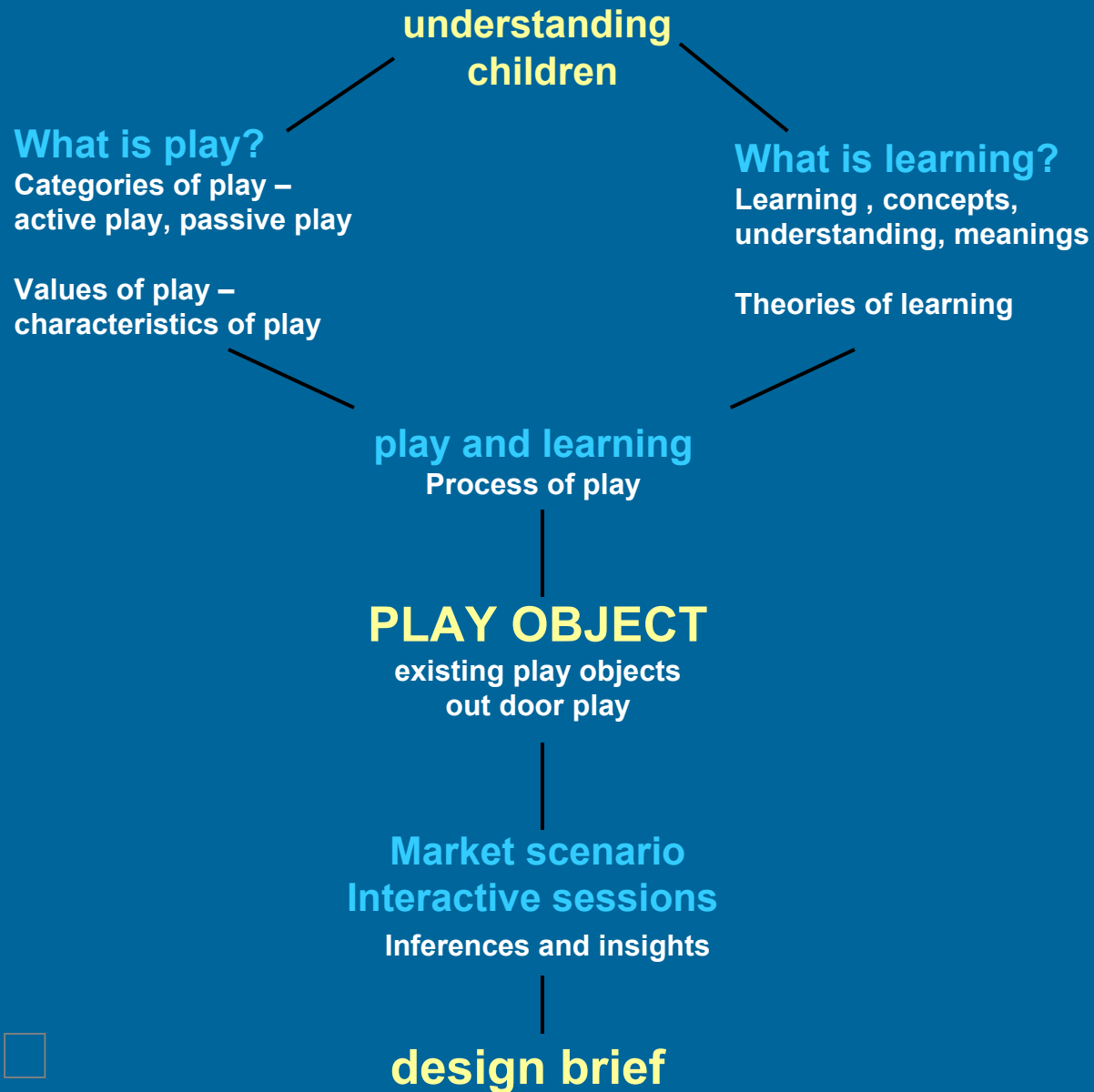


design of play objects for children

Presented by: Vidya Joshi
Guided by: Prof. Mohan Bandari



The project is an attempt at designing play objects that are a source of enjoyment, awareness and learning for children – play objects that let play be ‘play’ and not become ‘work’.



target age group



The target age group is primarily 3-5 years.

children start making associations with people and objects.

urge for exploration is maximum.

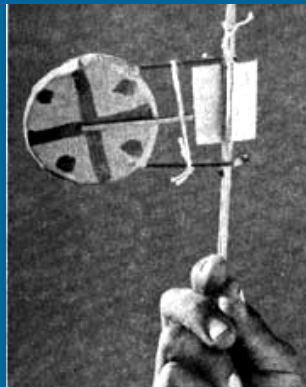
process of play



first impact
dialogue
elements of surprise
elements of change
variability in the process of change
bits of discovery – partial revelation of
surprises

challenges
articulation of play process
goal

market scenario



organized sector

Mattel Toys and Funskool are the big players in market

stress on play objects that encourage children's participation.

'quality' of the play experience

un organized sector

Traditional toys have deep socio-cultural roots.

analysis of existing play objects



criteria

- Element of play
- Element of learning
- Developmental advantages
- Overall experience of play
- Ergonomic consideration
- Safety
- Material and process
- Maintenance and durability
- Cost

inferences from interactive sessions

Children love to **personify and personalize** objects, constantly giving new meanings and forming new associations with objects.

Children love **physical exploration of objects and spaces**, It provides them an opportunity of 'effortless play',

- Parents are aware of the educational potential of play objects and willingly buy them.

- Due to over emphasis on educational parameters, the **play value of most play objects is ignored or overlooked**.

- Designs of most play objects get are influenced by popular trends. (cartoon characters or movies).

-- The play is generally over instructed thereby restricting children from playing 'effortlessly'.

- After some time, children get bored with most play objects.

design brief

Design of play objects for children aged 3-5 years of age. The play objects should be a source of enjoyment and overall development for the child.

It should allow by way of physical exploration of objects and spaces

-It should instigate a play process that directs but does not restrict the child's creativity and urge to explore.

-Play process should

**Arouse the child's curiosity,
Build achievable challenges,
Suggest a direction of progress by way of punctuations
of success and failures,
End with a feeling of accomplishment, and
Success should inspire urge to play more and take up
more complex challenges**

- It should contribute to the **overall development** of the child- physical, mental and emotional

It should

trigger sensory apparatus

create better inter-sensory co-ordination

develop imagination and creativity

develop analytical skills

develop ability to create new meanings ,associations

-It should allow **playful participation from other children and adults**.
Role of instruction and participation from adults should be to enhance play process and not as a forced intervention.

-It should be **safe** to handle and easy to maintain and store and moderately priced.

-playing with it should be an **enjoyable experience** for the child

PLAY

Play as play and not work

Element of effortlessness and enjoyment

CREATIVITY

Child as creator, and not user

Creating objects with new meanings and associations

Forming an independent world view

Looking at things from a fresh point of view without pre-conceived notions

**PLAY
OBJECT**

LEARNING

Learning as awareness, not education

gaining valuable personal and social traits

Overall development

physical, mental, emotional

EXPLORATION

Trigger for sensory apparatus

An object ...

..to explore and discover

..that has an engaging quality

..Source of effortless enjoyment

micro and macro- situations for play

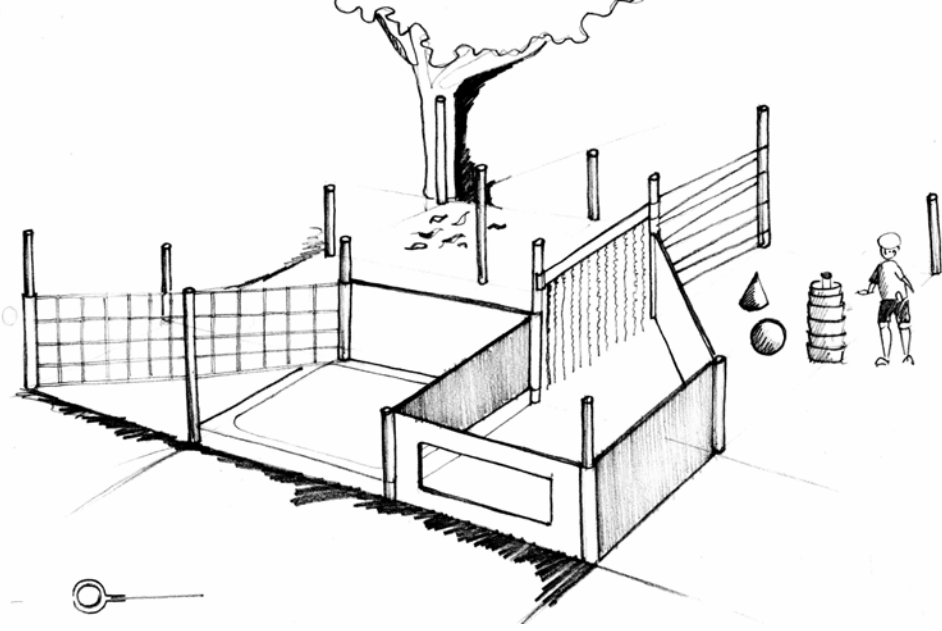
PLAY OBJECT

- Play object - focus of play activity
- Object as a source of exploration, creativity and enjoyment
- Object activates body movement in the surrounding space
- Scale: handheld object

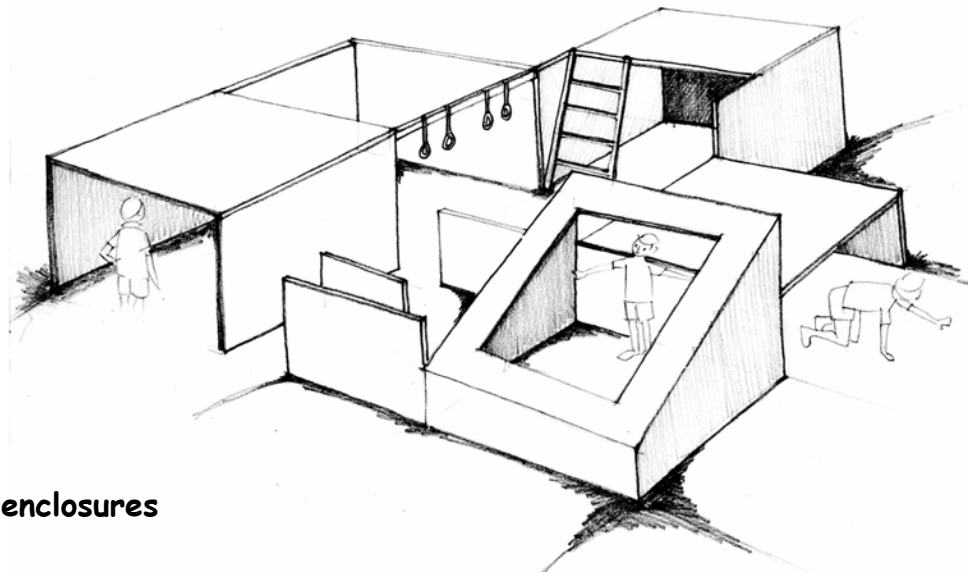
PLAY ENVIRONMENT

- An environment created by one or more objects
- objects define or modulate space
- Object and space both are source of exploration, creativity and enjoyment
- Body movement is more for spatial experience
- Scale: environmental

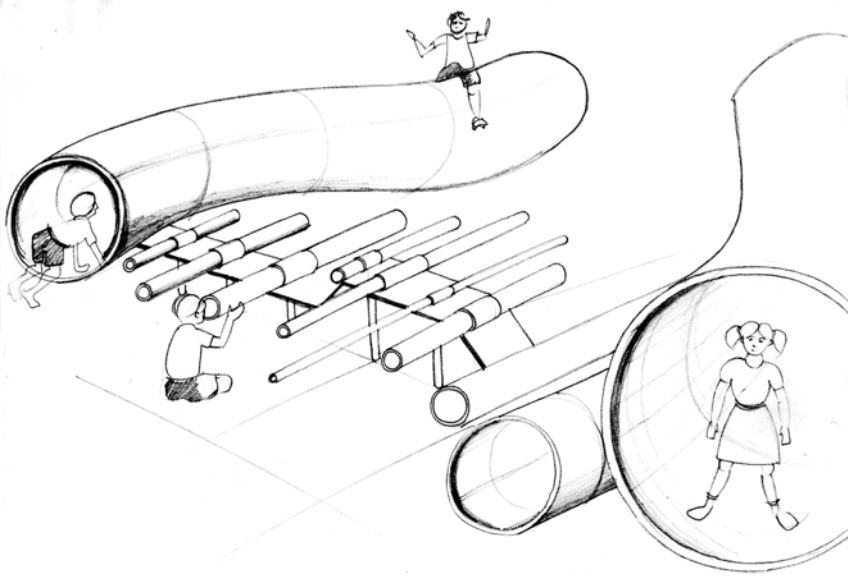
ideation



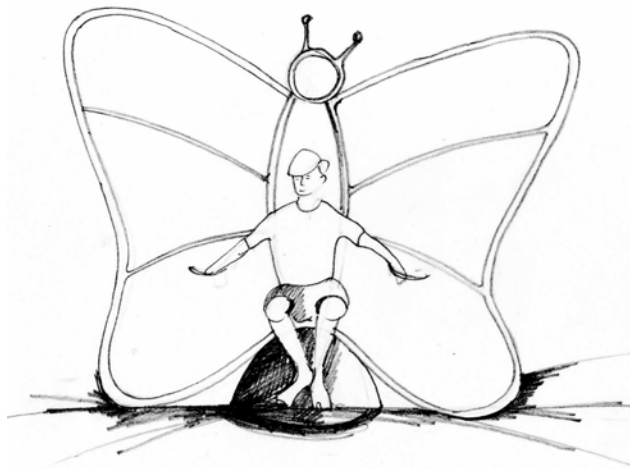
poles and planes



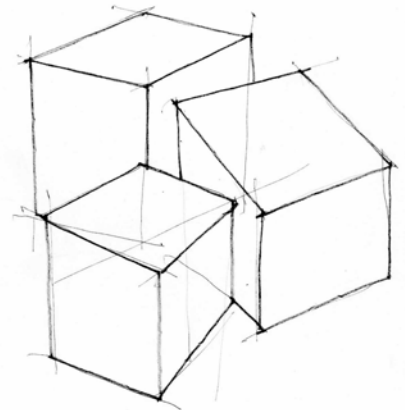
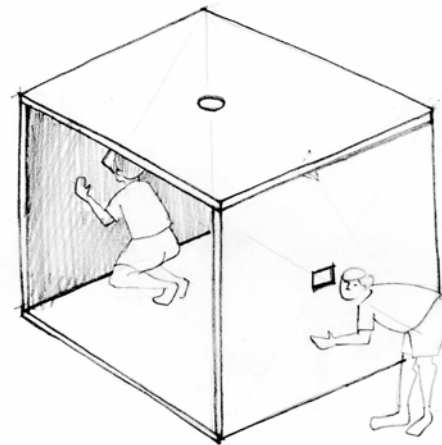
enclosures



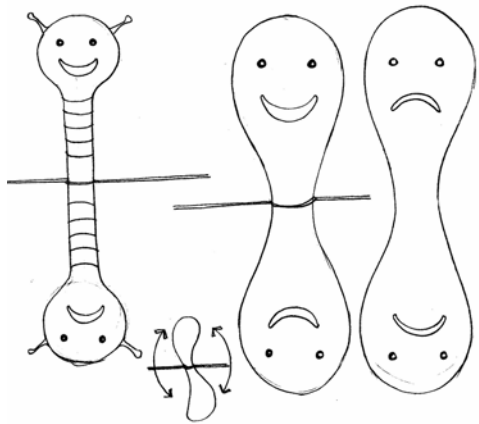
sound and space



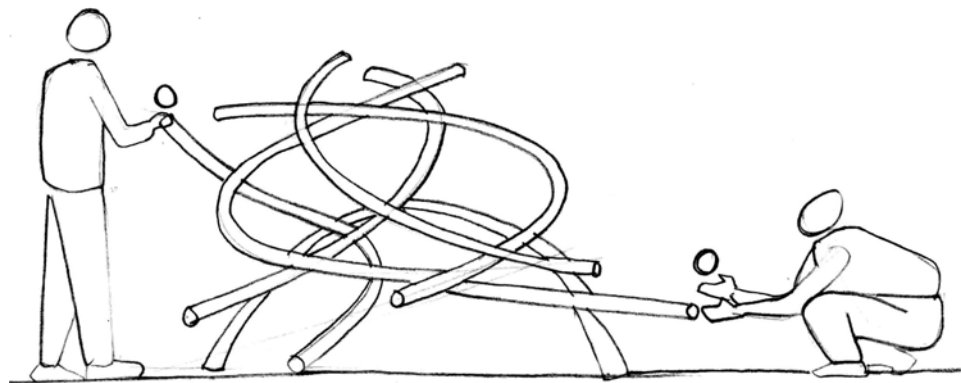
I m butterfly!



framing the world!



smilies



catch the ball!



puppets

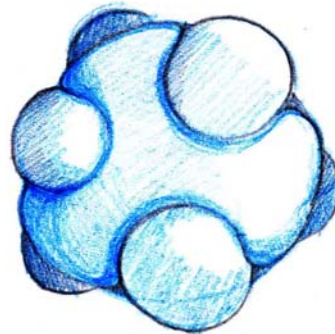
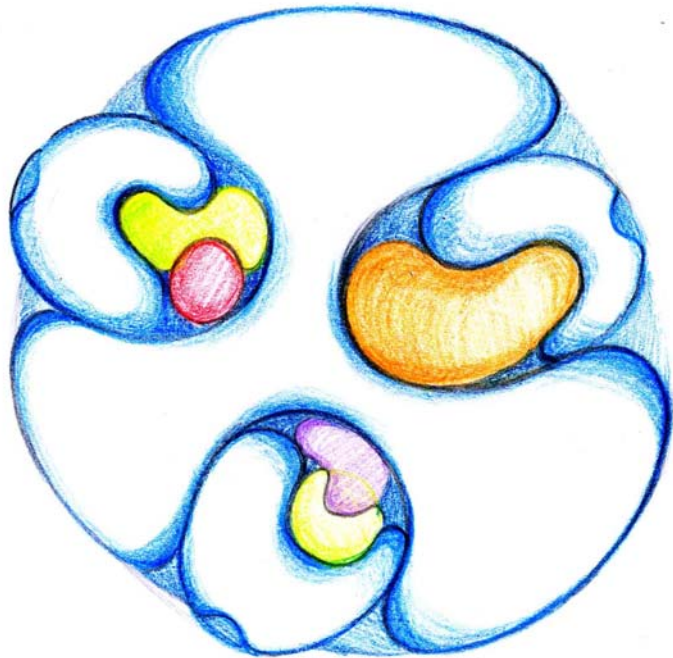
concepts - stage1

play environment

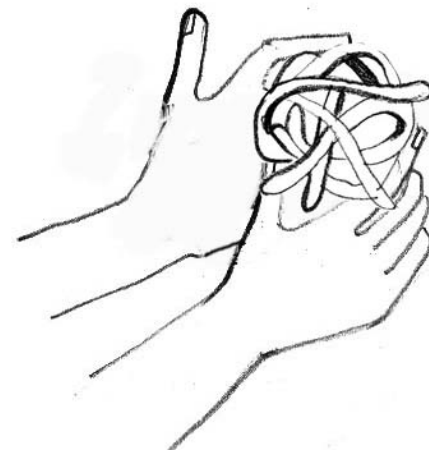
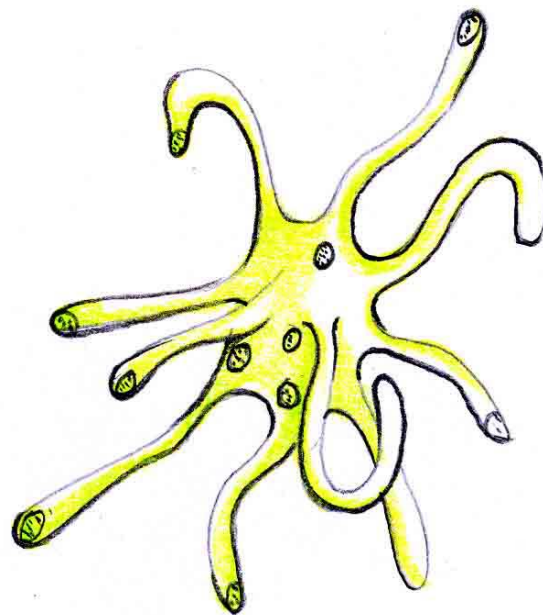
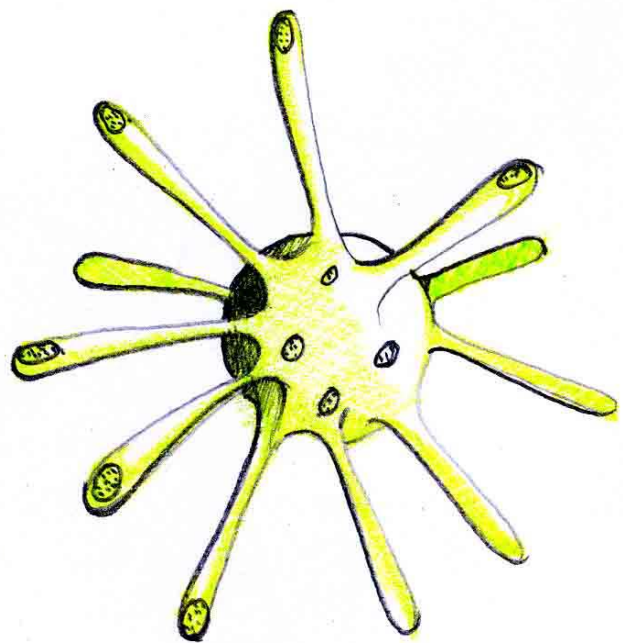
concepts - stage1

play object

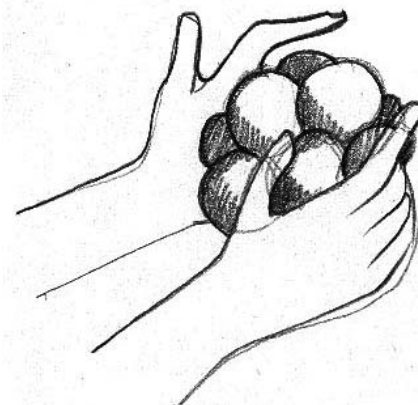
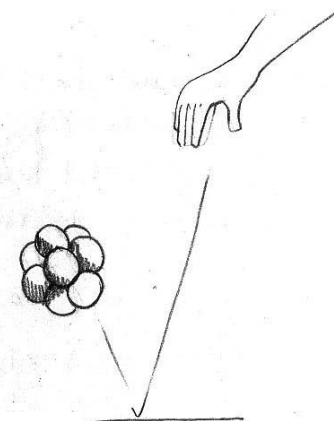
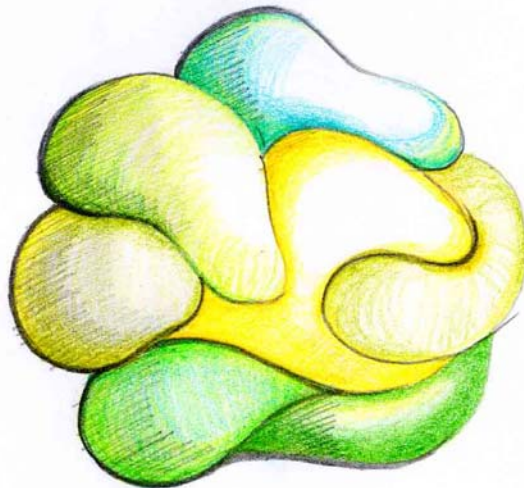
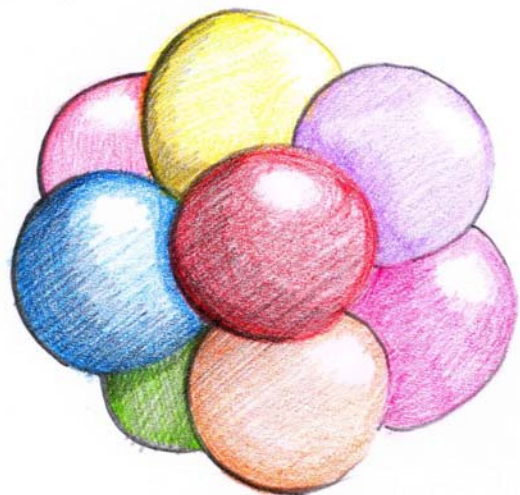
CONCEPT1
form within a form



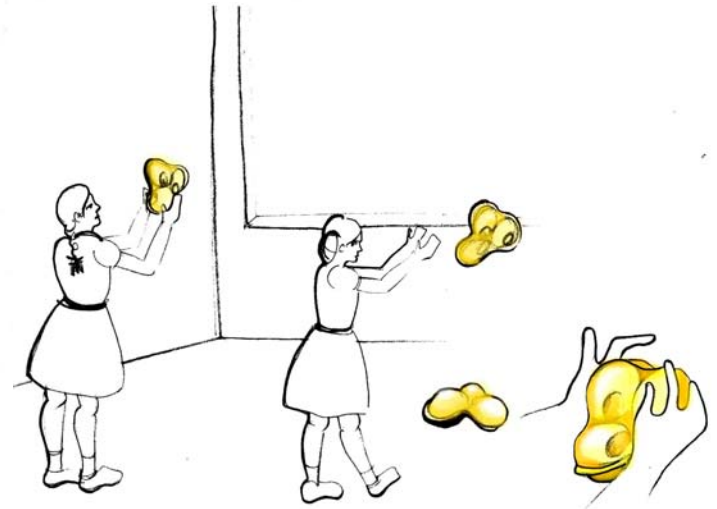
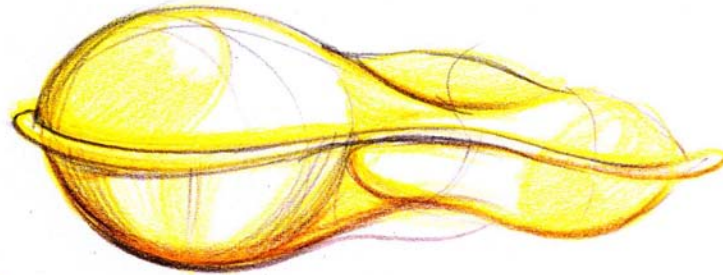
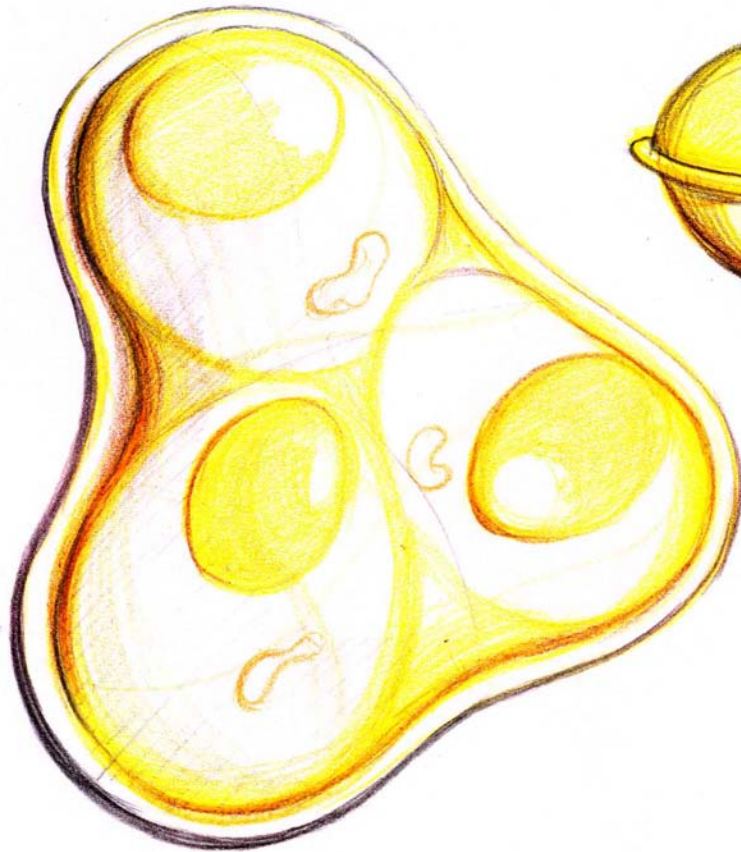
CONCEPT2
bendies



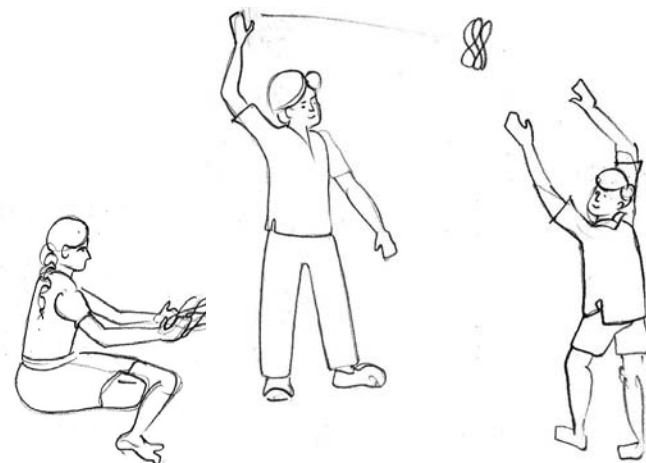
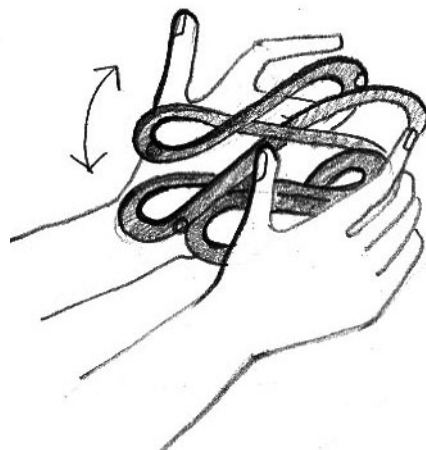
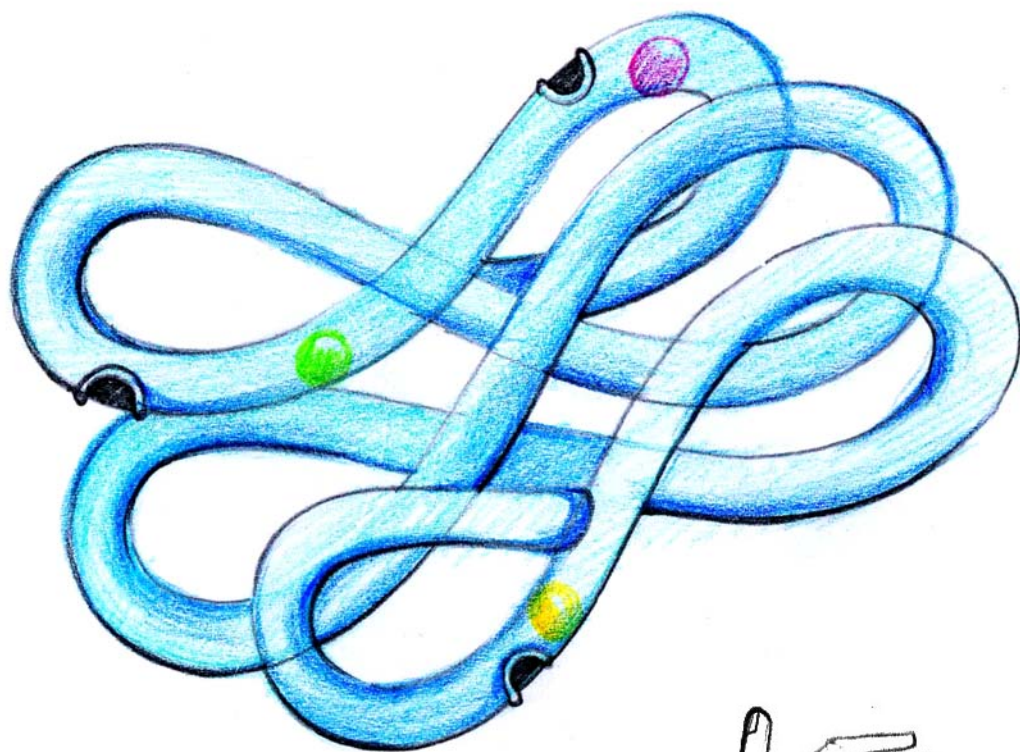
CONCEPT3
soundball



CONCEPT4
fun omelets



CONCEPT5
flexi maze



concept evaluation

First impact – quality to initiate play

Definition and structure of play process

play process – fun filled and adventurous detour

punctuations of success and failure

scope for exploration and creativity

analytical skills – brain teasing quality

ever refreshing experience -elimination of monotony

effortless play

challenging but not frustrating

Element of fun – what leads to fun?

Element of overall development- physical, mental, emotional,
exploratory skills, creative skills

Role of instruction

concepts – stage2

PLAY OBJECT

Play object - focus of play activity

Object as a source of exploration, creativity
and enjoyment

Object activates body movement in the
surrounding space

Scale: handheld object

PLAY ENVIRONMENT

An environment created by one or more
objects

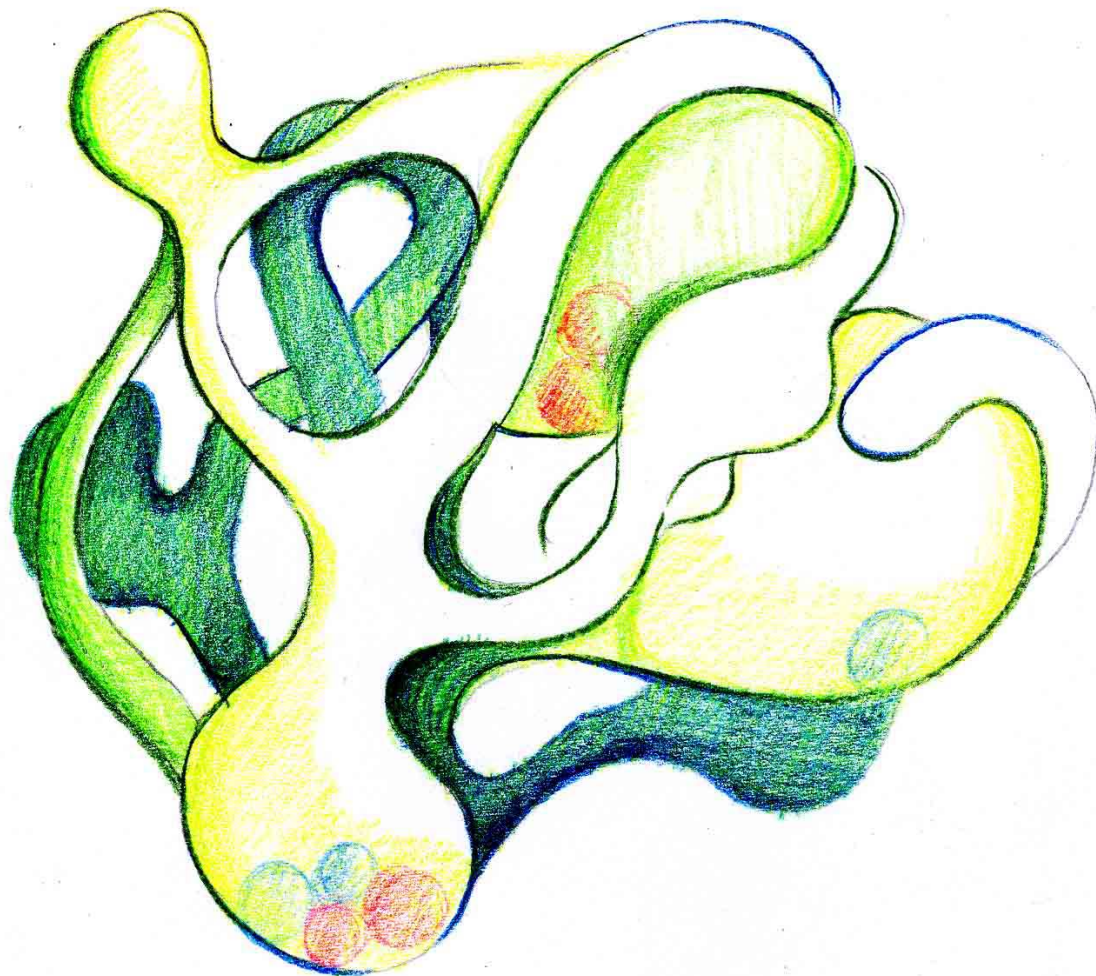
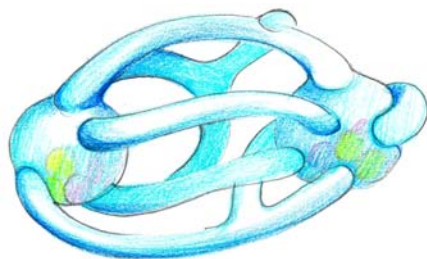
objects define or modulate space

Object and space both are source of
exploration, creativity and enjoyment

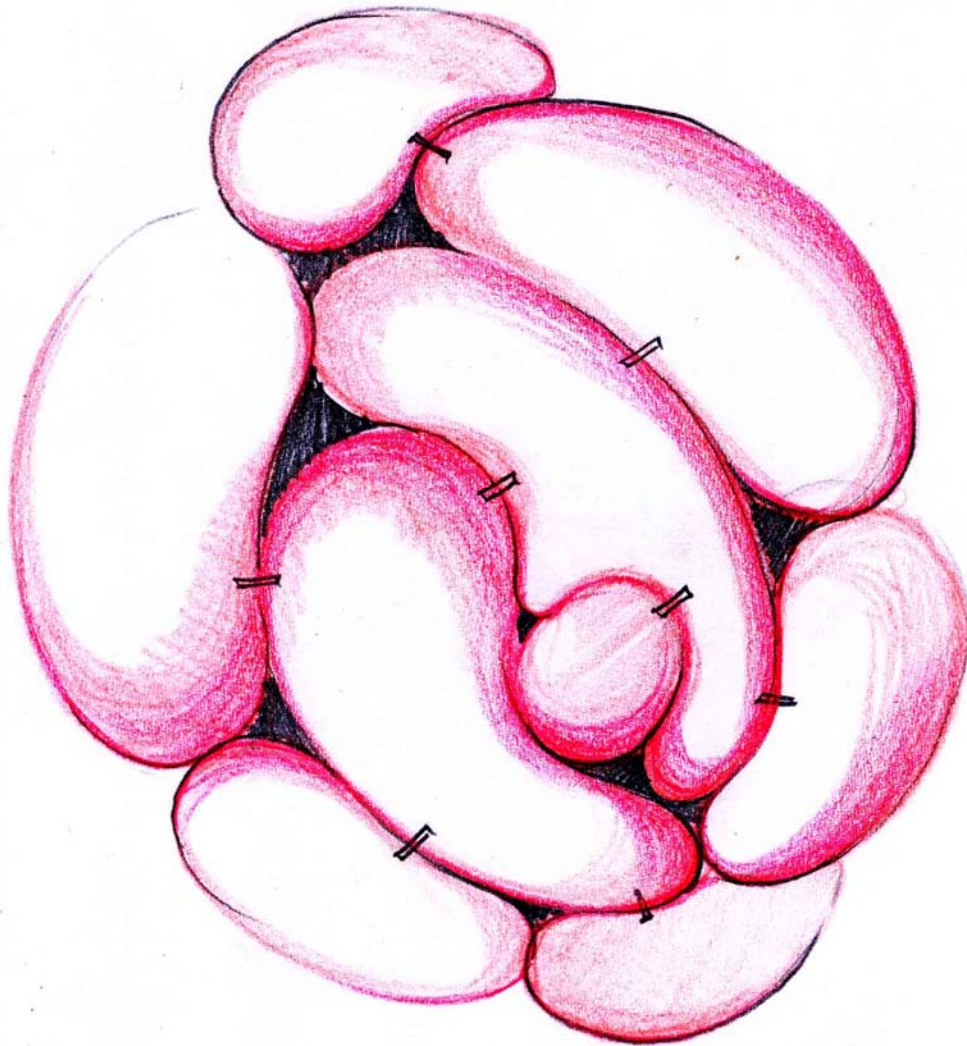
Body movement is more for spatial
experience

Scale: environmental

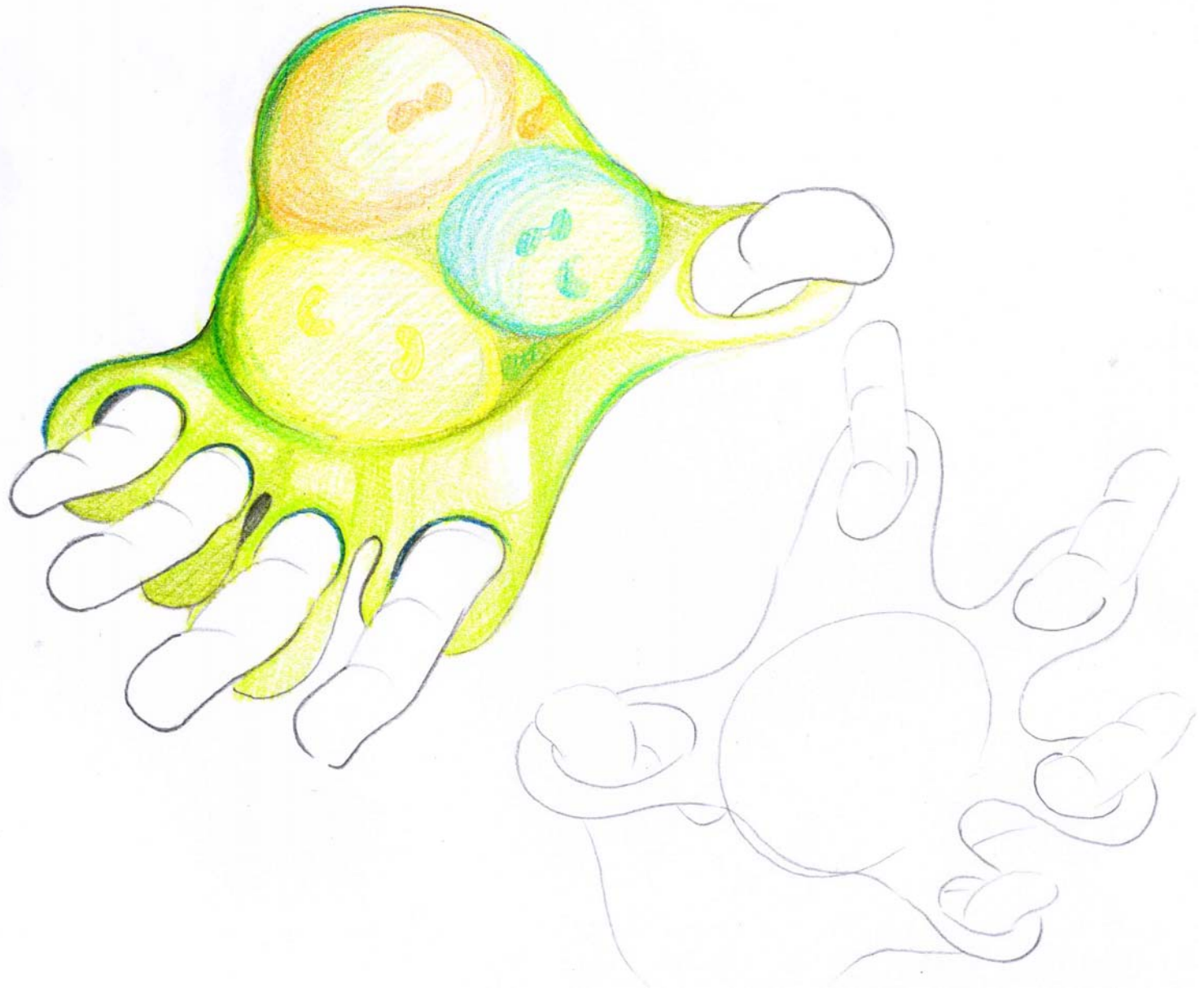
CONCEPT1
flexi maze



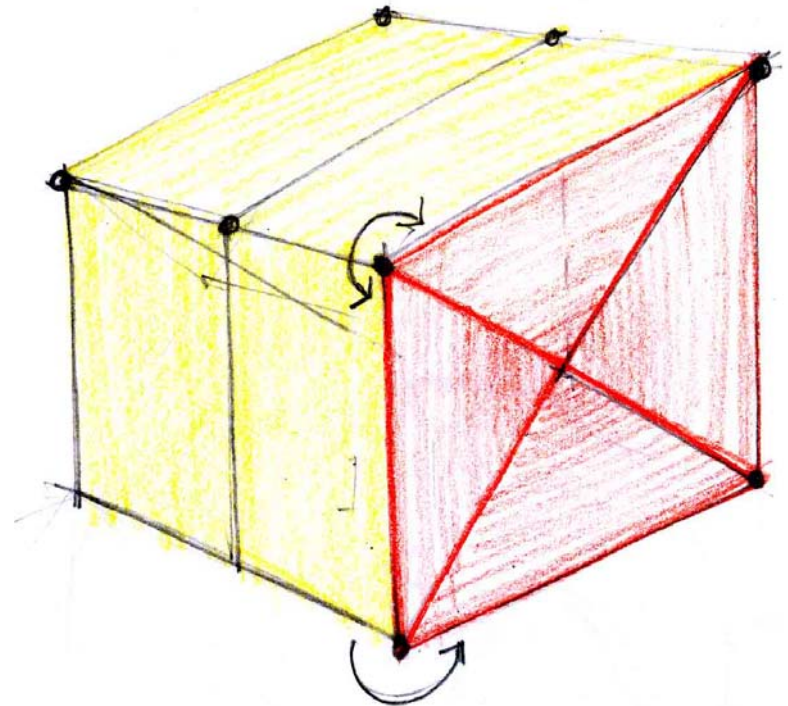
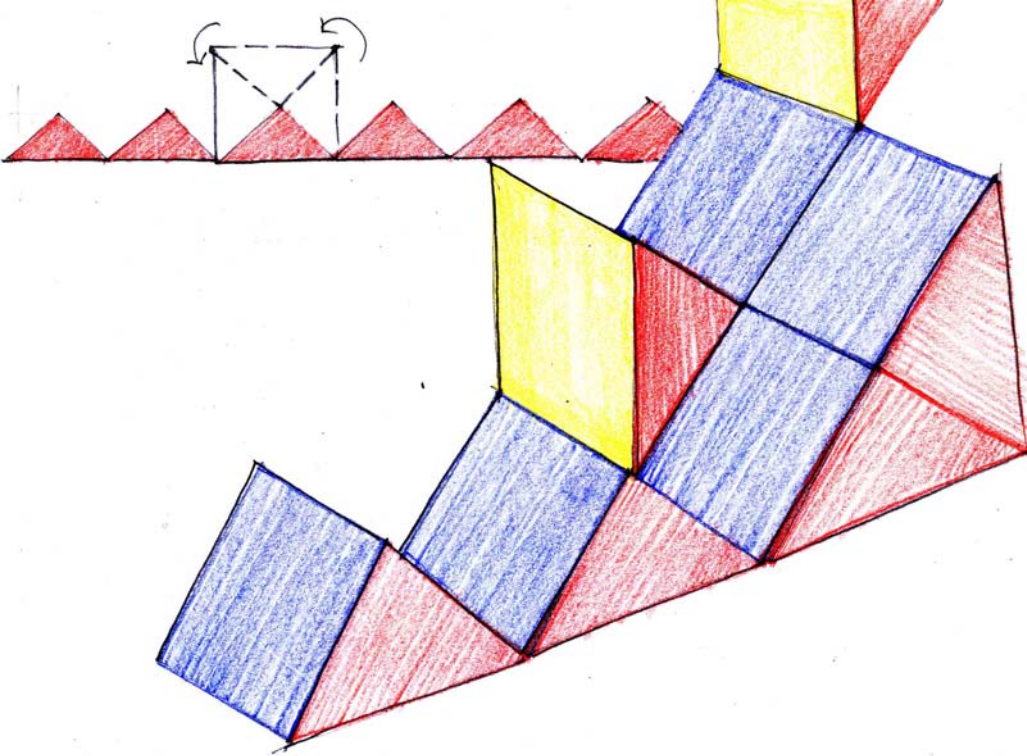
CONCEPT2
form that changes form..



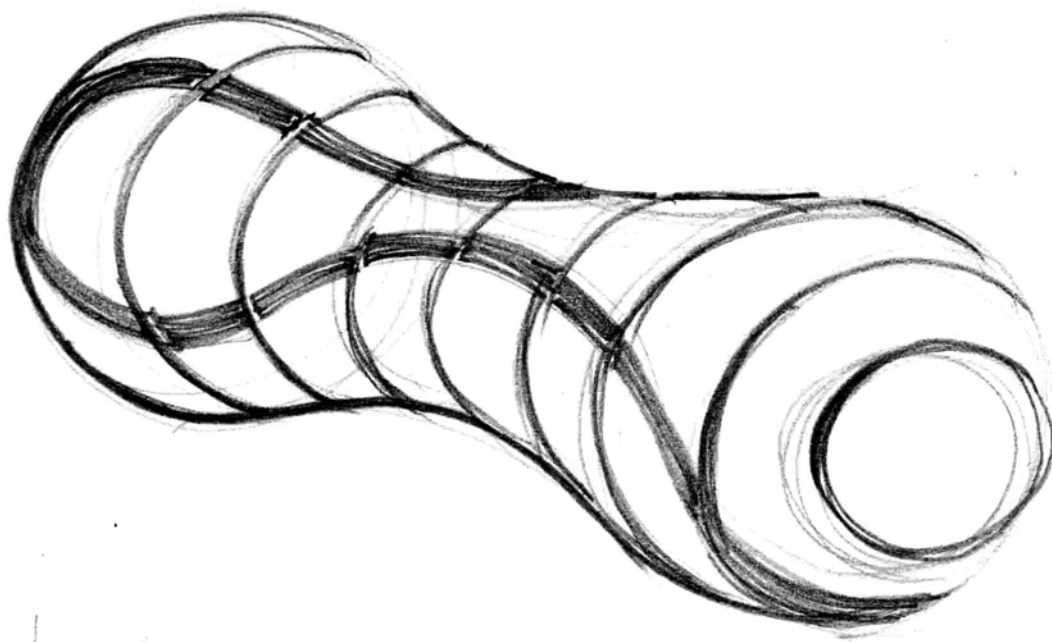
CONCEPT3
wriggly palm



CONCEPT4
combinetricks



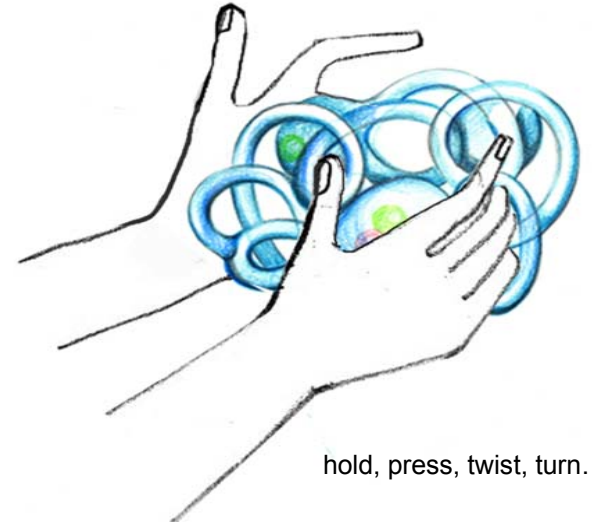
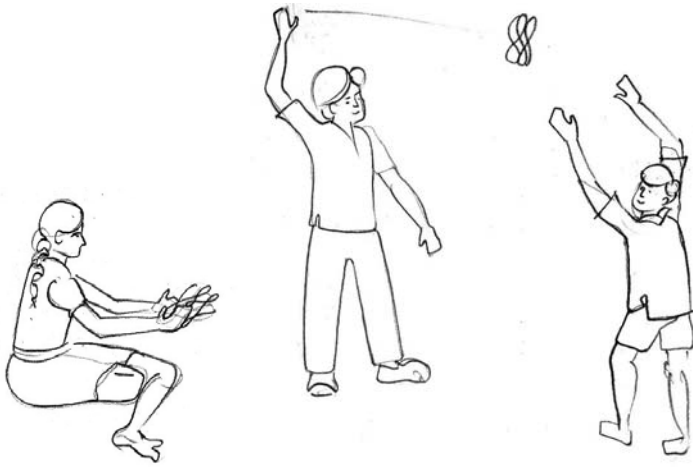
CONCEPT5
catch the match!



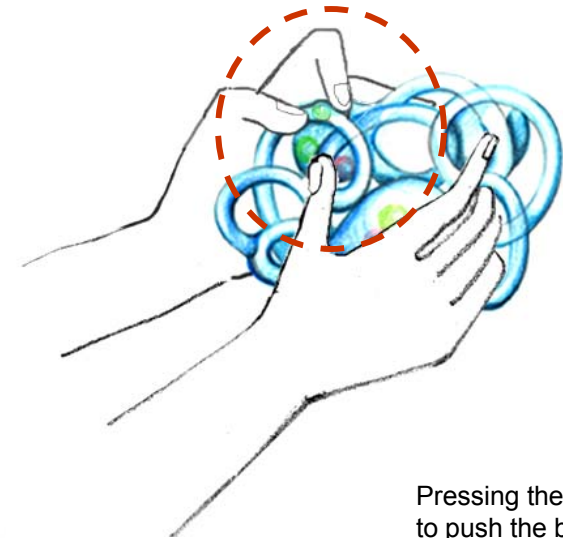
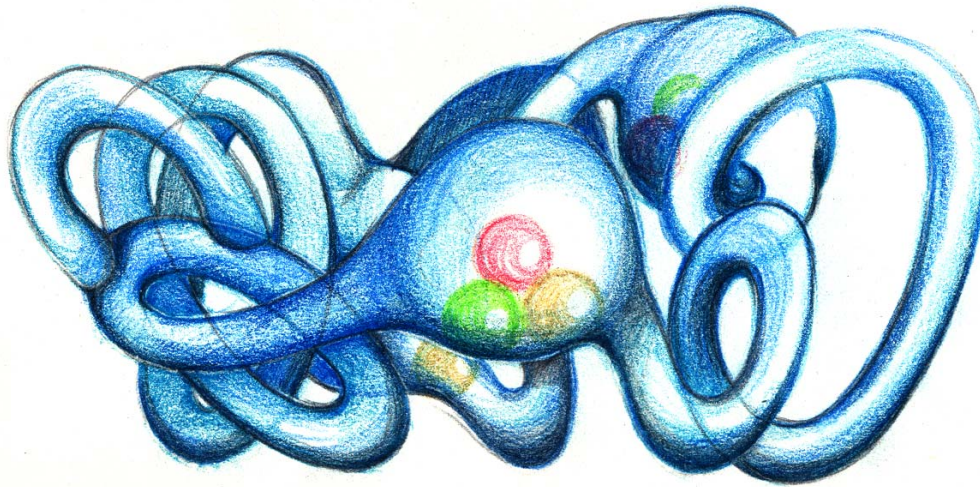
concepts – stage3

CONCEPT1

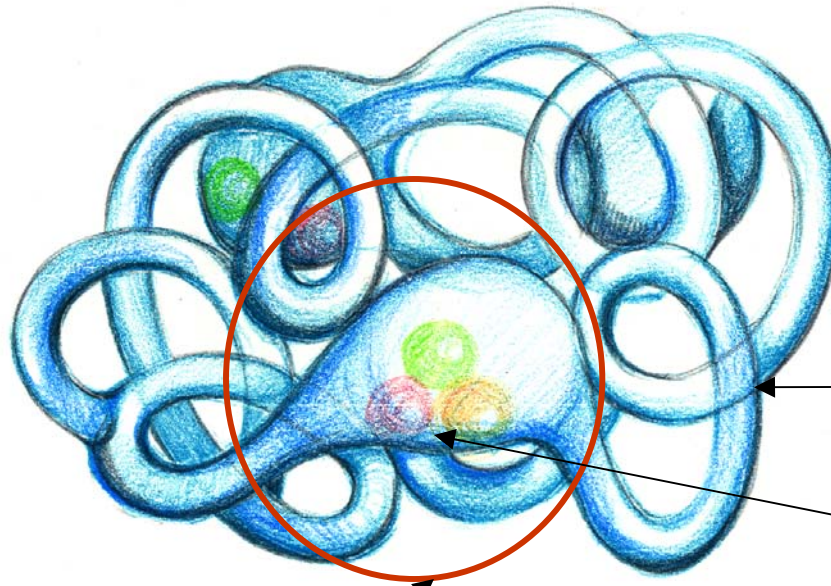
Flexi maze



hold, press, twist, turn...



Pressing the flexible pipe
to push the ball ahead

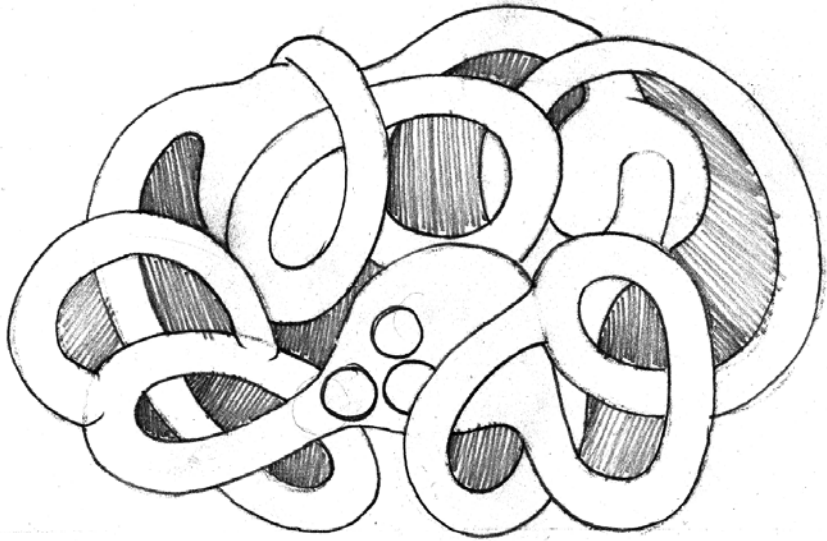


Object molded in flexible plastic

Balls of different colours grouped in different ways

achieving the desired grouping of balls in the three lobes

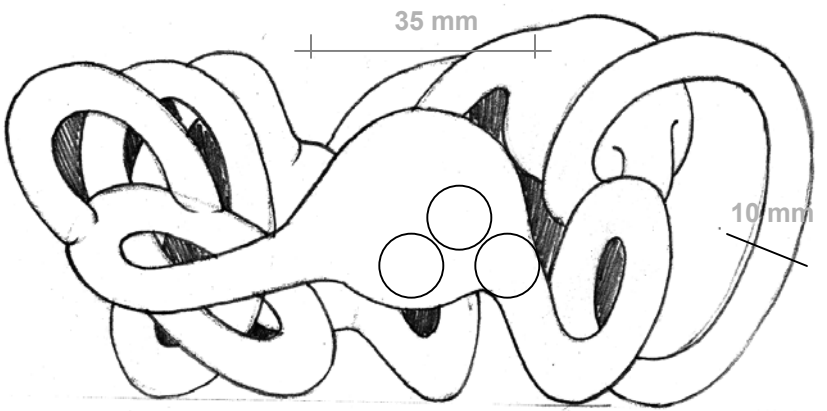




140 mm

95mm

TOP VIEW



35 mm

10 mm

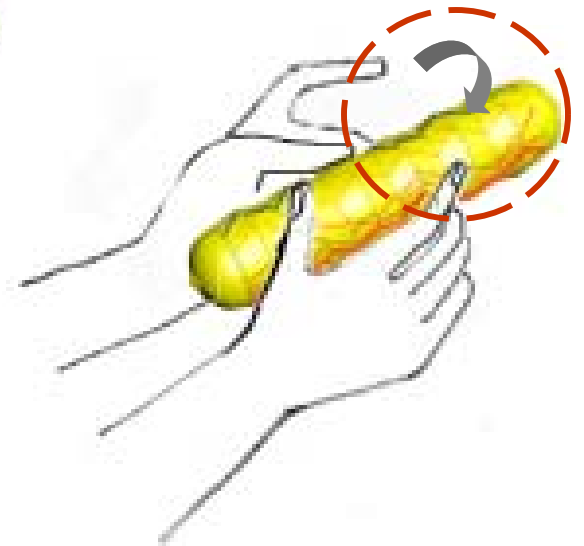
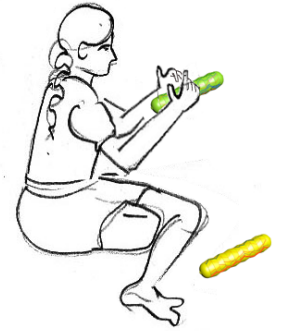
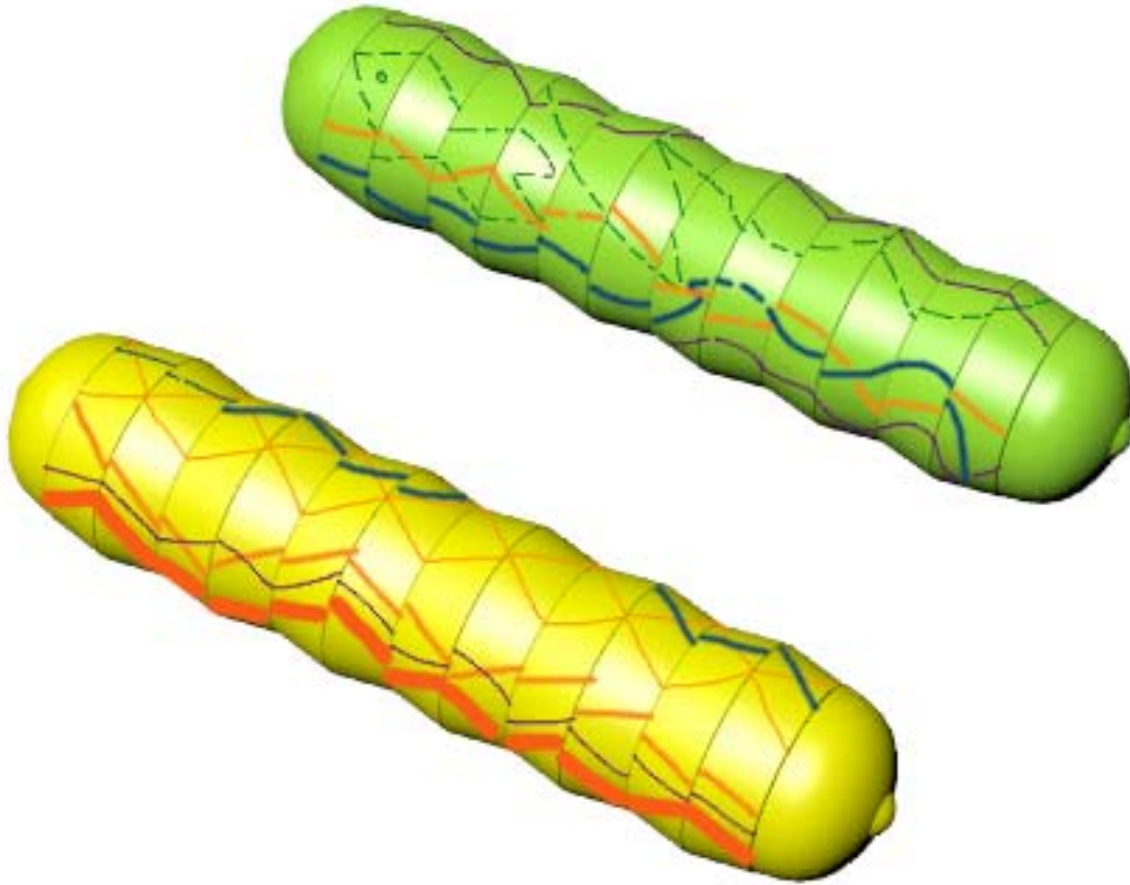
70 mm

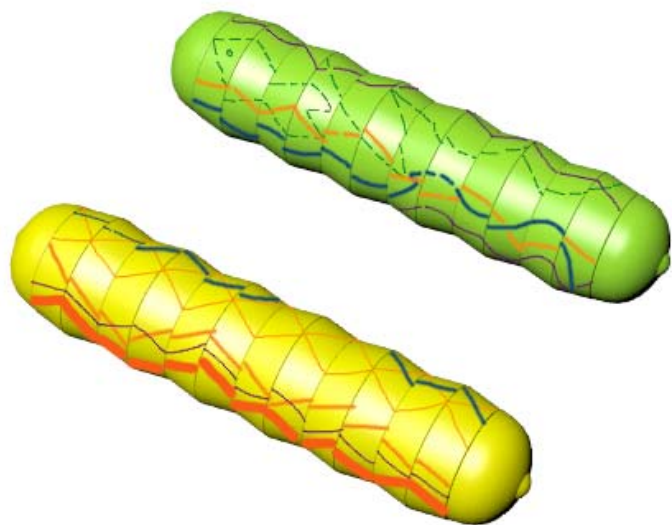
FRONT VIEW



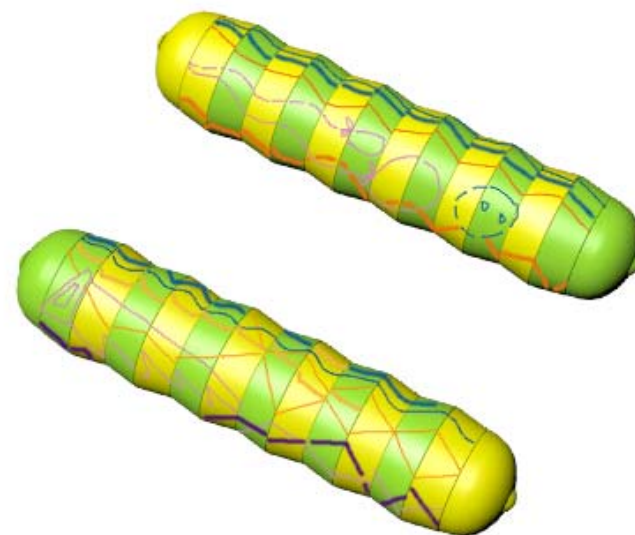
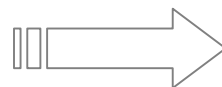


CONCEPT2
catch the match!

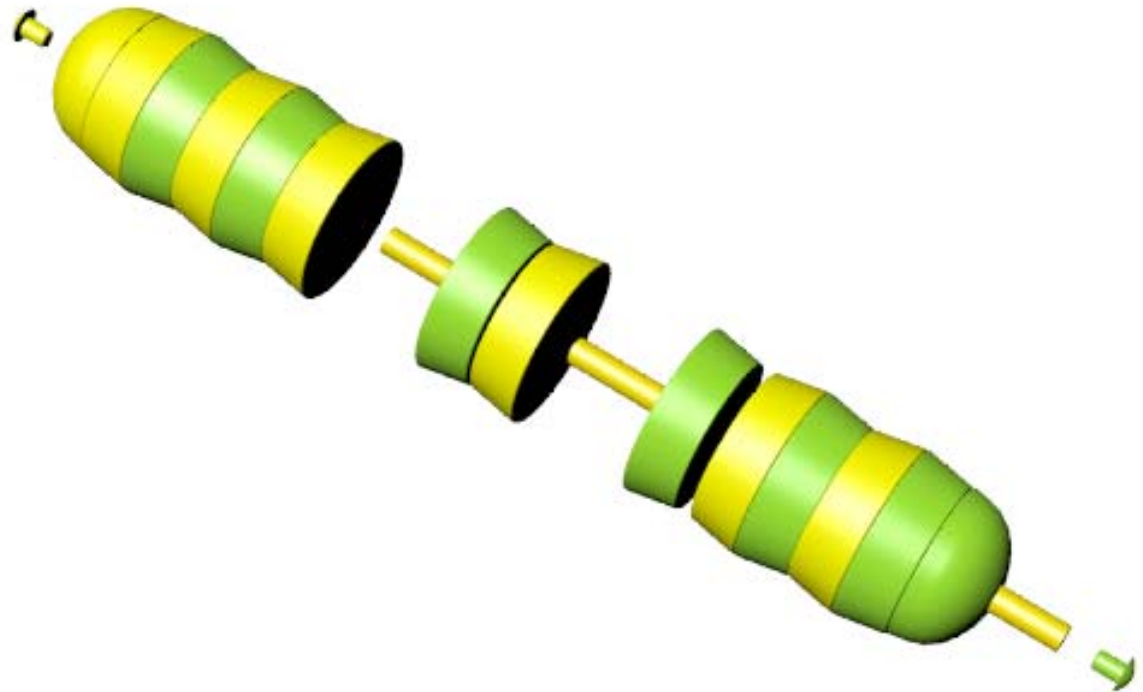




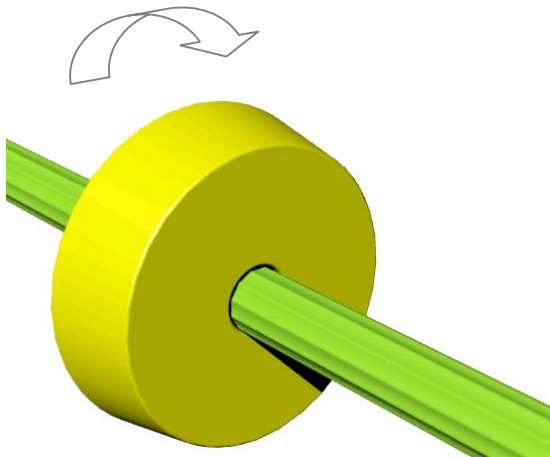
stage1



stage2



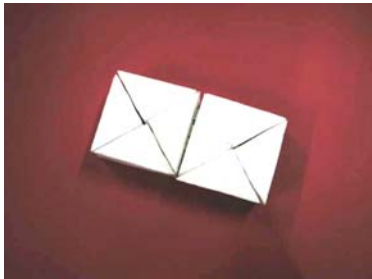
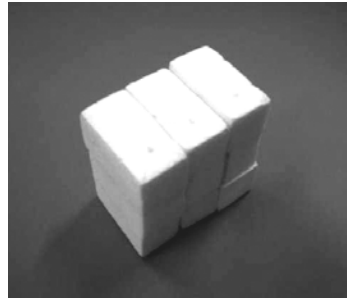
exploded view of components



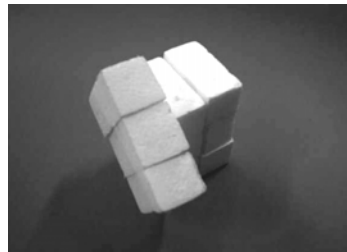
component rotates about central rod

CONCEPT 3 combinetricks

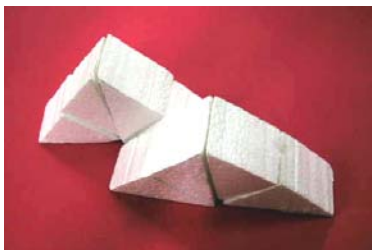
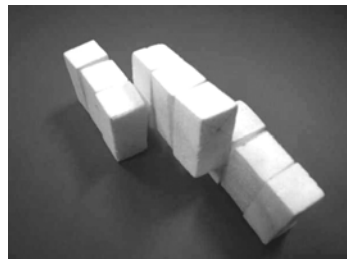
An object with several elements that combine in different ways resulting in the creation of various coherent forms that have a formal definition that the child can recognize.



1



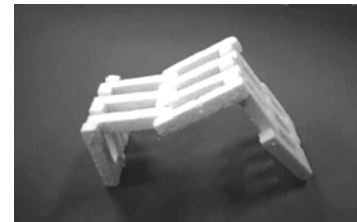
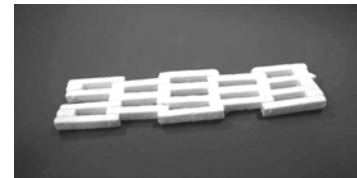
2



3



1



1



2



further development – variation 1

Variation 1 was further developed into configurations which could yield more number of formal organizations.



feedback from children



Insights regarding:

- size of components
- springiness of action
- role of instruction
- differences in comfort levels of children of different age

After a few encounters, the child gets acquainted with the play object and wants something new to continue with, otherwise the child loses interest in the object.

final concept

development

Final concept was chosen as per the following criteria

- genuinity of concept
- play value
- learning and development objectives
- challenges and punctuations in play process
- variety of forms achieved
- growth in complexity of play
- versatility
- characteristic features
- safety and ergonomic considerations
- manufacturability

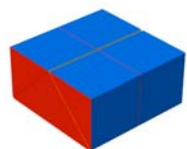
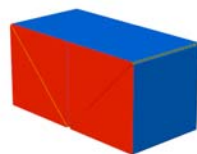
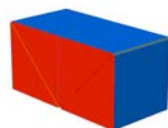
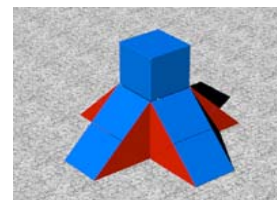
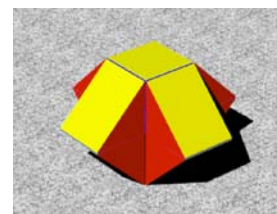
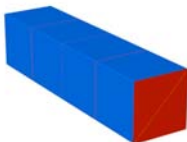
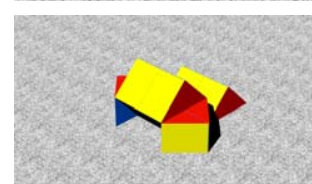
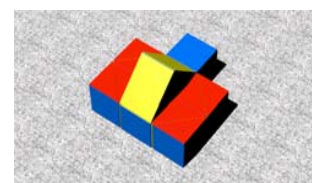
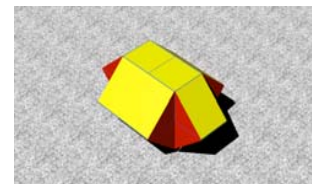
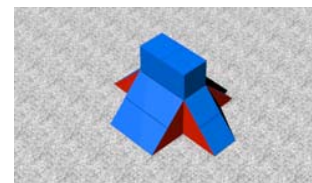
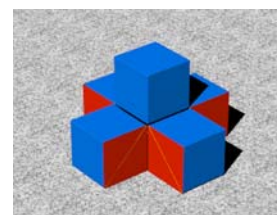
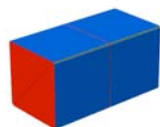
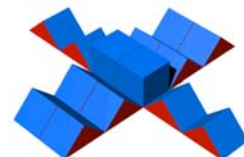
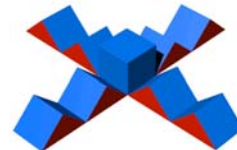
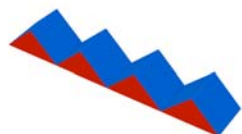
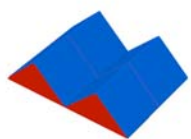
final concept

alternative approaches

Three approaches were defined within this concept :

- **approach A**
a set of individual play objects with growing complexity of play.
- **approach B**
an object that grows and reconfigures to become more and more complex.
- **approach C**
an object that reveals itself partially in stages increasing the scope and complexity of organization

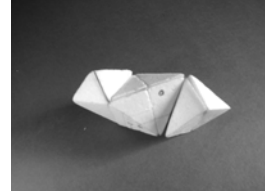
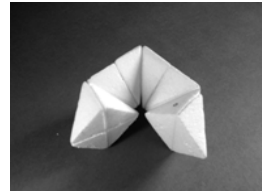
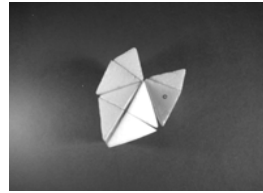
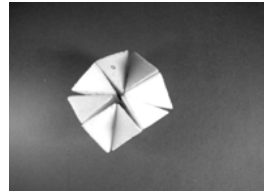
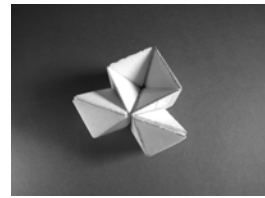
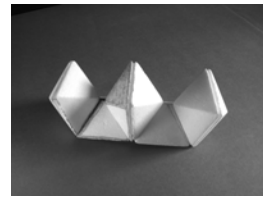
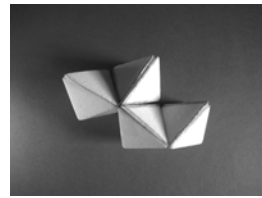
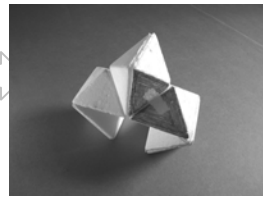
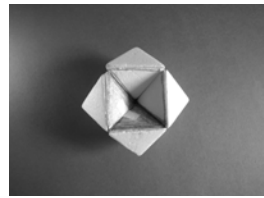
approach A



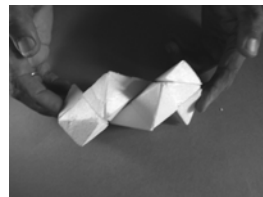
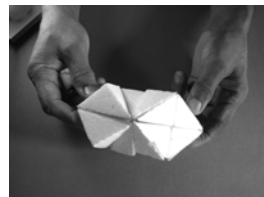
approach B



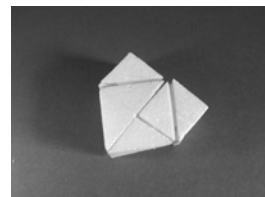
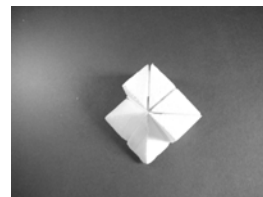
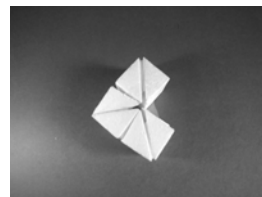
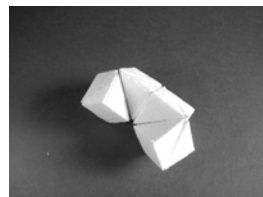
Stage 2



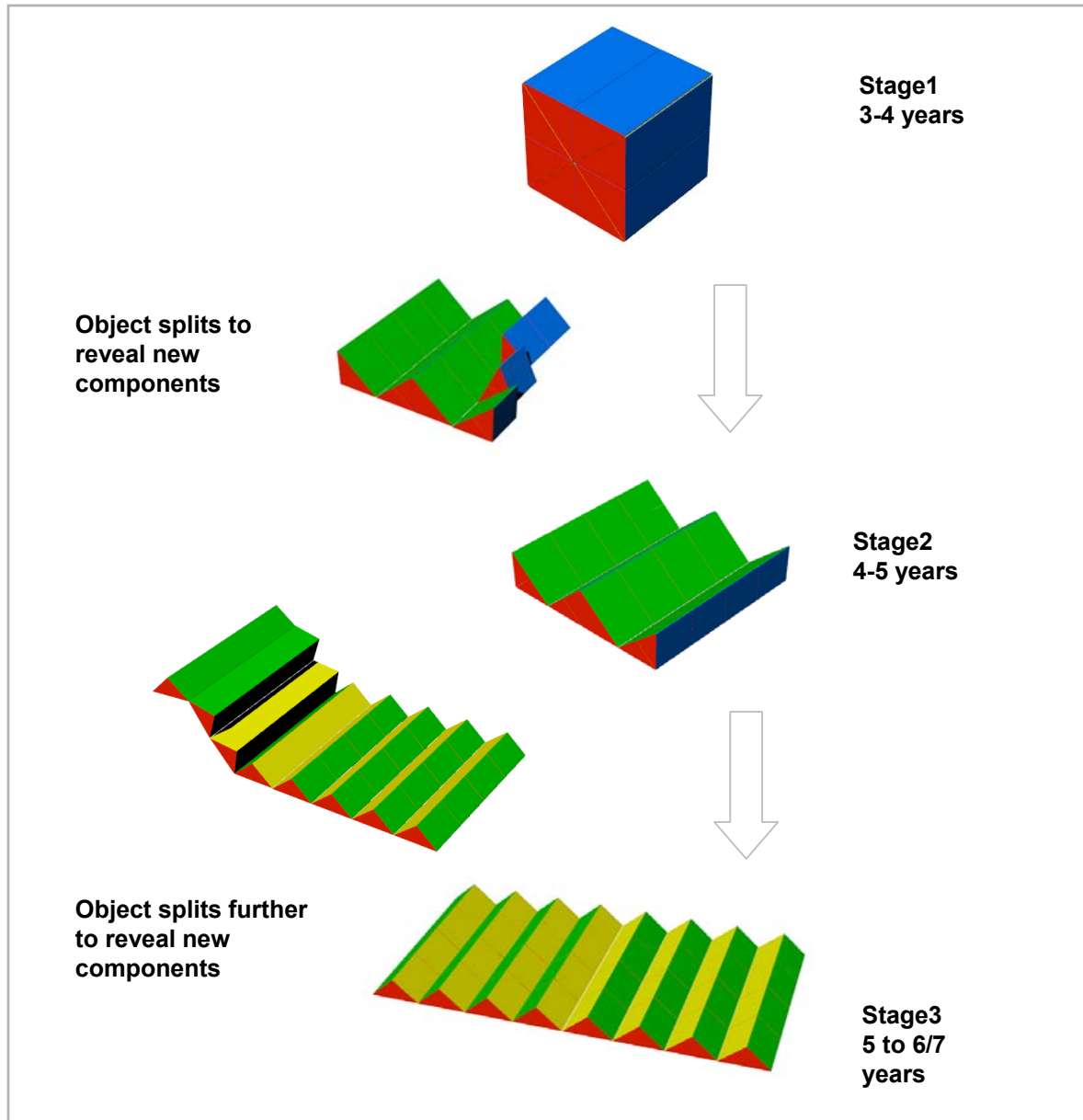
Stage 3

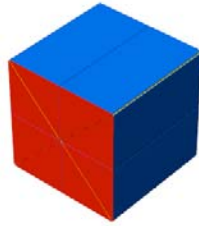


Stage 4

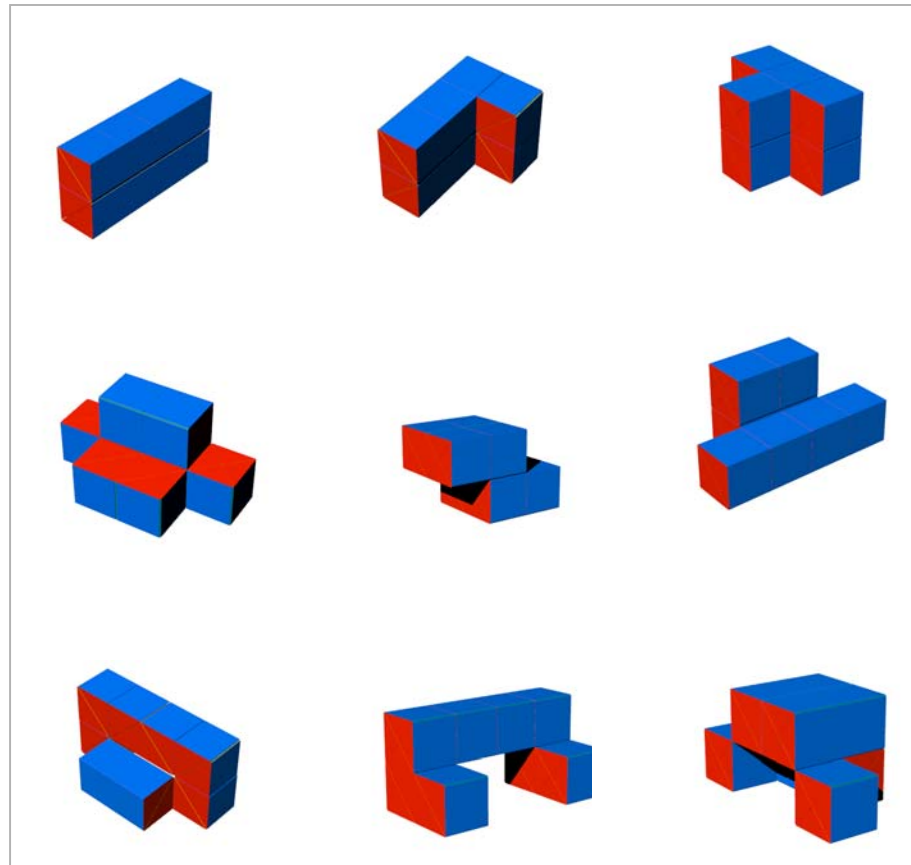


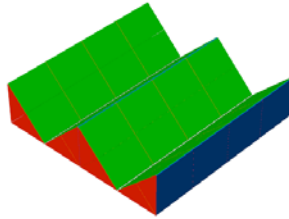
approach C



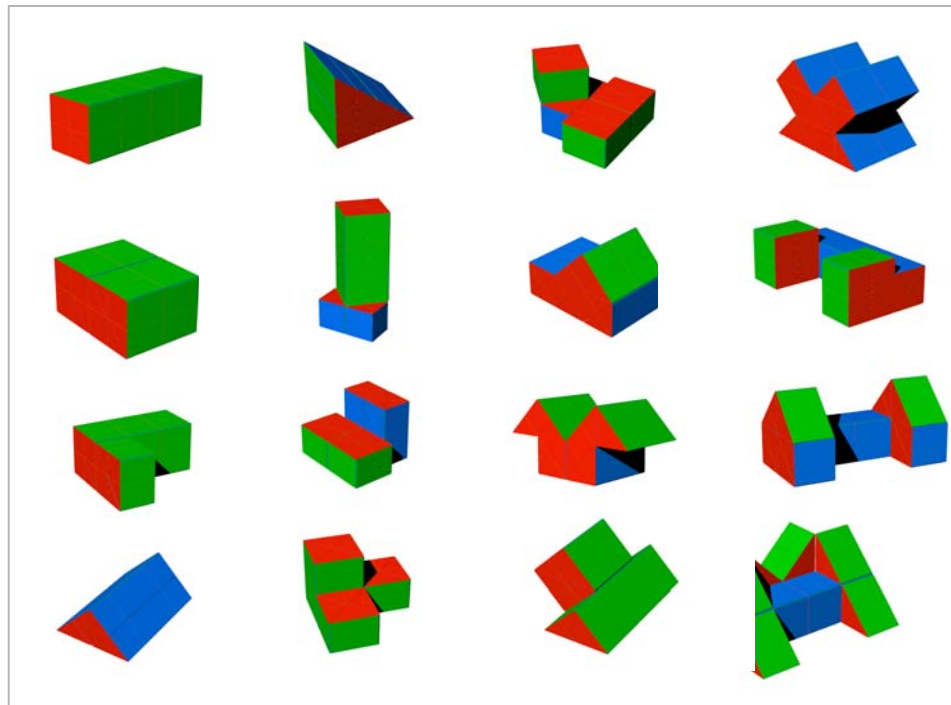


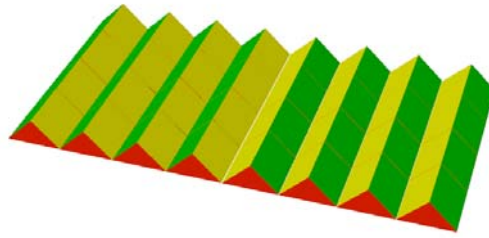
Formal organizations
Possible in STAGE1
play



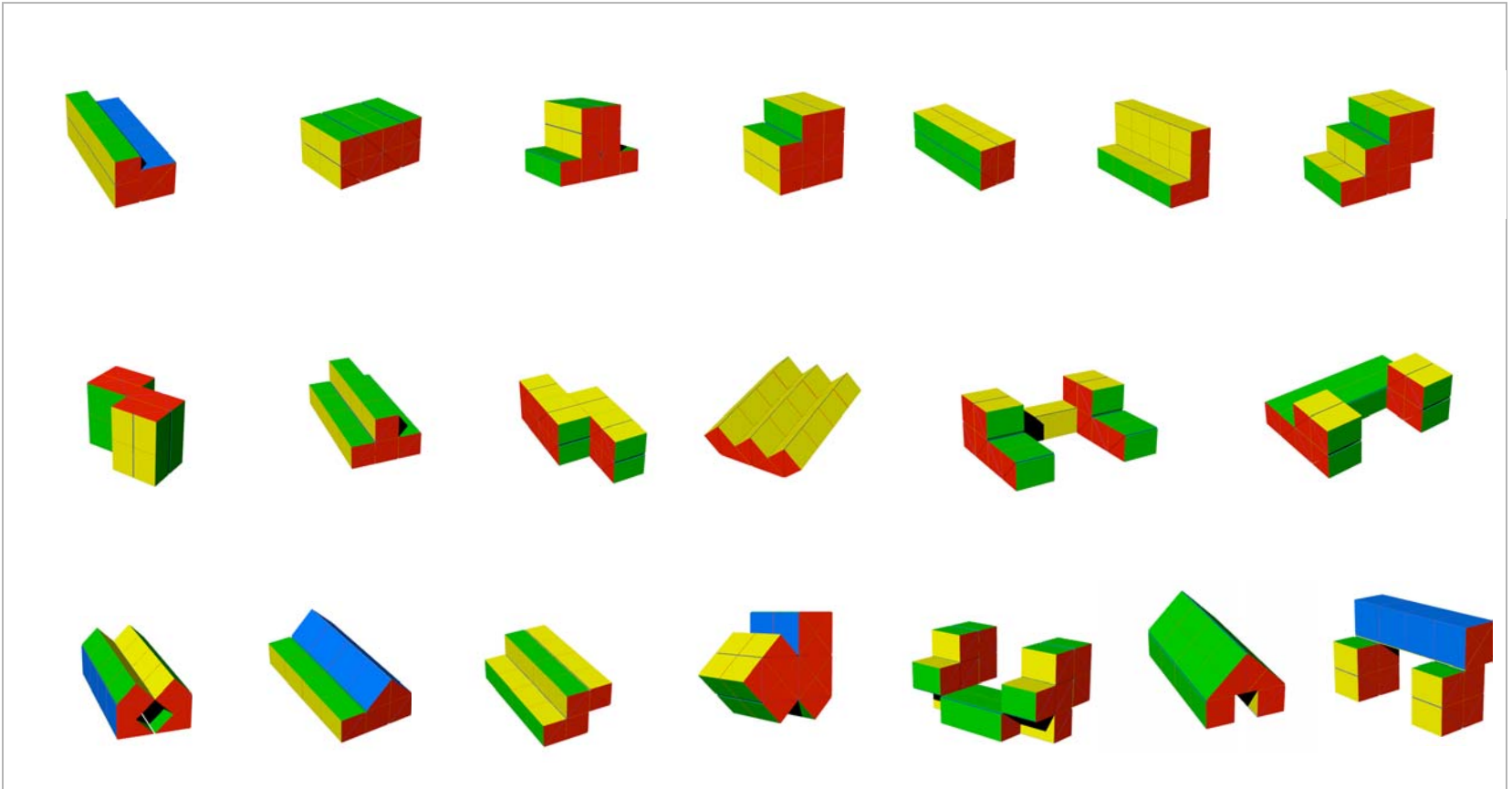


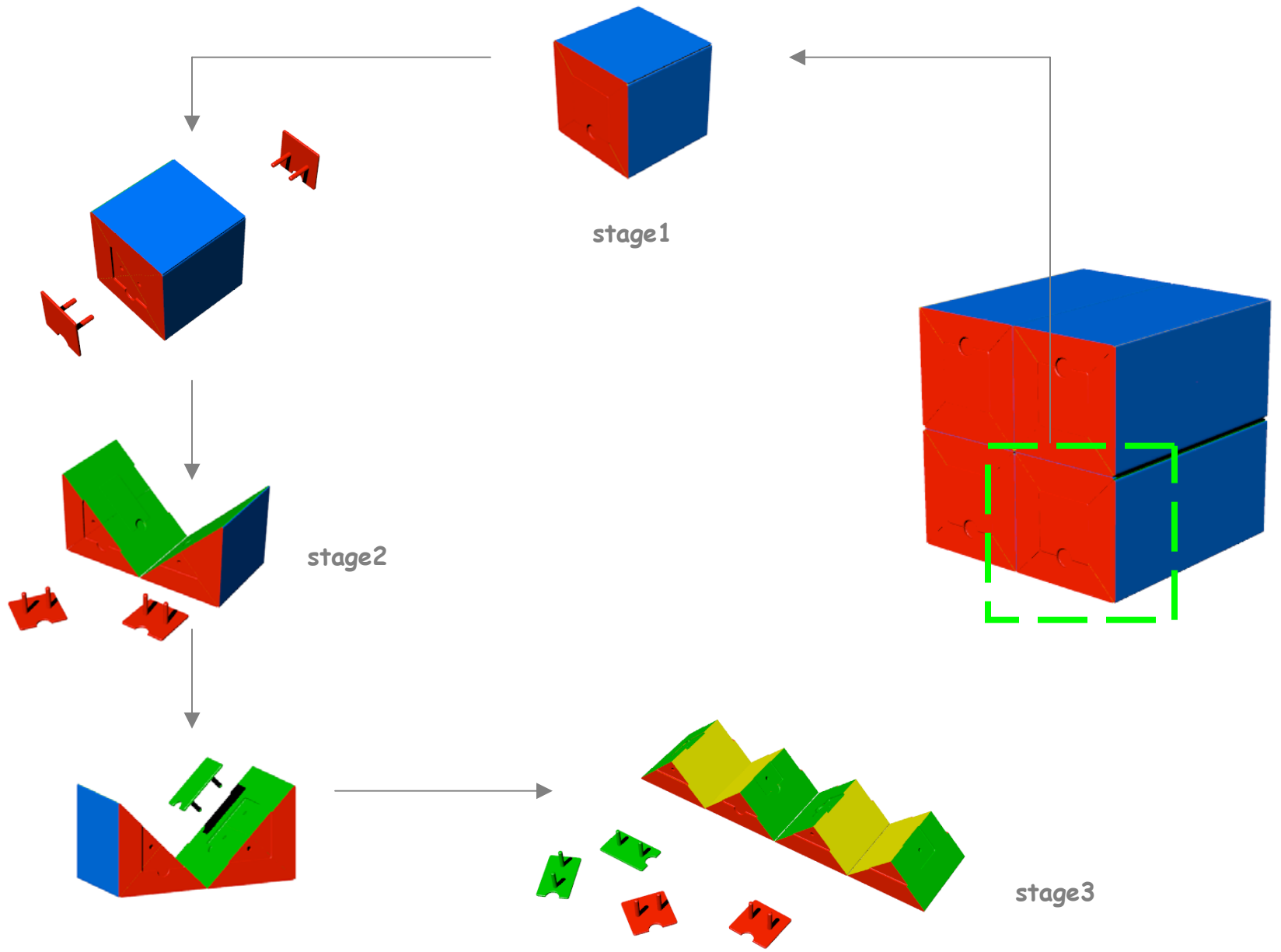
Formal organizations
Possible in STAGE2
play

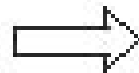
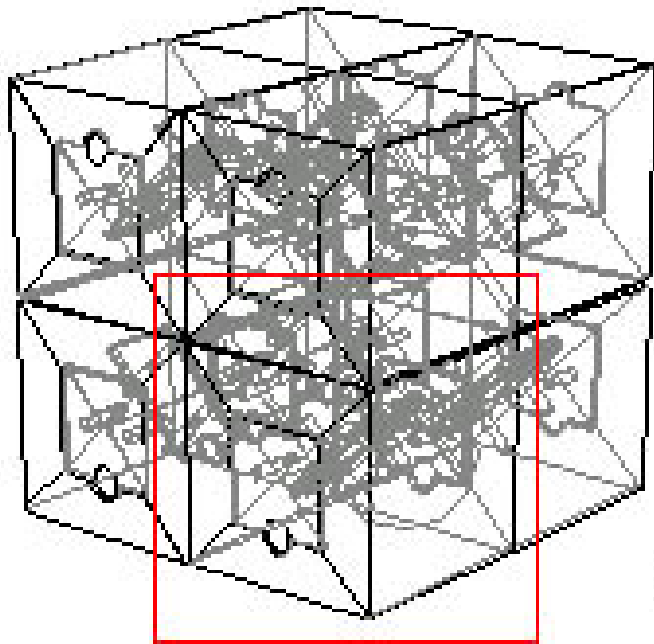




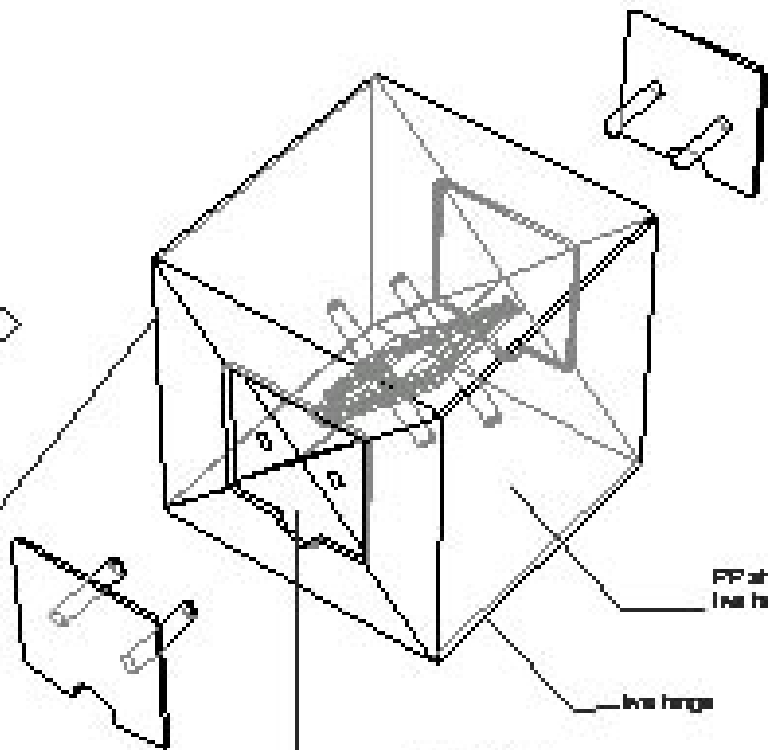
Formal organizations
Possible in STAGE3
play







top piece(s) in HDPE wrap
tied to the ball arm piece

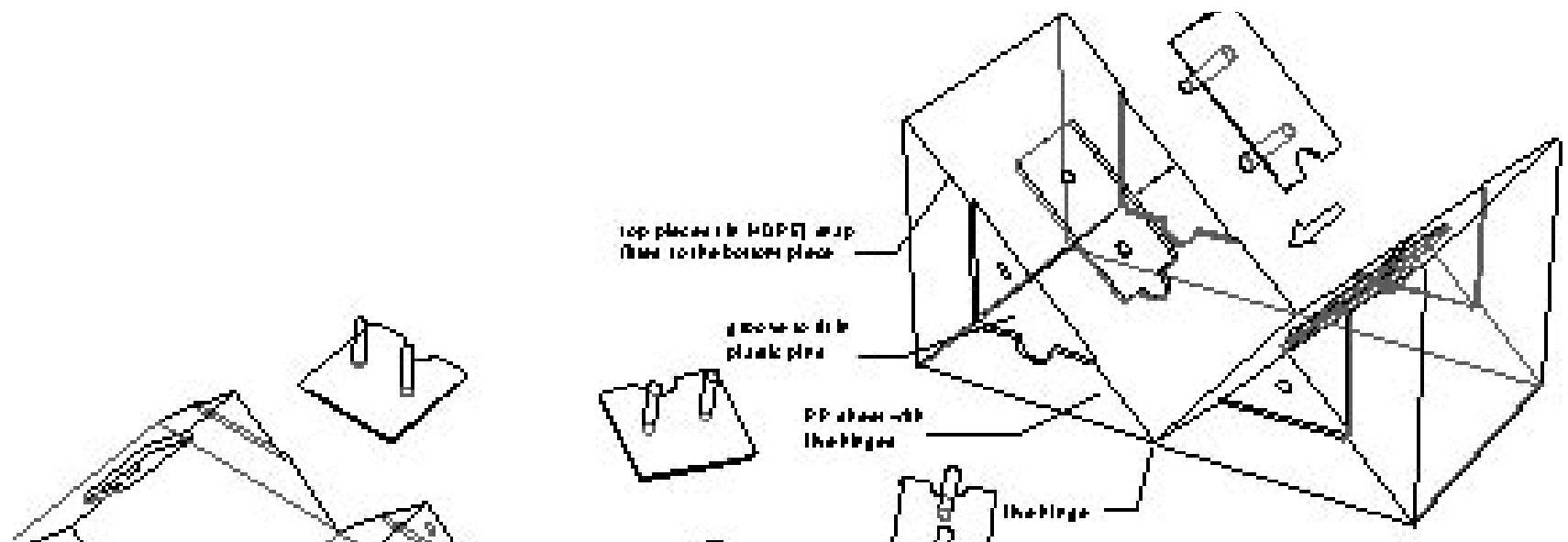


FP sheet with
live hinge

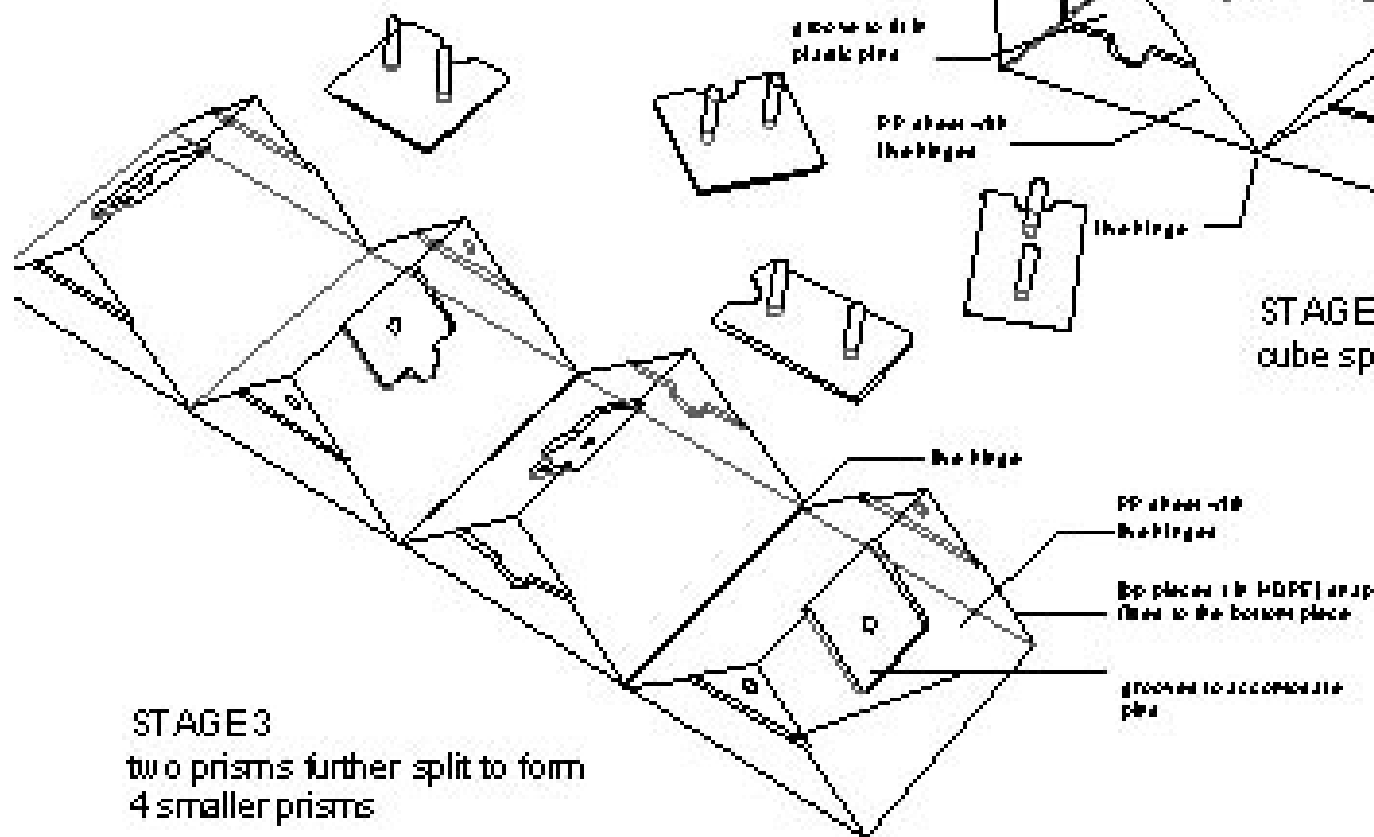
live hinge

groove to fit in
plastic gear

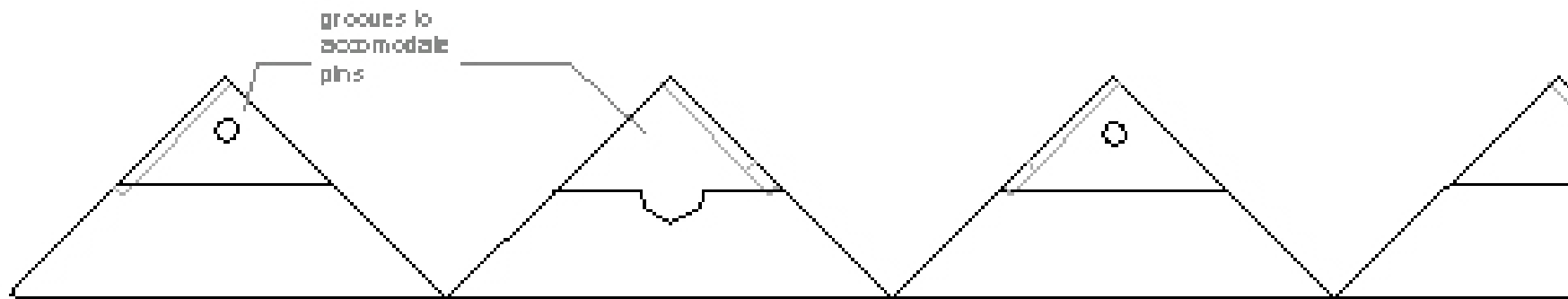
STAGE 1
play object reveals smaller
cube components



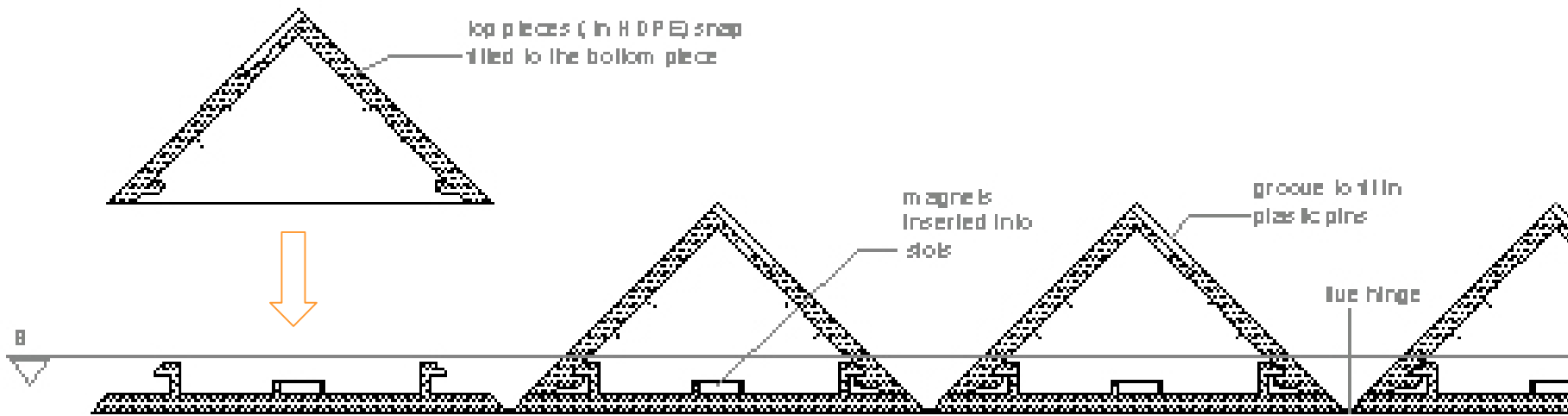
STAGE 2
cube splits to form two prisms



STAGE 3
two prisms further split to form
4 smaller prisms



FRONT VIEW



SECTION AA



feedback from children



thank you

