

# UNSCHOOLING

DESIGN RESEARCH JOURNAL

LILIAN CHEE STUDIO | NUS DOA | M.ARCH 1 AY20/21 SEM 2

ANG HUI YING & ZHANG YIYUE



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### ACKNOWLEDGEMENTS

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# JOINT RESEARCH

## UNSCHOOLING

### THEORETICAL TEXT

*99 Theses on the Revaluation of Value* by Brian Massumi

### GROUP STUDIED

Pre-school Children

### SITE STUDIED

Bishan-Ang Mo Kio Park

Brain Massumi's Temporary Autonomous Zone (TAZ) practices creative duplicity - interfacing with capitalism to sustain itself, while opposing it.

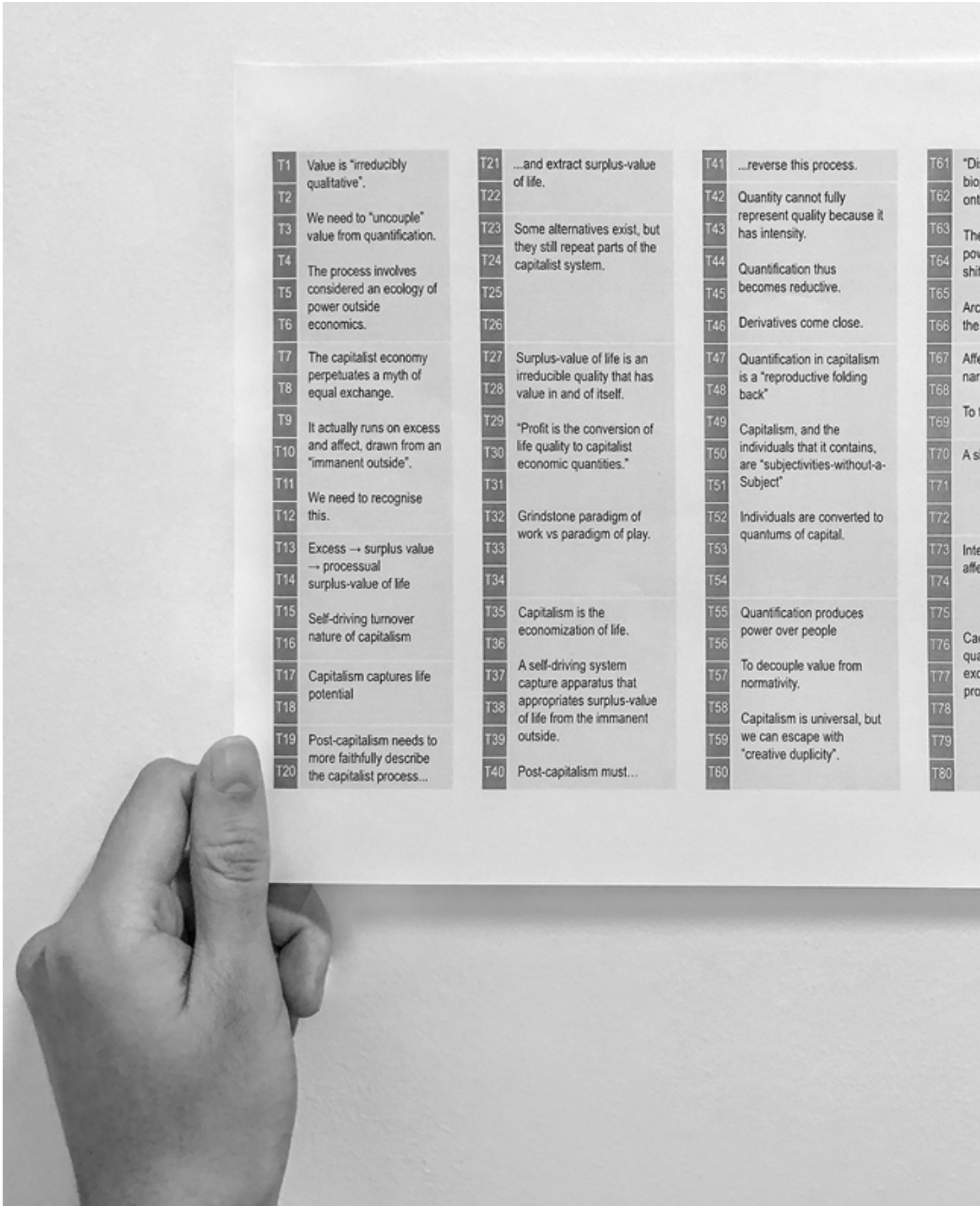
We find a similar quality in the mischievous child's tendency to fidget in a plastic classroom chair - a temporary, playful and non-violent resistance to the rigidity in an institutionalised space for learning. Through studying the behaviour, movement, spaces and furniture for children, our joint research aimed to use this mischievous spirit to carve out TAZs that redefine learning outside of a classroom.

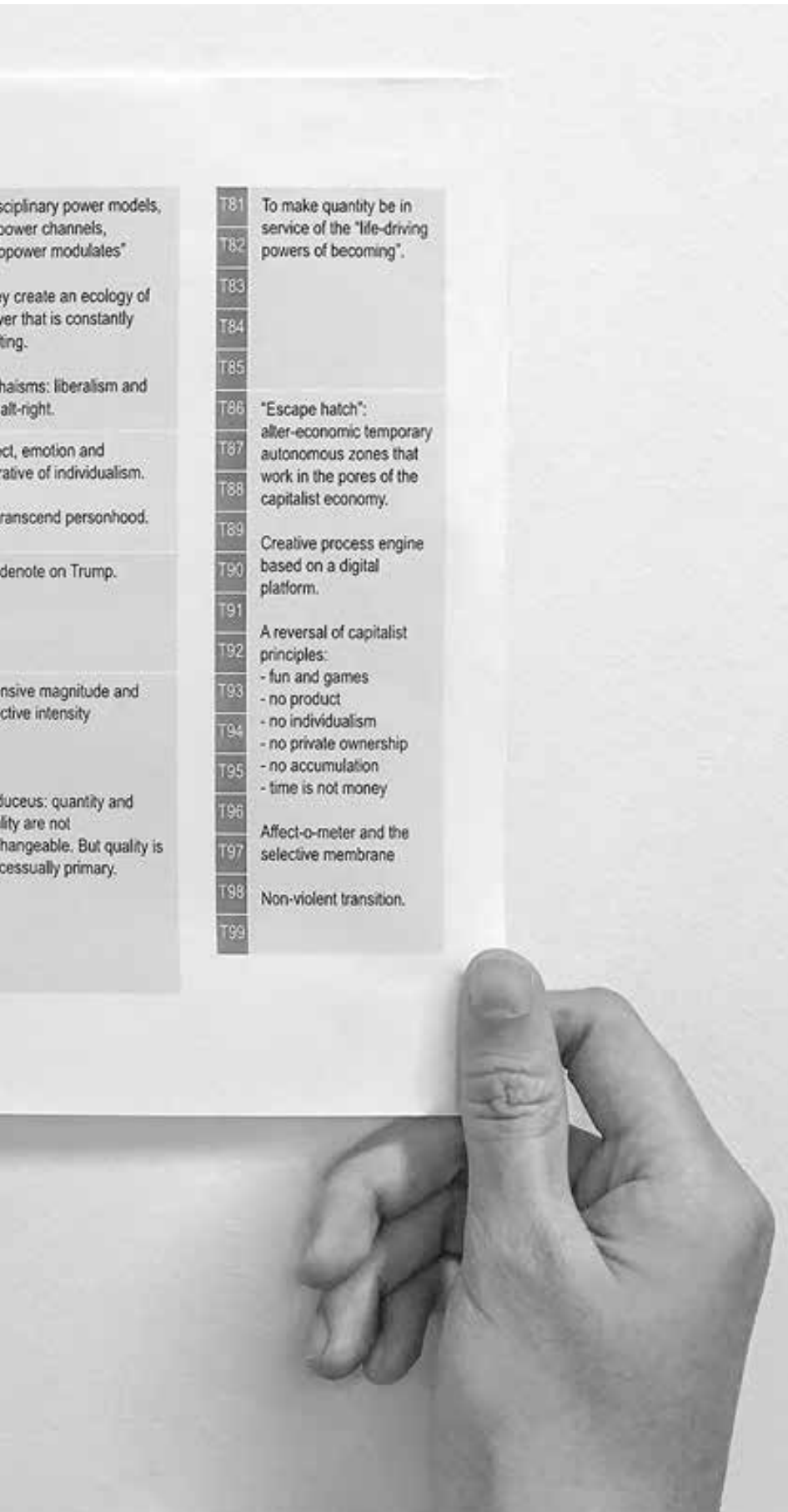
We studied Bishan-Ang Mo Kio Park as a site where mischief be used to oppose the flood safety warning system. We aimed to create spaces that encourage a child-led, experiential pedagogy, one that engages risk to build confidence and character, while cultivating psychomotor and social skills through outdoor play.

# RESPONSES TO THEORETICAL TEXT

## 99 THESES ON THE REVALUATION OF VALUE BY BRIAN MASSUMI

### OVERALL ARGUMENT STRUCTURE





A contemporary Canadian philosopher and Social Theorist, Brian Massumi proposes creating Temporary Autonomous Zones (TAZs) as probe into a post-capitalist future economy.

His argument can be organised into three parts:

**#1 Critique of capitalism**

Capitalism appropriates qualitative life potential ("surplus-value of life") , turning it into quantitative profit for the accumulation of wealth

**#2 TAZs to counter capitalism**

An alter- economy that reverses this process can be imagined through Temporary Autonomous Zones (TAZs).

**#3 Qualities of the TAZ**

TAZs need to practice "creative duplicity", to be embedded within capitalism but working to oppose it.

## OUR RESPONSES

### 3 KEY POINTS

capitalism's  
operating mechanism

Marx identifies the exploitation of surplus value produced by a worker (the value of the product of his work minus wages and cost of materials) by capitalists for the accumulation of wealth as the core of the capitalist economy's ills. Massumi probes further by observing that to produce surplus value a worker draws upon many non-economic elements that interact in complex ways, life qualities he calls surplus-value of life (T32). He observes that the capitalist surplus value is a quantification of surplus-value of life, profit is the quantification of life activity, and that capitalism is the economization of human potential (T39). As surplus-value of life is inherently qualitative, its quantification is reductive (T46).

Like Marx, Massumi argues that to move beyond capitalism is to reverse and reject the tenets of capitalism that enable its exploitation. Rather than being captured and extracted as profit, the production of surplus value of life will dictate the economy (T86). Private ownership, individualism and unitization of value into currency will be abolished (T93).

Instead of fomenting revolution, however, Massumi advocates a more surreptitious approach. He describes an ecology of autonomous zones engaged in "creative play" in the "pores" of capitalism that operates on the production of surplus-value of life (T94). Key to the creation of these zone is an alternate cryptocurrency that tracks surplus value of life while converting it to cash as necessary to sustain the zones. Acknowledging the impossibility of complete implementation, Massumi describes his zones as "probe-head[s]" to tease out a possible postcapitalist future (T96).

alternative to  
reverse  
capitalism's mechanism

experimental pockets  
with alternative currency

## YIYUE



turning potential  
into profit

The capitalist economy, always wanting more, thrives on speculation and the harnessing of life potential. Massumi asserts – in 99 Theses on the Revaluation of Value – that capital, being speculative in nature, “captures the future of vitality” and operates as an apparatus of power. (T18). Capital refers to the potential to acquire from the existing amount of money more money in the future (T13). This transformative force derives excess and surplus-value from “life’s in-the-making” to serve as the engine of the economy. Highlighting the myths of fair exchange and commensurability of a present amount of money with future value, Massumi reaffirms that actual market dynamics assume unequal exchange (T10). The economic system turns over on itself consistently overspilling its own internal systems to plunge into external the immanent outside, such that it has the capacity to harness surplus that will further drive the economy forward (T16). Capitalism exerts power over life and money functions as the medium of that power relation.

In order to return power to man, qualitative excess must be created. Post-capitalism alternatives must be “more faithful to how the capitalist process actually run than market ideology is” in order to undo the turnover process of the capitalist economy (T20). Massumi proposes what he calls an “escape hatch”, which is a temporary autonomous zone that is a threshold to allow for postcapitalist potential to be released to flourish beyond the system (T74). Ideally, the alter-economy would have surplus-value of life retaining its value of itself through life’s creative advance (T86).

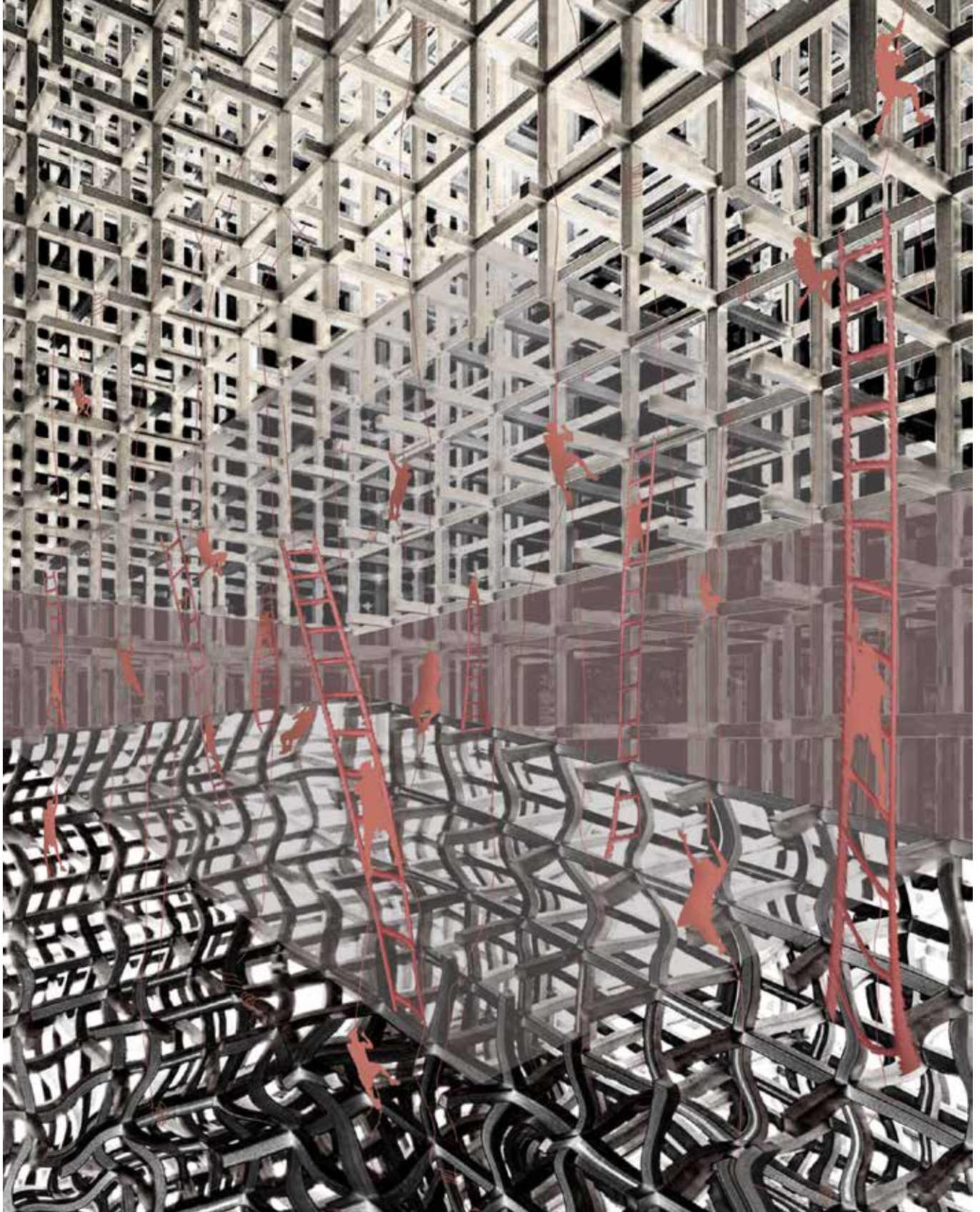
need to reverse  
capitalism’s mechanism

embedded within  
capitalism  
but operating  
against it

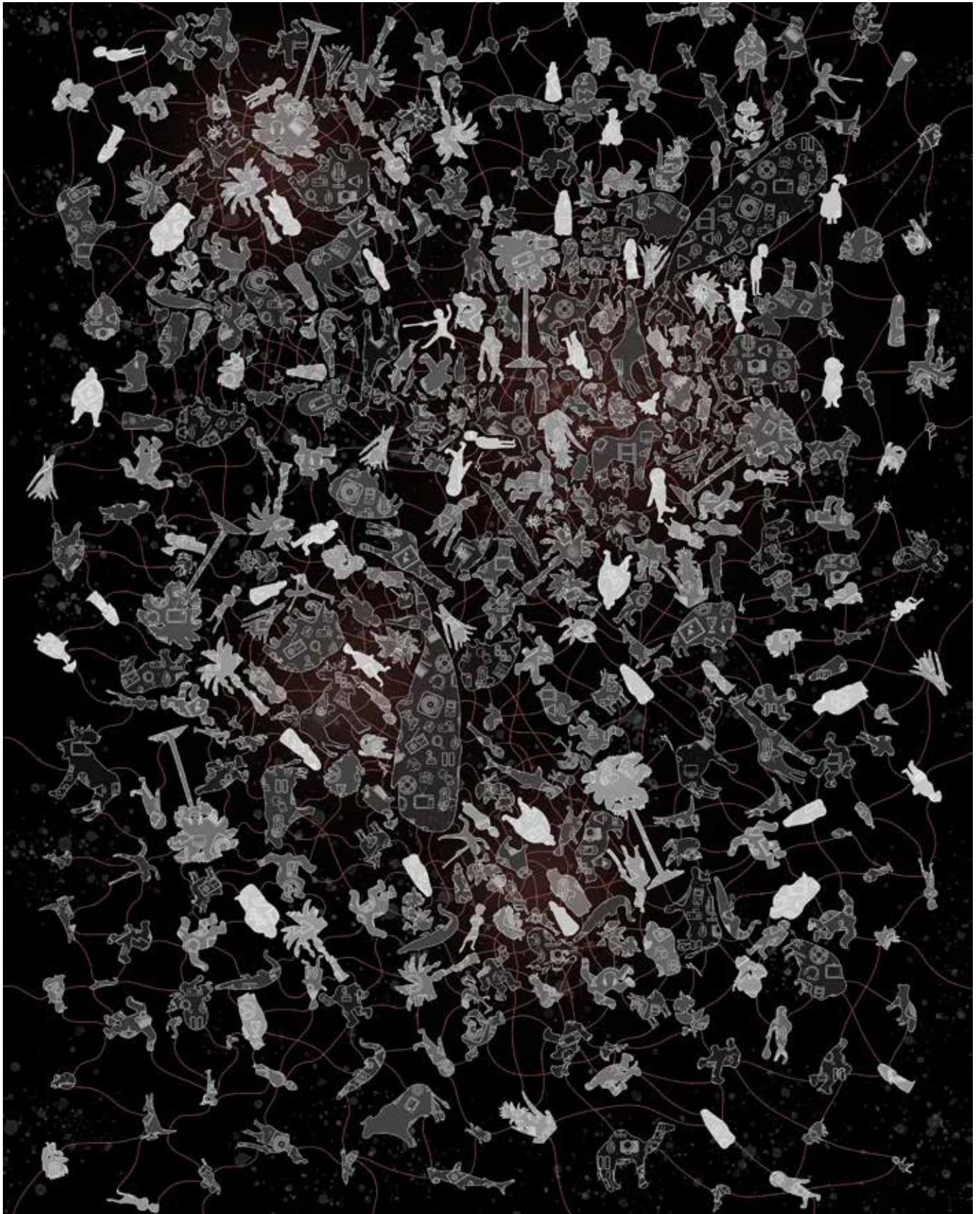
# THE TEMPORARY AUTONOMOUS ZONE (TAZ)

COLLAGE CAPTURING QUALITIES OF MASSUMI'S TAZ

CREATIVE DUPLICITY



In Massumi's TAZ, while occupants' activities oppose capitalism, they still interface with it by producing products of capitalist value so as to procure resources to sustain the TAZ.

**HORIZONTALITY**

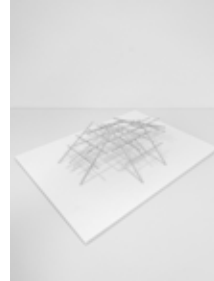
The TAZ is organised without hierarchy - occupants relate to each other in multifarious ways. Connections are horizontal on equal ground, as compared to vertically in a conventional hierarchical structure.

## PROCESS MODELS

### TRANSLATING QUALITIES OF TAZ

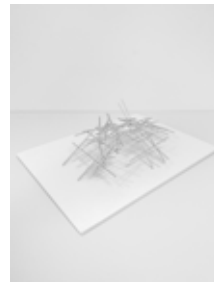
#### SELF-SUPPORTING STRUCTURE 1

Although base module of overlapping squares were arranged following the linearity of the sticks, the structure curves to form an arch.



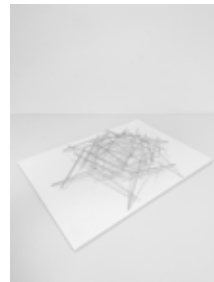
#### SELF-SUPPORTING STRUCTURE 2

A development of the previous model, varying dimensions of the base module were used to challenge the rectilinear form of the module and the overall structure.



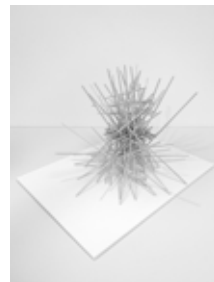
#### SELF-SUPPORTING STRUCTURE 3

This model explores the possibilities of having the self-supporting structure support externalities like additional elements or members.



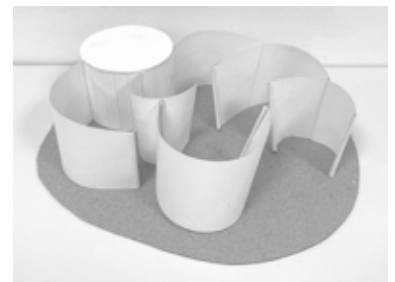
#### SELF-SUPPORTING STRUCTURE 4

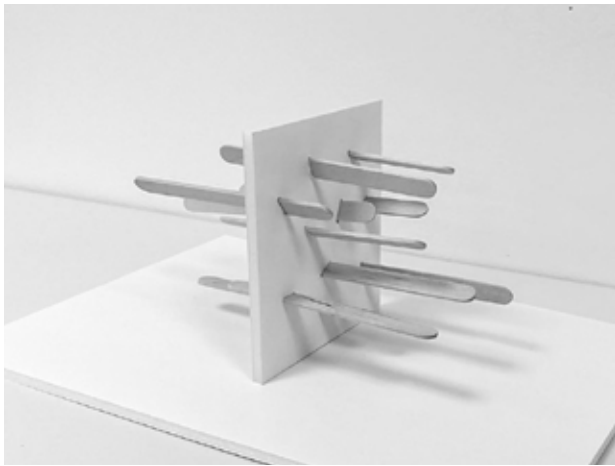
This model seeks to understand the possibilities of having a tiny structure allow for additional elements to be attached. The elements can be seen as expanding from the initial structure and may even overwhelm it over time.



#### CONCEPTUAL PART I

This model explores the possibility of occupying external spaces with the blurring of indoor and outdoor spaces. Structure is brought to open spaces to allow for intentional play within a safe environment.

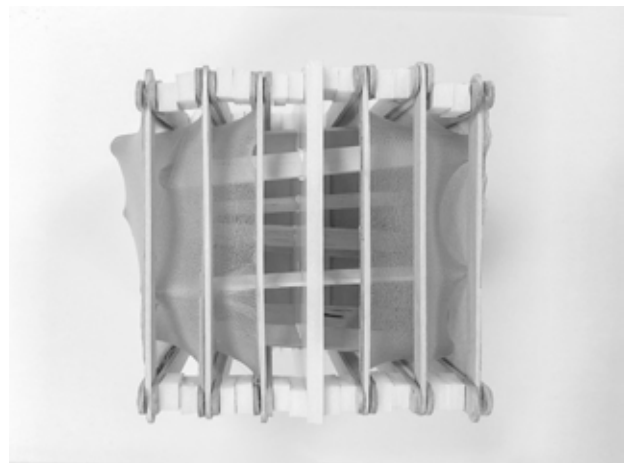
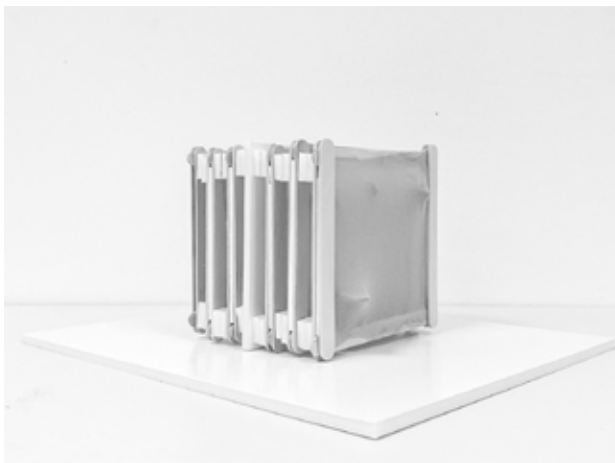
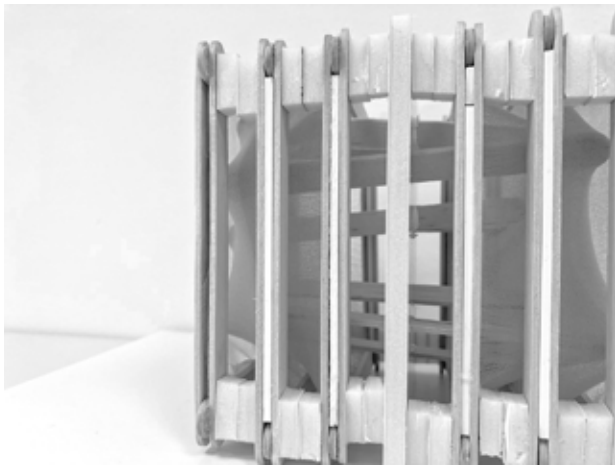
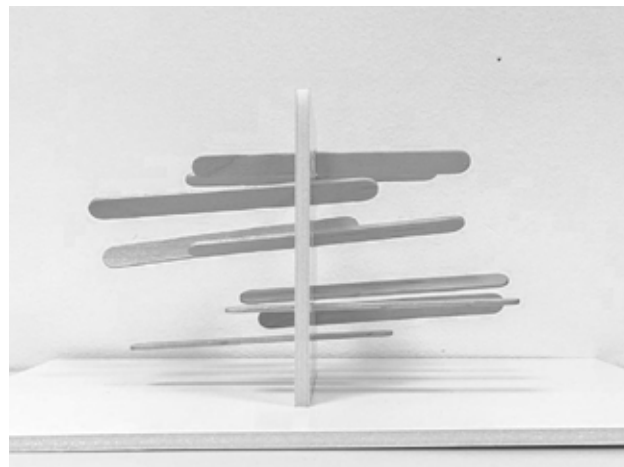
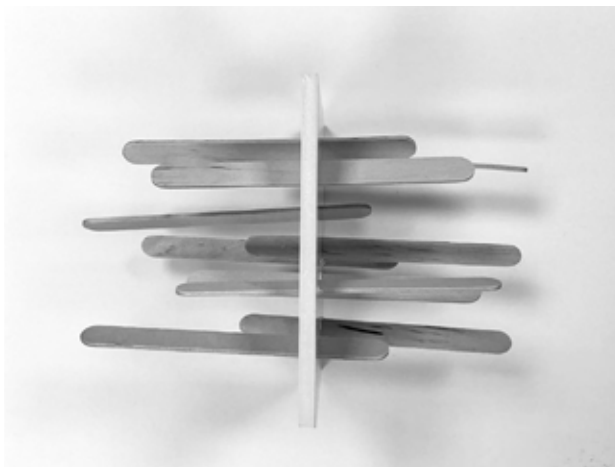


**TOP: INTERFACING**

This model seeks to capture back-and-forth motion of elements between the TAZ and the structures outside, as well as the resultant reciprocal changes on either side of the transition zone.

**BOTTOM: LIMITATIONS**

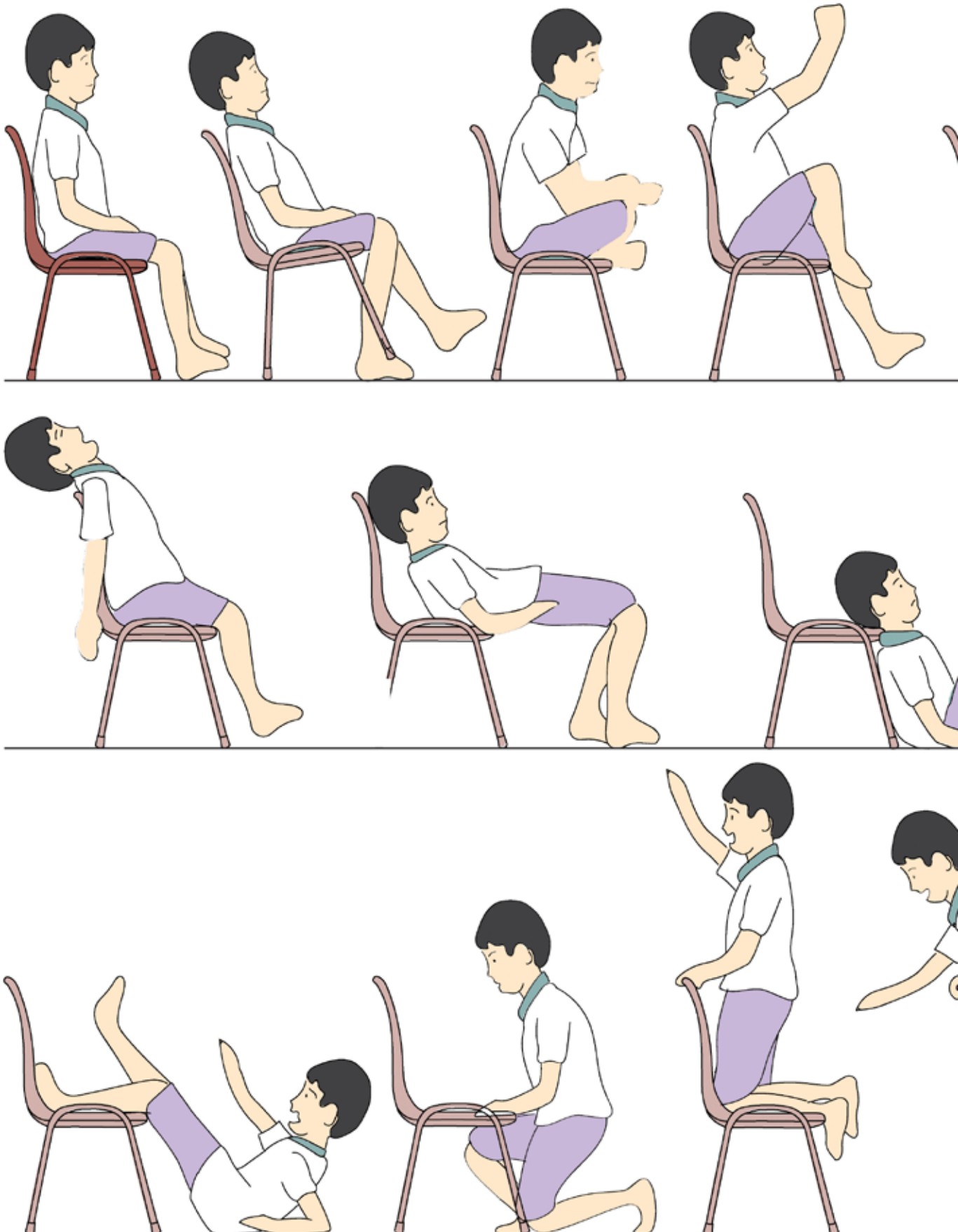
An extension of the previous model, this model subjects the changes in the transition zone to different filters and layers of restriction to track the changes in form as protrusions in space.

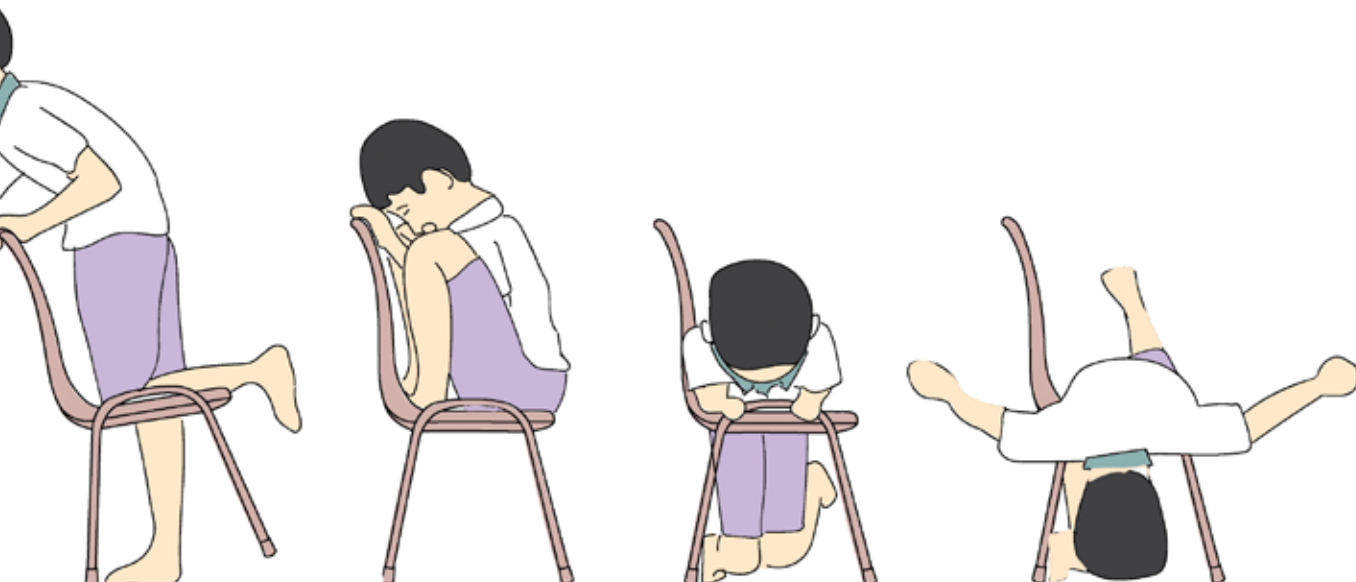
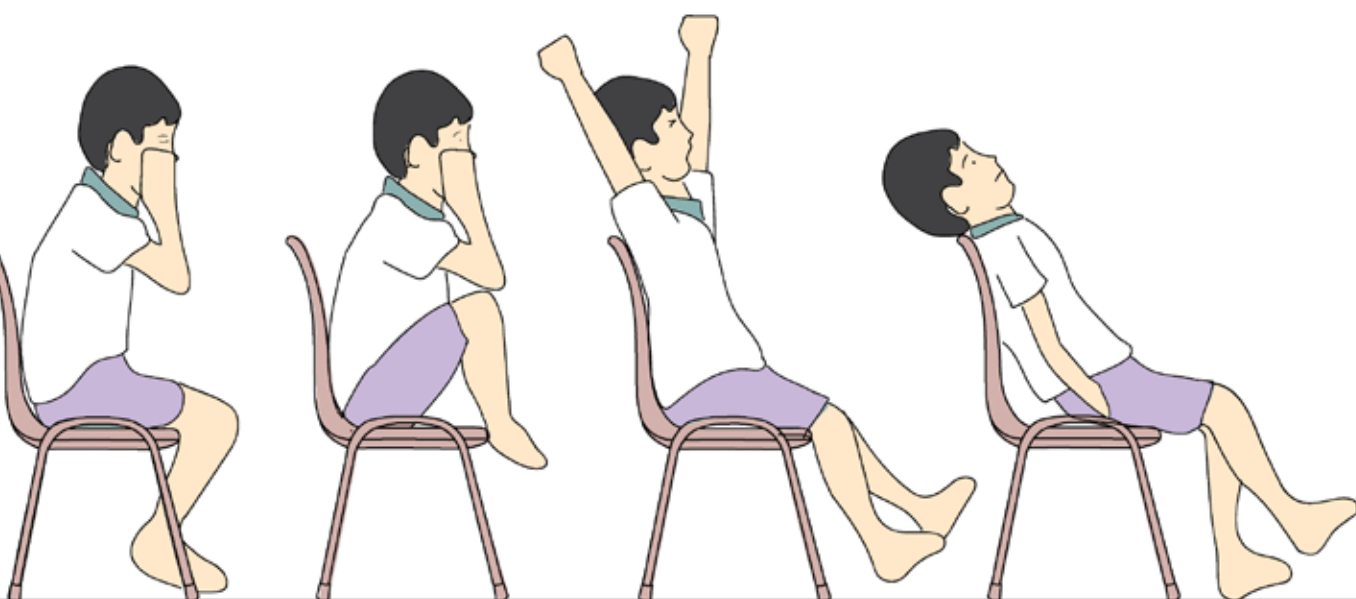


# MOVEMENT, SPACES, FURNITURE

## MOVEMENT: FIDGETING

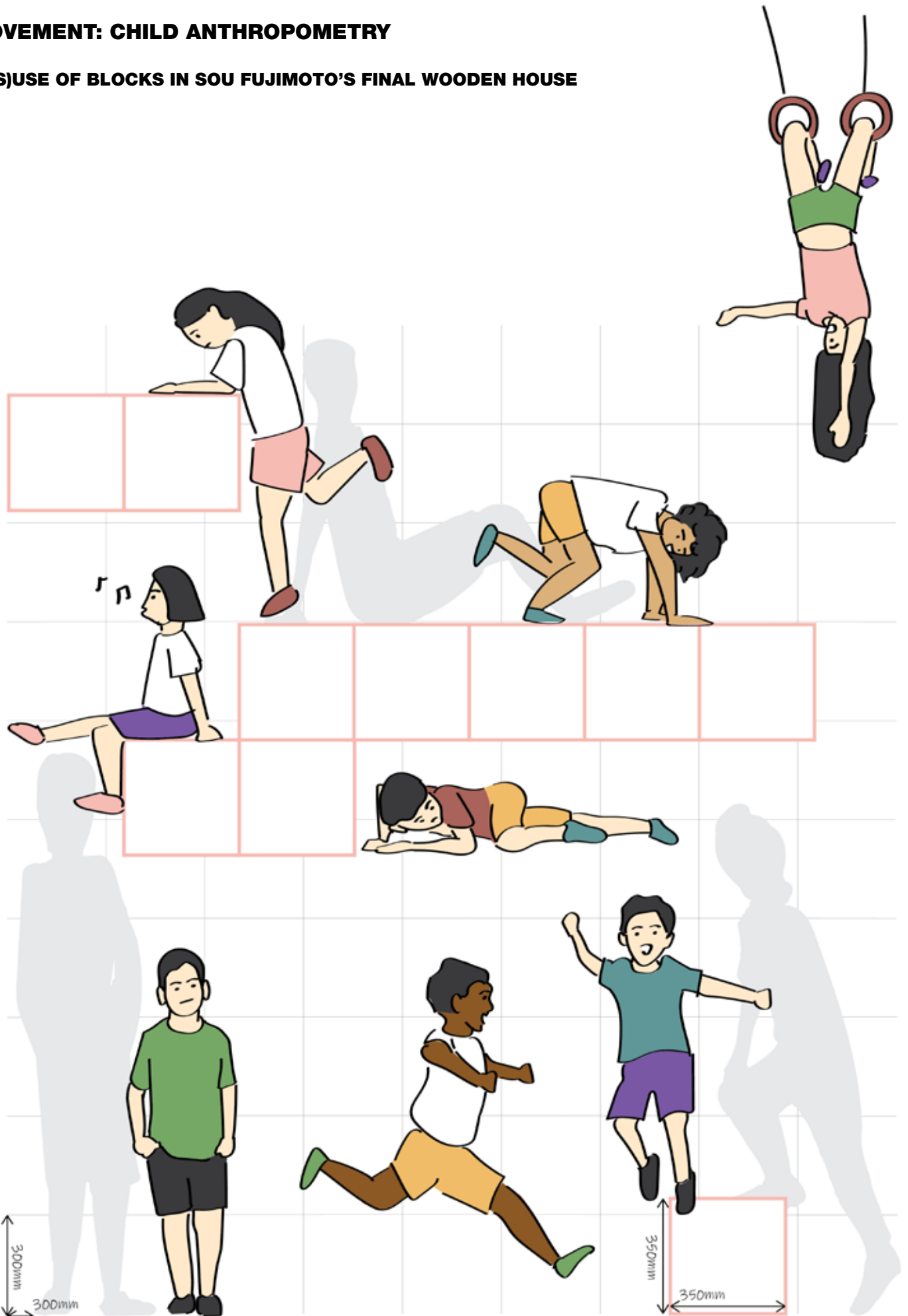
### 20 WAYS TO RESIST A CLASSROOM CHAIR



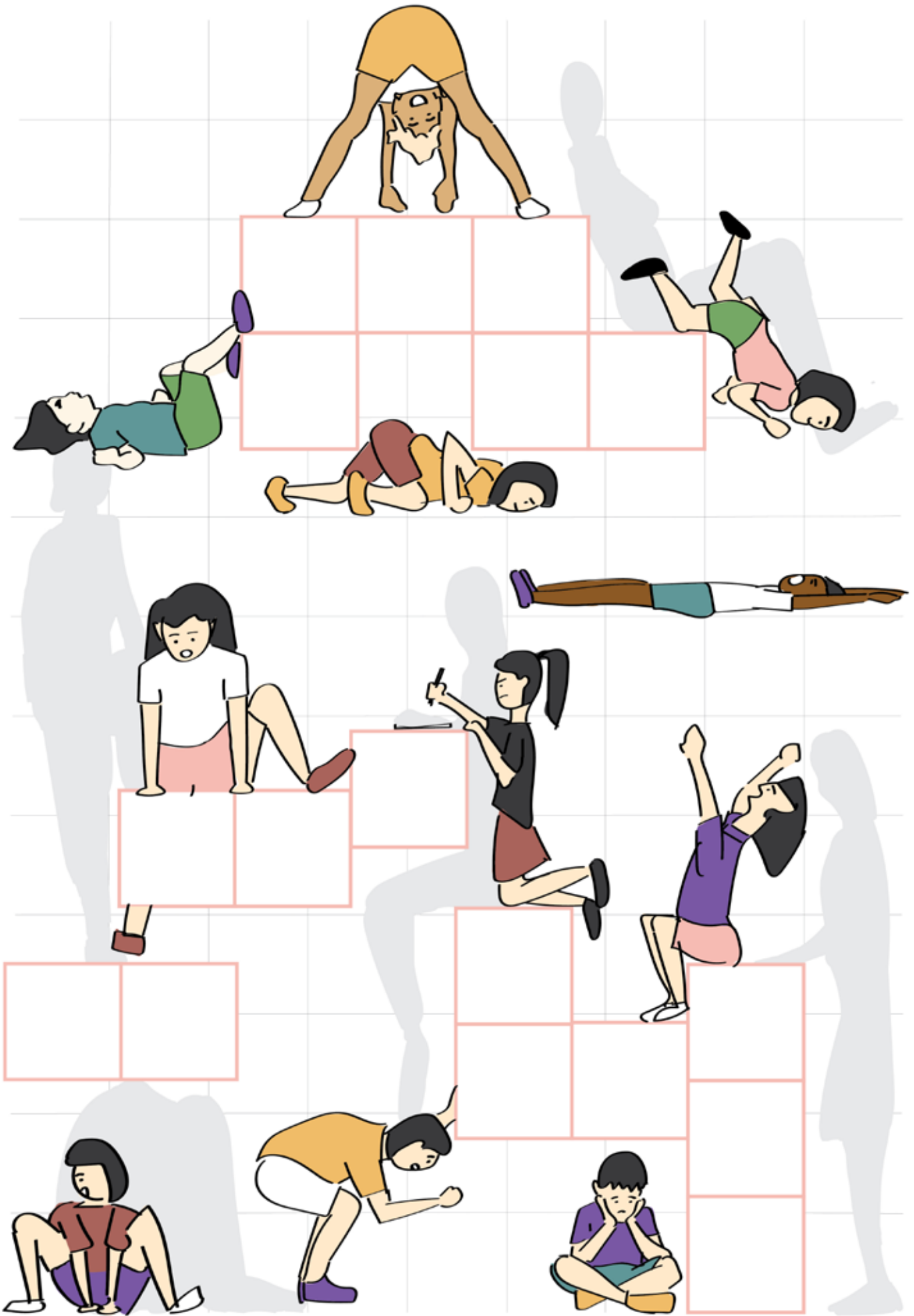


# MOVEMENT: CHILD ANTHROPOMETRY

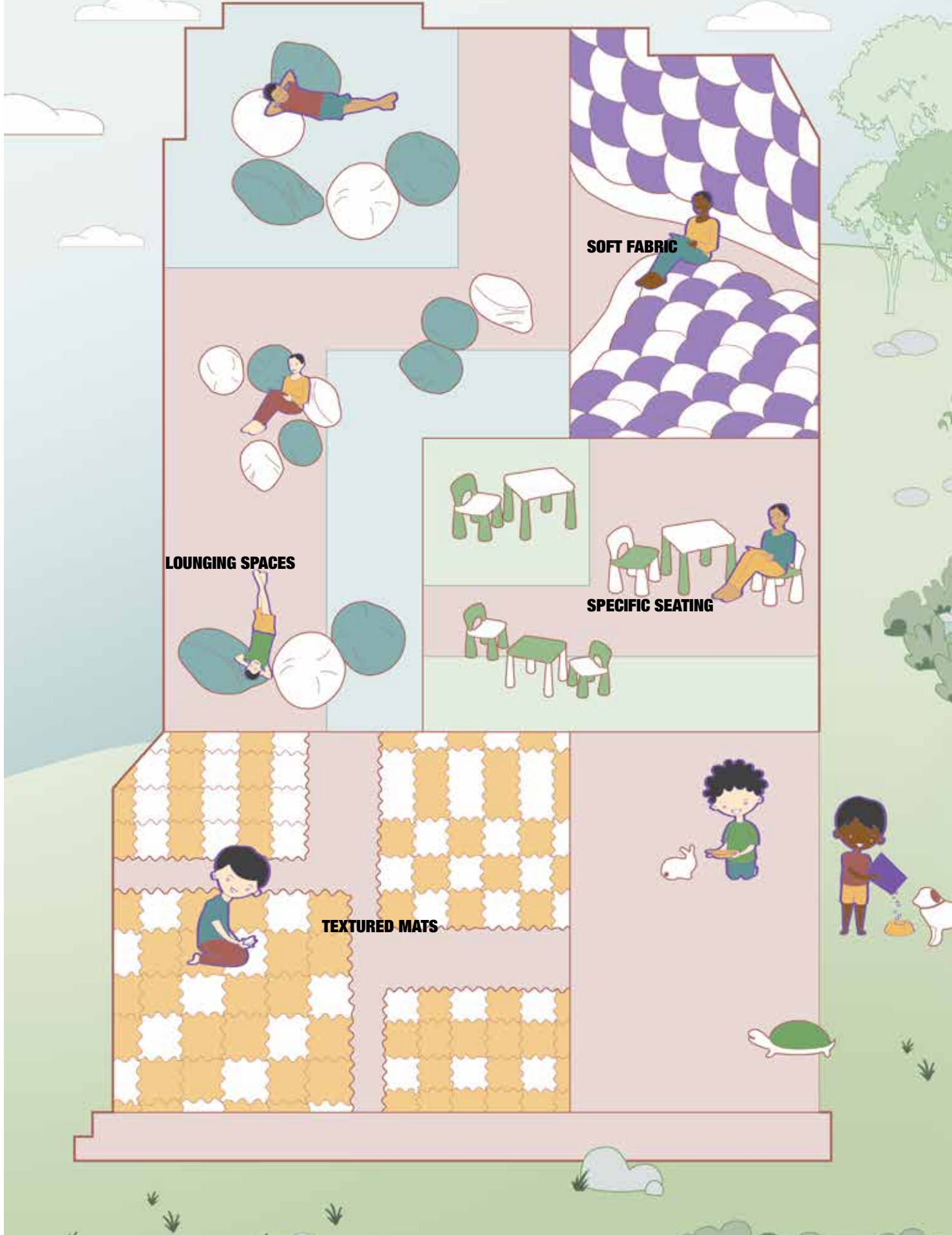
## (MIS)USE OF BLOCKS IN SOU FUJIMOTO'S FINAL WOODEN HOUSE



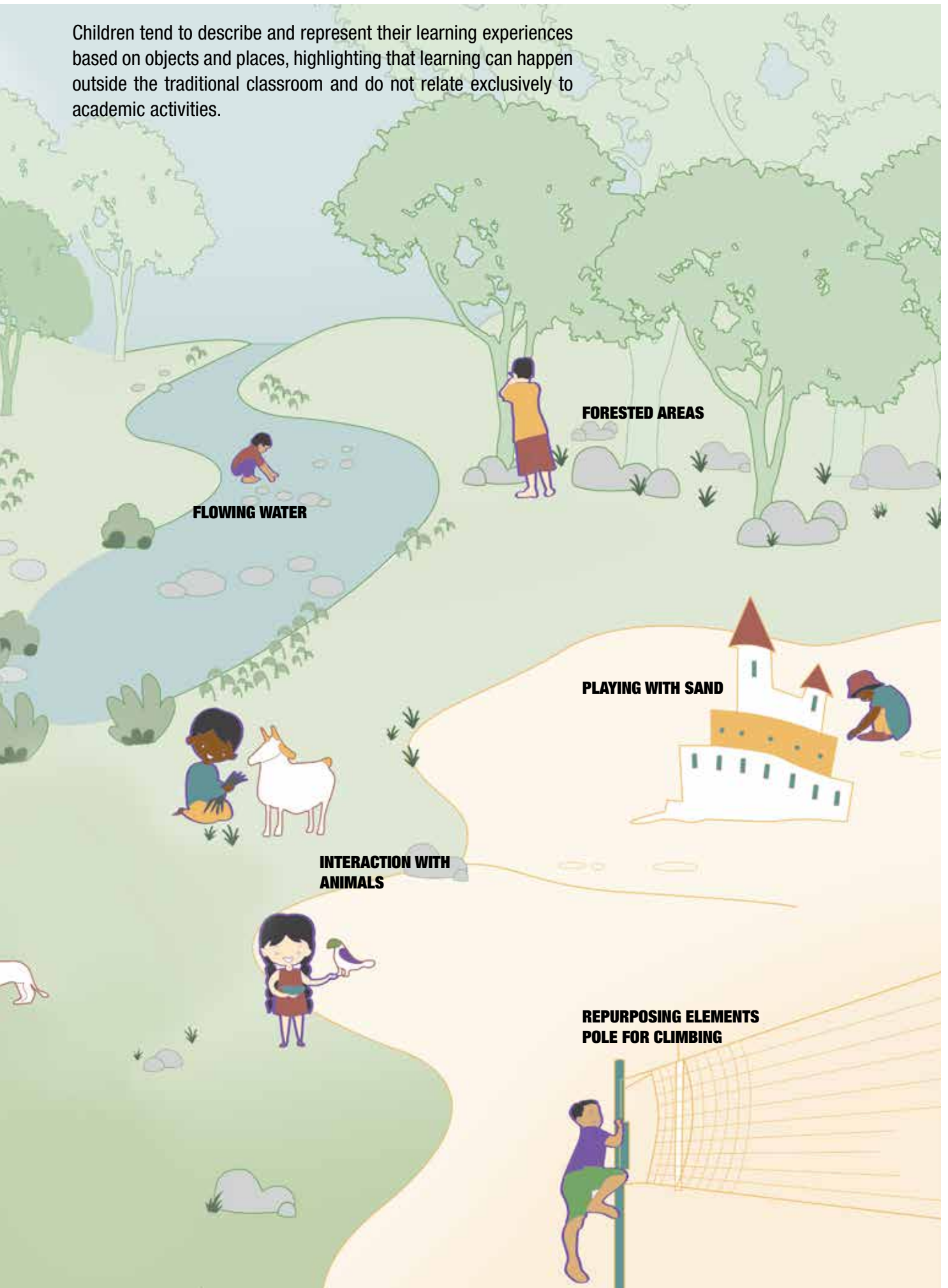




# STIMULATING THE CHILD'S LEARNING

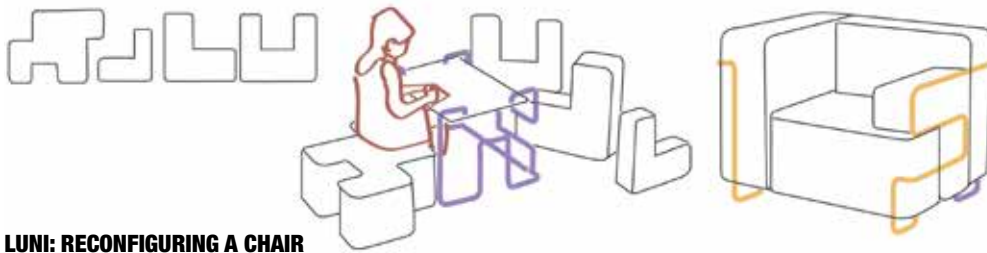


Children tend to describe and represent their learning experiences based on objects and places, highlighting that learning can happen outside the traditional classroom and do not relate exclusively to academic activities.



# PLAY FURNITURE: MULTIFUNCTIONAL MODULES

## EXISTING PLAY FURNITURE



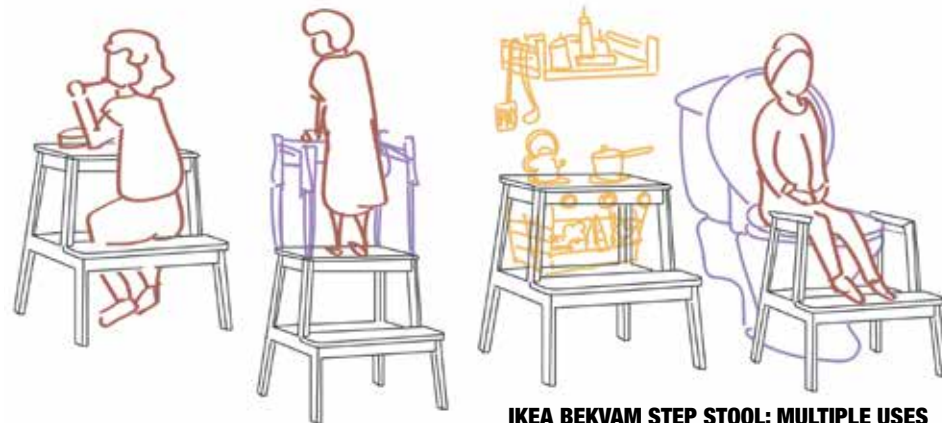
**LUNI: RECONFIGURING A CHAIR**  
*Anastasija Ribaka*



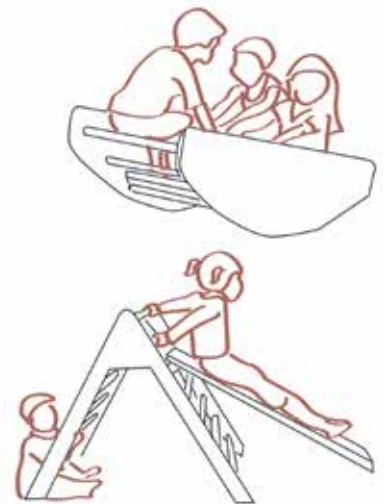
**BALANCE BALL: ACTIVE SITTING**  
*Gaiam*



**MODULINO 2.0: STACKABLE FURNITURE**  
*Alessandra Fagnan*



**IKEA BEKVAM STEP STOOL: MULTIPLE USES**  
 IKEA

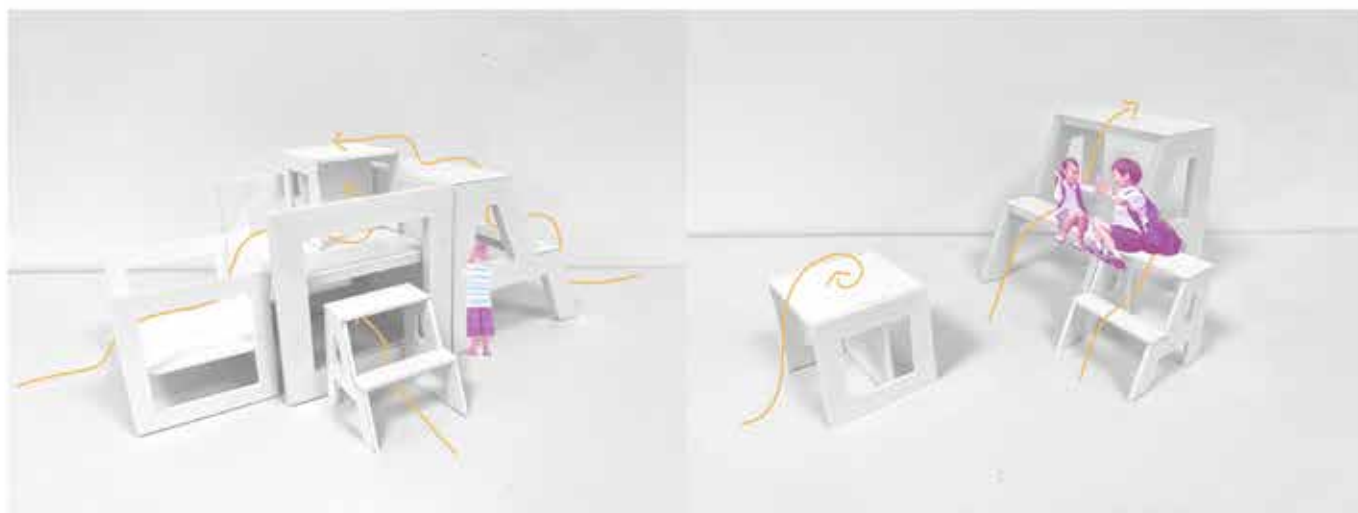
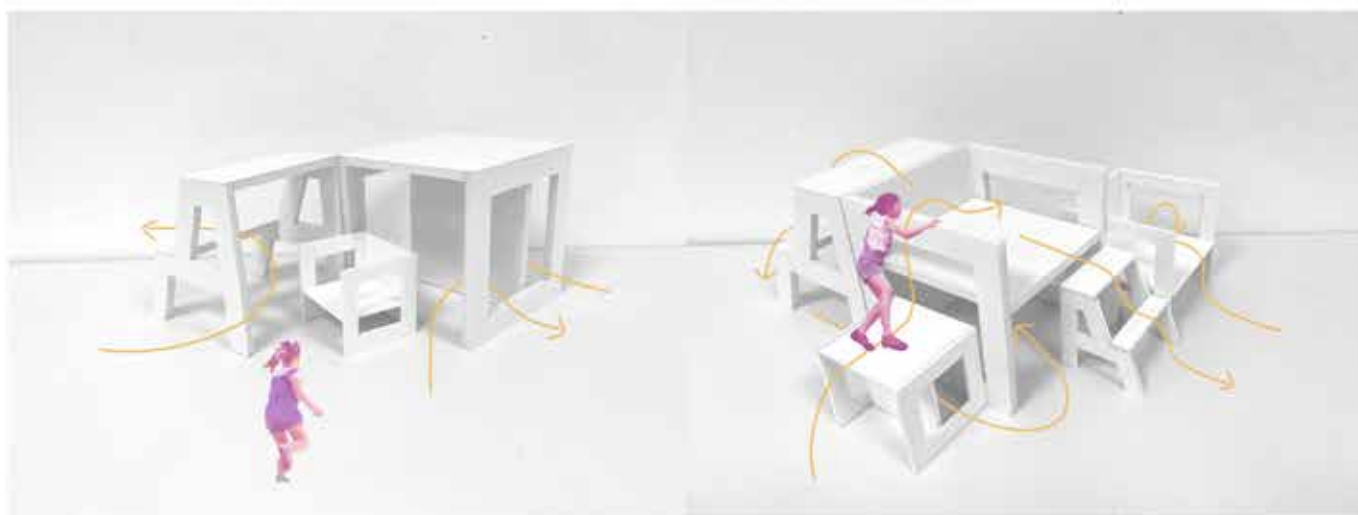
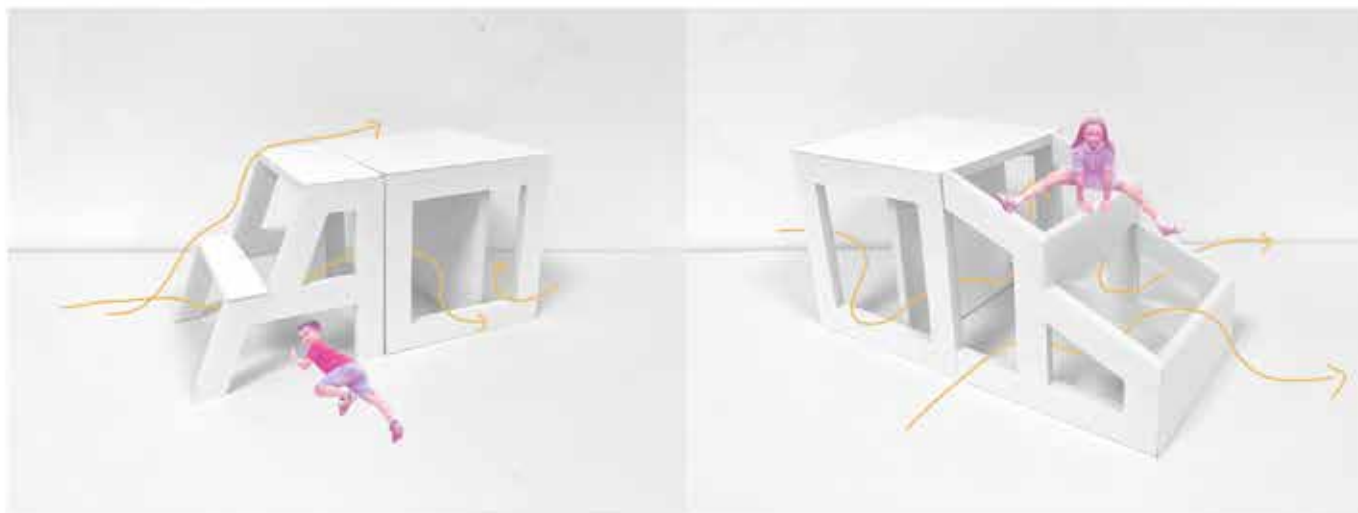


**PIKLER PLAY FURNITURE: ROCKER, TRIANGLE, TUNNEL**  
*Emmi Pikler*



**MONTESORI FURNITURE: ENCOURAGING INDEPENDENCE**  
*Maria Montessori*

**STACKING & RECONFIGURING AT DIFFERENT SCALES**

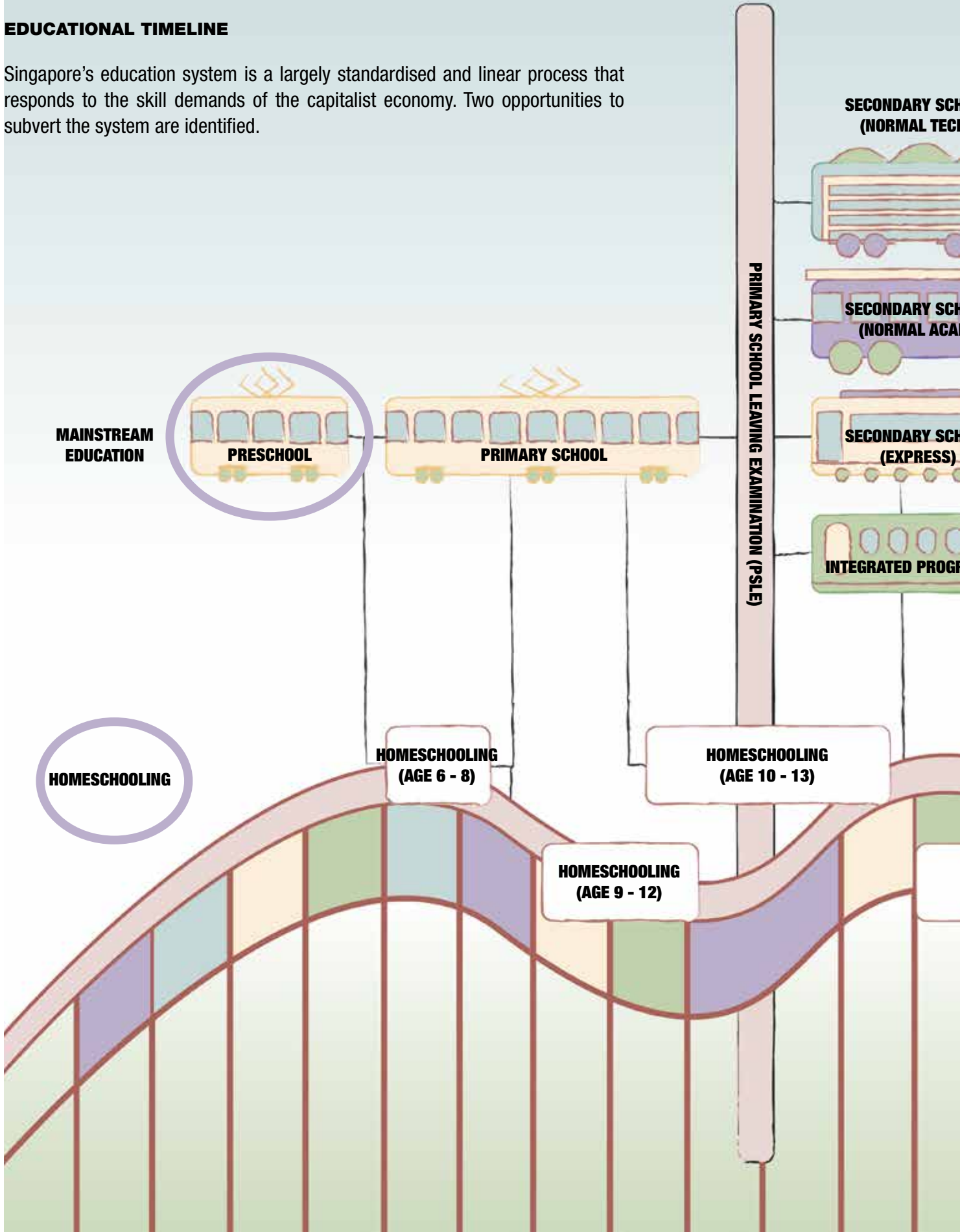


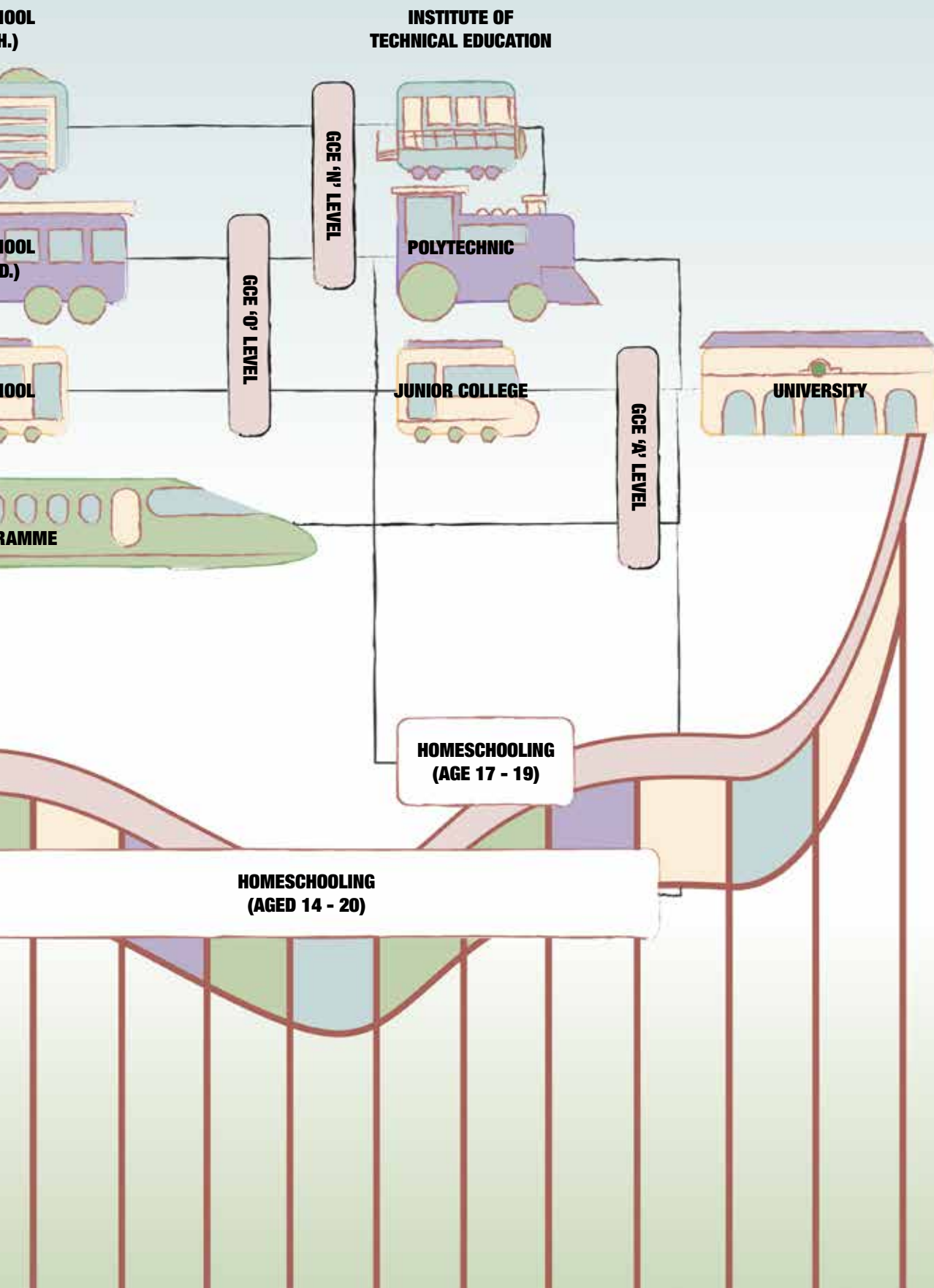
# A CHILD'S EDUCATION JOURNEY

## POTENTIAL TAZS

### EDUCATIONAL TIMELINE

Singapore's education system is a largely standardised and linear process that responds to the skill demands of the capitalist economy. Two opportunities to subvert the system are identified.





# UNIQUE PRESCHOOL PEDAGOGIES

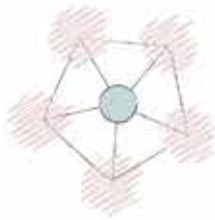
## WALDORF EDUCATION

Developed by Rudolf Steiner

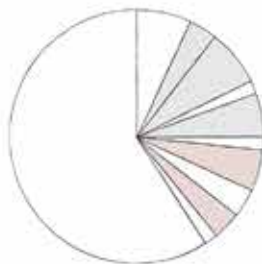
Education should bring life to knowledge through hands-on experience and children learn best through physical activity and play.



HUMANS ARE THREE-FOLD: BODY, SPIRIT AND SOUL



PEER LEARNING: TEACHER AS FACILITATOR



DAILY SCHEDULE: FORMAL EDUCATION (GREY) BEFORE OUTDOOR PLAY (PINK)



EL TI-LER SCHOOL VARIOUS CONFIGURATIONS FOR DIFFRENT ACTIVITIES

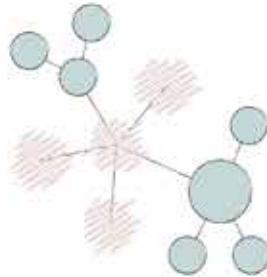
## REGGIO EMILIA

Developed by Loris Malaguzzi

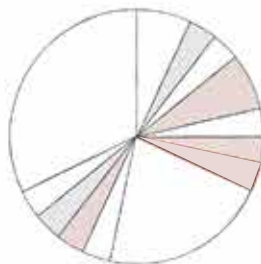
Education is founded upon the daily presence of a plurality of educators and teachers with children within co-ordinating group.



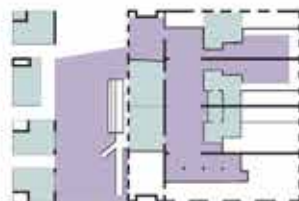
EDUCATION SHAPED THROUGH DIDACTICS, PROFESSIONAL GROWTH, PARTICIPATION, ENVIRONMENTS AND DOCUMENTATION



INTERCONNECTED SPACES: ATELIER AND PERSON OF THE ATELIERISTA



DAILY SCHEDULE: LEARNING THROUGH PLAY BETWEEN FORMAL EDUCATION



REGGIO EMILIA PRESCHOOL AND PRIMARY SCHOOL COMMUNAL SPACES SURROUNDED BY SMALL CLASSES

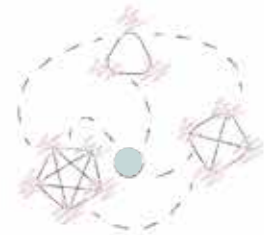
## MONTESSORI APPROACH

Developed by Maria Montessori

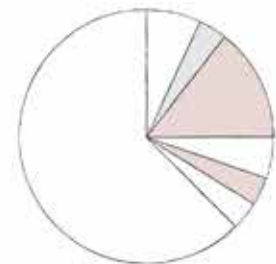
Education should be flexible and encourage the child to choose what is learnt through provision of various activity stations.



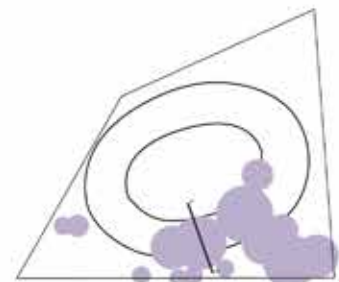
CHILDREN CHOOSE WHAT TO LEARN: PHYSICAL, INTELLECTUAL, SOCIAL AND EMOTIONAL DEVELOPMENT



VARIOUS ACTIVITY STATIONS: TEACHER MOVING FROM GROUP TO GROUP



DAILY SCHEDULE: PLAY AS SIGNIFICANT FORM OF LEARNING

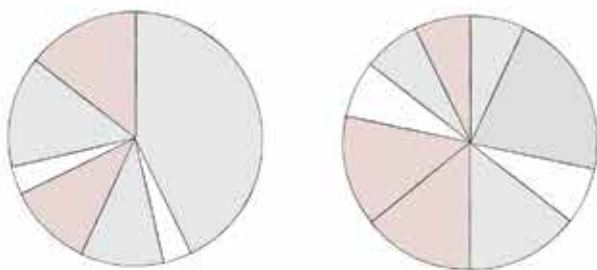
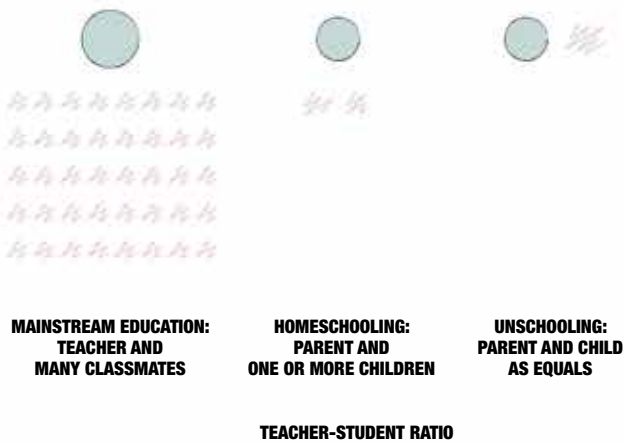


FUJI KINDERGARTEN OUTDOOR SPACES FLOW INTO RING OF CLASSROOMS

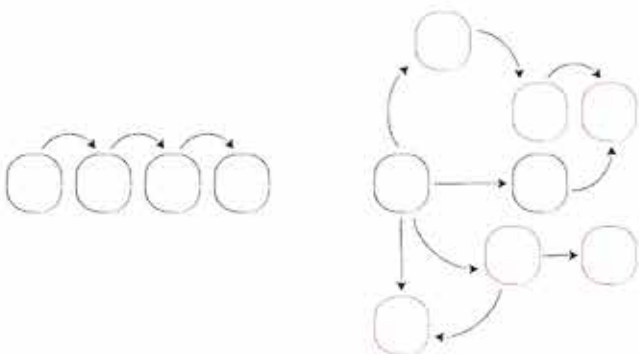


# HOMESCHOOLING

Homeschooling reverses the power relation between teacher and student, drastically reduces the teacher-student ratio to 1, and offers more freedom for play and exploratory learning. However, homeschoolers have to meet the 33rd percentile at the PSLE, in addition to other MOE requirements. Despite this autonomy, homeschooling requires significant familial commitment and is generally a privilege of the middle and upper class.



**DAILY SCHEDULE:**  
**MAINSTREAM EDUCATION (LEFT)**  
**AND HOMESCHOOLING (RIGHT)**  
**GREY - CLASSES, TUITION AND HOMEWORK**  
**PINK: EXTRA-CURRICULAR ACTIVITIES AND REST**



**ACADEMIC PROGRESSION:**  
**MAINSTREAM EDUCATION (LEFT)**  
**AND HOMESCHOOLING (RIGHT)**  
**BLACK: STANDARD TOPICS LEARNT WITHIN THE ACADEMIC YEAR**  
**PINK: EXTRA INTERESTS TO BE PURSUED**

## PRESCHOOL PRECEDENTS

### A DIFFERENT CLASS: PRESCHOOL SPACES REDEFINED

Singapore. 2014, Lekker Architects for Lien Foundation

The site informs new typologies of preschools, while generating new pedagogies that allows the environment to engage learning. The architecture “occupies” the outdoors, and uses it to shape learning.



**HOMESCHOOLING**

Tokyo, 2007, Takaharu Tezuka

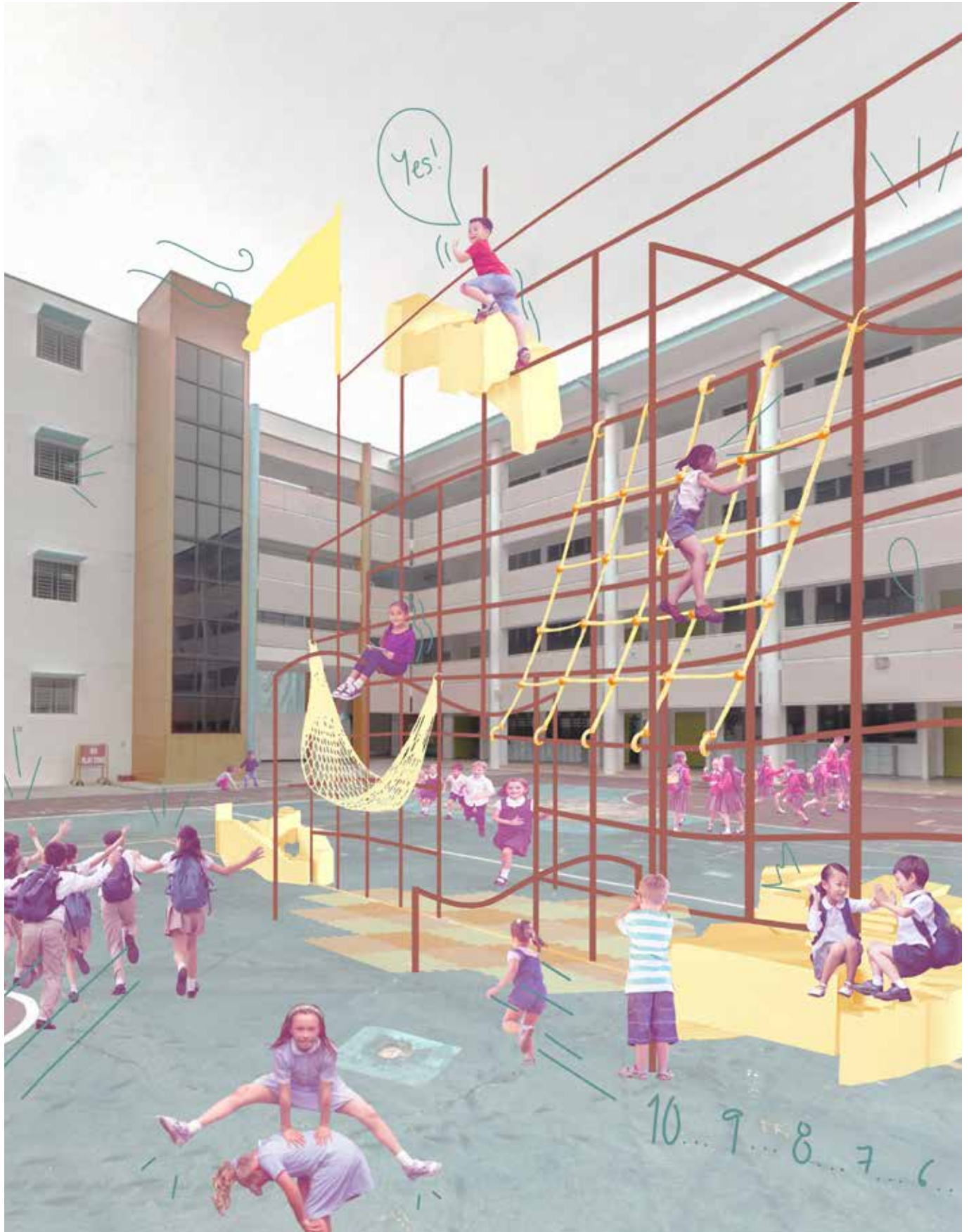
Outdoor spaces flow into the classrooms from both sides. The very structure of the building allows children to freely explore, through facilitating interaction with nature, dirt and the outdoors. In each interaction, the children's imagination is temporarily set free beyond the bounds of his physical location, despite still being at the same spot.



## STUDENT CARE CENTRE

We briefly explored the reinventing the student care centre as an opportunity to create a TAZ that is set within the institution we were aiming to oppose - the primary school.

### STRUCTURING OUTDOOR PLAY SPACE



**BLURRING BOUNDARIES BETWEEN INSIDE AND OUTSIDE**



# BISHAN-ANG MO KIO PARK

## RISK & SAFETY

### SPECTRUM OF RISKY PLAY

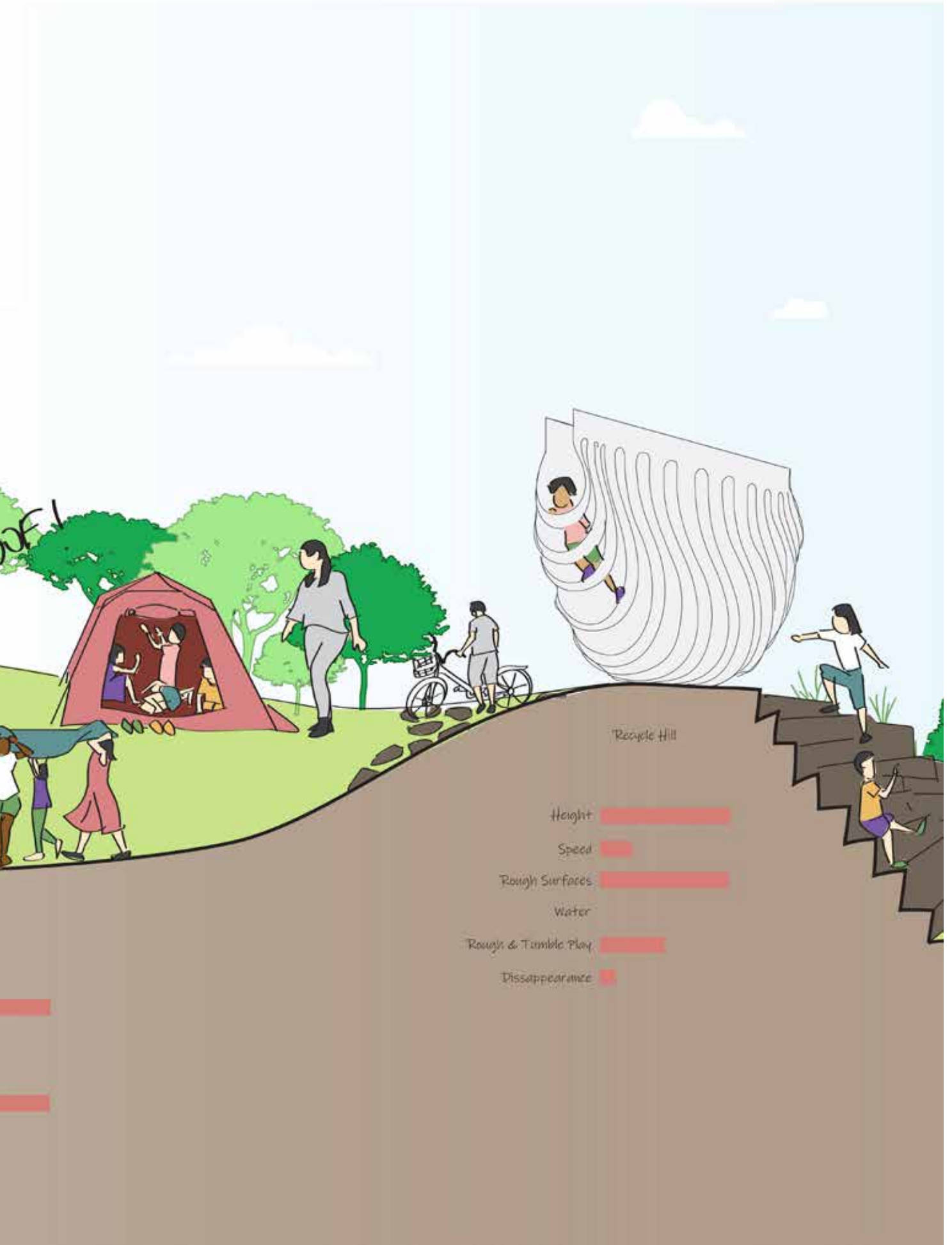
Playing in a naturalised river without barriers, the risk of being caught during a flood is ever-present in the park. Popular, structured play spaces are well-away from the river edge, while areas nearer the water are more natural and unstructured.

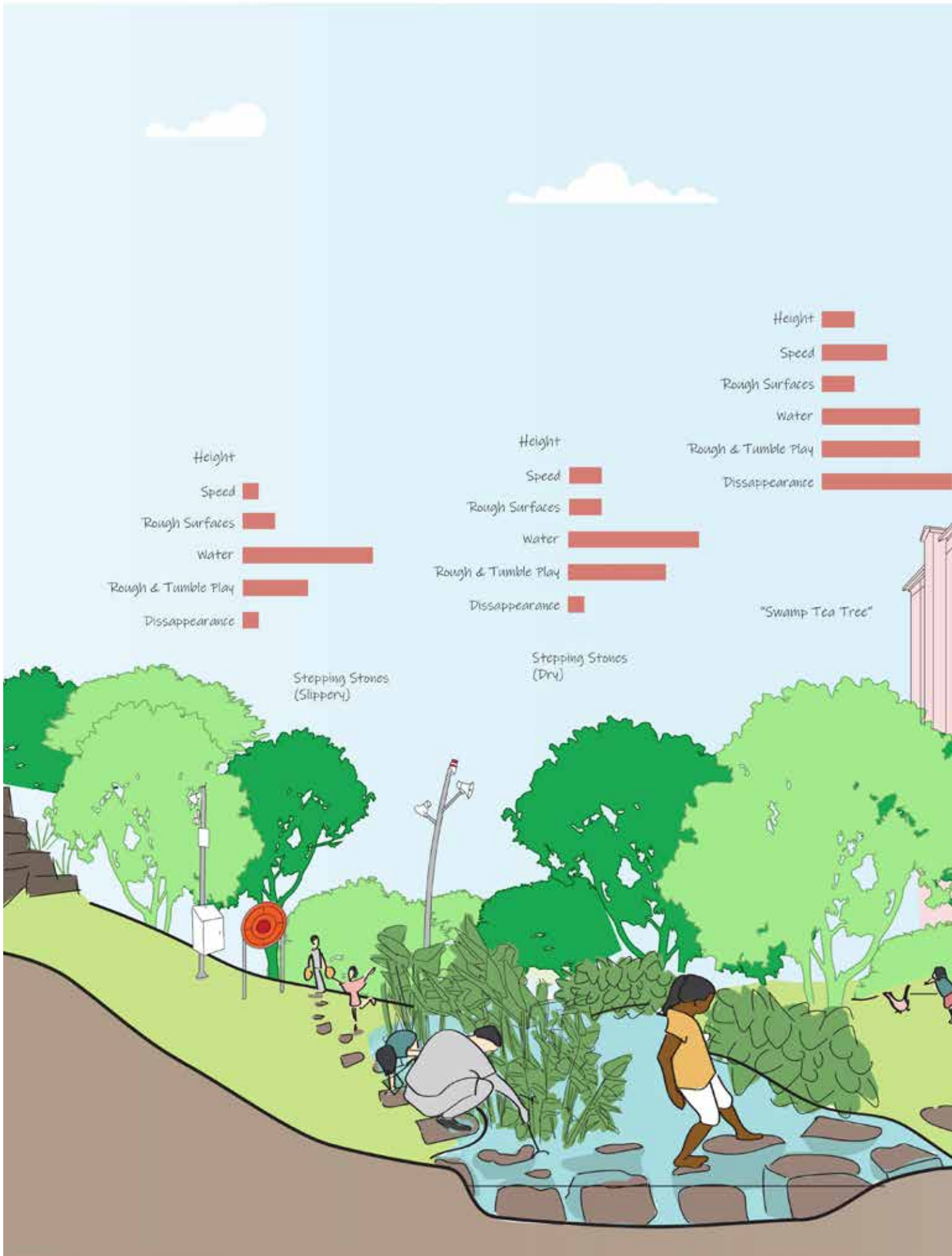


Water Playground  
Inclusive Playground

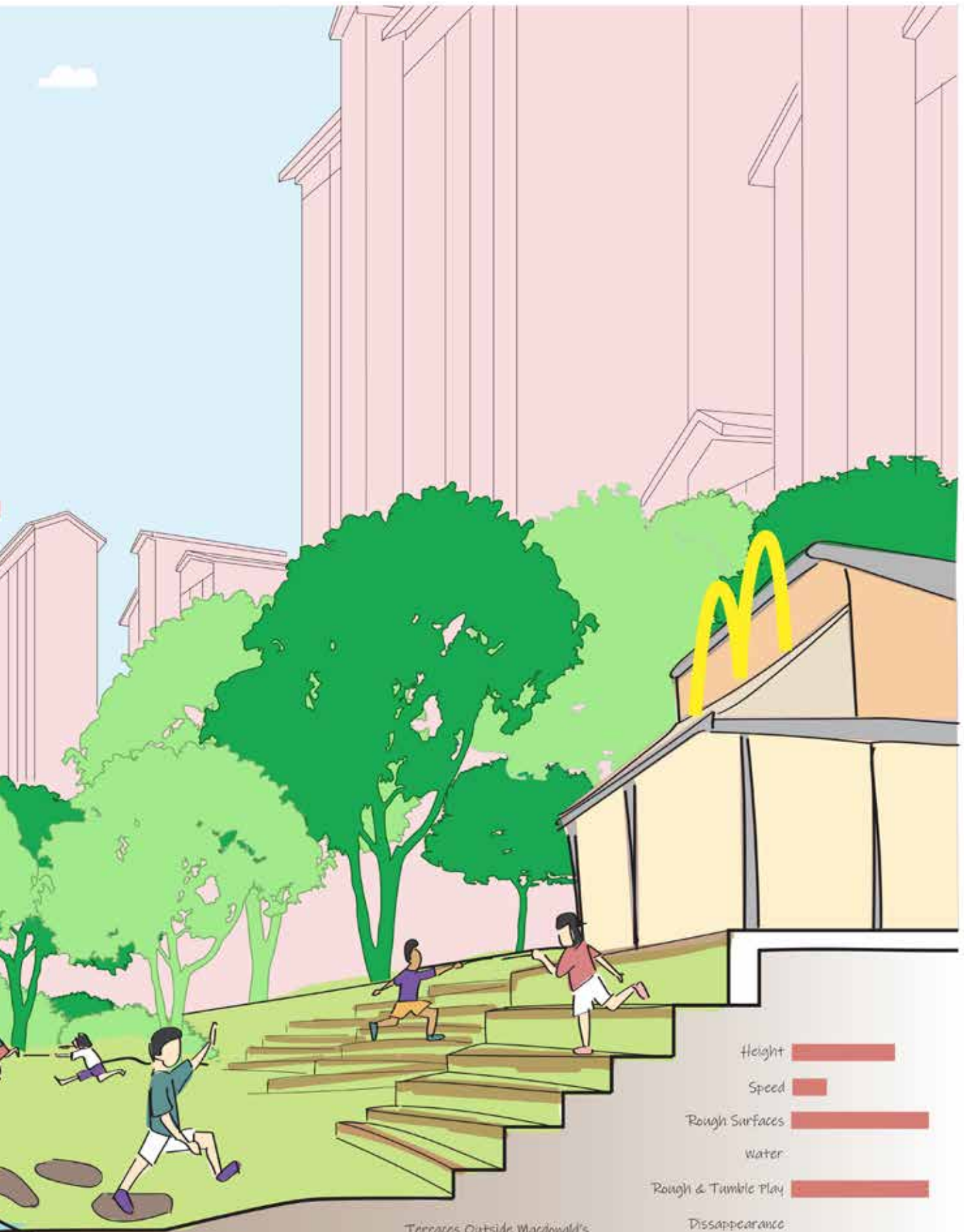
Dog Run  
Open Field











Terraces Outside Macdonald's

## HIDDEN ACCESS POINTS TO WATER

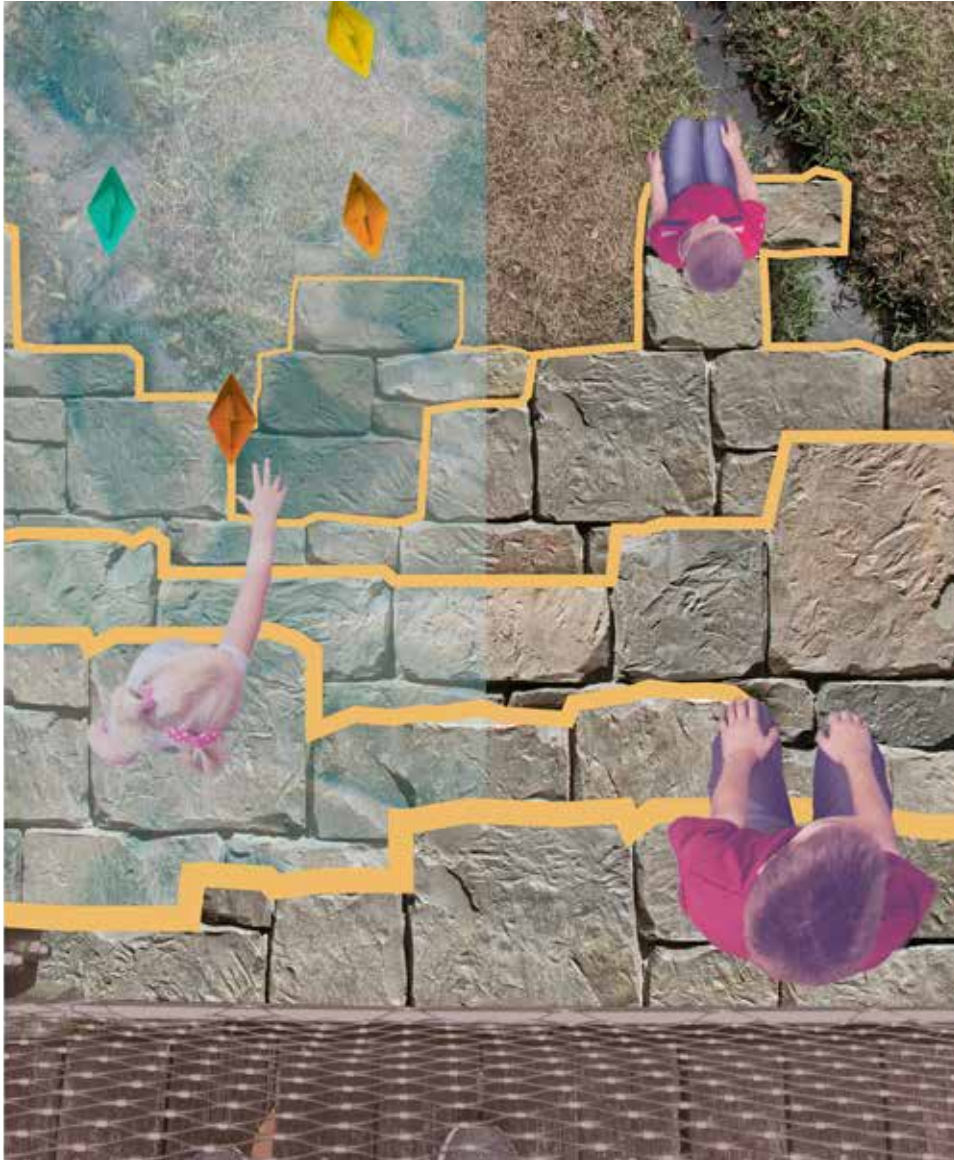
The potential in creative play lies in the undesignated access points to the river. These hidden spaces can be inhabited and occupied according to the child's desire. The collages shows how these spaces can be used for different activities according to the qualities of the spaces.





### STRATEGIES FOR BUILDING STRUCTURES IN THE FLOOD PLAIN

To engage the child’s curiosity and provide a child-led exploratory learning, spaces have to straddle between danger and safety. These secret hideaways are spaces challenging enough to the child to provide a thrilling experience but safe enough such that the child will be comfortable taking risks. These spaces largely involve the exposure to water, with reference to high elements, submerged spaces and floating mobile platforms.



HEIGHT



DEPTH

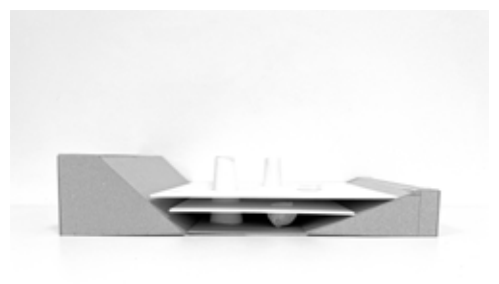
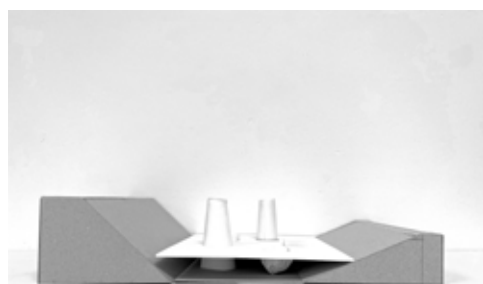
### CHANGING WATER LEVEL

Looking into temporal change, this model explores the different ways in which one can interact with the changes in water level and how architecture can change the surface of the water. The massing shows architectural interpretation of height, submersion and buoyancy.





**FLOATING**



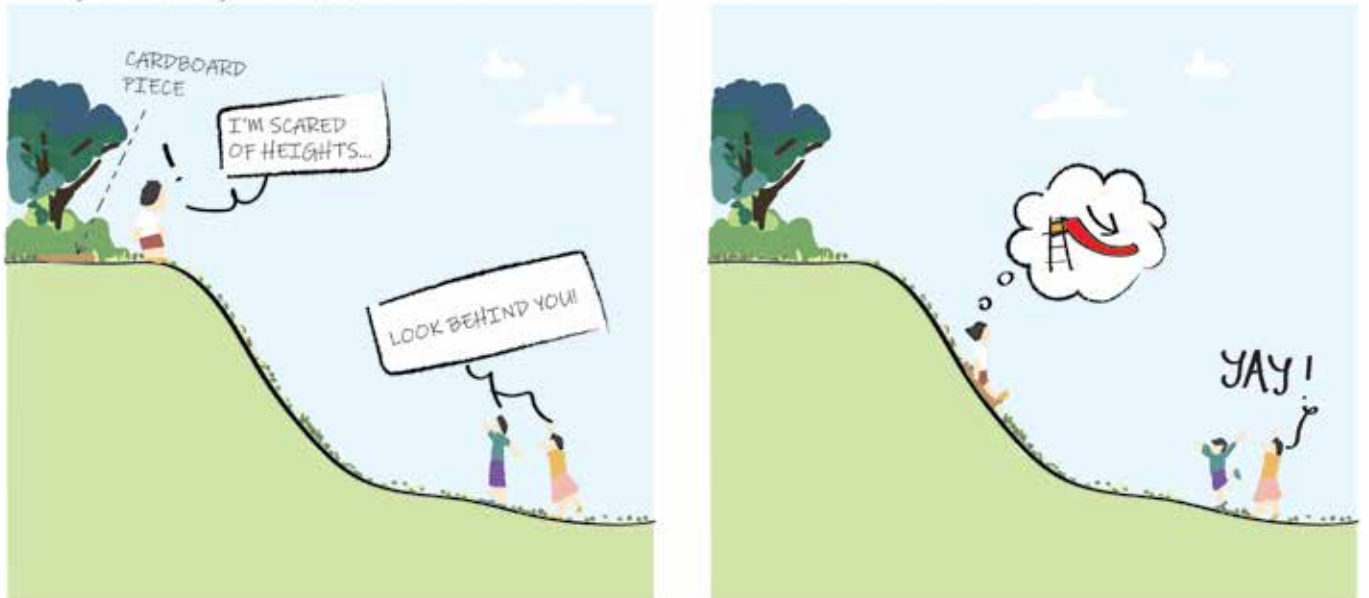
### ADVENTURE AT A SECRET HIDEAWAY

This past proposal involved facilitating learning as an adventure of independent exploration with adult guidance as necessary.

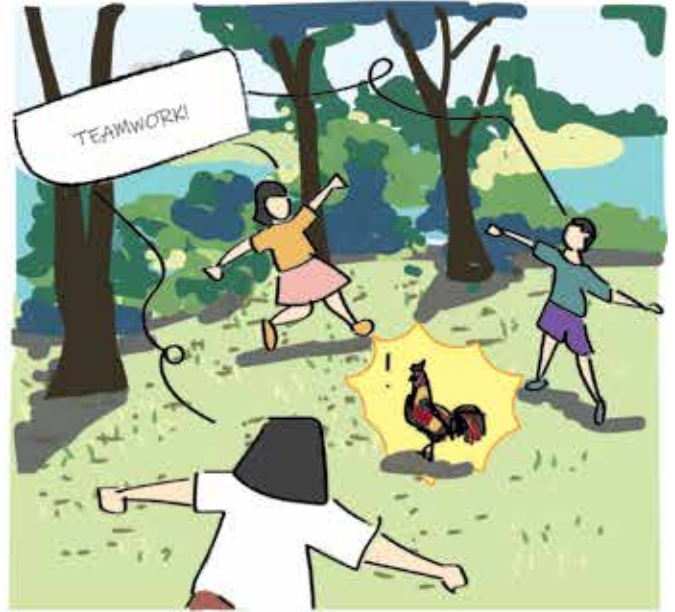
Escaping Home...



Challenge #1: Conquering the Steep Slope



Challenge #2: Catching a wild Rooster



Challenge #3: Rescuing a Shoe (with help from stranger)



End of an Adventure...



## ACKNOWLEDGEMENTS

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