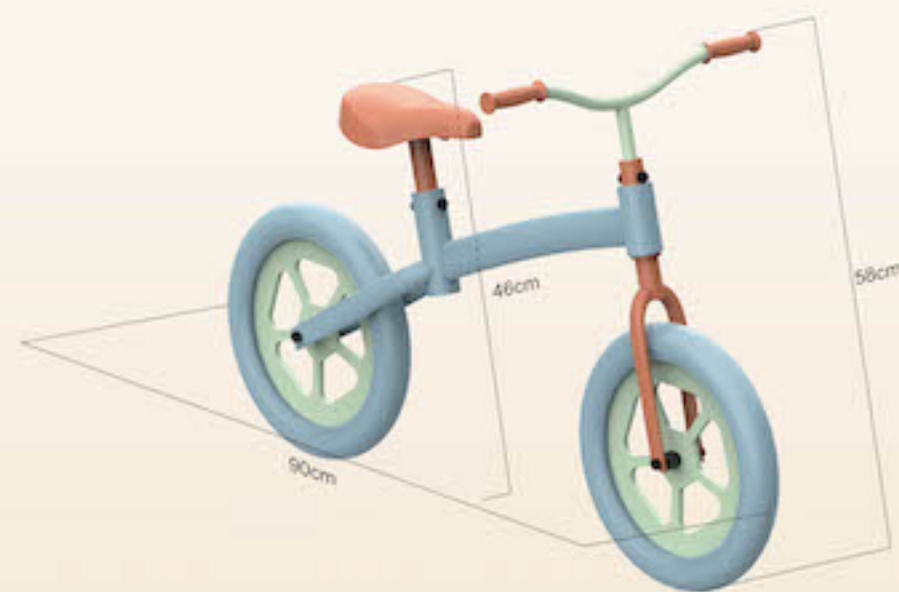


ENMOTIONAL BOND



Can make originally the lack of parents to accompany children to work in the process of growing a things have become more contact them, and they can use a set of parts go together into different growth environment can play bicycle scooter and so on, summarizes the different types of toys, it can ride, can spell, can change, Toys for children of this age generally have all of these things.



SENCE OF PLACE

Sence of the entrance of the Huangbian Village Kindergarten

There are a lot of safety harzards on the way from school to home

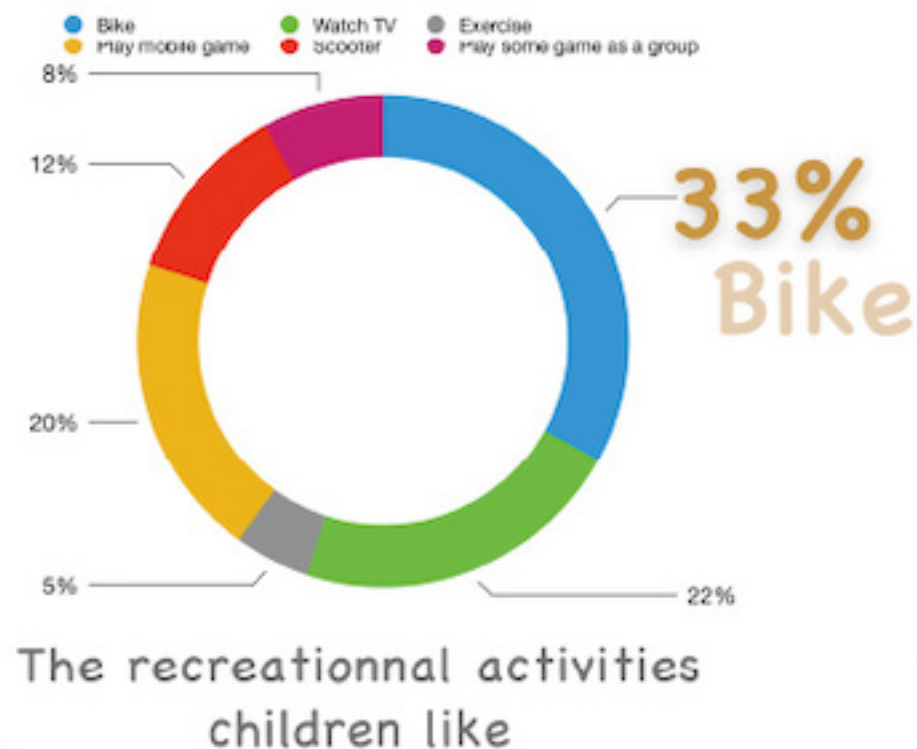
In Huangbian Village are generally the elders take care of their grandchild ren



The number of people come to pick up the children ,elders is more than children's parents

Huangbian village children are generally introverted, there is no group entertainment activities

There are about 800 children in this kindergarten



Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10	Q11	Q12	Q13	Q14	Q15	Q16	Q17	Q18	Q19	Q20
1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
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20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20

The questionnaire about children in Huangbian

Inspiration

Children in Huangbian Village are generally raised by grandparents. From birth to five or six years old, they do not have close relationship with their parents, which is also due to this growing environment. Most children are introverted. Through questionnaires and surveys, it is found that children's favorite activity in Huangbian Village is riding bicycles.



Inspired by these,

I plan to design a bicycle that can connect children and parents, so as to ease the relationship between children and parents in the absence of companionship.

Research

Interact



Audiences

Children aged 3-6
in Huangbian Village

"Assemble"

LEGO's way of interaction is to assemble, which is when children need their parents' company and help



Interactive toys for children and parents



Toys that can be played with other people besides their parents

Suitable for toddlers, this balancing bike is leg-propelled



Balance car

Better for older children, two wheels for balance

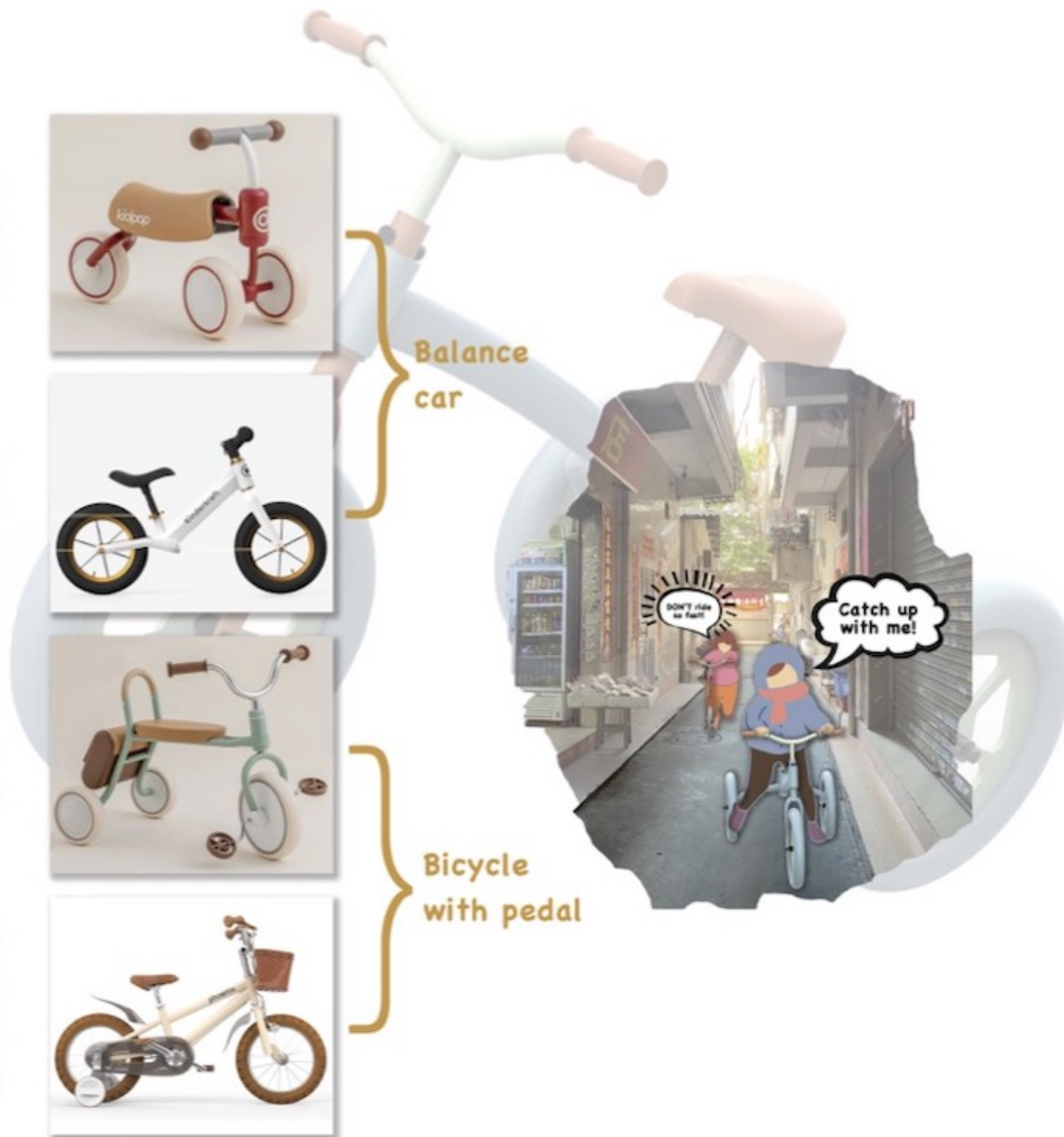


This bike with pedalis safer for younger children than two wheels



Bicycle with pedal

This is suitable for older children and is the final step in the transition to biking



Develop

Structure

The way lego parts are assembled



Level

Scooter

The age of 3

Balance bike

The age of 4

Tricycle

The age of 5

Four-wheeled trolley

The age of 6

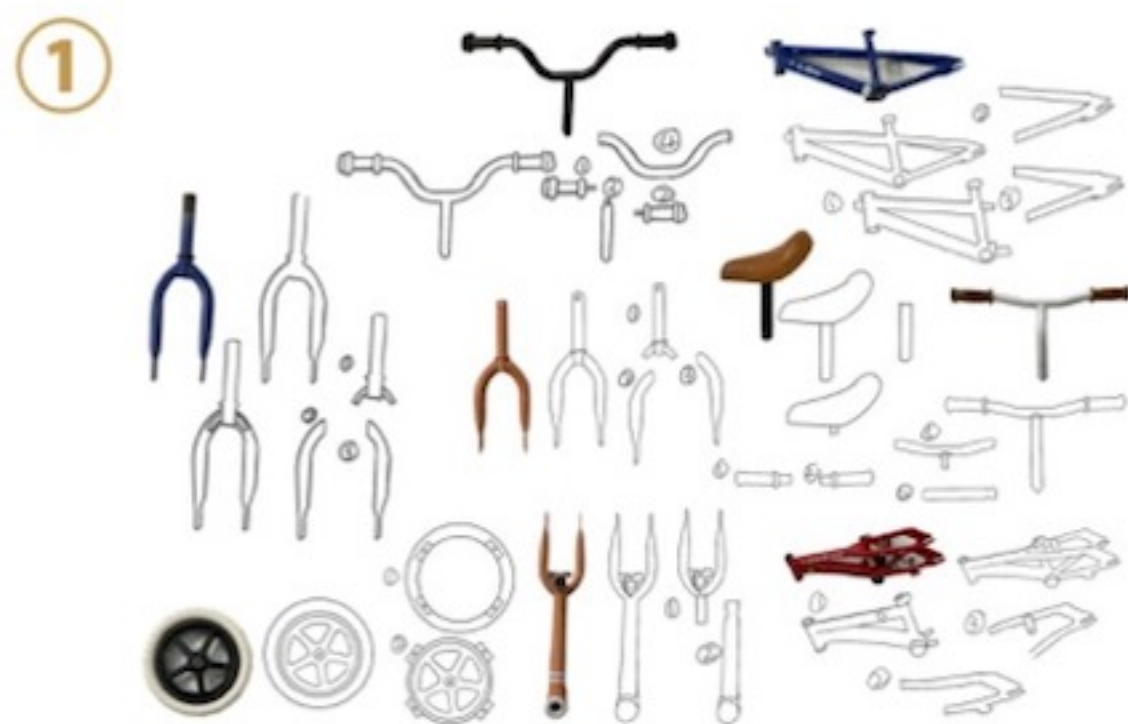
Apart

I chose three types of bikes on the market and took them apart to study their structure and components



I took the bike apart and reassembled it from two directions, from parts to smaller structures and from parts to create something new

Assemble way



Summary of children's daily life questionnaire in Huangbian Village

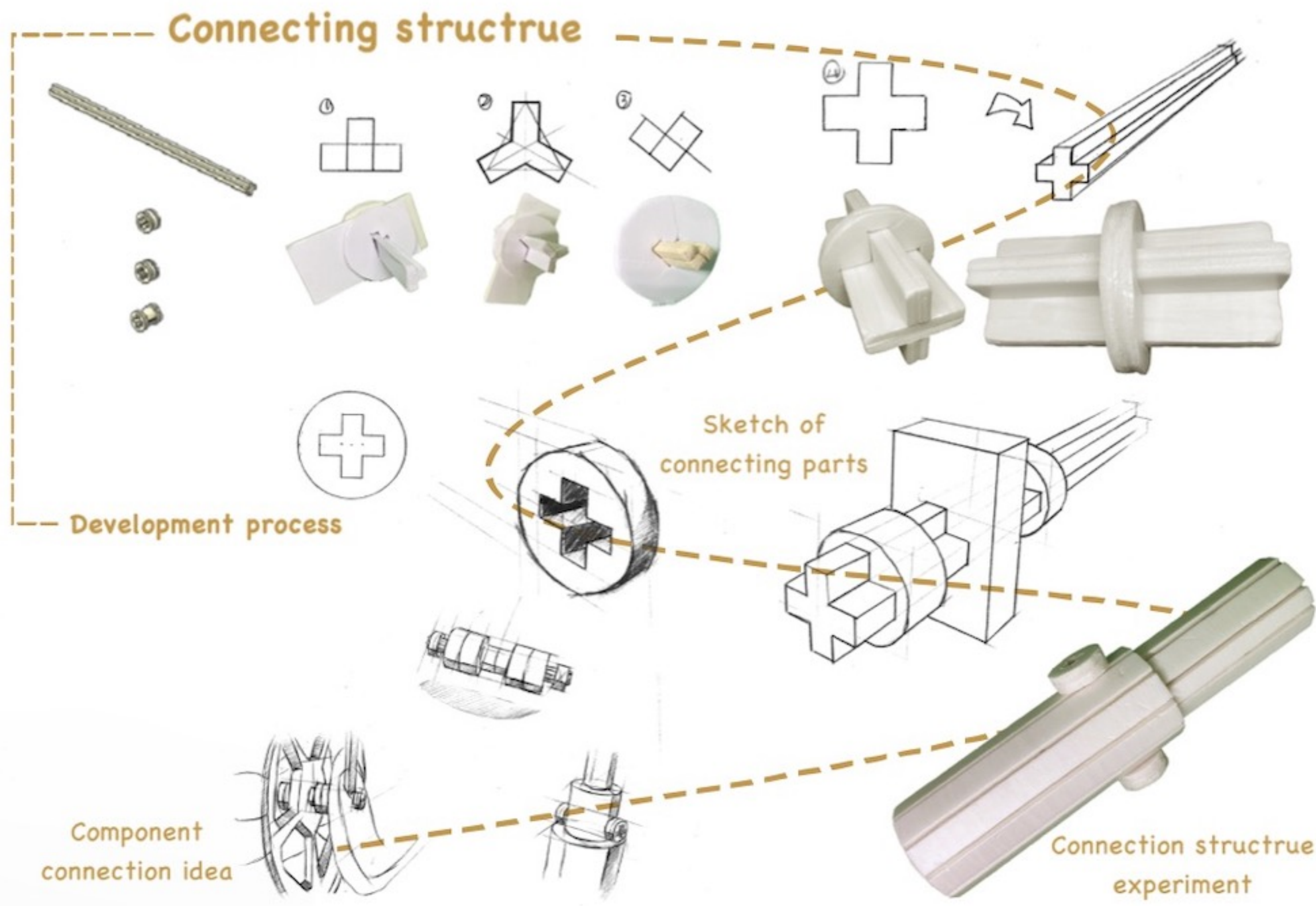
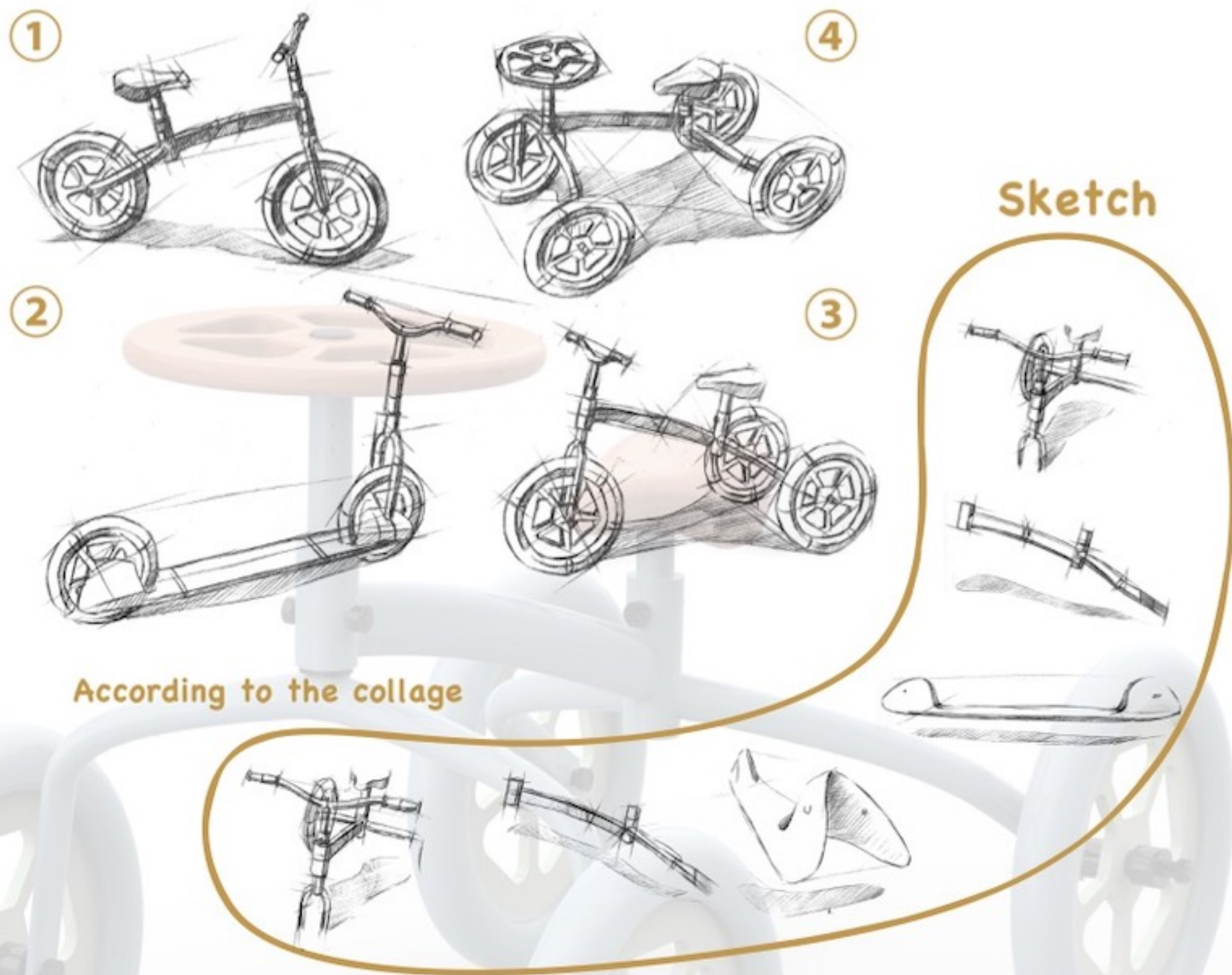
Children to 3-6 year old	8 a.m.	8:30 a.m.	9-10 a.m.	10-12 a.m.	1 p.m.	2:30 p.m.	3:30-4:00 p.m.	4:30 p.m.	About 4-5 p.m.	About 5-6 p.m.	7-8 p.m.	About 9-10 p.m.
Huangbian children's daily routine in week	Get up	Arrive Huangbian kindergarten	Do exercises and play games on the playground	Take English, Chinese, simple math, art, music classes and so on	Take a nap with your classmates in the classroom	Get up and have some fruit snacks	Have PE class, play games, play the slide and so on	Grandma and grandpa or more and dad pick them up and back home	Ride bikes and scooters or play sports in the village's senior centers, basketball courts and alleys	Wait for parents back home and eat dinner (the dinner usually cook by grandparents)	Wash hands, homework and so on	Go to bed



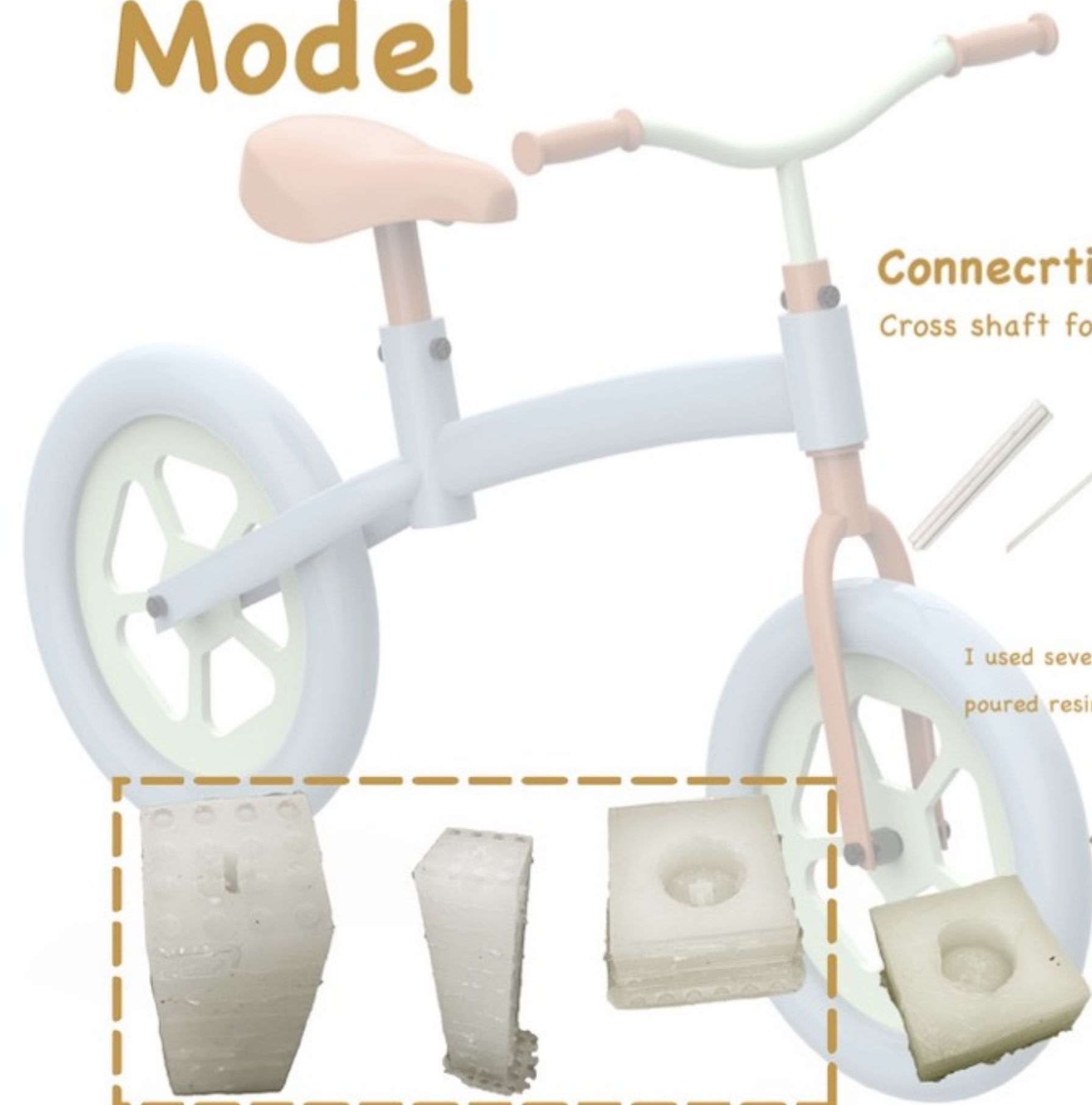
Lego has a product that uses one set of parts to make two toys

Their daily routine is simple and boring, as Huangbian village has **NO amusement facilities** for children

Develop



Model



Connectrting structrue

Cross shaft form test



I used several materials to make the model of my connecting structure, and then poured resin into the well-molded silicone mold to make many parts in batches

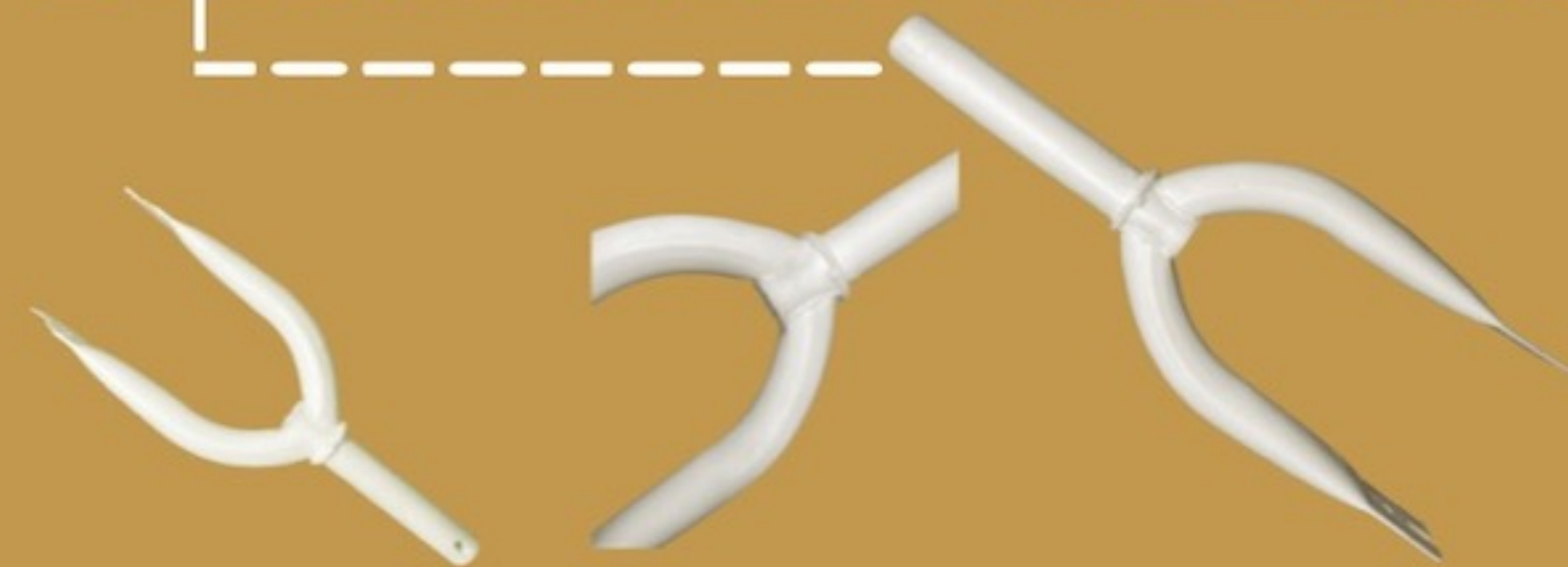


Successful mold

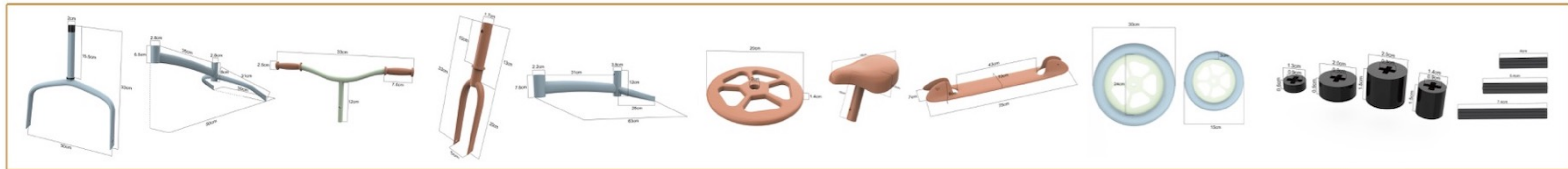
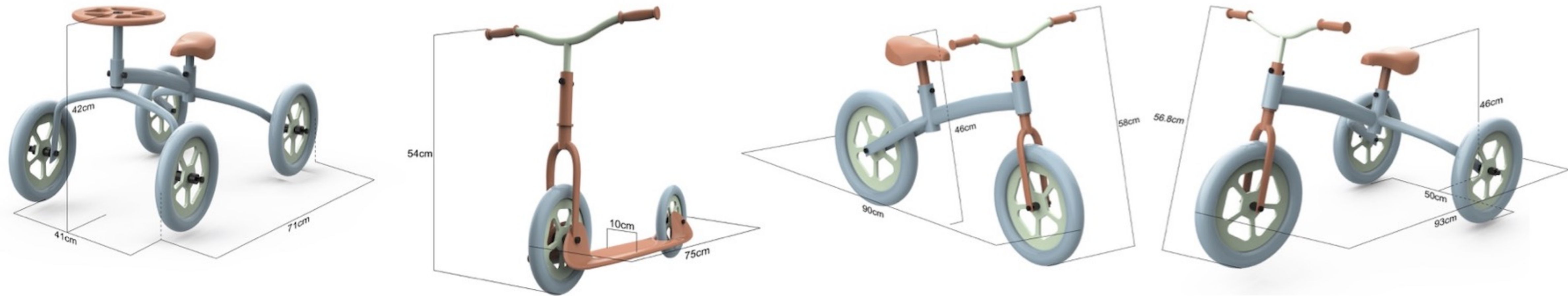
The silicone mold experiment

Large part model

I took the parts I had removed and turned them over using silicone and modified the shape according to my design

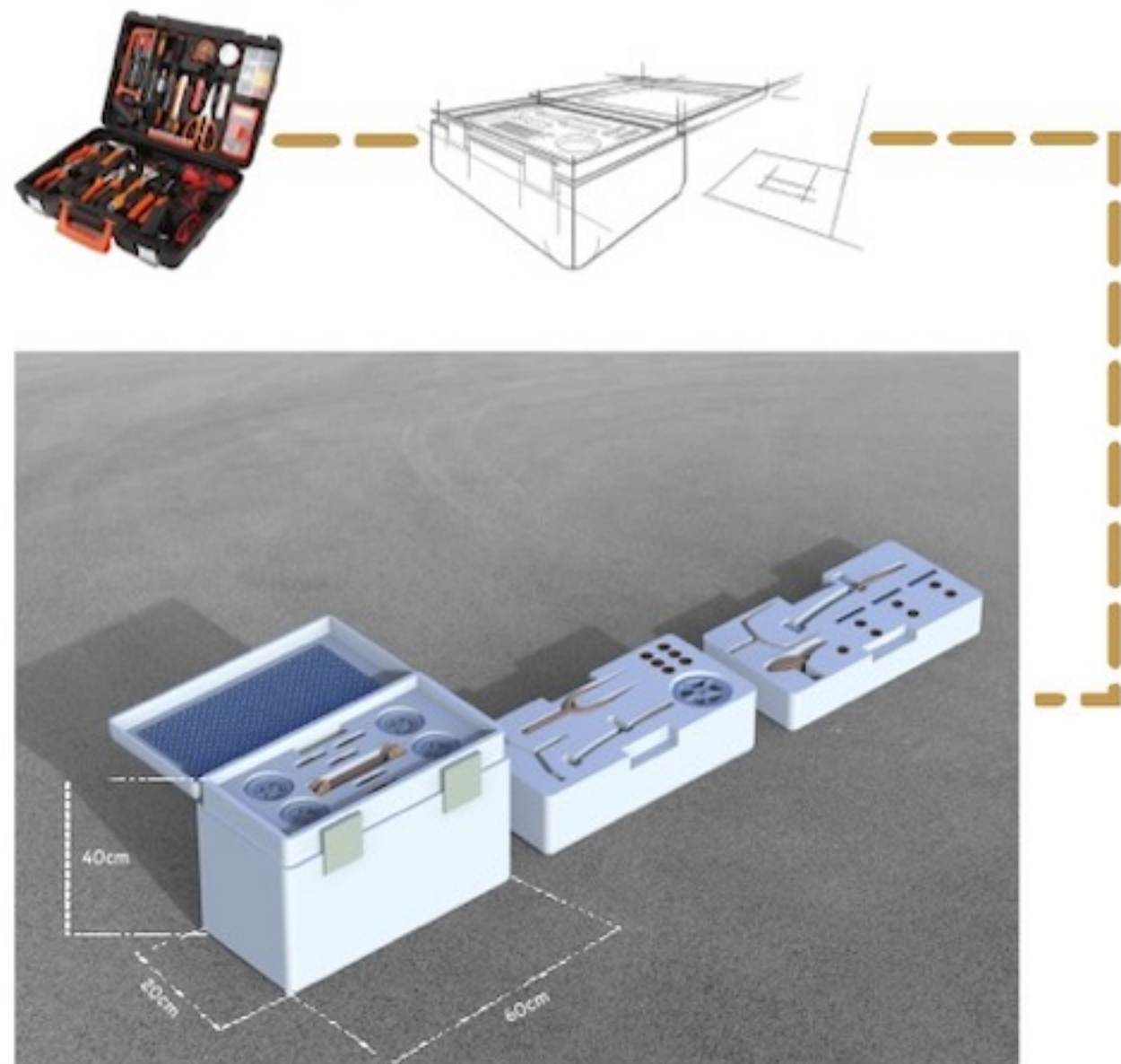


Modeling & Size

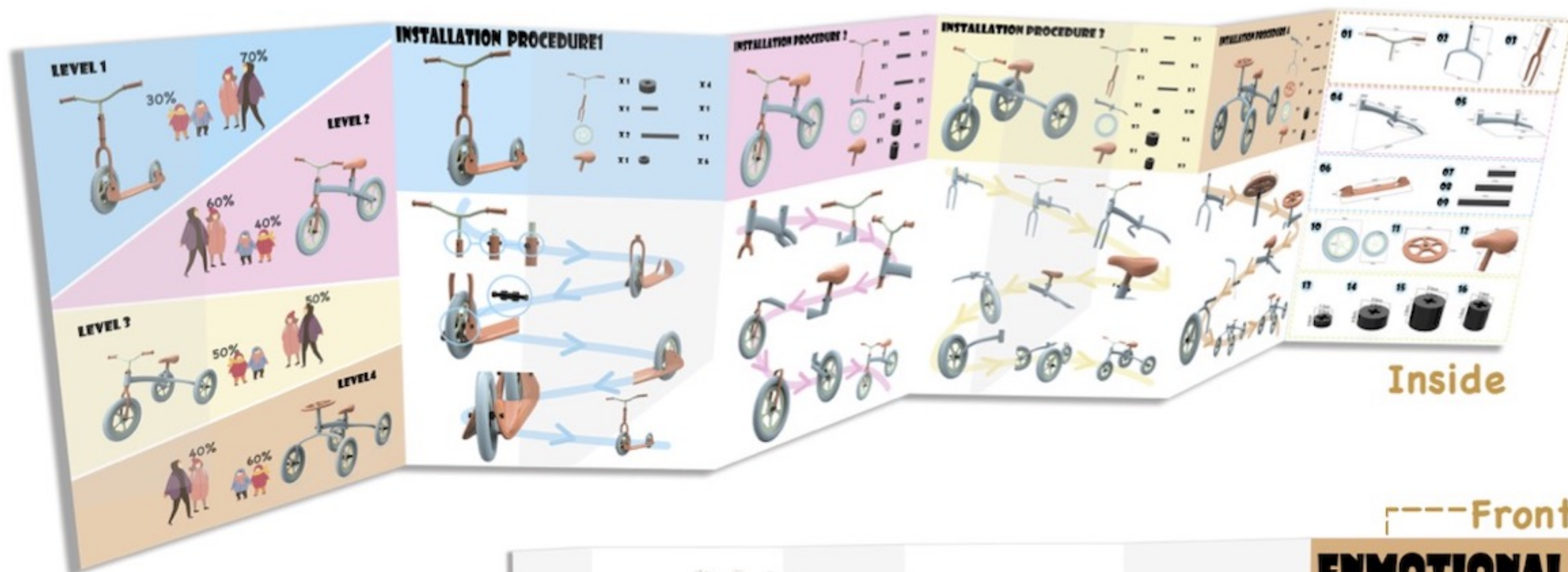


Product data

Packaging box



The box consists of three layers, each of which contains numbered parts



Instructions

I used the way of folding to make my manual, the form of folding is relatively clear and easy to read



Back