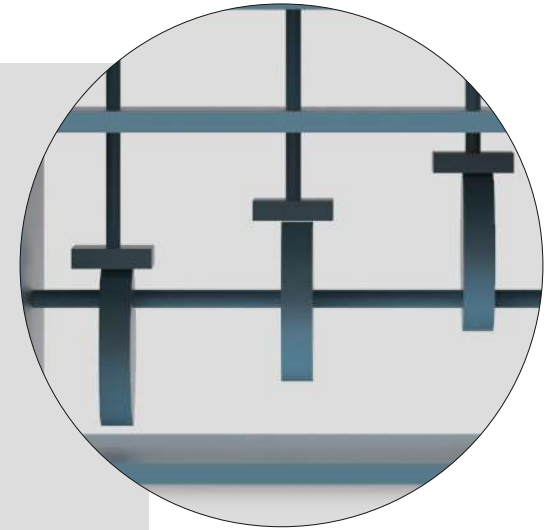

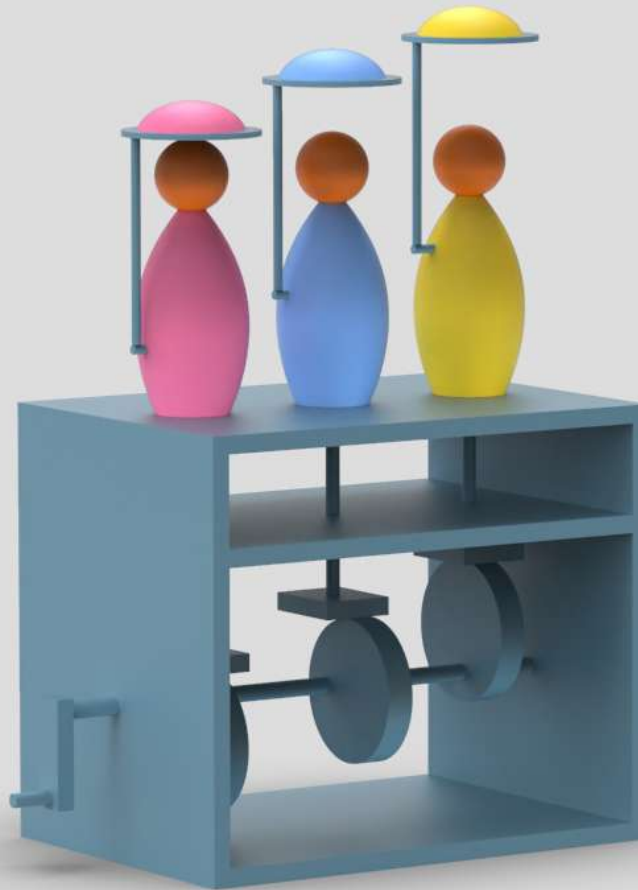
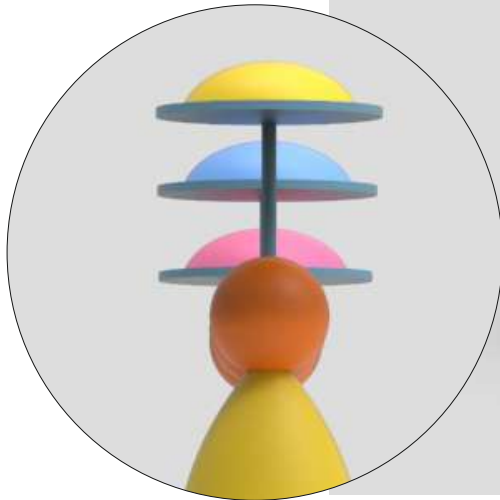simultaneous hand movement

fun to watch

reference
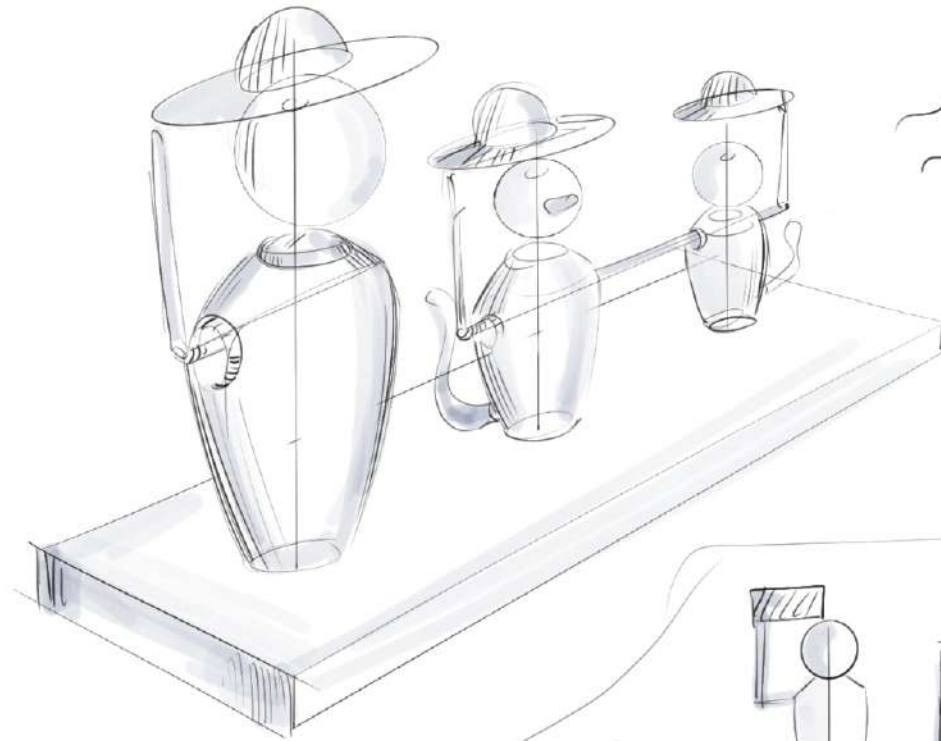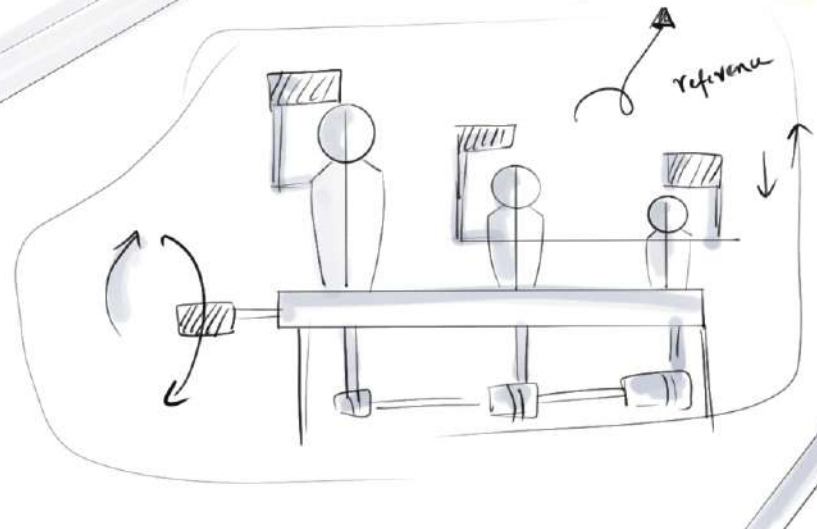
NAKALCHI BANDAR

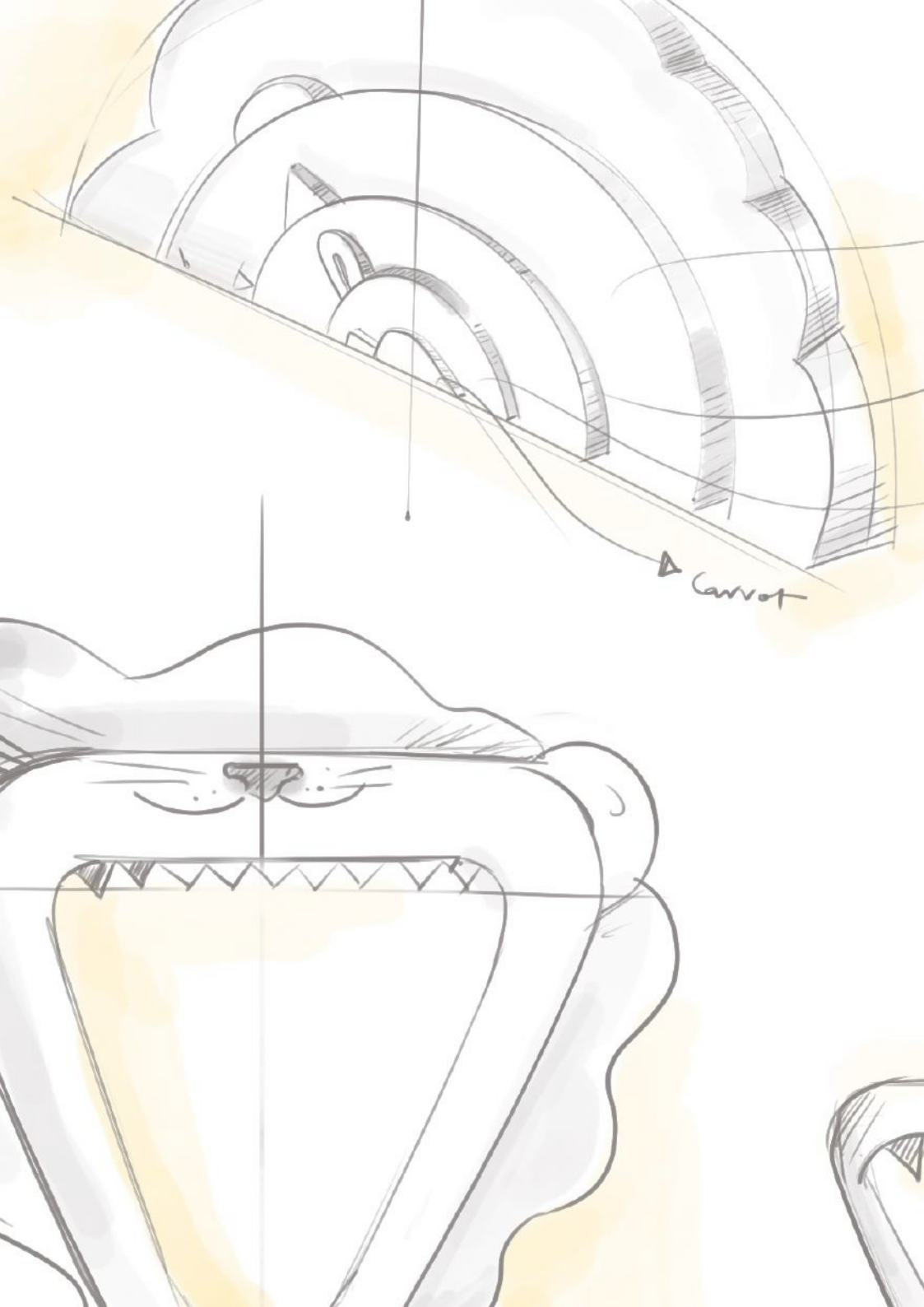Meditative

Motor skill
development

How to play?
- Rotate the axel enjoy the story come to live

EDUCATIONAL TOYS
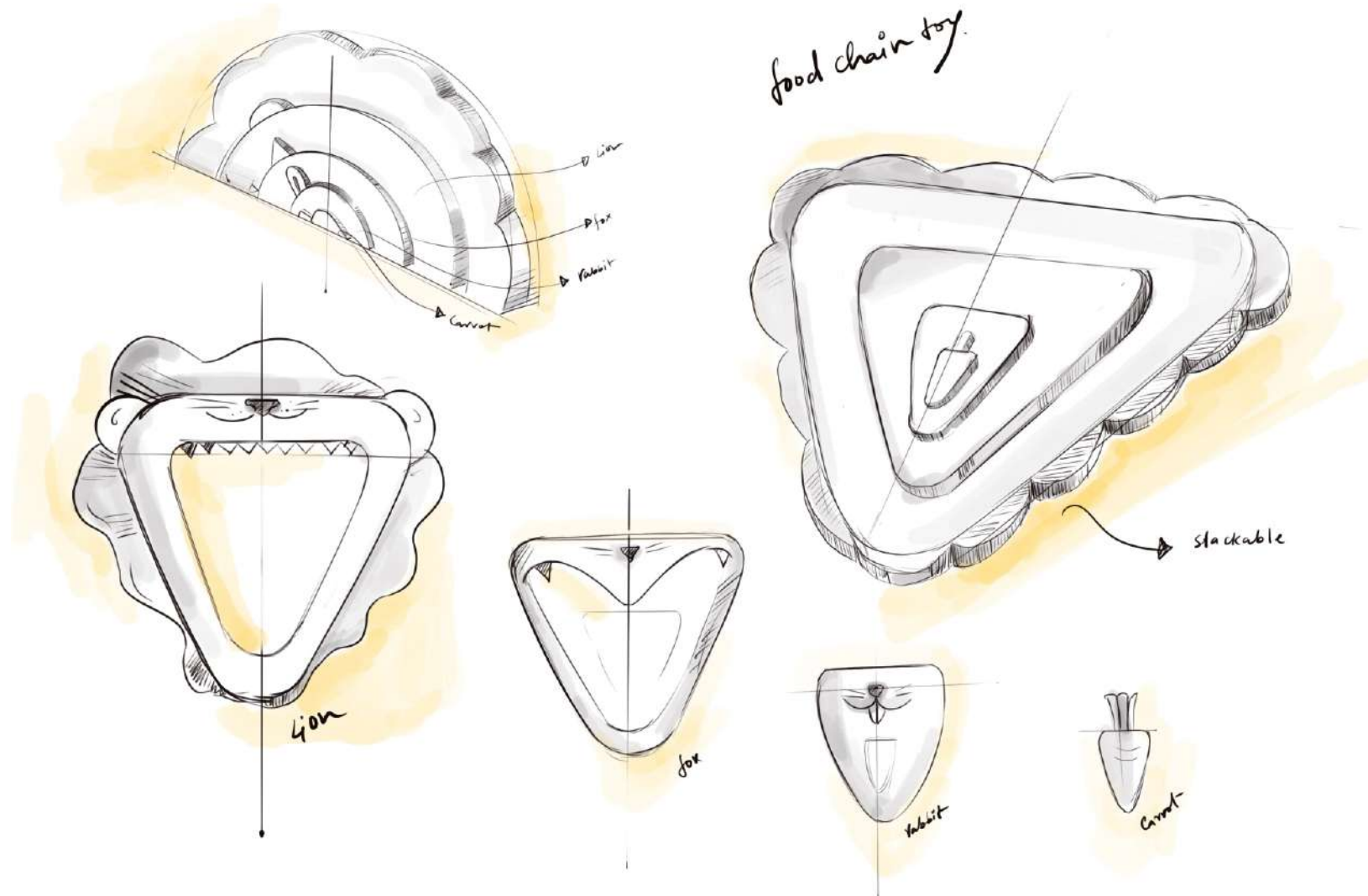
COLLECTION.3 EDUCATIONAL TOYS

Carrot

FOOD CHAIN

Food Chain is a beautifully crafted three-dimensional wooden puzzle. It focuses on educating little ones about A4 linked food chain while they develop their motor skills and enhance their cognitive skills.
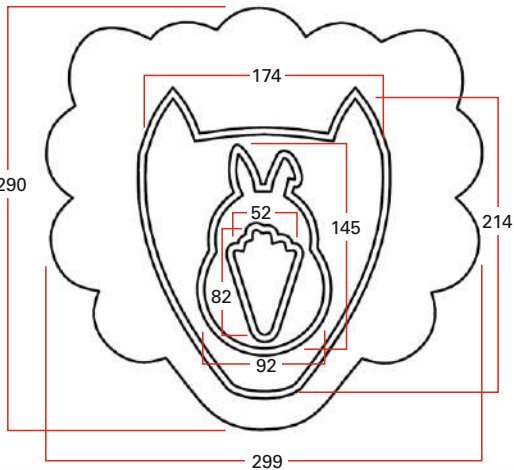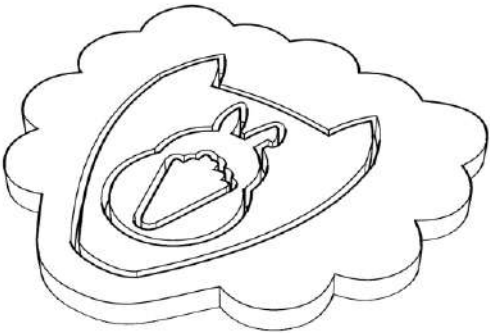
AGE- 3+

CONCEPT SKETCH
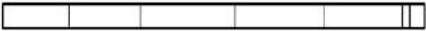
SPEC SHEET

LION

TOP VIEW

174
290
52
145
214
82
92
299

PERSPECTIVE VIEW

FRONT VIEW

13

SIDE VIEW

All dimensions are in mm
PRODUCT NAME: Food Chain
DIMENSIONS: 290 x 299 x 13
MATERIAL: Hardwood (Babul)
MANU. PROCESS: CNC Router Cutting
COSTING: 800 INR

FOOD CHAIN

Spatial awareness

Understanding concept

Motor skill development

Eye hand coordination

Toy contains:
- 4 set of insertable wooden characters
- 1 lion,1 fox,1rabbit,1 carrot

How to play?
- Know the A 4 link food chain and stack the
- insert fox inside lion, rabbit insides fox and carrot inside rabbit

ATRANGI

Toy contains:
- Wooden components for 4 animals
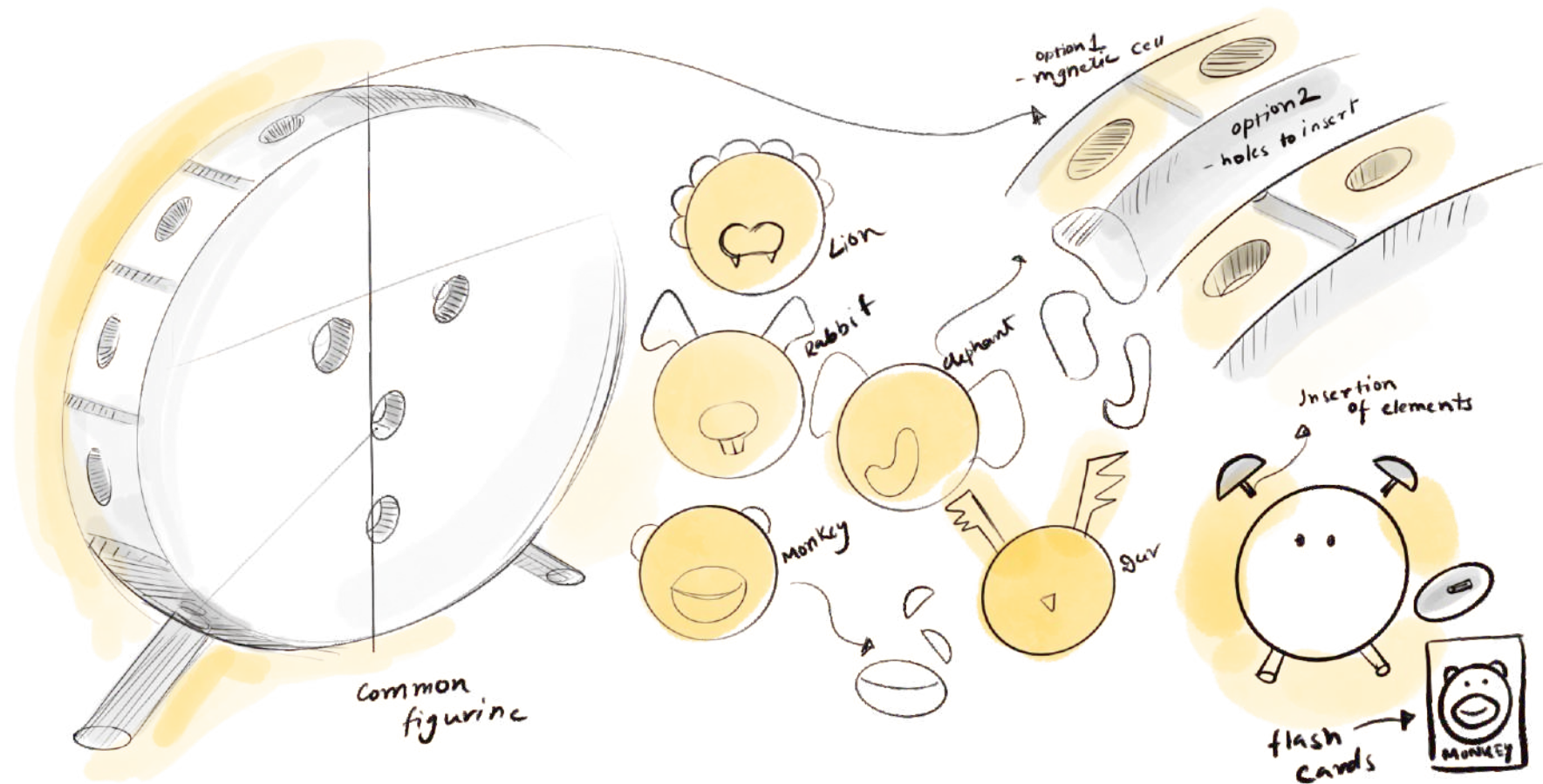- 4 flash cards
- Wooden body

How to play?
- Pick a flash card and develop the animal by inserting the components in the wooden body

Make your favorite animal and play with it through Atrangi. It is a pretend-play toy that gives children the freedom to create animals by changing their body parts and having fun with it.
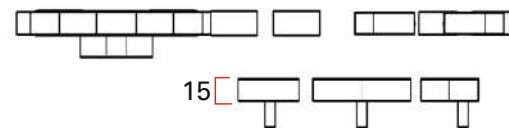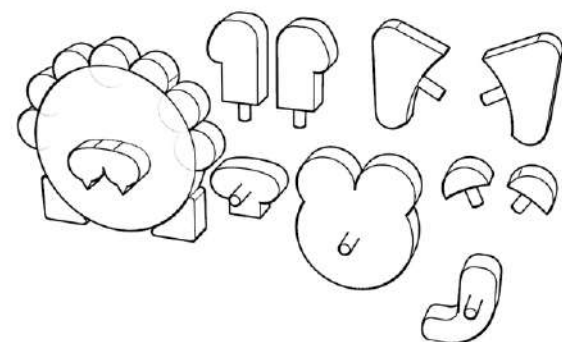
AGE- 4+

CONCEPT SKETCH

option1
- magnetic cell

option2
- holes to insert

Lion

Rabbit

elephant

Monkey

cow

Common figurine

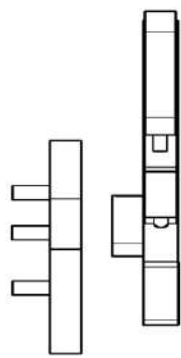Insertion of elements

flash cards

MONKEY

SPEC SHEET

TOP VIEW

15

PERSPECTIVE VIEW

FRONT VIEW

25

30

40

26

35

55

20

30

D95
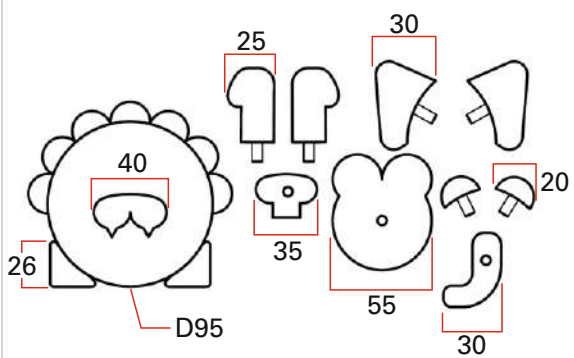
SIDE VIEW

All dimensions are in mm
PRODUCT NAME: Atrangi
DIMENSIONS: 15 x 95 x 130
MATERIAL: Pine Wood
MANU. PROCESS: CNC Router Cutting
COSTING: 1100 INR

FLASHCARDS

FRONT

BACK

Rabbit

Elephant

Lion

Monkey

ATRANGI

MONKEY

Expand imagination

Creativity

Communication

LION

Fine Motor
skill development

Eye hand
coordination

RABBIT

ELEPHANT

Toy contains:
- Wooden components for 4 animals
- 4 flash cards
- Wooden body

How to play?
- Pick a flash card and develop the animal by inserting the components in the wooden body
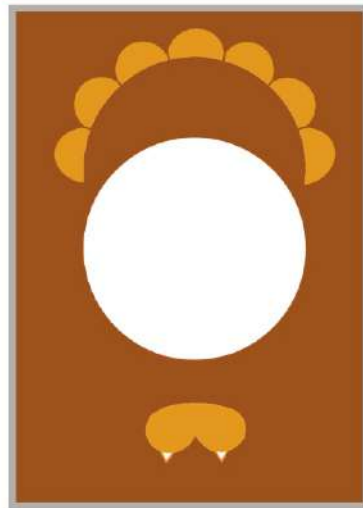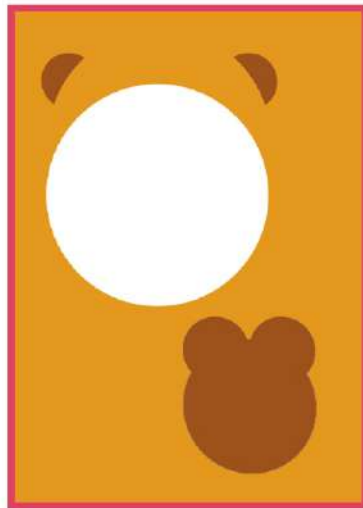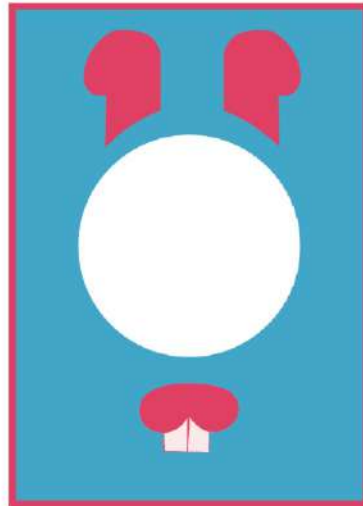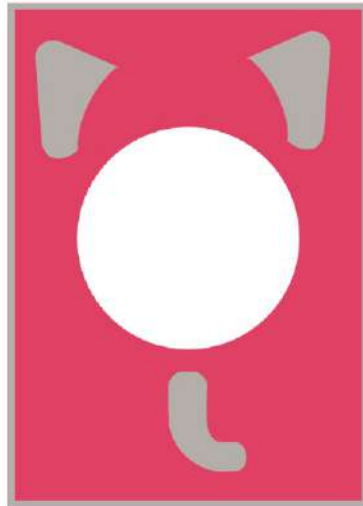
SEHAT

Enjoy the game of snakes and ladders with a new twist. Sehat is a classic snakes and ladders game with a food-themed twist that features healthy food as ladders and junk food as snakes which would be a great impact on children.

AGE- 4+

SPEC SHEET

136

102
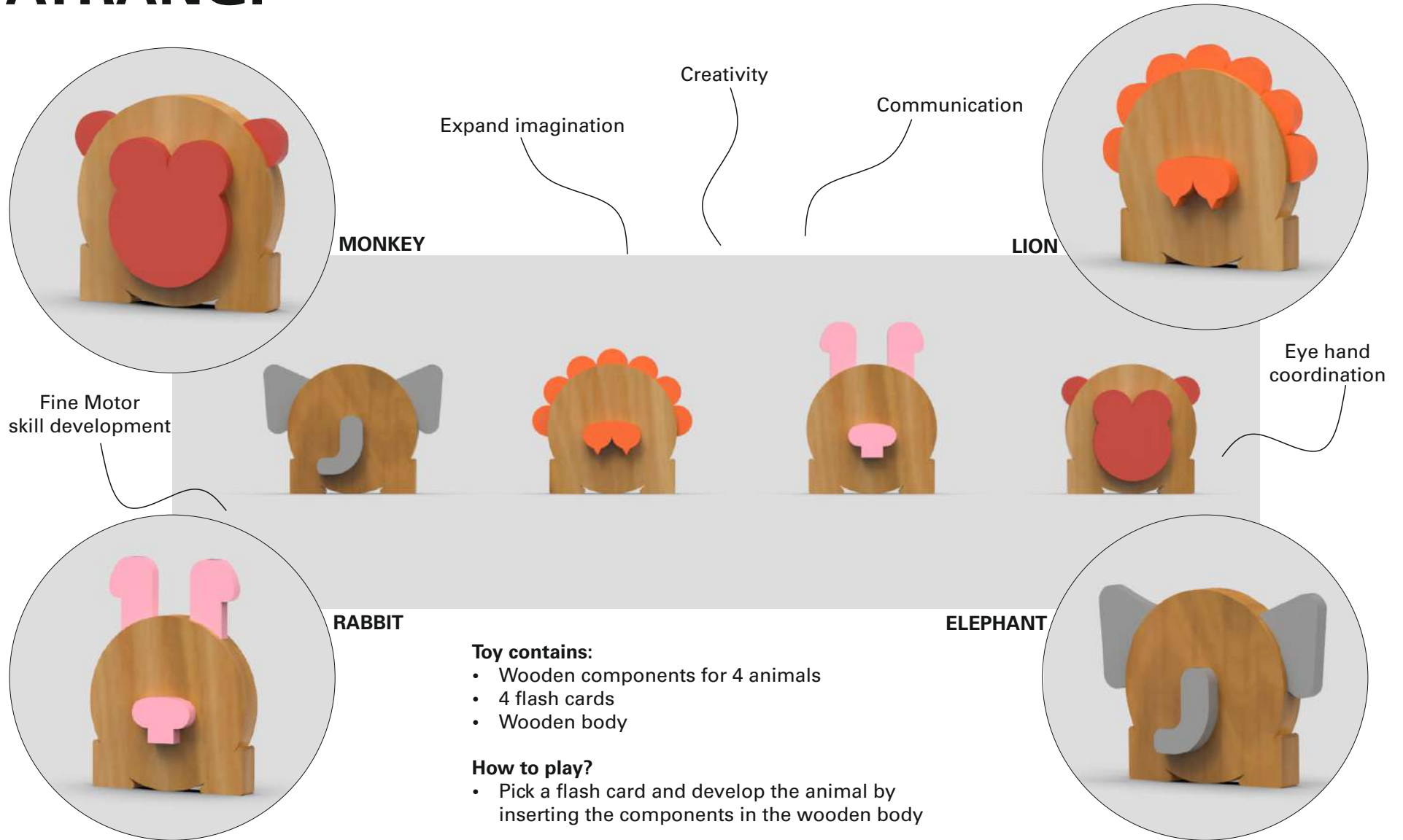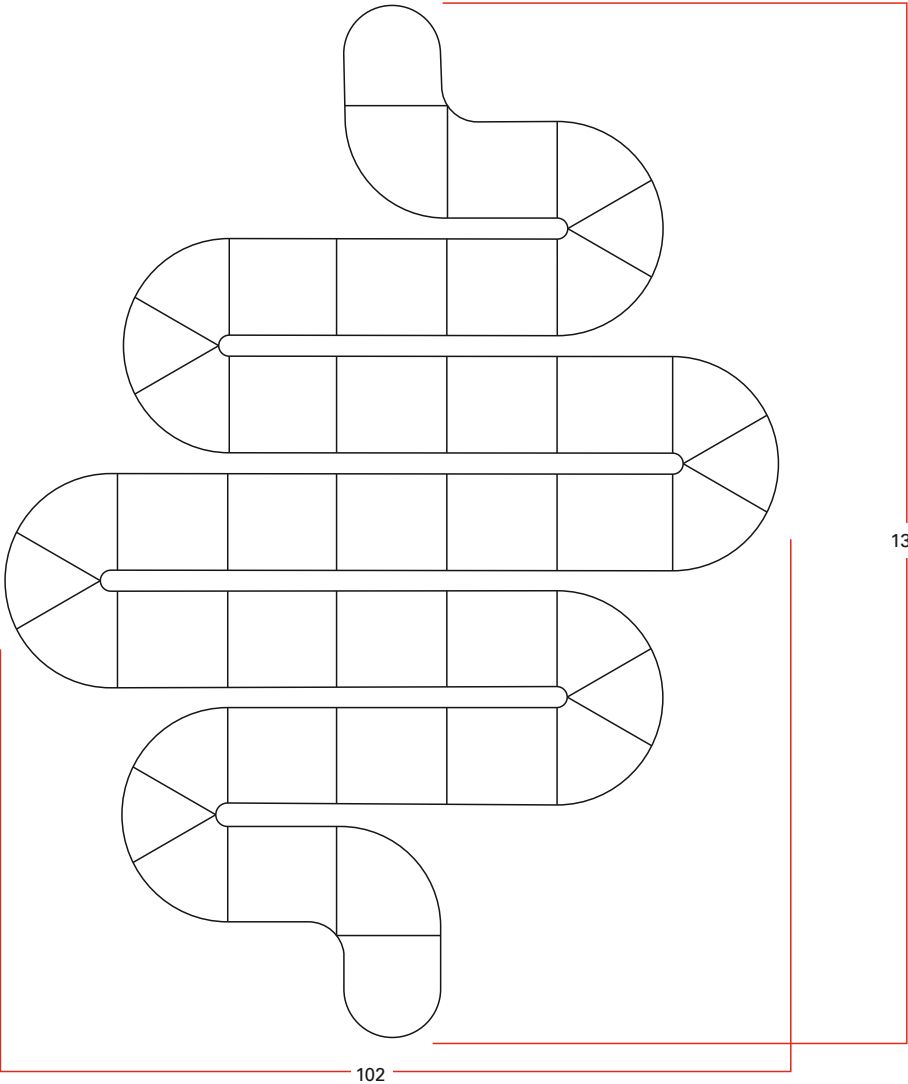
All dimensions are in mm.
PRODUCT NAME: SEHAT
DIMENSIONS: 136 x 102
MATERIAL: Cloth
MANU. PROCESS: Printing

GRAPHICS

This game has a healthy twist to the classic snakes and ladders board game. It teaches children to eat healthy food like vegetables, fruits, dry fruits etc in a playful way. It features an upset face as a medium of snakes that indicates an upset stomach caused after eating junk food.

MAUSAMI FAL

It is important for kids to learn about different seasons. And fruits that bears in the respective seasons. This game in particular teaches this concept in a very playful manner I.e just by matching the colours of the fruit silhouette with the pedestal colour voila! A kids knows what to eat in summer, monsoon and winter.

AGE- 3+

GRAPHICS

CUSTARD APPLE
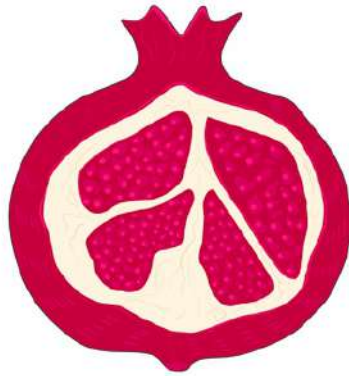
POMEGRANATE
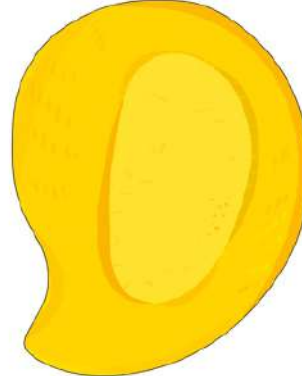
MANGO
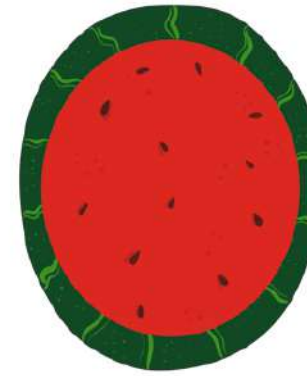
WATERMELON

JAMUN
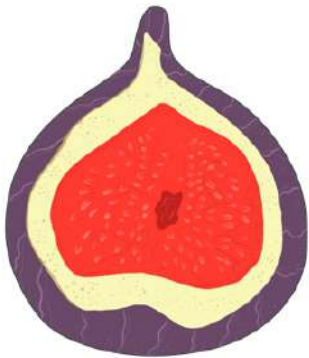
FIG

STRAWBERRY

GRAPES
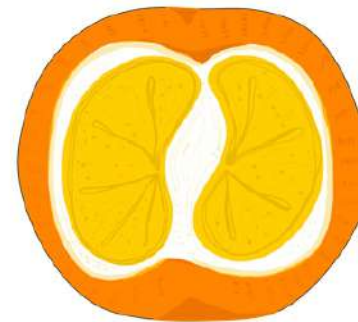
ORANGE
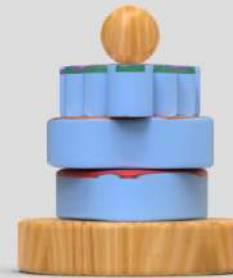
MAUSAMI FAL
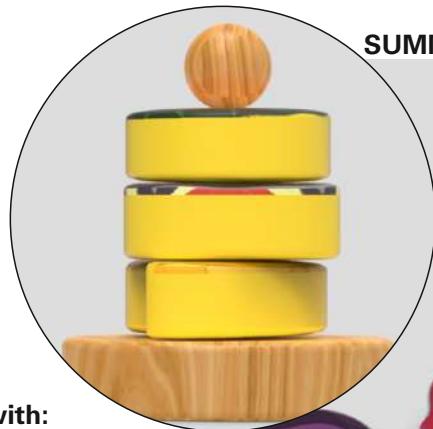
SUMMER

MONSOON

Toy comes with:
- 3 set of 3 fruits each
- 3 wooden pedestal

How to play:
- Yellow depicts summer, blue depicts winter and grey depicts monsoon
- Kids have to match and stack the colour
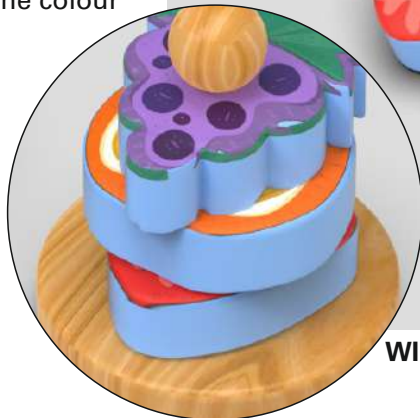
WINTER

Understanding concept

Hand eye coordination

Spatial awareness

Motor skill development

APNA TYOHAR

Recommended for age 5 years and above, Festival and States is a memory card game with a cultural twist where the kids have to match the renowned Indian festivals with their respective states.

AGE- 5+

SPEC SHEET

88

Front

Back

122

Ganpati
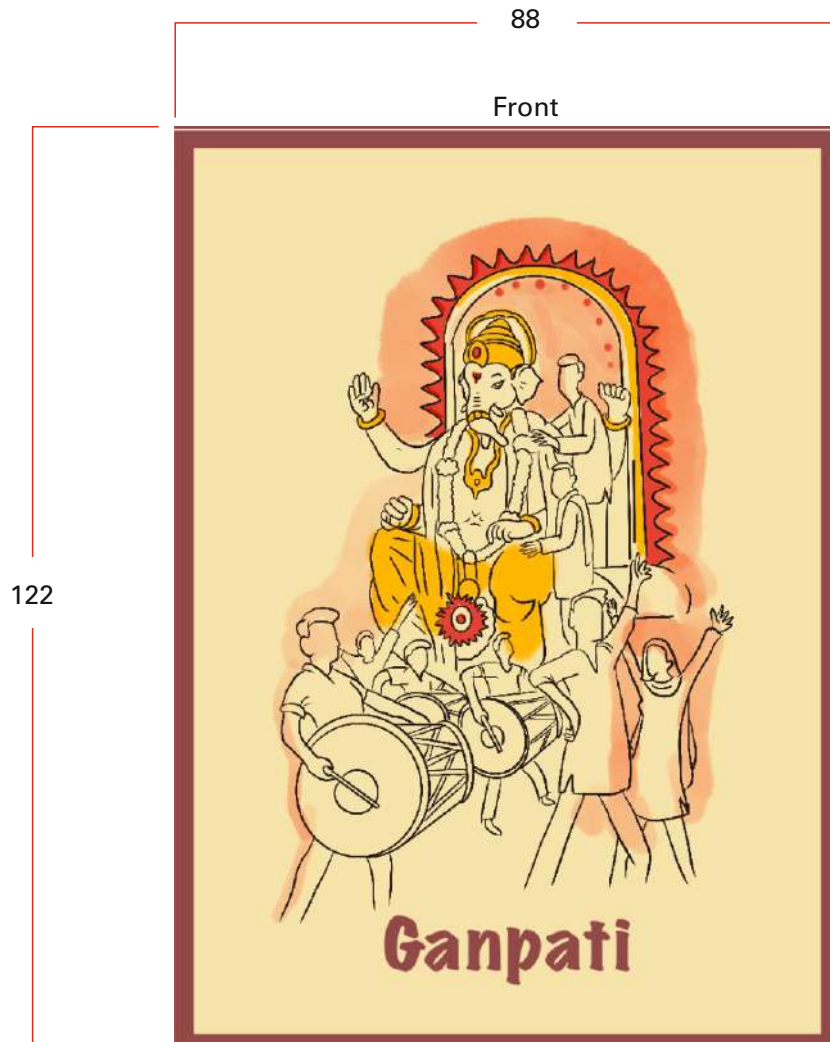
All dimensions are in mm
DIMENSIONS: 122 x 88
MATERIALS: Cardboard

CARDS

Toy contains
- 16 state cards
- 16 festival cards

How to play?
- Kids have to arrange all the cards upside down. Then they have to memorise the sequence and match the festival cards with their respective states.

Rath Yatra

Orissa
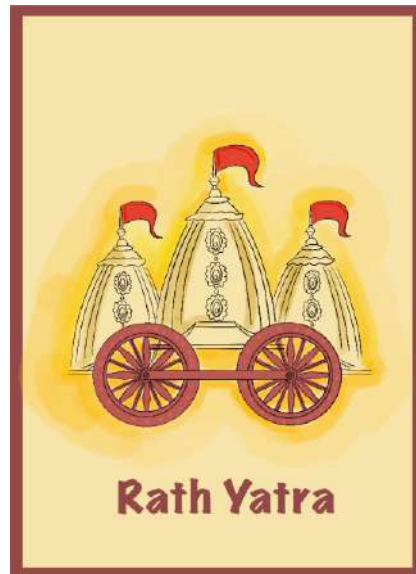
FESTIVAL CARDS

Rath Yatra

Navaratri

Durga puja

Ganpati

Lohri

Onam

STATE CARDS

Orissa

Gujrat

West Bengal

Maharashtra

Punjab

Kerala

slit for movem[ent]

[PU]PPET SHOW BOX
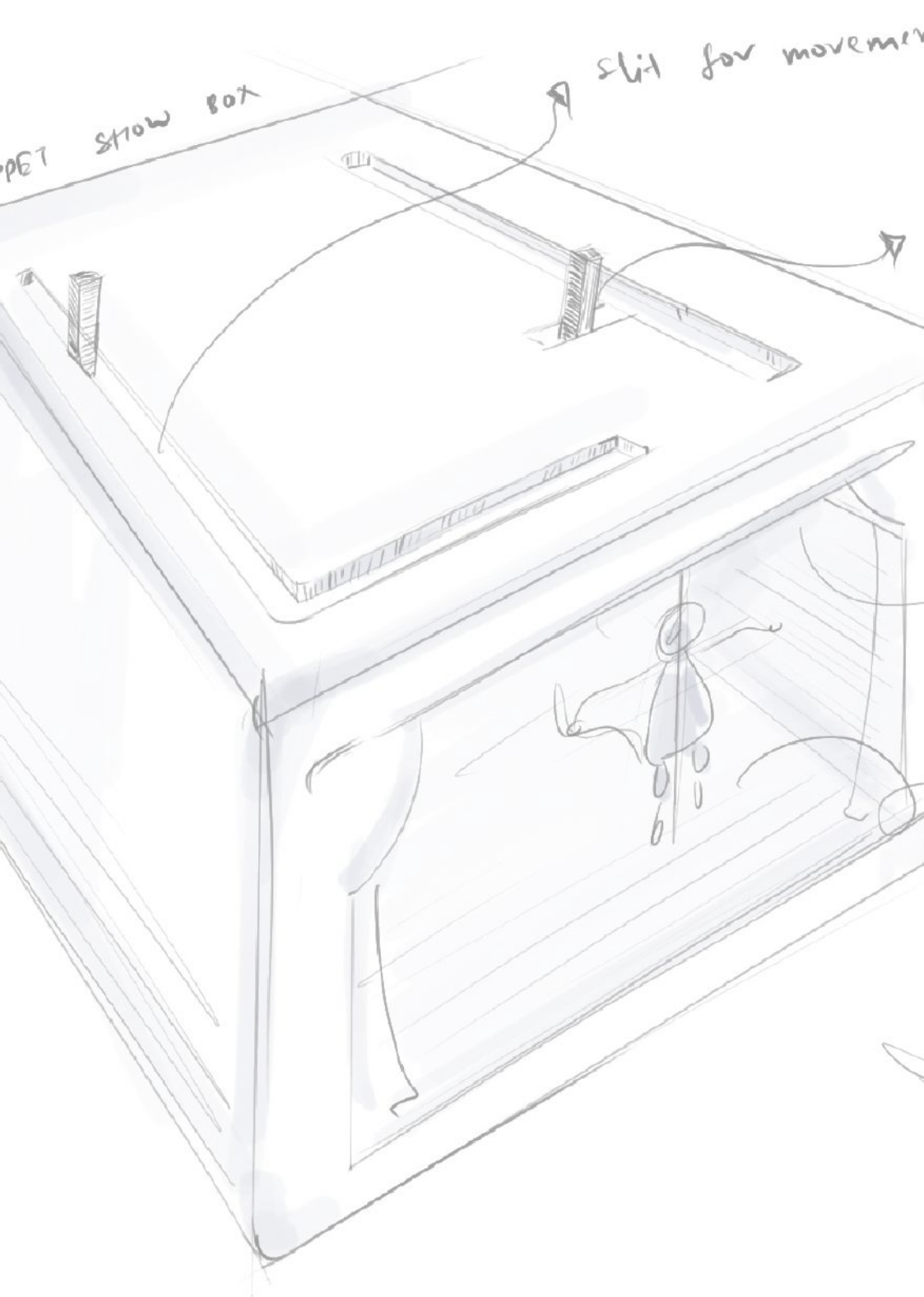
PUTLI NAACH

Enhancing children's imagination, Puppet is a pretend play puppet box with backgrounds and characters from the Indian legendary epic Panchatantra. It will keep the little ones aging from years 2 and above, busy for hours.

AGE- 2+

CONCEPT SKETCH

PUPPET SHOW BOX

slit for movement

Controler

Suitable graphics

Dangling figurines

FLASH CARDS
— with any story

SPEC SHEET

TOP VIEW

150

150

PERSPECTIVE VIEW

FRONT VIEW

150

SIDE VIEW

112

84

3
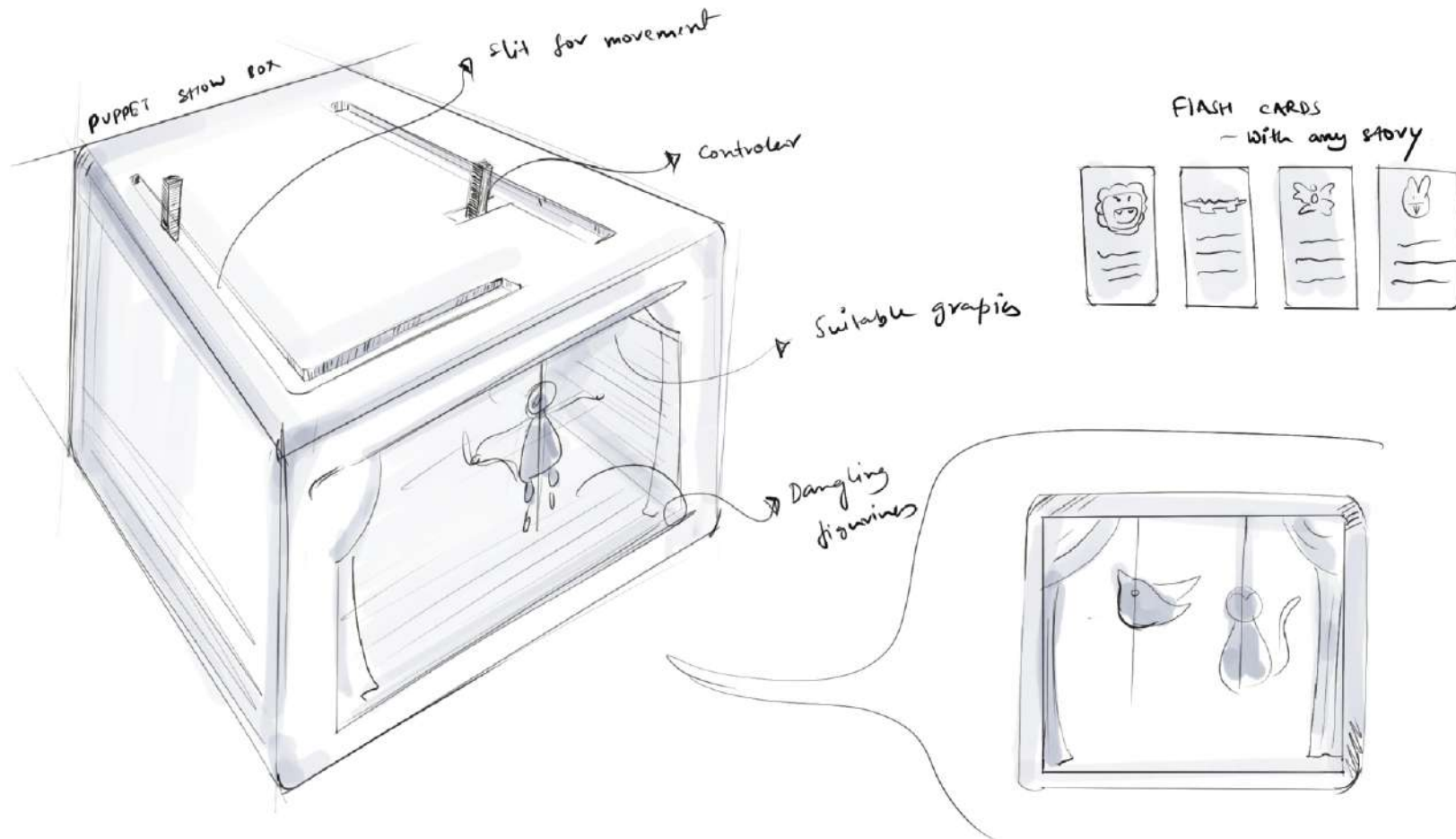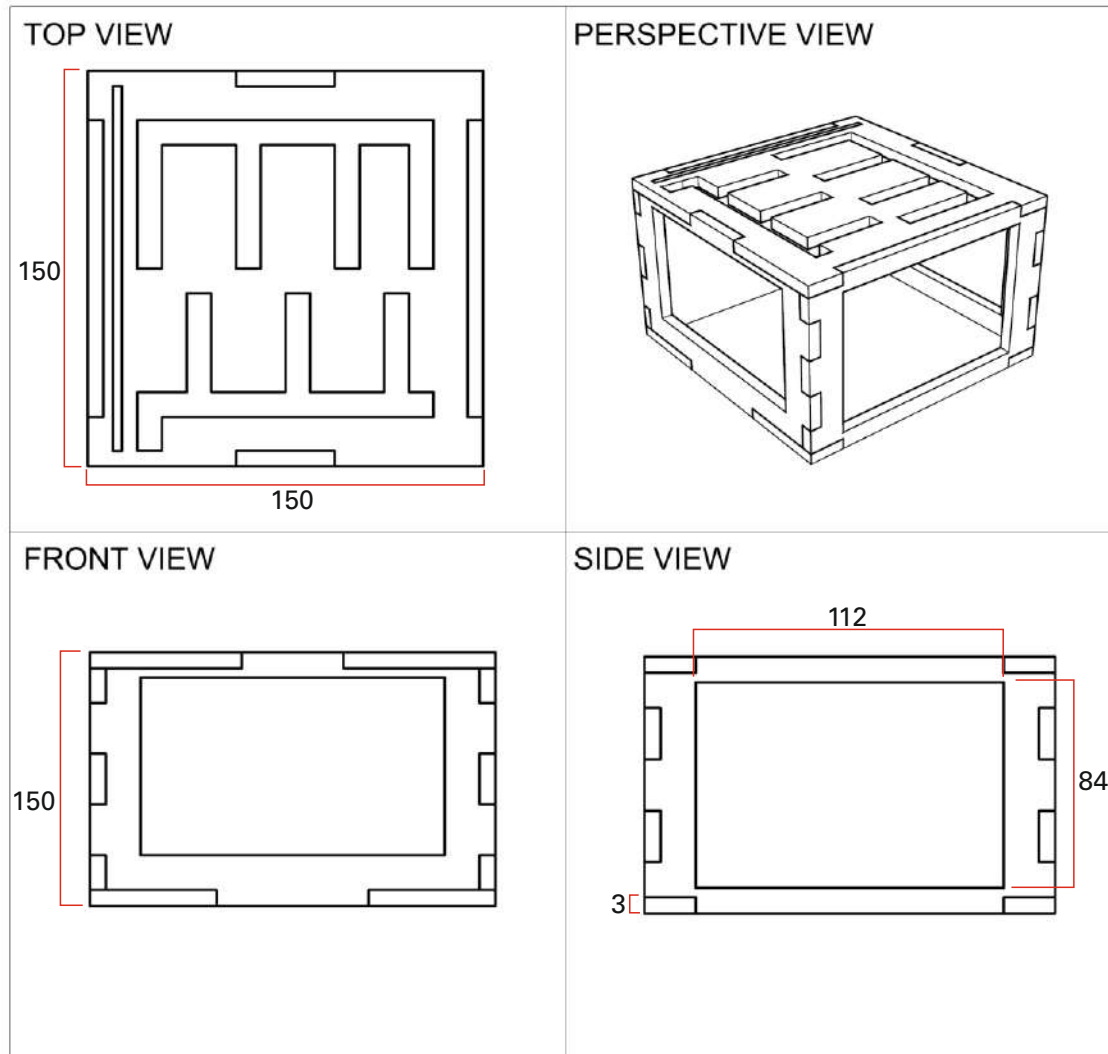
All dimensions are in mm.
PRODUCT NAME: Putli Naach
DIMENSIONS: 150 x 150 x 150
MATERIAL: MDF
MANU. PROCESS: CNC Laser Cutting

ENVIRONMENT CARDS
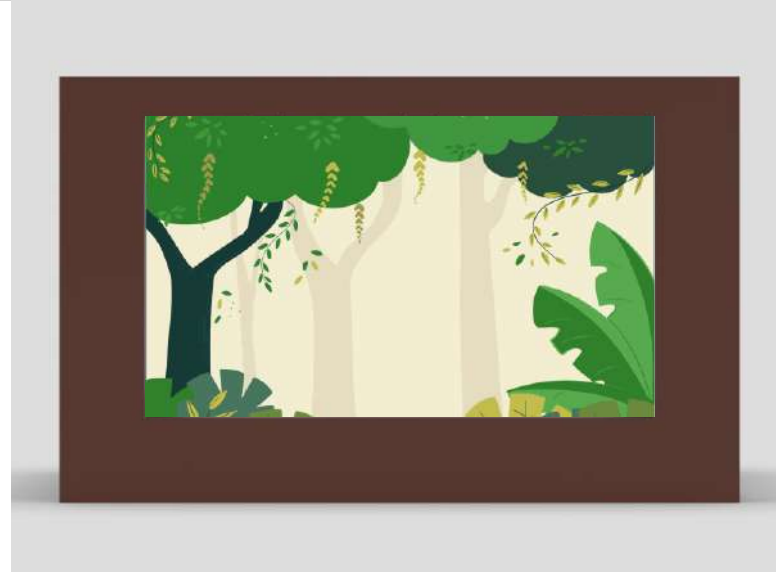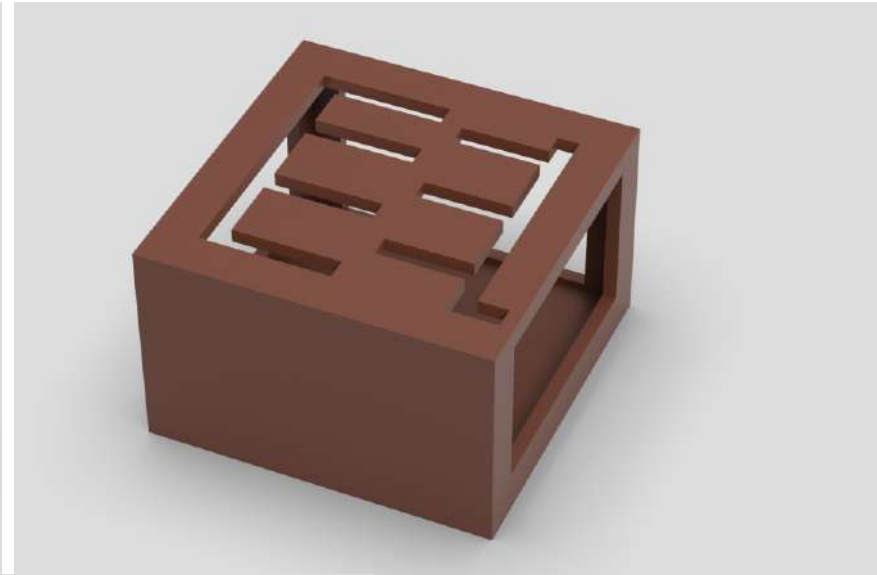
PUTLI NAACH

Gross Motor skill development

Communication skills

Toy contains-
- Set of 3 changeable environment cards
- Self constructable Components of puppet show booth
- Stick puppet figurines

How to play?
- Choose your desirable environment
- Relatable figurines to your story
- Insert the figurines in the as shown
- Enact your favourite story to all

Creativity skills

Social skills

COLLECTION.4 SENSORY TOYS

Sensory toys are designed to stimulate a child's five senses: sight, sound, touch, smell, and taste. They might include elements such as bright, contrasting colors, sounds, or different textures. These toys are meant to help children develop their senses in a safe and natural environment using play. Sensory toys and tools focus on promoting touch, increasing concentration, reducing anxiety, developing fine motor skills and encouraging language skills.

Why Felt?
- Does not wear out easily
- Inexpensive
- Easily accessible
- Versatile
- Available in multiple colors and thickness
- Can be cut easily in clean edge shape
- Can be sewn easily and hand or machine

BENEFITS-

- Communication skills
- Fine Gross Motor Skills
- Hand- Eye Coordination
- Social Skills
- Imagination
- Brain Development
- Visual Skills
- Auditory Skills

RABBIT & TORTOISE

A rabbit always boosted about his speed. One day he dared someone to challenge Him to a race. A tortoise challenged him. Seeing that, all the animals in the forest laughed at him. But that did not discourage him. The next day, all the animals gathered at starting point. As the race started, The rabbit run and soon left the tortoise behind. On his way, he saw a field of carrot and had a snack. After eating, he felt sleepy and took a quick nap. But the tortoise didn't give up and slowly rolled its way to the finishing line. Suddenly, the rabbit woke up to see that the tortoise had already crossed the finishing line!

Moral: slow and steady wins the race

Velcro

Z Z Z Z

dangled string

white chain & Puller
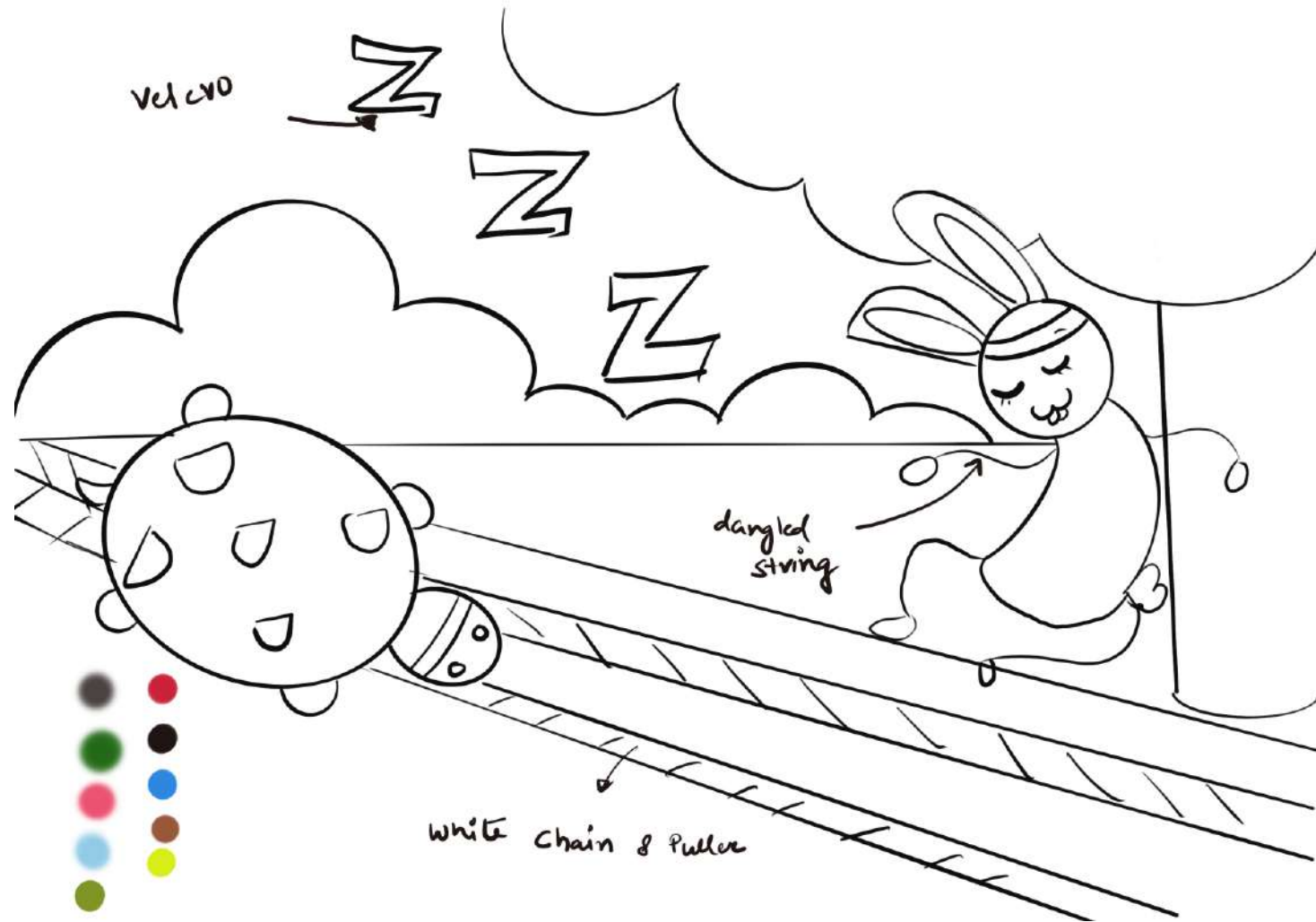
HARDWARE:

Zipper Puller
Wooden Buttons
Pompoms
Strings

MONKEY & CROCODILE

A monkey and a crocodile were friends. The monkey gave his friend fruits to eat. One day, the crocodile's wife said that if the fruits were sweet the monkey's heart should be sweeter. She demanded the monkey's heart. The crocodile told his friend that his wife had invited him home. The monkey climbed on the crocodile's back. When they reached the middle of the river, the crocodile said that he had lied. He said that his wife wanted to eat the monkey's heart. The clever monkey said that he had left his heart on the tree. So he had to get it back. As soon as they reached the river bank, the monkey jumped on to the tree. He told the crocodile to go away and to never come back.

Moral: Quick wit should be one's best friend
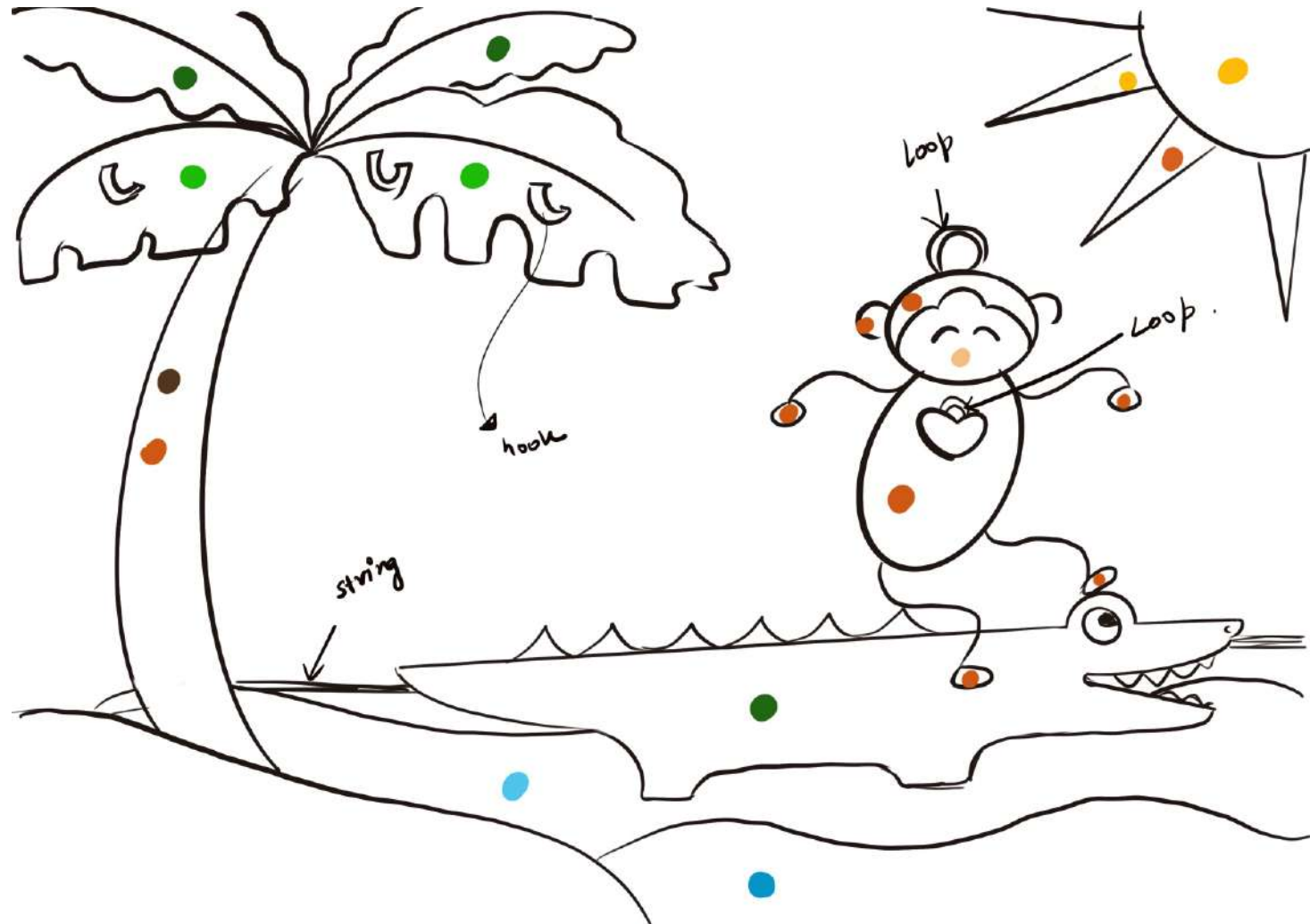
HARDWARE:

Wooden Buttons
Wooden Beads
Strings
Hooks
Googly Eyes

SHEPHERD BOY

In a faraway land, a young Shepherd tended sheep at the Foot of the Mountain. While his sheep grazed, he felt lonely and bored. He did not know how to spend his time. One day, he had an idea. He shouted,"wolf,wolf!" When the villagers rushed, the boy laughed and made fun of them. This made the villagers angry. He liked the fun he had and repeated it a couple of times. One day, a wolf came and attacked the sheep. He shouted for help. But the villagers thought he was joking and did not rush for help. The Shepherd looked helplessly as the wolf chased away all his sheep. He regretted his foolishness and returned home empty handed.

Moral: A liar cannot be believed even when he tells the truth.
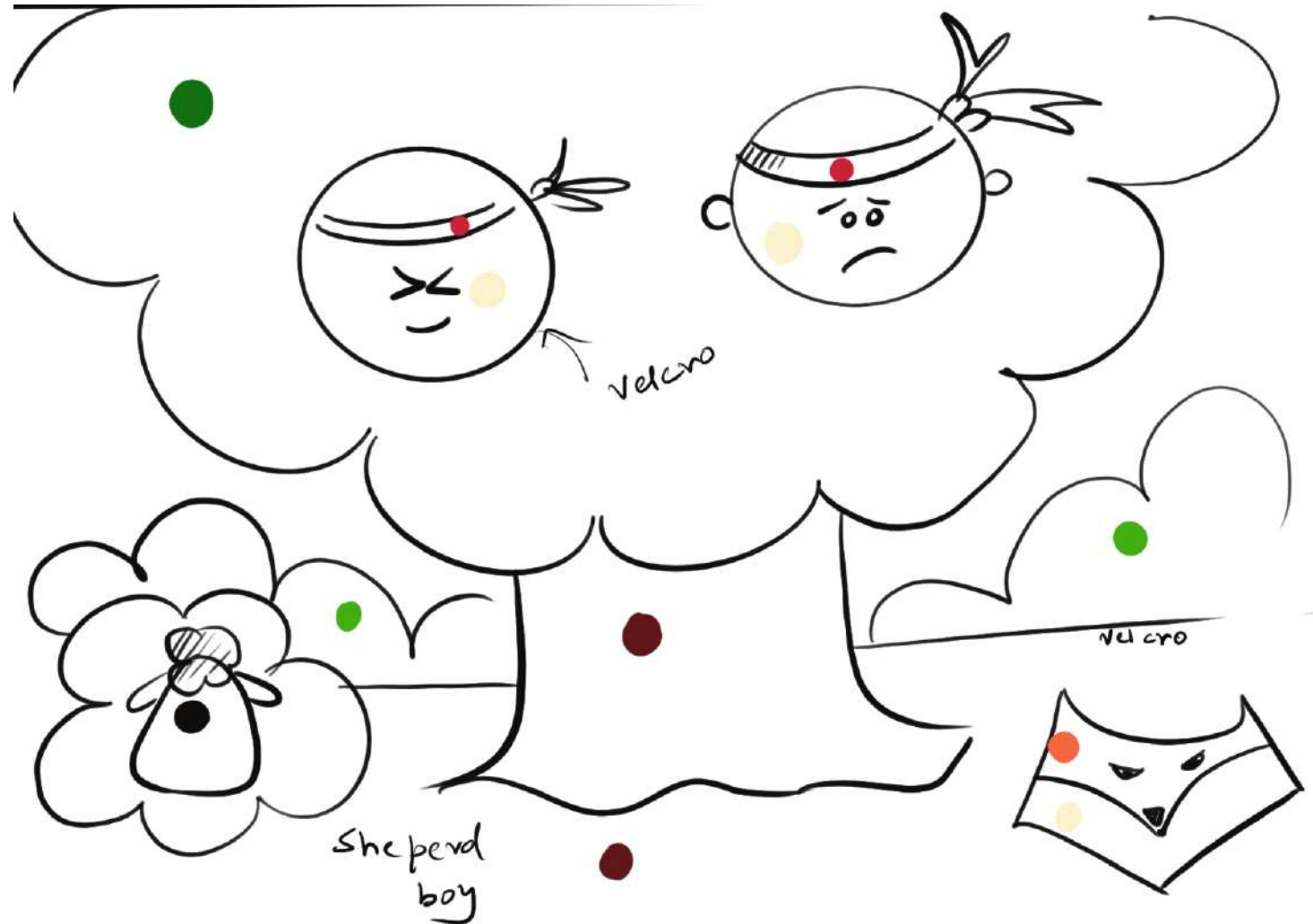
HARDWARE:

Plastic Buttons
Strings
Pompoms
Googly Eyes
Velcro
Satin Ribbon

ANT & GRASSHOPPER

One day, A grasshopper was relaxing under a tree. He saw an ant carrying a kernel of corn. The grasshopper was curious and asked her," Why are you working all day? I have never seen you enjoy your time". The ant replied, "I am saving food for winter. You should also do the same. "But the grasshopper did not listen to her advice. During winter, the grasshopper realised that he had nothing to eat. He saw the ants distributing the greens they had collected. Seeing him, the ant said, " all summer, I worked hard and you laughed at me. Now, my tummy is full You Are hungry". Sadly, the grasshopper walked away. **Moral:** as you sow, so shall you reap.

HARDWARE:

Plastic Buttons
Wooden Beads
Strings
Pompoms
Googly Eyes
Satin Ribbon
Ghungroo

SPEC SHEET

BUNNY HEAD — 31mm, 31mm

BUNNY BODY — 17.5mm, 52mm, 33mm

TREE

Z — 18.5mm

Z — 23mm, 24mm

Z — 30mm, 33mm

13.6mm

BUNNY EAR — 30.5mm

BUNNY EAR — 14mm, 41mm

279mm

73mm

TREE

TURTLE

BUNNY EAR

BUNNY EAR
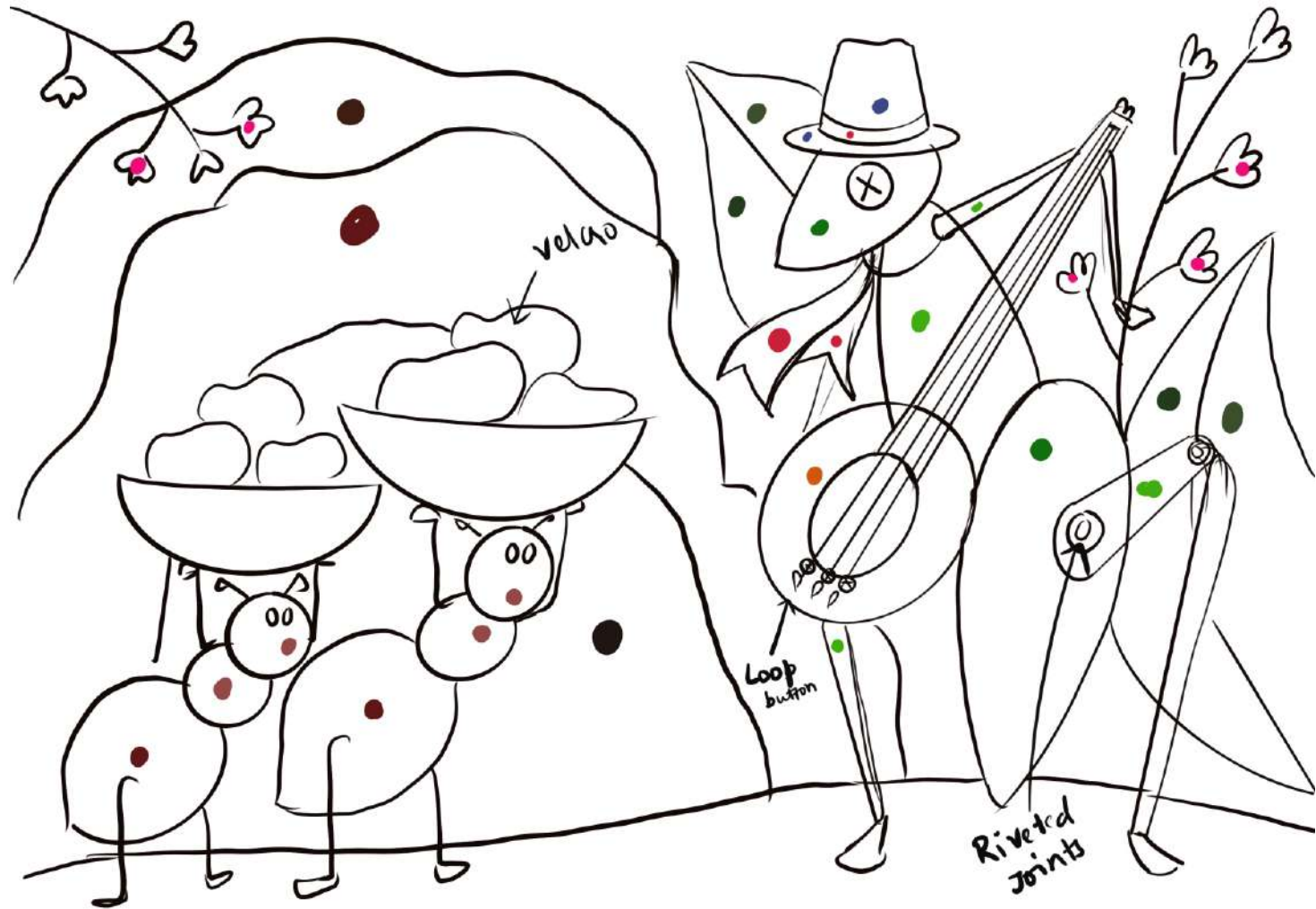
TURTLE

TURTLE (x4)

TURTLE

111mm

279mm

38mm

GRASS

Ant and grasshopper

One day. A grasshopper was relaxing under a tree. He saw an ant carrying a kernel of corn. The grasshopper was curious and asked her, " Why are you working all day? I have never seen you enjoy your time". The ant replied, "I am saving food for winter. You should also do the same. "But the grasshopper did not listen to her advice. During winter, the grasshopper realised that he had nothing to eat. He saw the ants distributing the greens they had collected. Seeing him, the ant said, " all summer, I worked hard and you laughed at me. Now, my tummy is full. You Are hungry" Sadly, the grasshopper walked away.
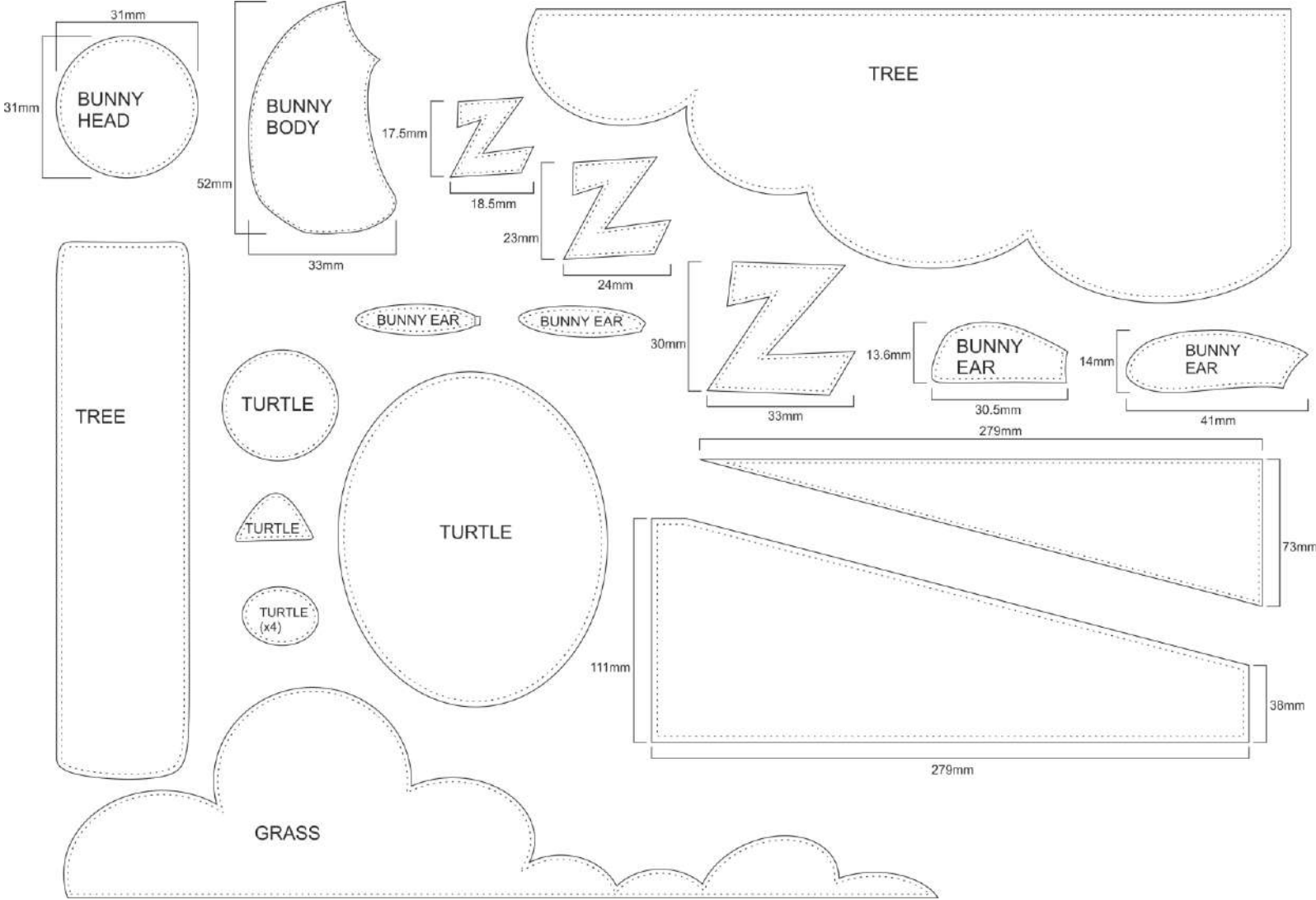
Moral: as you sow, so shall you reap.

CHAPTER 6: MARKETING

PACKAGING GRAPHICS

MARKETING PLATFORM

**W
E
B
S
I
T
E**

INSTAGRAM

M A G A Z I N E

Taali (clap) is a beautiful way of expressing emotions by striking palms together, creating a distinct sound.

Just while you win a round or you could eliminate your opponent or made your best possible move,could you ever resist yourself from clap instantly? on the other hand a kid can't stop clapping after throwing a ball.Thus "taali" is the most common gesture one makes after an achievement.Our brand mainly promote individual being happy,excited,joyful while interacting with us.So what is more better than starting and ending every move with a taali?

Our logo features an old man framed through the initial "T" and a kid framed through the end letter "i"of "TAALI",who are clapping.That signifies how simply "taali" help bridging the generations by making our granny's story live interacting with us.It also tells "taali" is for one and all,there is no age boundaries to give a taali!

CONCLUSION

The purpose of this project was to work together as a team and develop a concept that could be successfully converted into potential start-up.With limited knowledge about toy and games designing it was a challenging decision for us to take this group project ahead as our graduation project. But with all kind of help from our mentor and family members we could make it up to this stage of finalisation. On the star point we have gained immense knowledge through this self learning process.
This is undoubtedly the most useful experience we are going to take ahead with us in our life. Through this process of project we also got golden opportunities to meet and work with outstanding organisations and personals who not only taught us but unbelievably helped us selflessly, their contribution will always be appreciated throughout.
Through this journey together as a team, We have grown together everyday taught and learnt from each other. Our differences in perspective, taste and area of expertise due to our differences in culture, upbringing and geographical location is our power that makes our group versatile and flexible. Our ability to take constructive feedback and incorporate it in my work has increased manifold.Through this journey, we have grown a little everyday and have learnt something new everyday.

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- http://www.healthofchildren.com/T/Toys.html
- https://www.lottie.com/blogs/childhood/five-things-parents-should-know-about-the-importance-of-toys-in-child-development
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