

GOOD THINGS
WE BUILD
END UP
BUILDING US

Jim Rohn



GOOD THINGS
WE BUILD
END UP
BUILDING US

Jim Rohn





2.00b





2.00b











A quiz!

1. what is your name?
2. please write a definition for toy product design.

ParSCORE™
TEST FORM
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NAME Last Name, First Name
LAST FIRST MIDDLE

SUBJECT Course, Section, Instructor

DATE Test Number HOUR/ DAY Test Version (A,B)

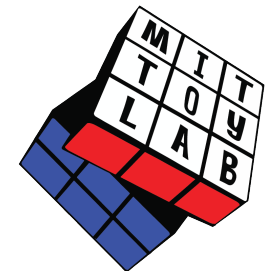
DIRECTIONS
• MAKE DARK MARKS
• ERASE COMPLETELY TO CHANGE
• EX. (A) (B) (C) (D) (E)

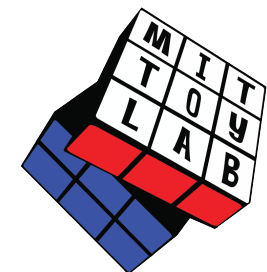
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9 9 9 9 9 9 9 9 9

Mark Test Version
TEST FORM
[] (B) [] (C) [] (D)

EXAM NUMBER
0 0 0
1 1 1
2 2 2
3 3 3
4 4 4

FEED THIS DIRECTION





Michelle MA

Toy. Some thing whose purpose is FUN!

Product. Something tangible/shareable to the world!

Design. Creating something from within your mind into the real world

Toy Product Design. The closest job to being Santa Claus

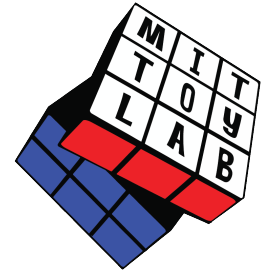
toy product design

Thomas Larson

The act of ideating, prototyping, and manufacturing objects with a lens focused on children, entertainment, or plain old fun

Brooke Bao

The process of visualizing and making an object intended for play

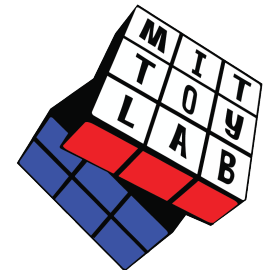


Anika Huang, Riya Gupta, Andi Liu, Gilford Ting, Crys Tang, Jared Steins. Evan Harrison, Holly Nihipali, Julia Xia

toy



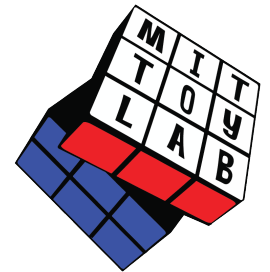
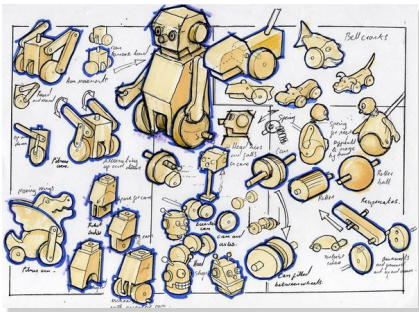
design



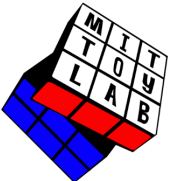
toy product design

the art and science of producing a plan
for an item used for play



that is intended to be manufactured and possibly sold





Lab preferences



Course Info
Syllabus
Course Staff
Toy Museum


Accessibility



Toy Product Design 2.00b

Hello, and welcome to 2.00b!

Lectures

Mon, Feb 13: Team players

Lecture 2: [ABCs of design slides](#)

Lecture 1: [it's 00b! slides and recording](#)

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Labs

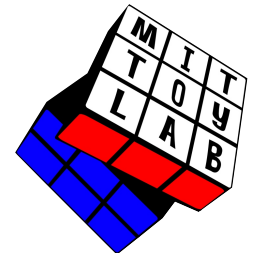
Week of Feb 13

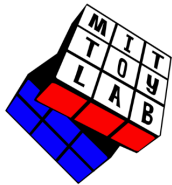
Please check here Sunday, Feb 12 after 8PM for your team assignment.

Lab 1: Pull toys! Please bring sketches of possible pull toy ideas to lab. You will be working in the shop. Please follow shop safety guidelines, including wearing closed-toe shoes, no dangling jewelry or loose clothing.

Things to-do

web.mit.edu/2.00b





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by Fri, 2/10, [Lab section preferences form](#) due

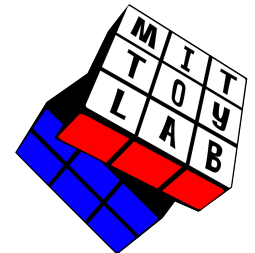
11:59PM Please **update** the form if your schedule changes and affects your lat time preferences.

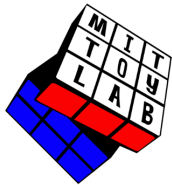
To-dos past best before date

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MIT

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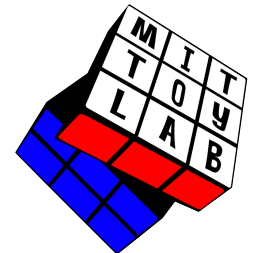
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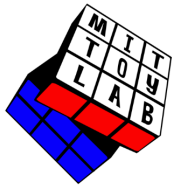
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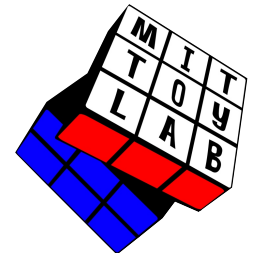
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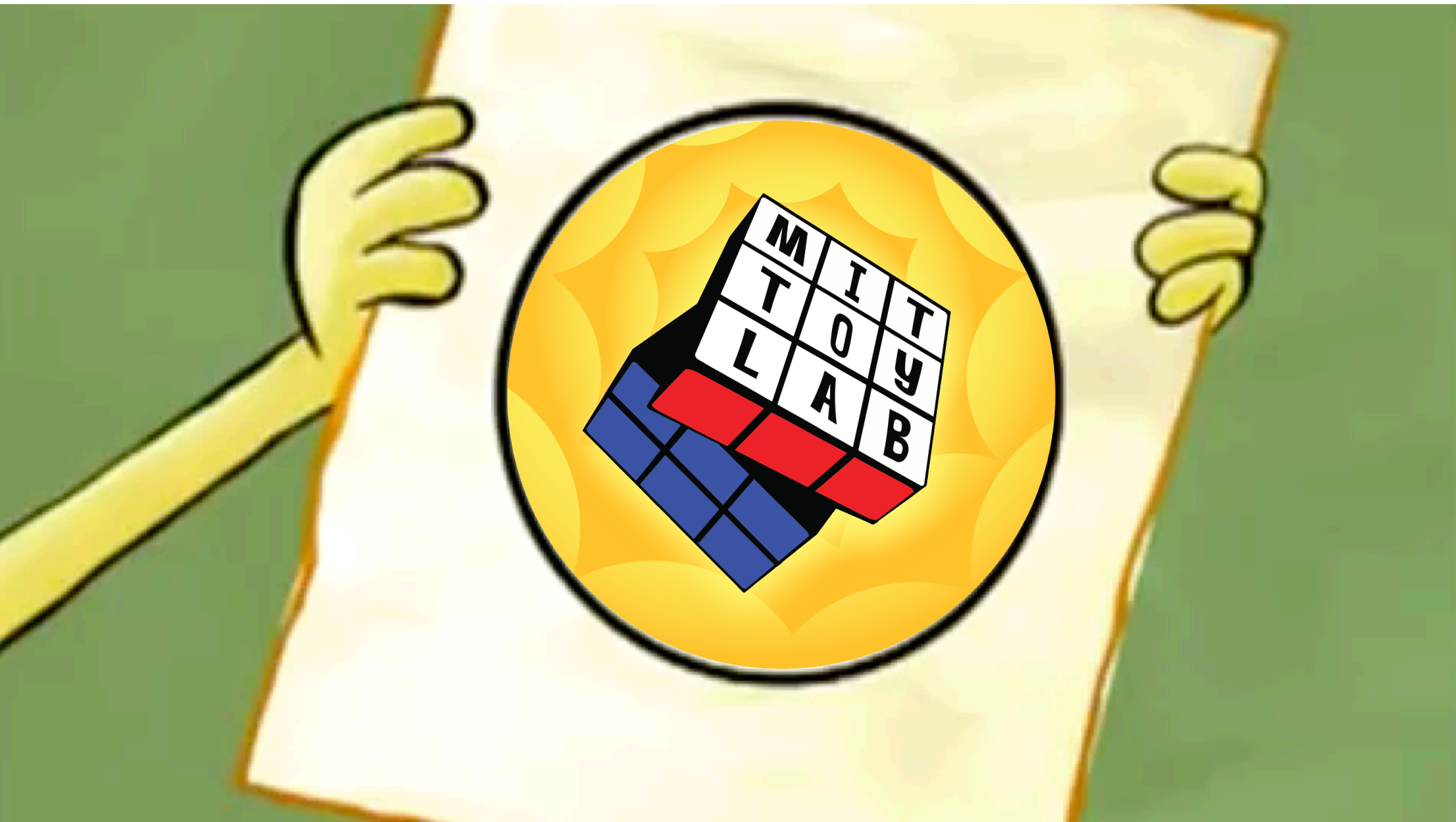
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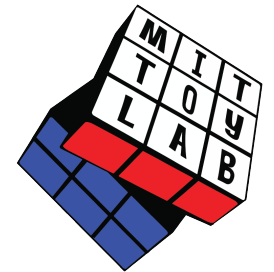
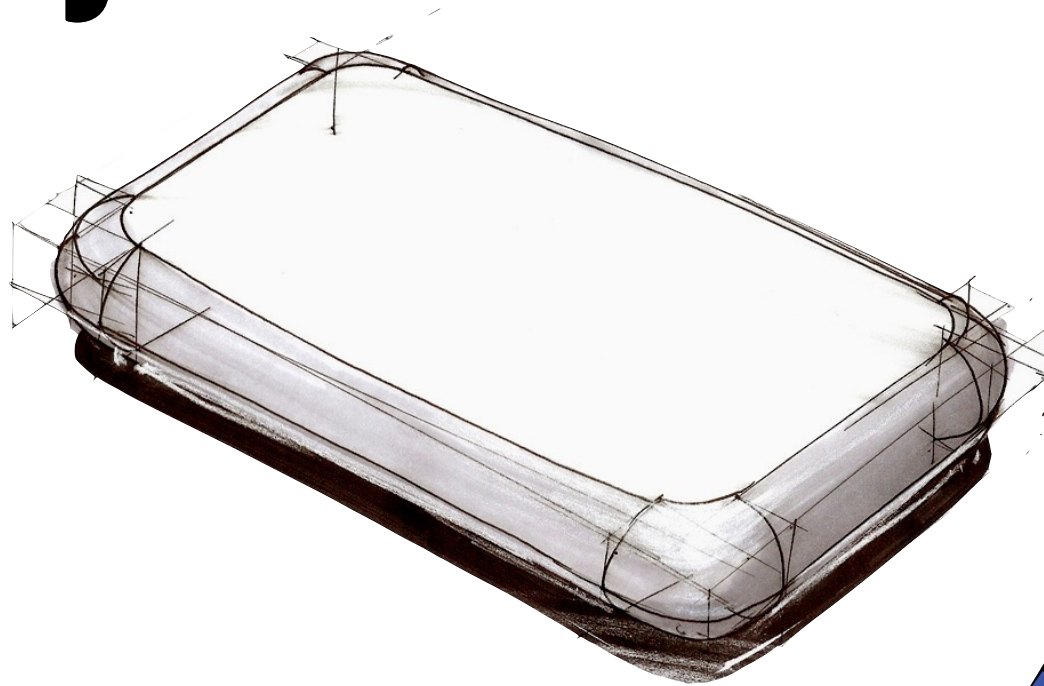






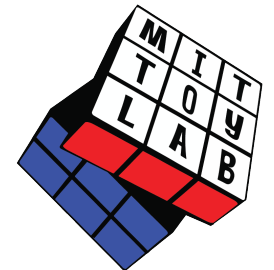
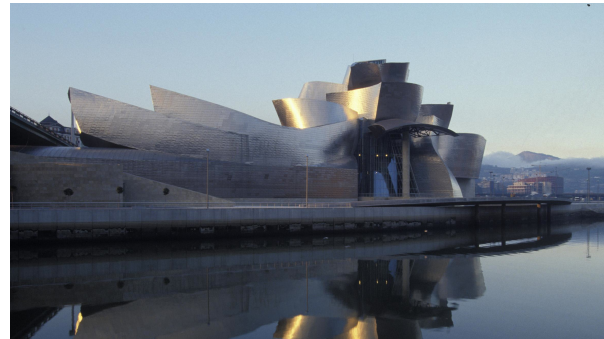
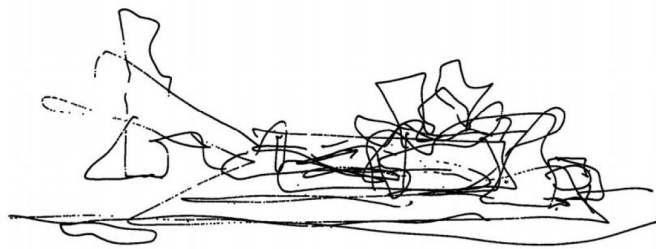


Sketching!

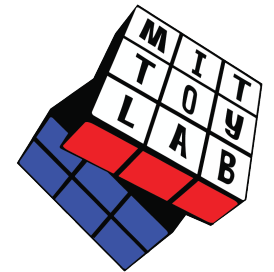
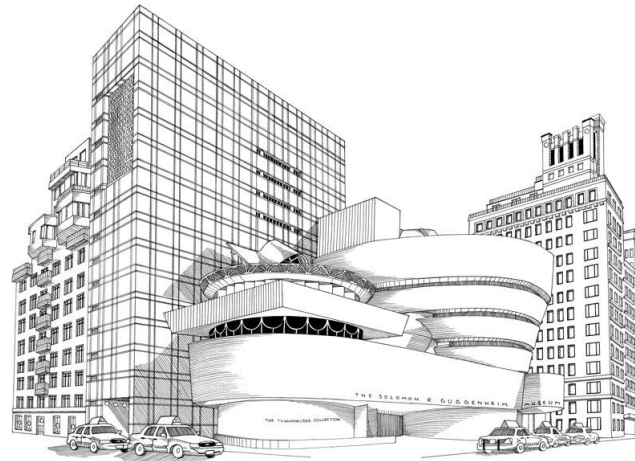
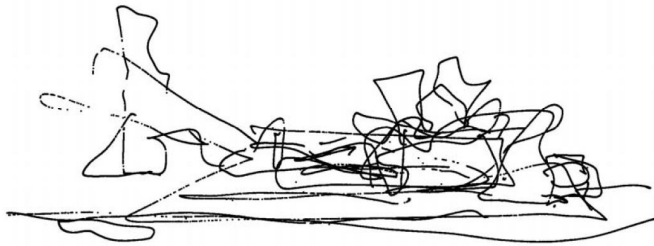


Sketch!

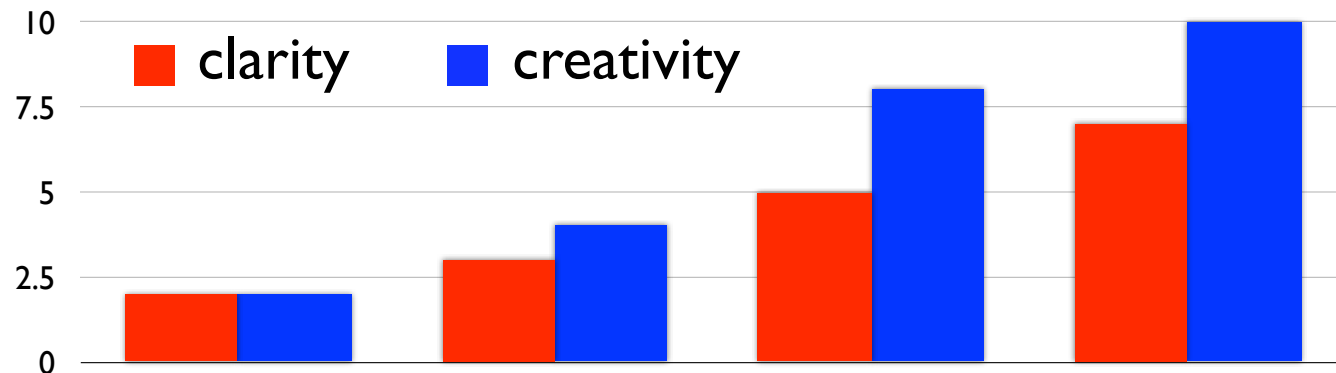
Communication, not art!



Sketch for a client?



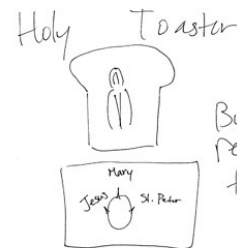
Why sketch clearly?



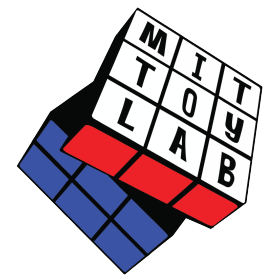
- religious toast - 'miracle toast'
- burns Jesus' face on toast



the Virgin Mary's image
burnt into every slice...
guaranteed.



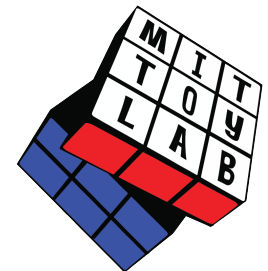
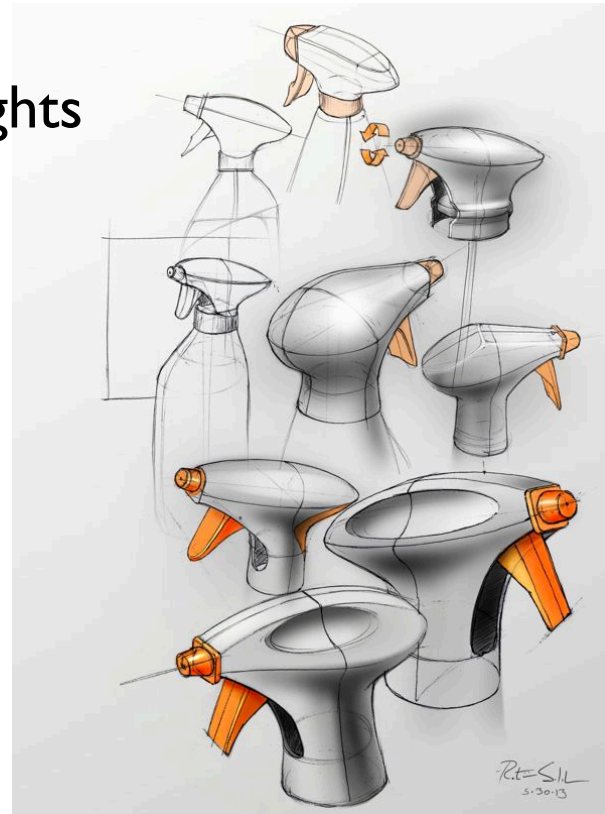
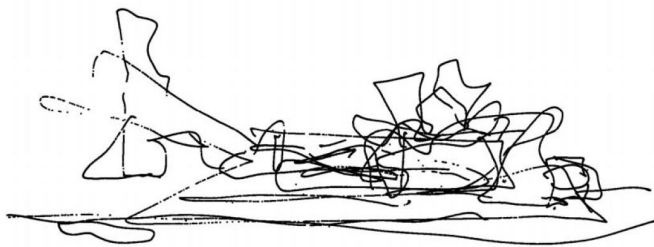
Burns
religious
figures



kudrowitz, wallace 2010

Sketching

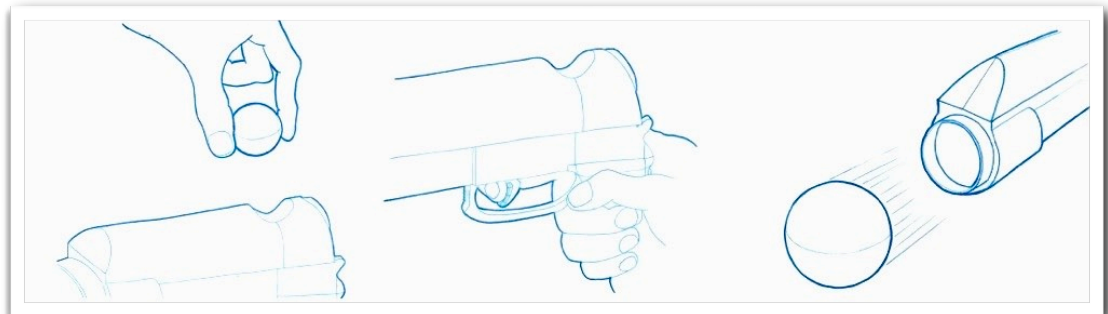
A way of organizing your thoughts



kudrowitz, wallace 2010

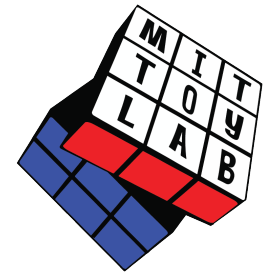
Sketching

The language of idea generation



Ping-Pong Ball Blaster

A toy blaster that fires plastic ping-pong balls, stores several at once inside its shell, and automatically resets with each pull of the trigger. New balls are loaded via the port on the top, several can be loaded at a time. Pulling the trigger once fires a ball out of the front and after...

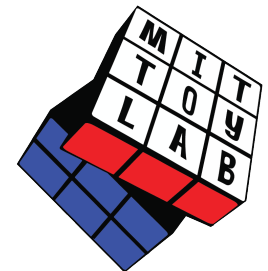
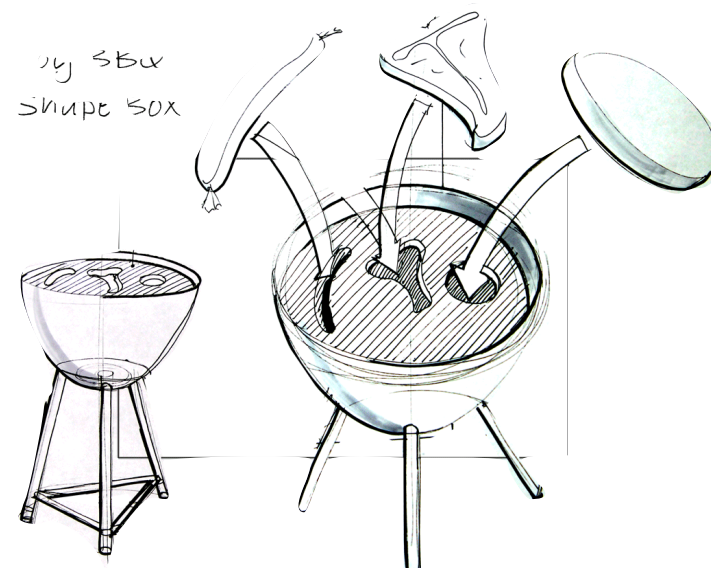


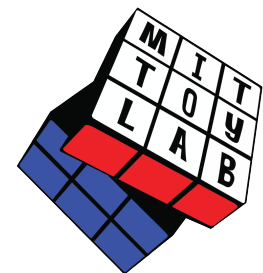
What's the process?

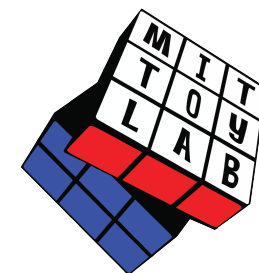
Basic Skills (simple shapes)

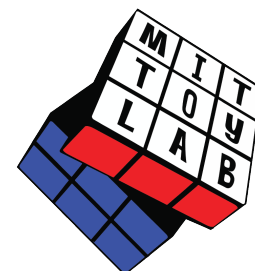
3D Rules

Practice!









Quiz!

1. What is your name?

2. Sketch the side view of a car. any car.

*use protective paper

ParSCORE™
TEST FORM
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NAME Last Name, First Name
LAST FIRST MIDDLE

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T F T F

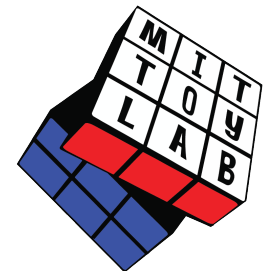
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27 A B C D E 77 A B C D E
28 A B C D E 78 A B C D E
29 A B C D E 79 A B C D E

DIRECTIONS
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• MAKE DARK MARKS
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• EX. (A) (B) (C) (D) (E)

CUID
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Mark Test Version
TEST FORM
(B) (C) (D)

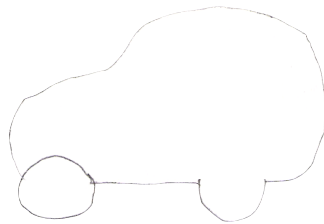
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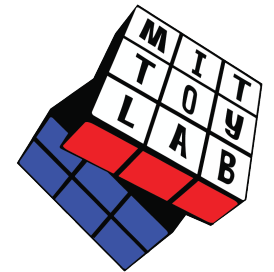
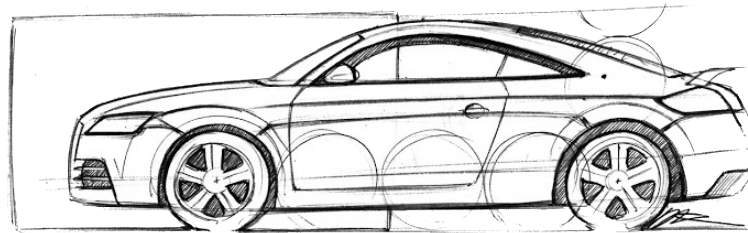
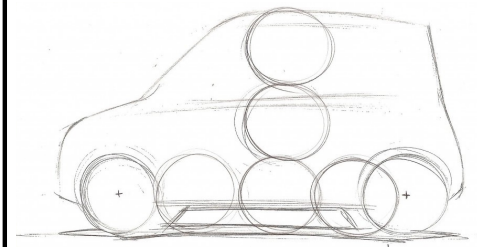
Mental models and sketches

step-by-step thought process

Architecture



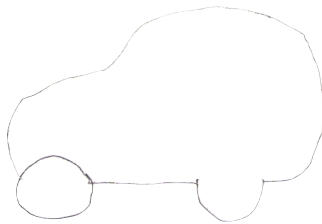
Proportion



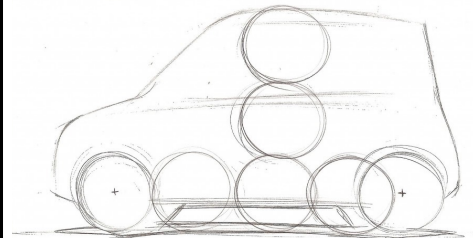
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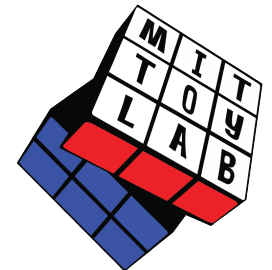
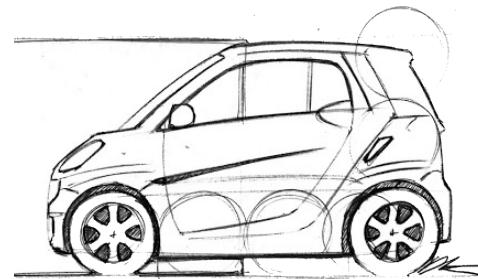
Architecture



Proportion



Detail

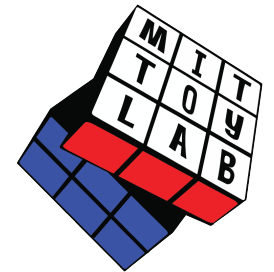
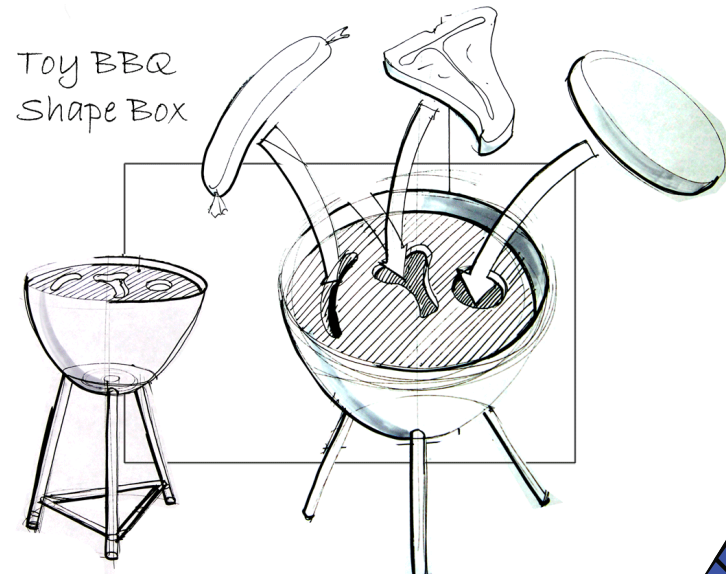


What's the process?

Basic Skills (simple shapes)

3D Rules

Practice

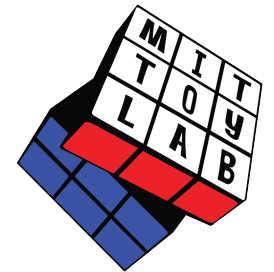
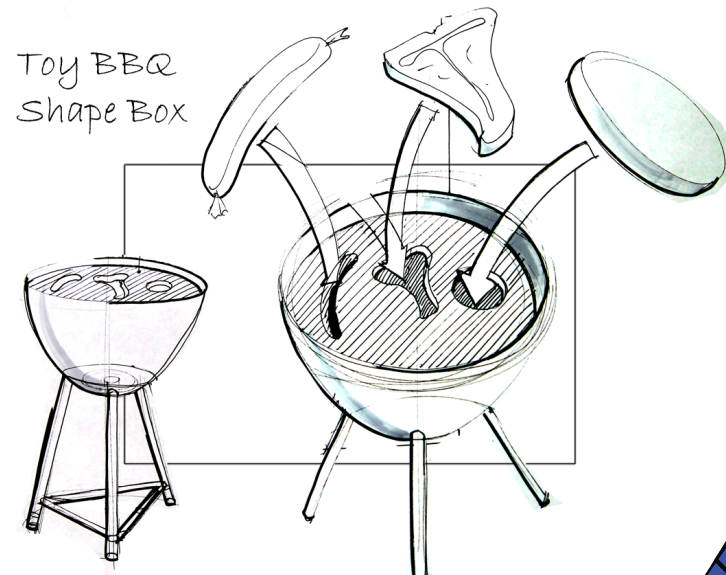


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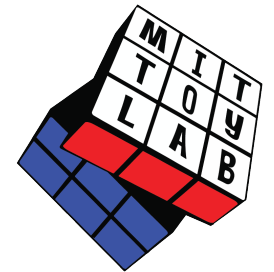
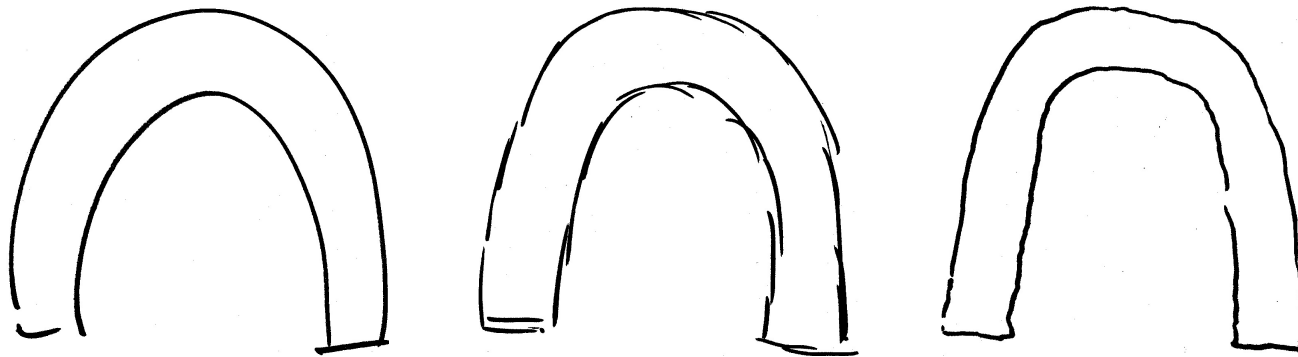
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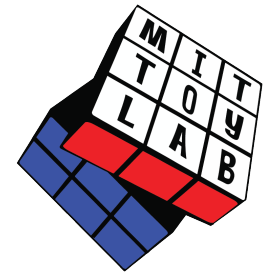
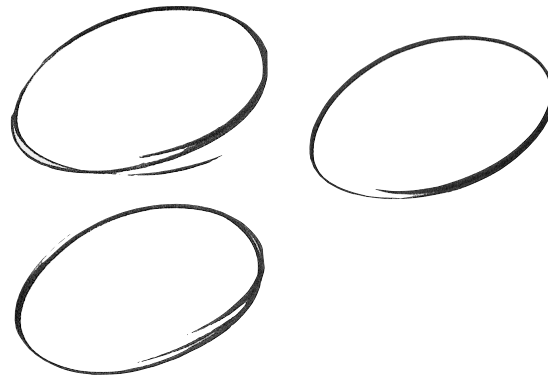
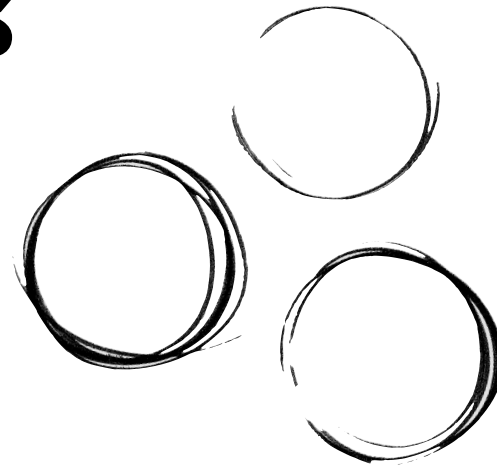
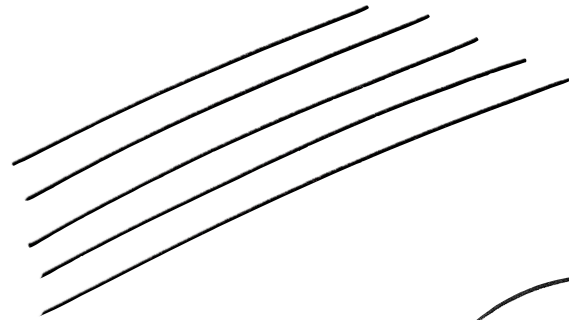


Uncertainty is visible!



The basic skills

lines, circles, ellipse

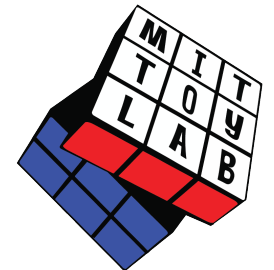
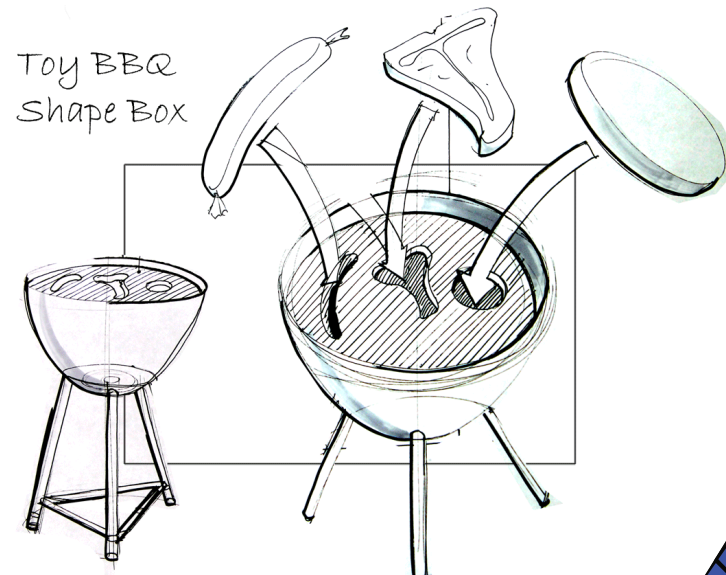


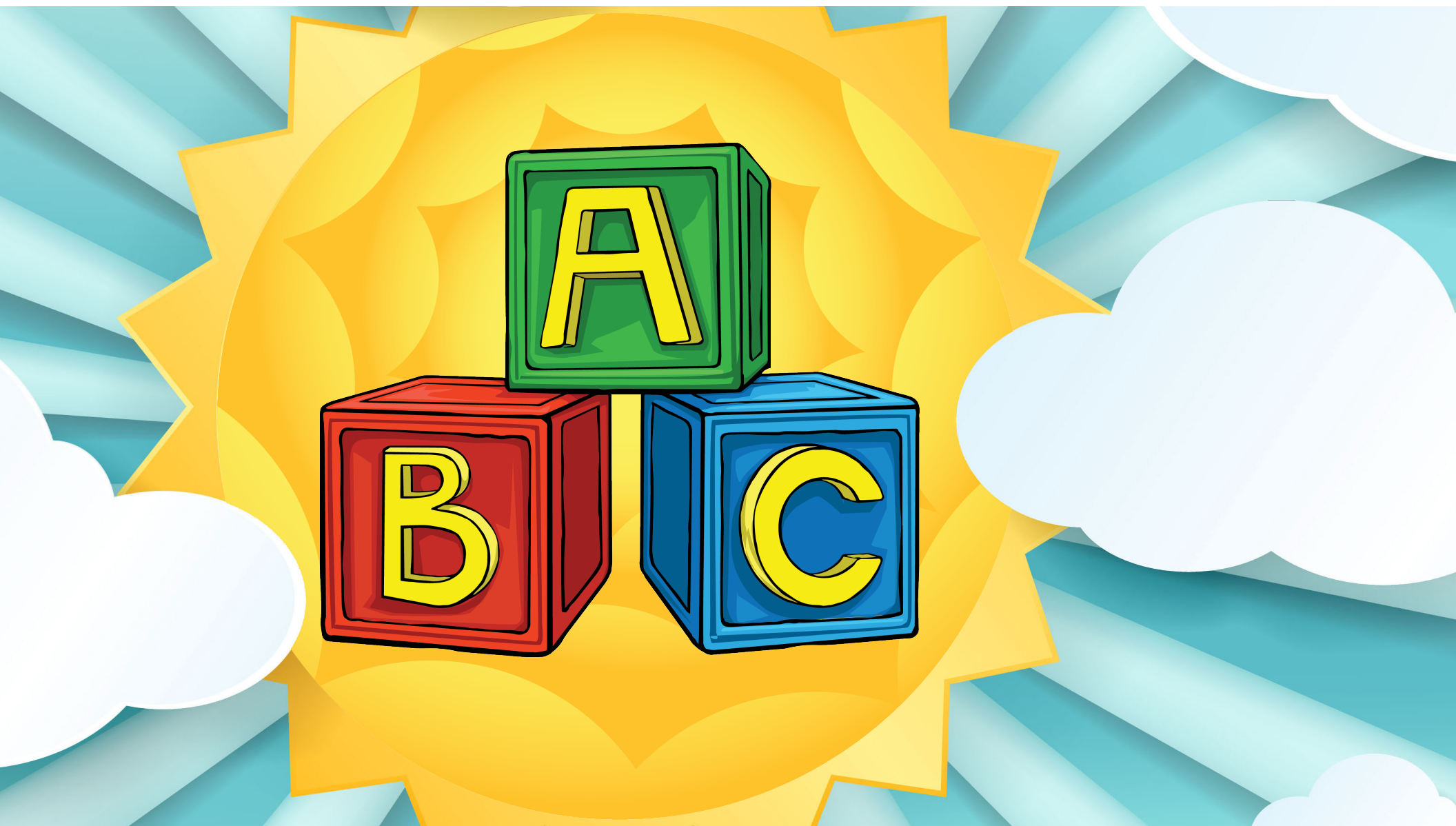
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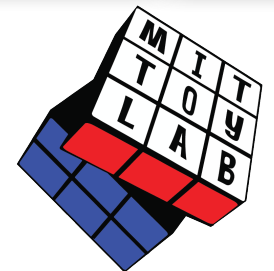




February

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12	13	14	15	16	17	18
19	20	21	22	23	24	25
26	27	28				

March							
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			1	2	3	4	
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19	20	21	22	23	24	25	16
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							30



February

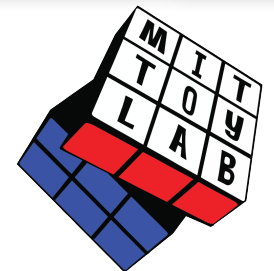
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			1	2	3	4
5	6	7	8	9	10	11
12	13	14	15	16	17	18
19	20	21	22	23	24	25
26	27	28				

8:00 PM

March

Su	Mo	Tu	We	Th	Fr	Sa
			1	2	3	4
5	6	7	8	9	10	11
12	13	14	15	16	17	18
19	20	21	22	23	24	25
26	27	28	29	30	31	

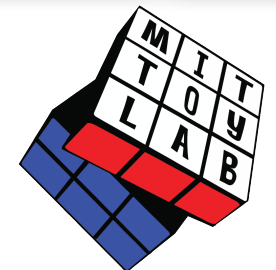
Su	Mo	Tu
2	3	4
9	10	11
16	17	18
23	24	25
30		

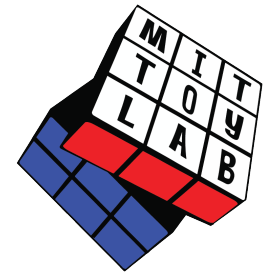


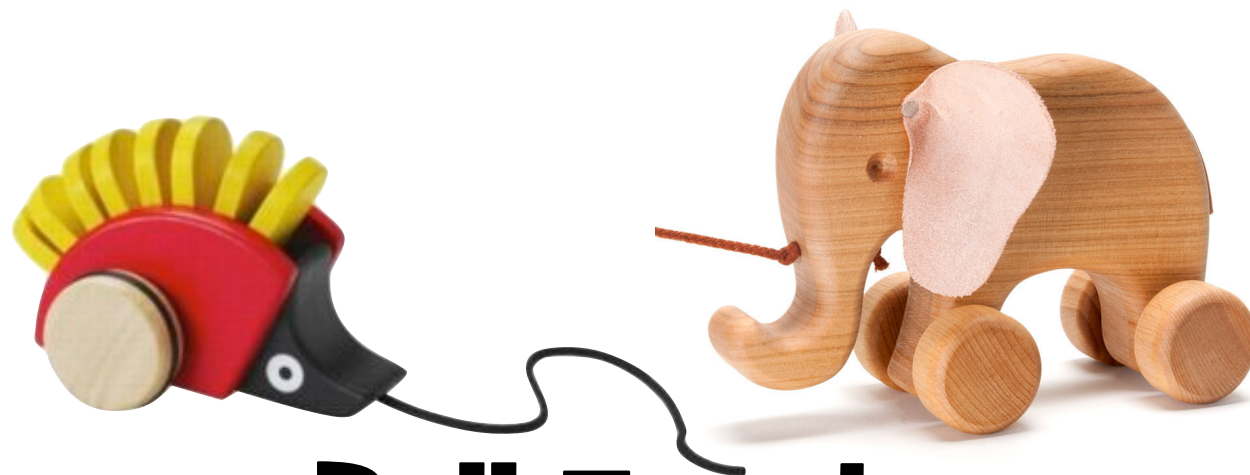
February

Su	Mo	Tu	We	Th	Fr	Sa
			1	2	3	4
5	6	7	8	9	10	11
12	13	14	15	16	17	18
19	20	21	22	23	24	25
26	27	28				

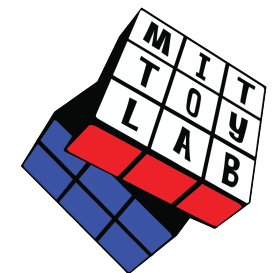
March							
Su	Mo	Tu	We	Th	Fr	Sa	
			1	2	3	4	
5	6	7	8	9	10	11	2
12	13	14	15	16	17	18	9
19	20	21	22	23	24	25	16
26	27	28	29	30	31		23
							30



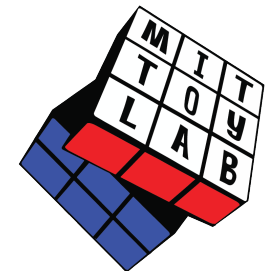




Pull Toys!

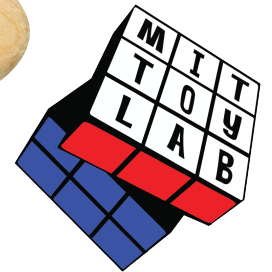
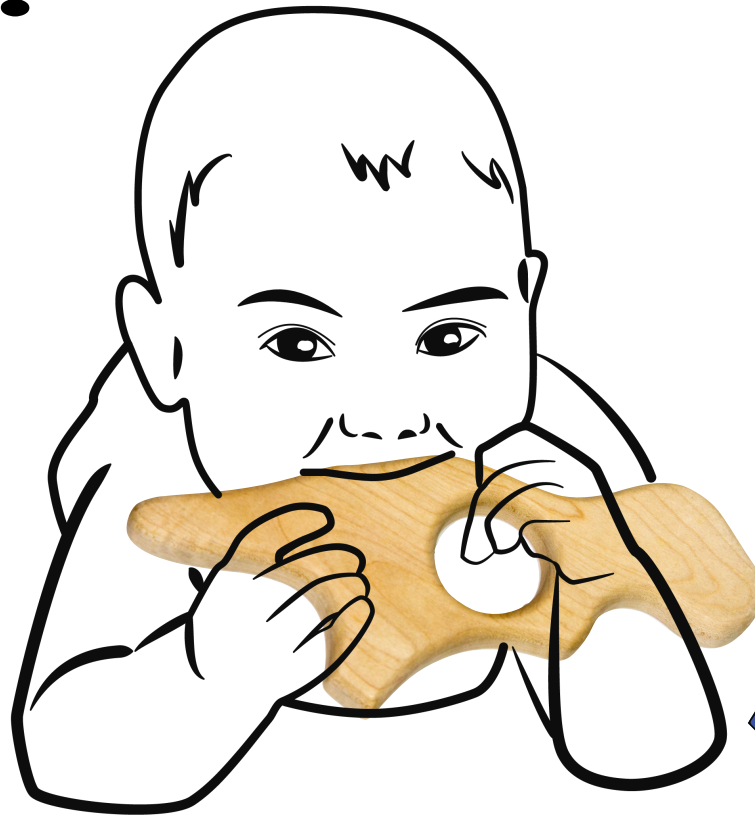


Pull Toys?



Teething Toy!

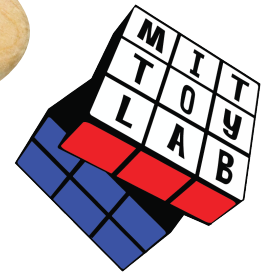
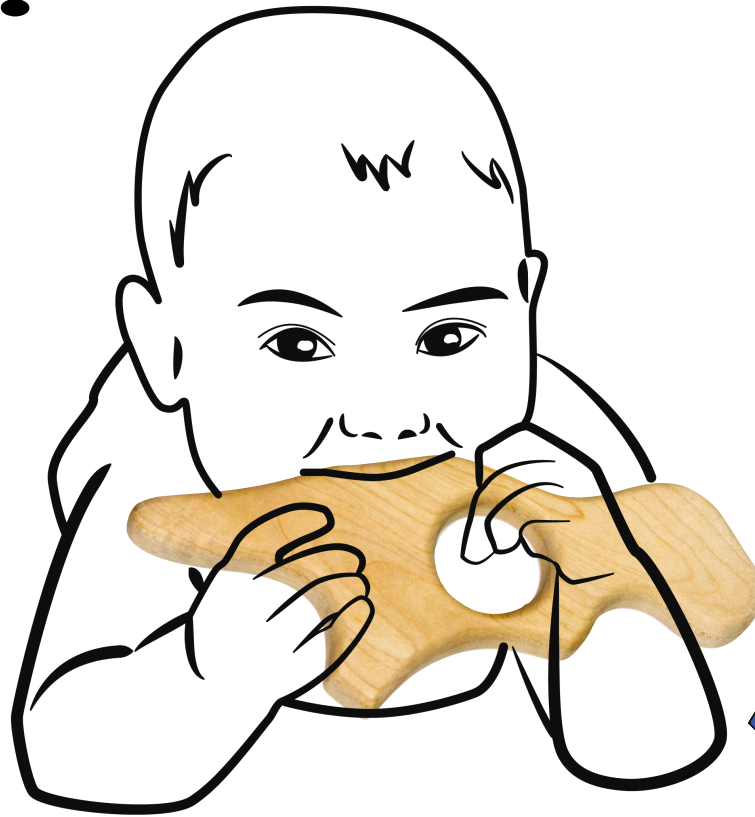
3 months plus



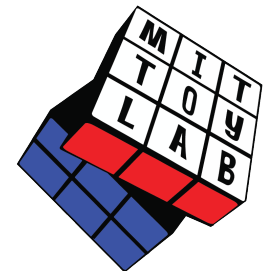
Teething Toy!

3 months plus

shapes to chew
easy to grasp
hardwood (maple)
no finish



Pull toy?



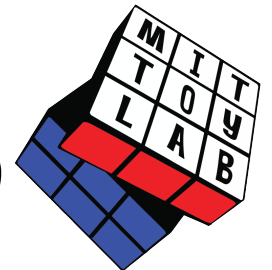
Push toy!

6 months plus (sitting)

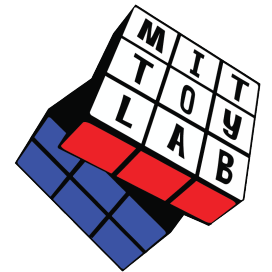


cause and effect
hand grip, gross motor skills
appropriate size

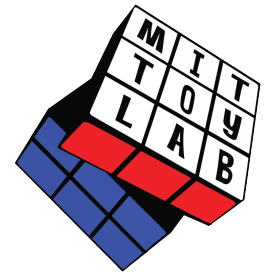
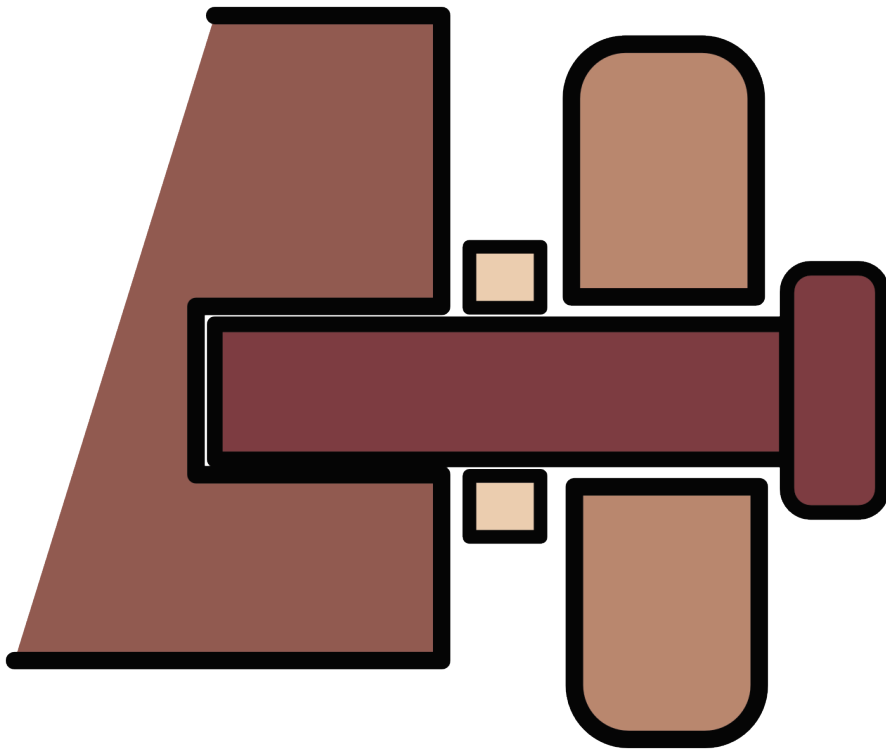
food safe finish



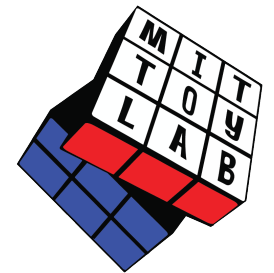
Wheelies!



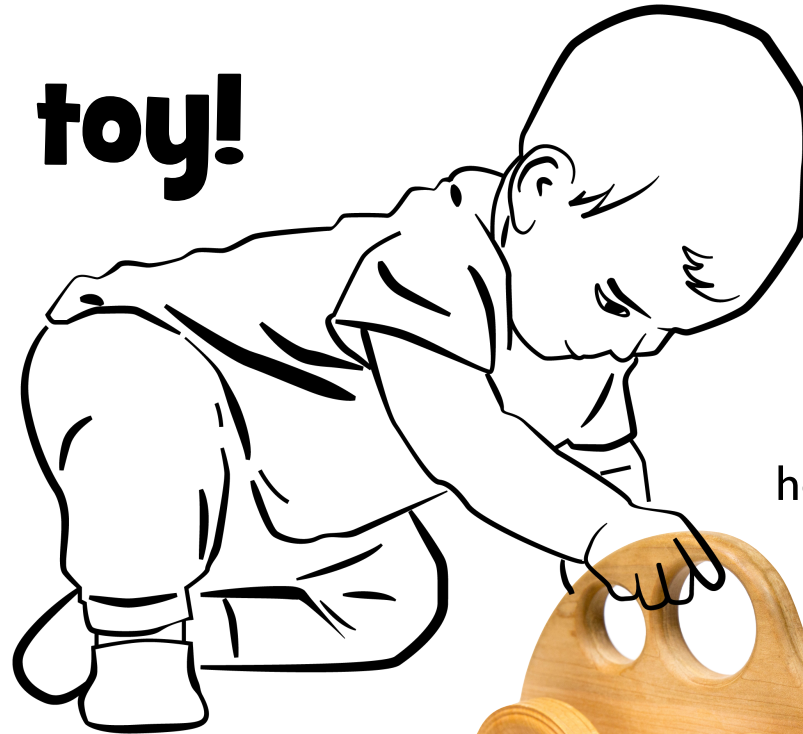
Axel(ies)!



Pull toy?



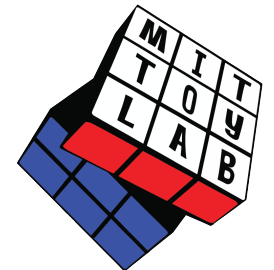
Push toy!



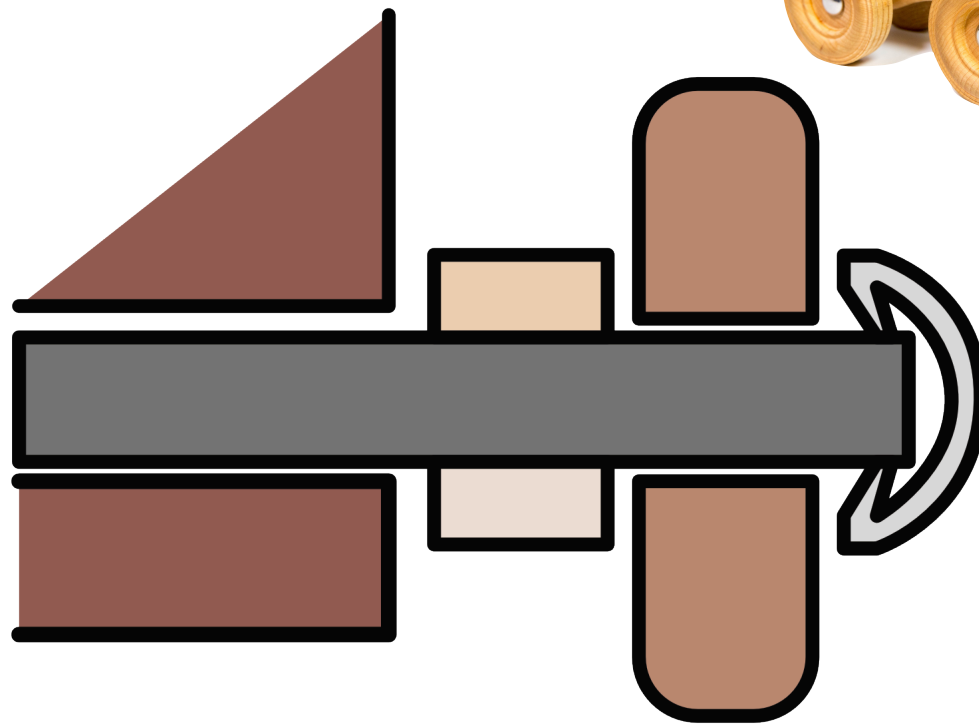
hand grip
food safe finish
appropriate size
hardwood (birch)

heavier construction

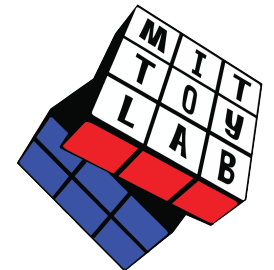
8 months plus (crawling)



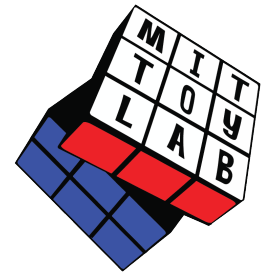
Wheelies!



aluminum shaft and press nut



Pull toy?





Pull toy!

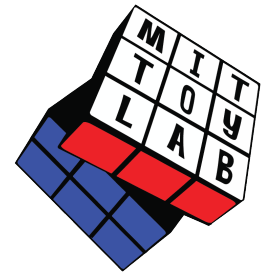
14+ months (toddler)

pull string
hardwood (walnut)

steel axels!



Push or pull toy



Push or pull toy

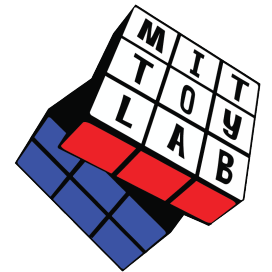
Wood blank sizes



0.75" x 7.5" x 10"



0.75" x 5.5" x 10"



Push or pull toy

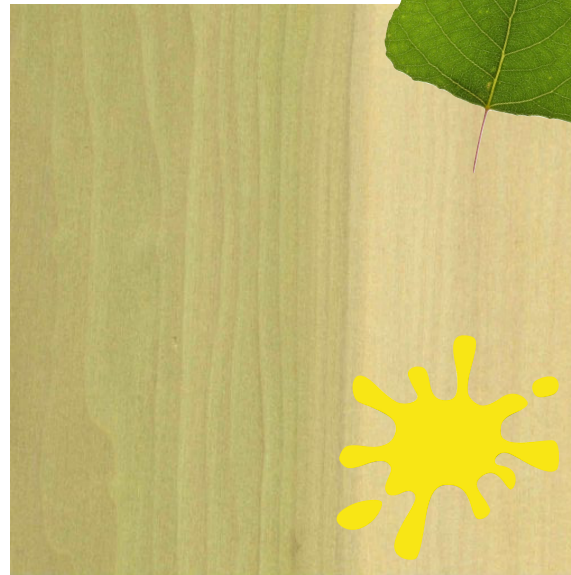
Wood types



white pine

softwood, easy to work

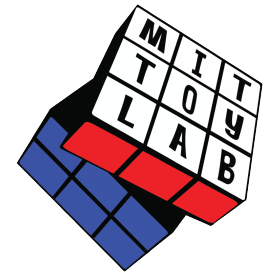
dents and splits fairly easily



poplar

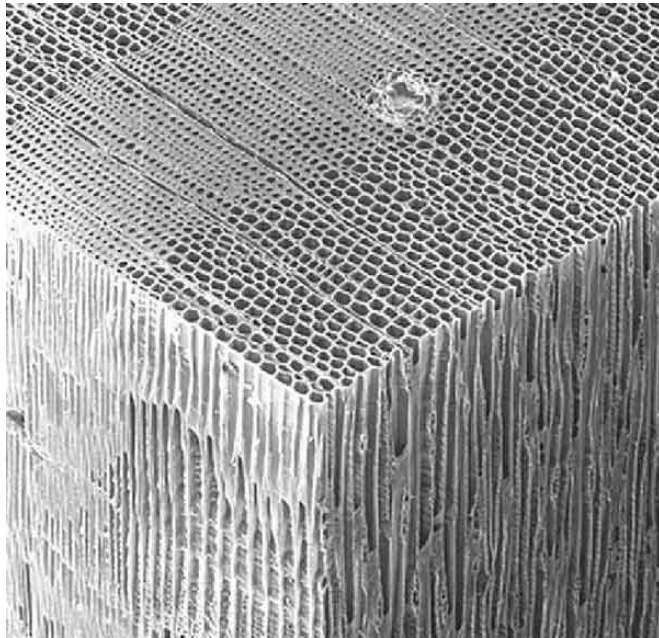
hardwood but soft! easy to work

does not split easily



Push or pull toy

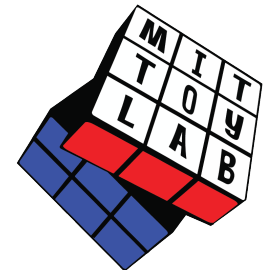
here's wood!



splits along fibers!

longer, aligned fibers
split more easily than
shorter, interwoven
fibers!!

does not split across
fibers!!!



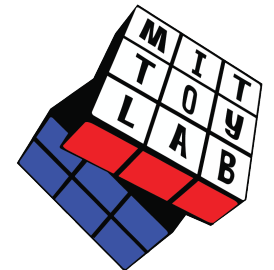
Push or pull toy

Rats (&\$**!), it split

choose the right wood
avoid short grain!



may the grain be with you!



Push or pull toy

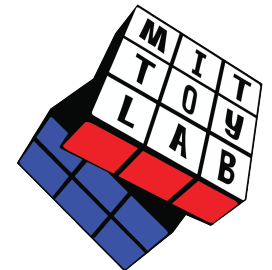
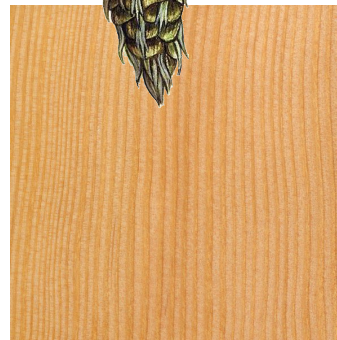
More softwood types!



Western Red Cedar
softwood, long fiber, aromatic



Douglas Fir
hard softwood



Push or pull toy

More hardwood types!



Maple
hardwood

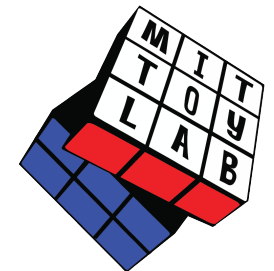


Cherry
hardwood

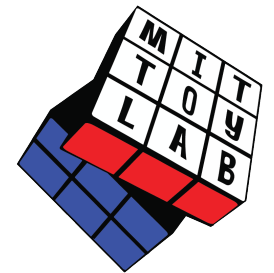


Red oak
hardwood
long fiber

Black walnut
hardwood

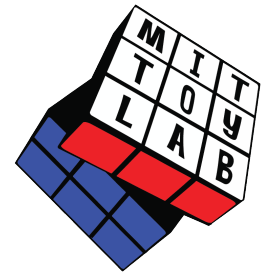
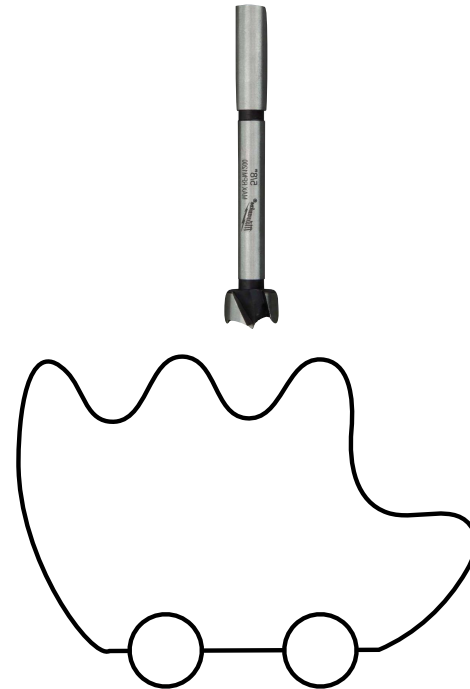
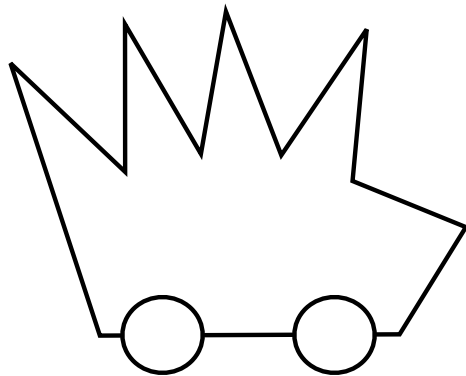


2+ hours!

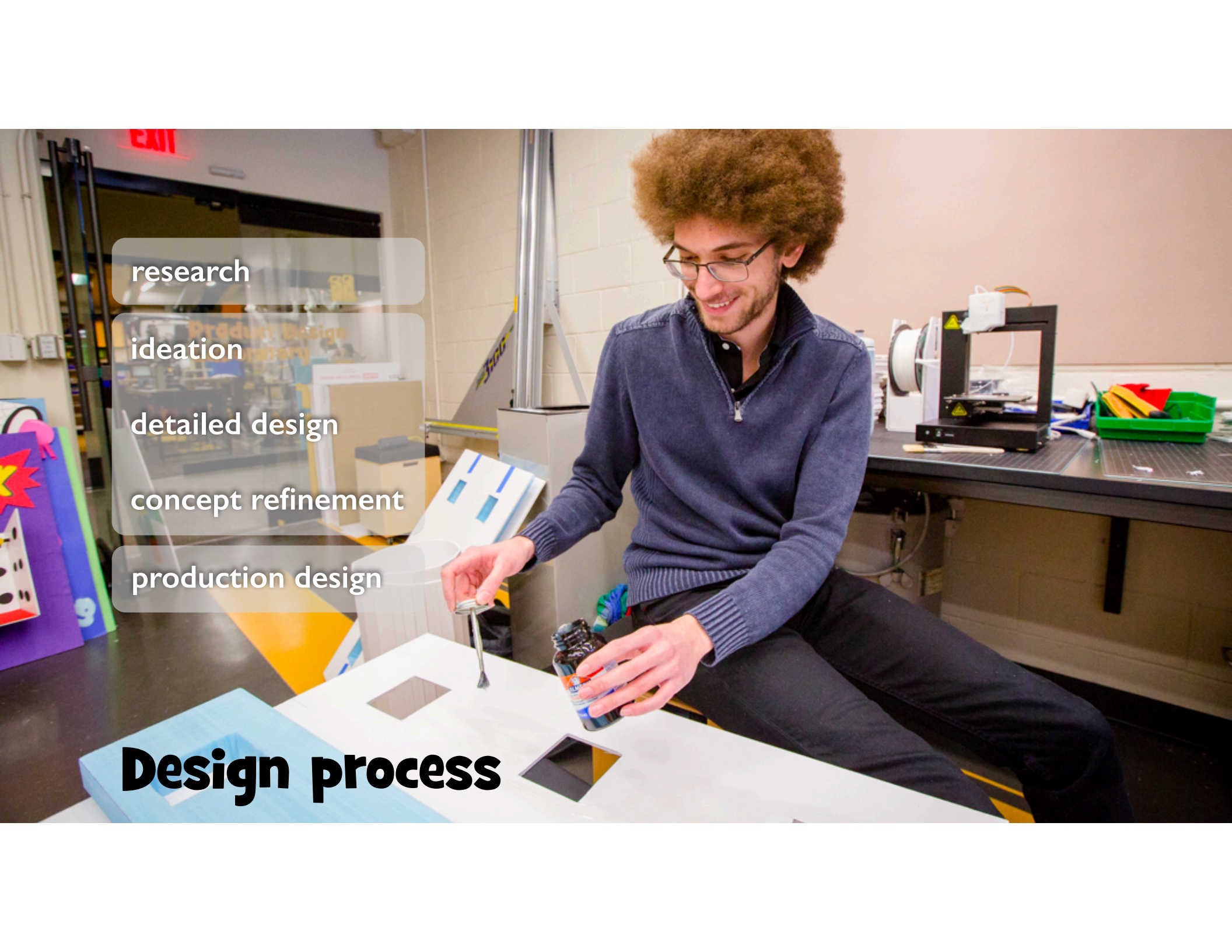


2+ hours!

Avoid shapes with hard to sand areas







research

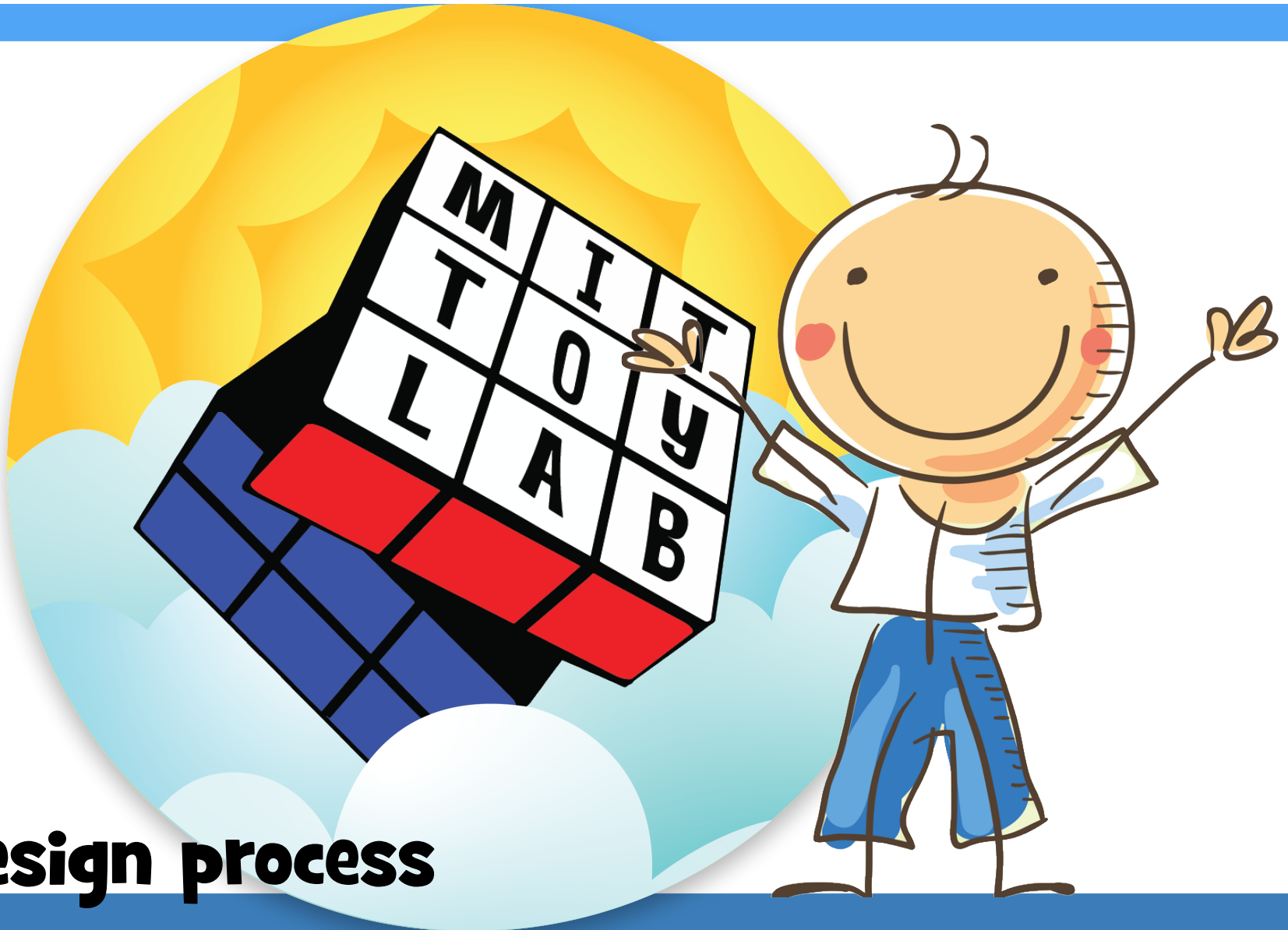
ideation

detailed design

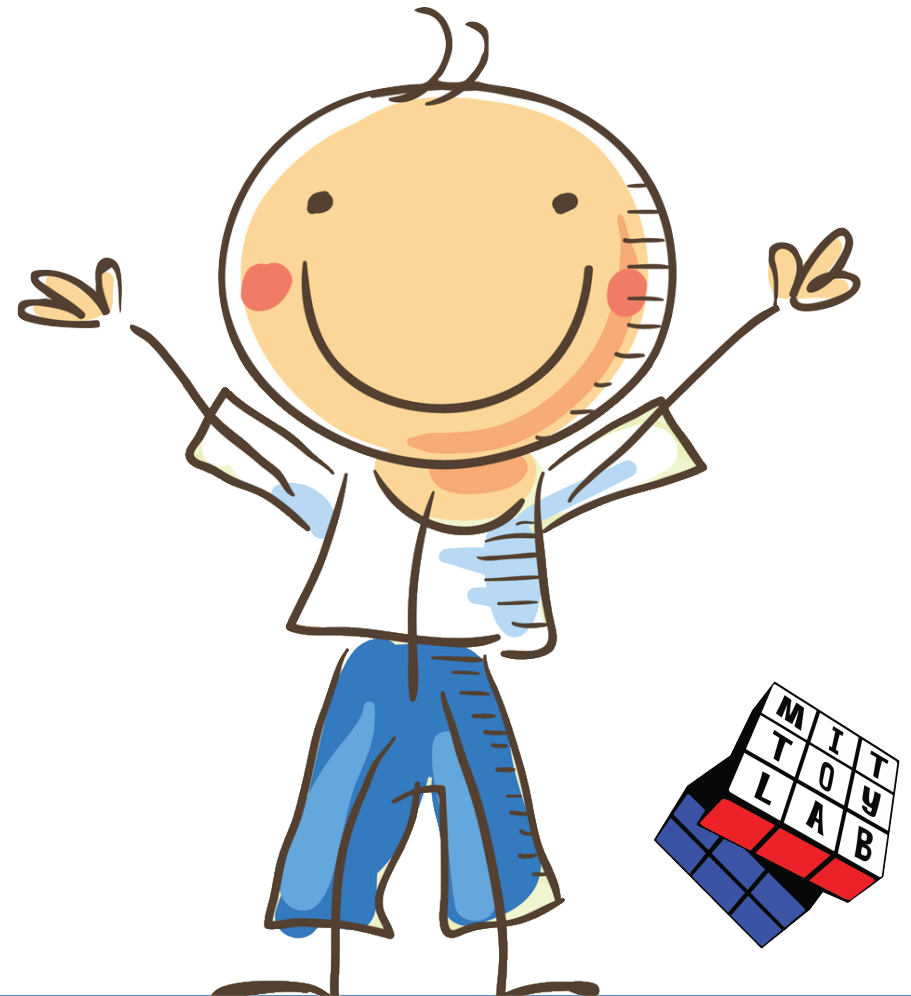
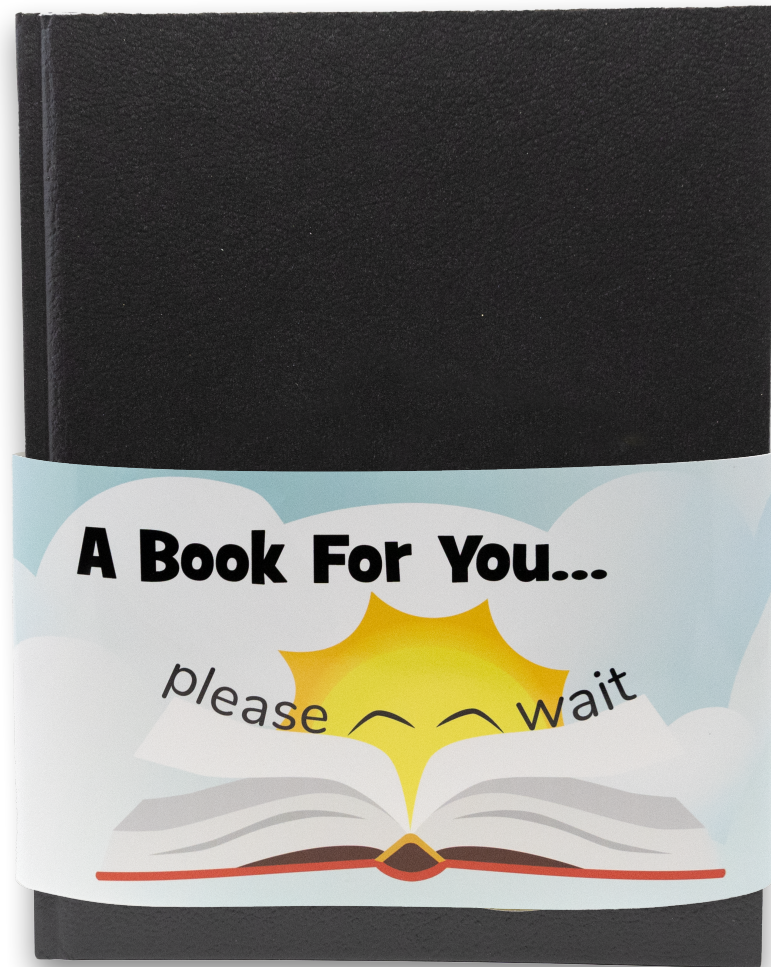
concept refinement

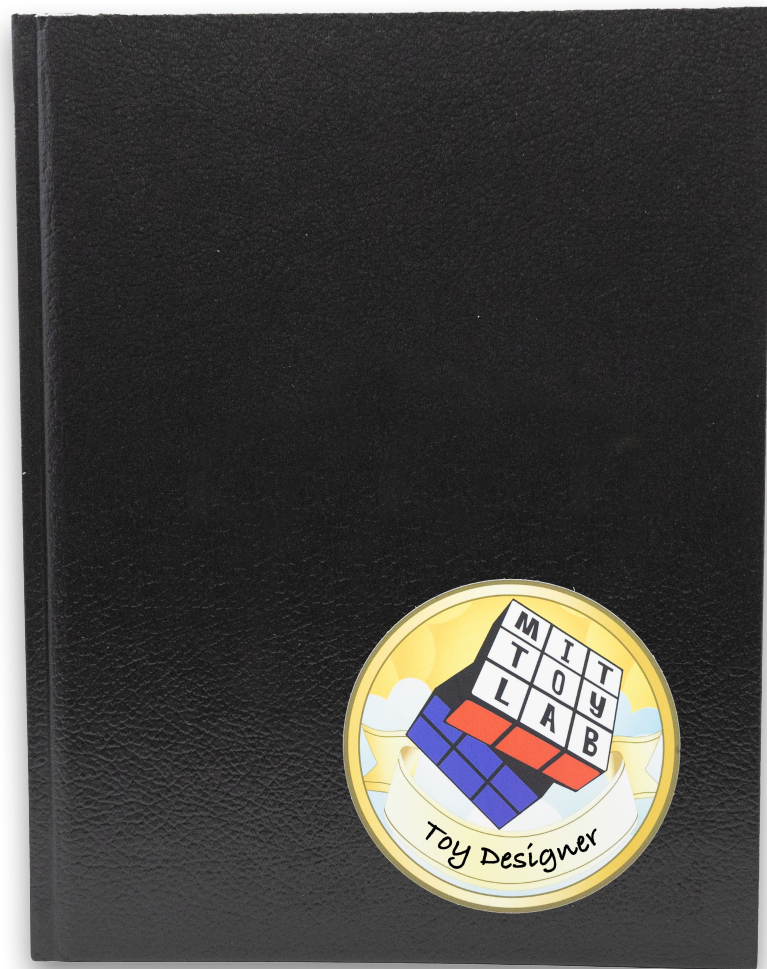
production design

Design process



Design process





A Book For You...

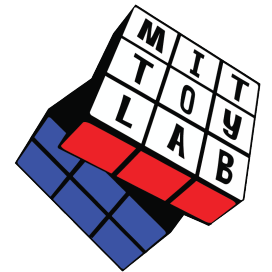


Design process

research

Please look up push or pull toys online and bookmark ones that you think are interesting.

5



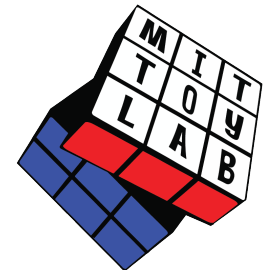
Design process

research

Please look up push or pull toys online and bookmark ones that you think are interesting.

Who is going to be your pull toy's user?

2



Design process

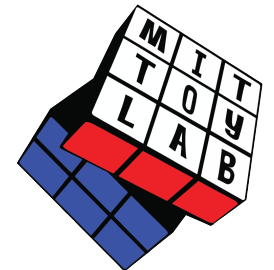
research

Please look up push or pull toys online and bookmark ones that you think are interesting.

Who is going to be your pull toy's user?

What some key design affordances for your user?

2



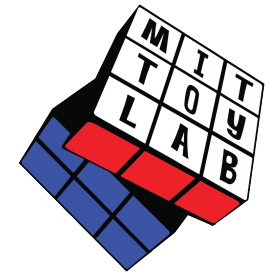
Design process

research

ideation

4

Please sketch many different ideas for your push or pull toy.
Simple, high level concepts. Many!



Design process

research

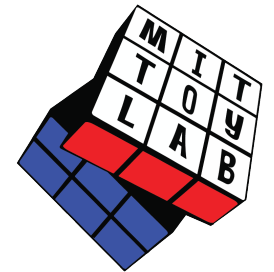
ideation

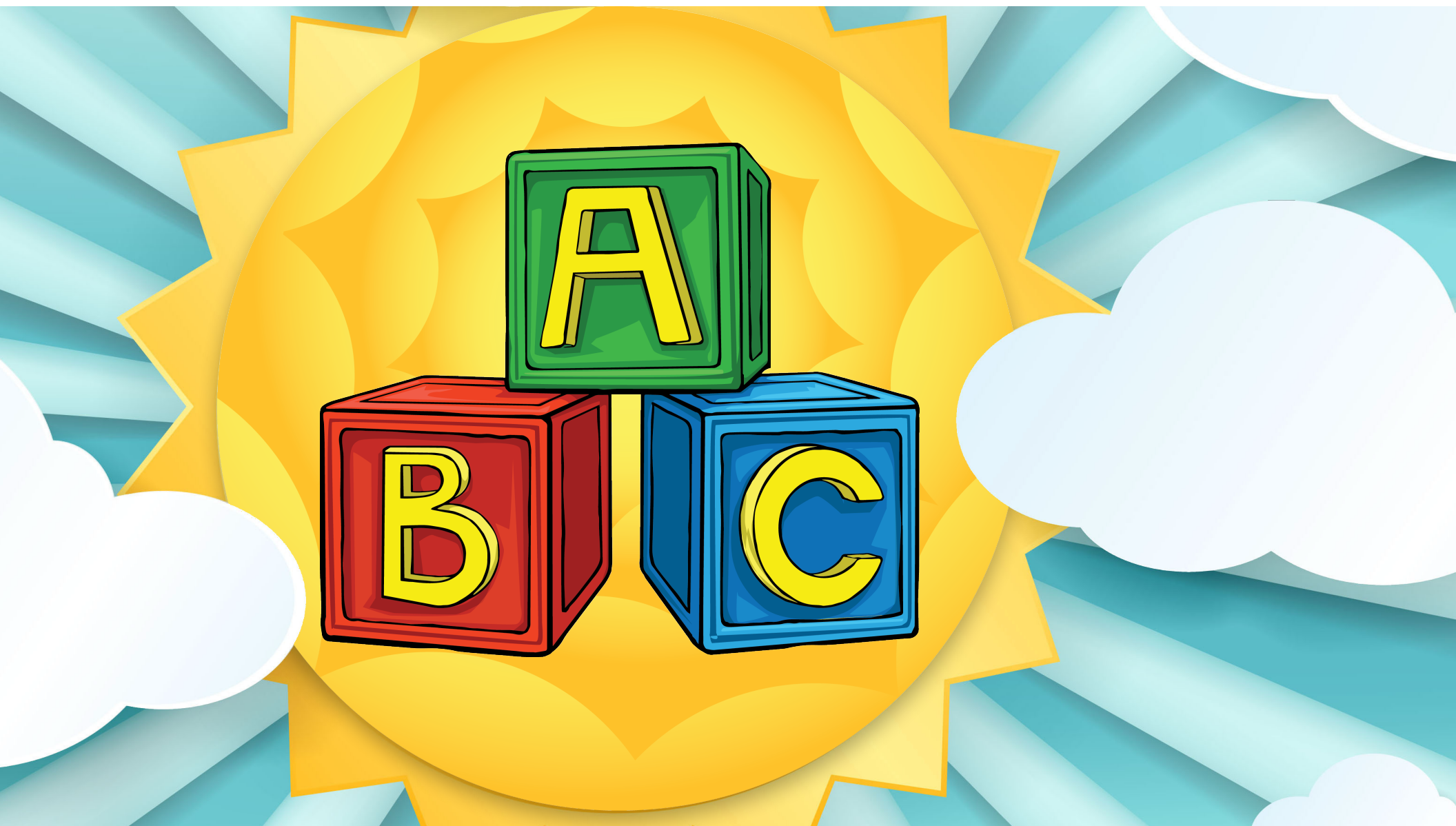
detailed design

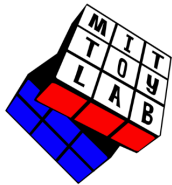
5

Pick a preferred design concept!

Think about the details of the design. Wood grain orientation, the shapes, pieces, and finish. Plus time!







Course Info
Syllabus
Course Staff
Toy Museum



Accessibility

Toy Product Design 2.00b

Hello, and welcome to 2.00b!

Lectures

Mon, Feb 13: Team players

Lecture 2: [ABCs of design slides](#)

Lecture 1: [it's 00b! slides and recording](#)

Please review the [course info](#), including notes about [attendance](#) and [syllabus](#).

Last chance: If you have a conflict at the start of Friday class and haven't completed [this form](#), please do so as soon as you can, so that the staff can contact you to make accommodations.

Labs Week of Feb 13

Please check here Sunday, Feb 12 after 8PM for your team assignment.

Lab 1: Pull toys! Please bring sketches of possible pull toy ideas to lab. You will be working in the shop. Please follow shop safety guidelines, including wearing closed-toe shoes, no dangling jewelry or loose clothing.

Things to-do

Thu-Sat, 2/9-11 Attend your Meet and Greet! Find your zoom link on the [schedule](#).

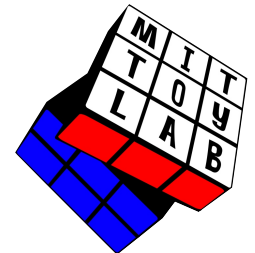
by Fri, 2/10, 11:59PM [Lab section preferences form](#) due
Please **update** the form if your schedule changes and affects your lat time preferences.

To-dos past best before date

- Upload your [personal association map](#). Both black and white or color maps are fine!
- [Sign up](#) for your Meet and Greet!

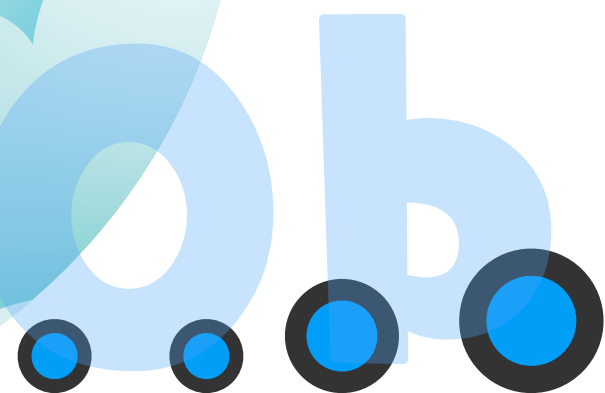
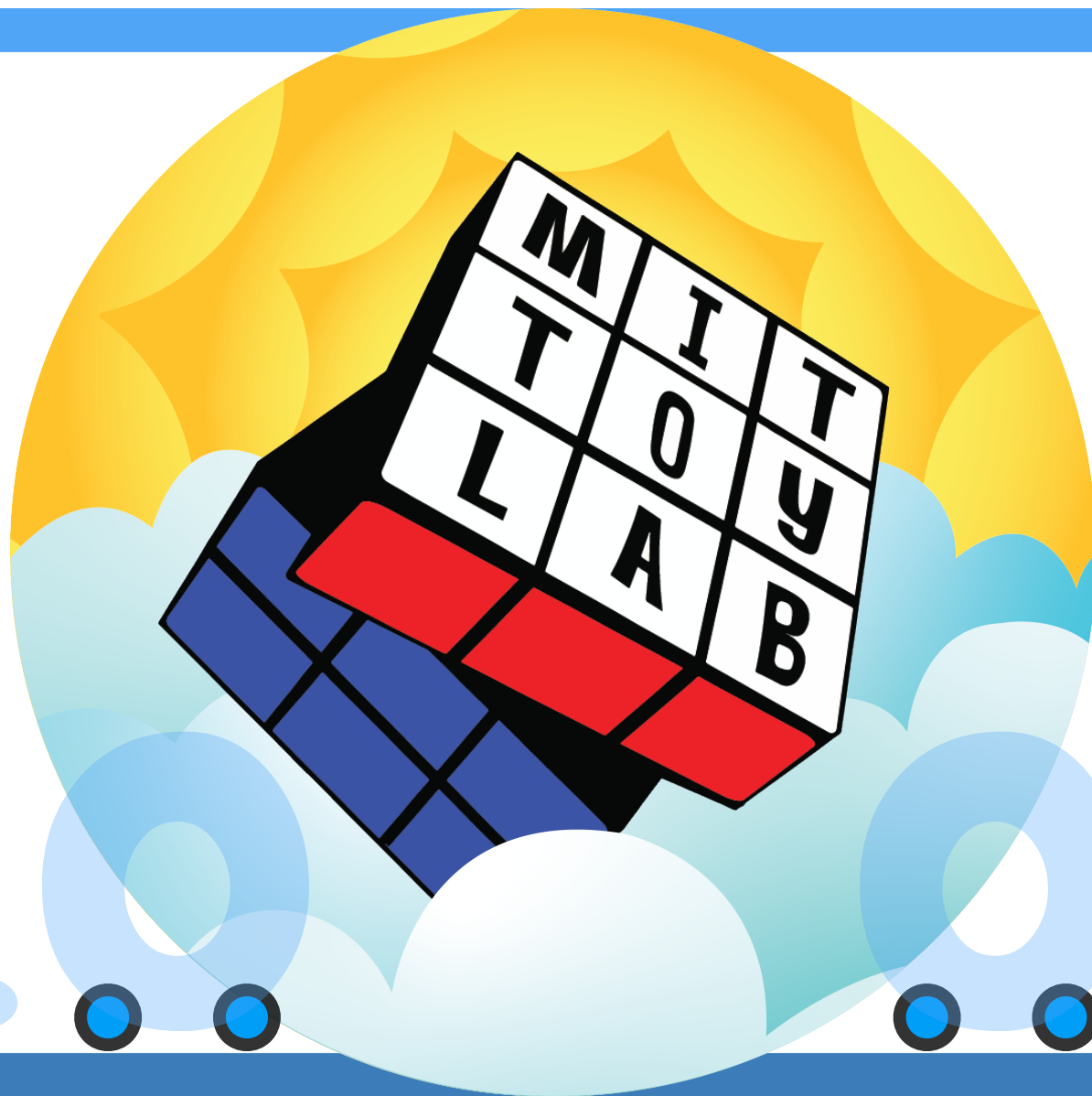


web.mit.edu/2.00b





2.00b



GOOD THINGS
WE BUILD
END UP
BUILDING US

Jim Rohn

