

THE RUBE GOLDBERG EXPERIENCE

A detailed black and white line drawing of a Rube Goldberg-style contraption. The scene is set around a man with a mustache and a topknot, who is seated at a table and eating from a bowl with a spoon. The contraption is a complex assembly of mechanical parts, including a large clock mounted on a stand, a seesaw with a bucket hanging from it, a lever with a funnel on top, a pipe that winds around the man's head, and various other components labeled with letters A through M. A parrot is perched on a branch on the left side of the image. The overall style is reminiscent of classic Rube Goldberg illustrations.

2015 Summer STEM Program
The Cooper Union

Amusement Park

- Rollercoaster
- Ferris wheel
- Thunder
-

Step Ideas

- Boat on stilts
- hit boat &
- Turn from

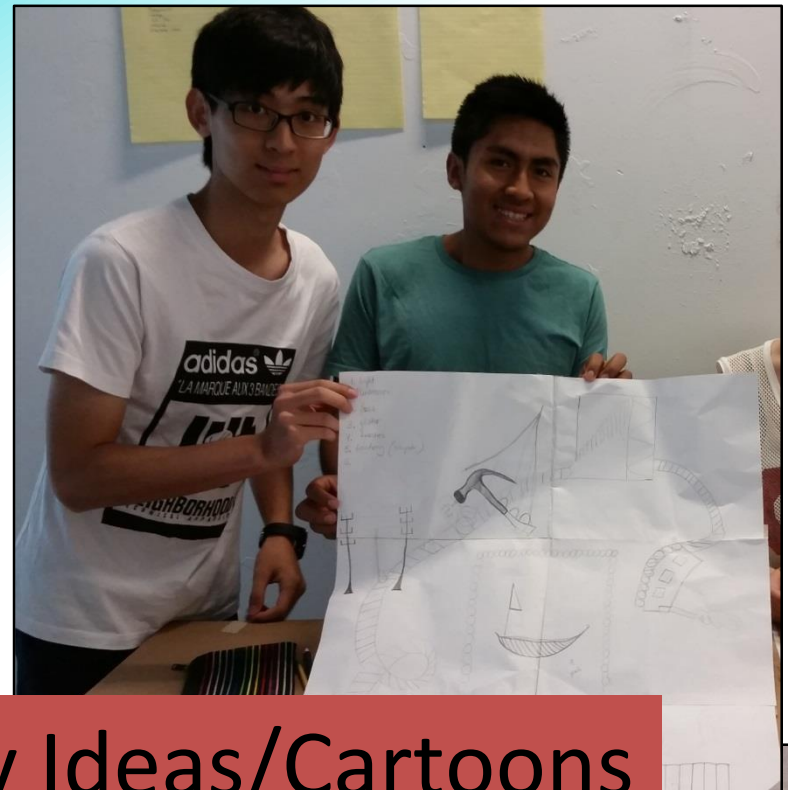
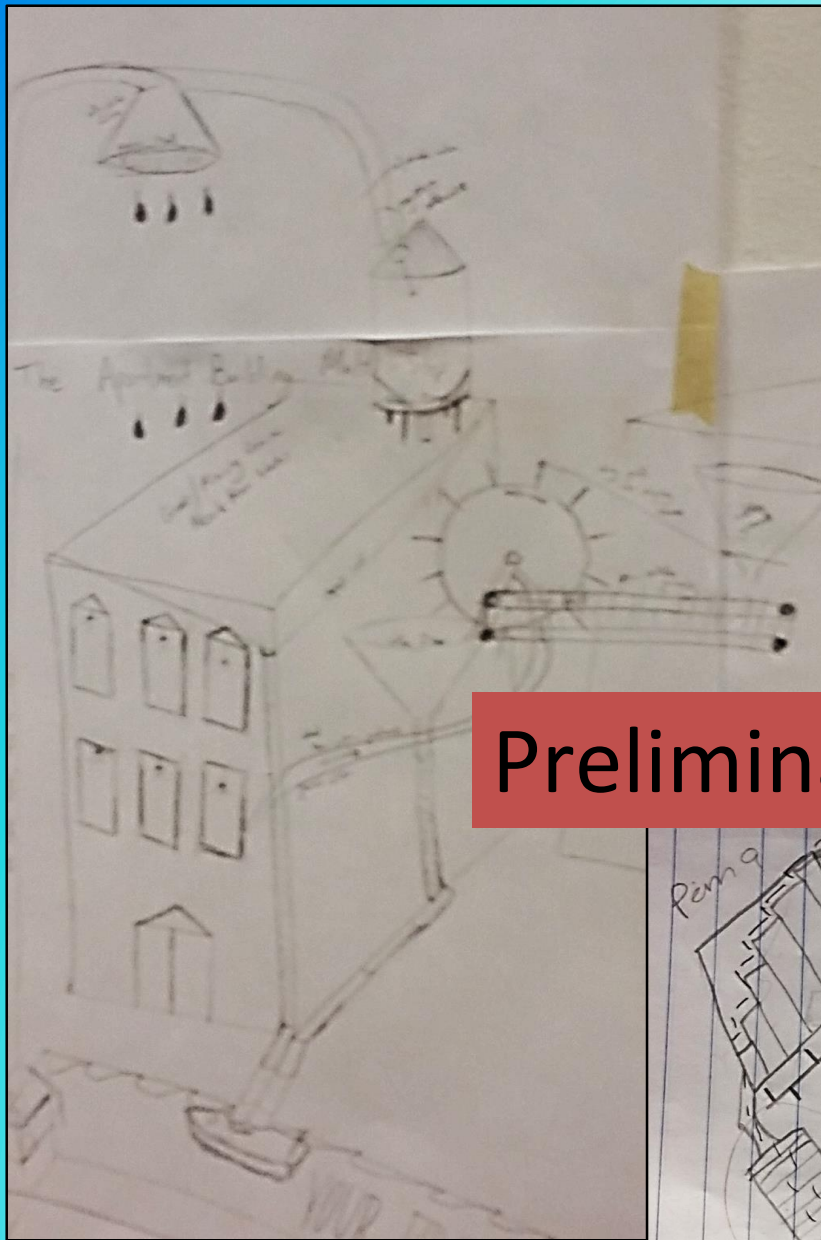
THE FUTURE OF NYC

Defining the Problem

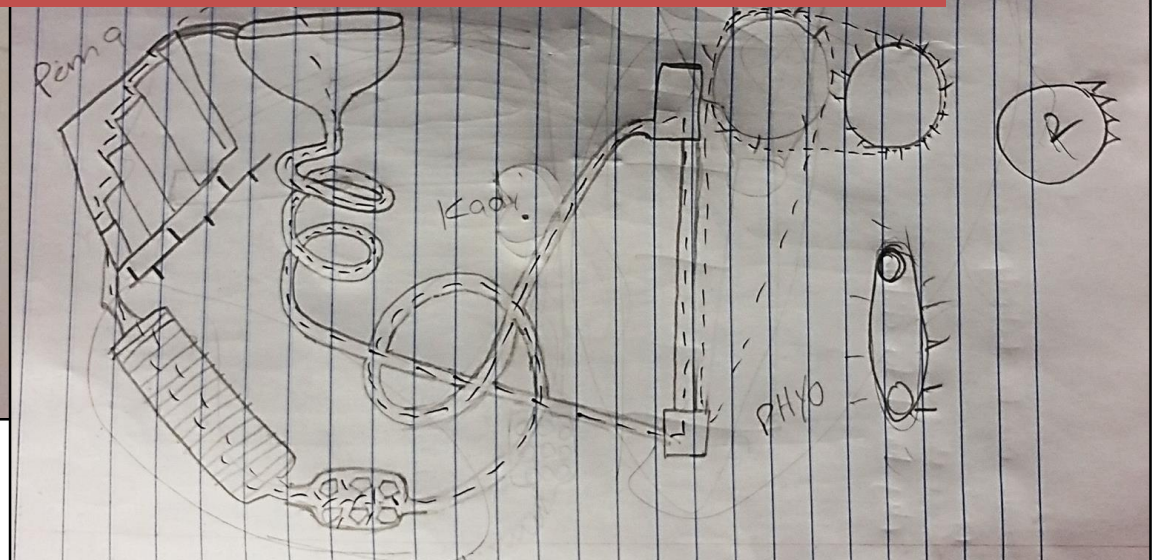
Guidelines

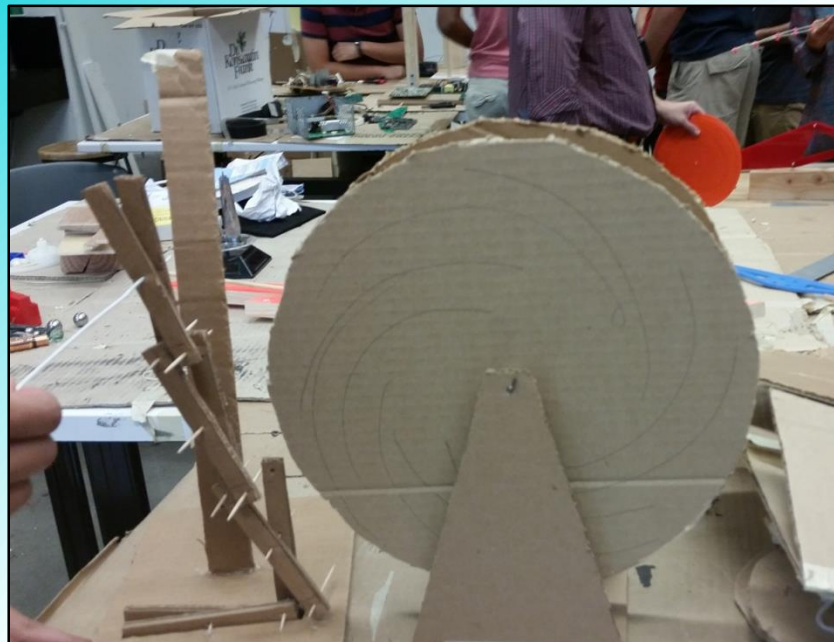
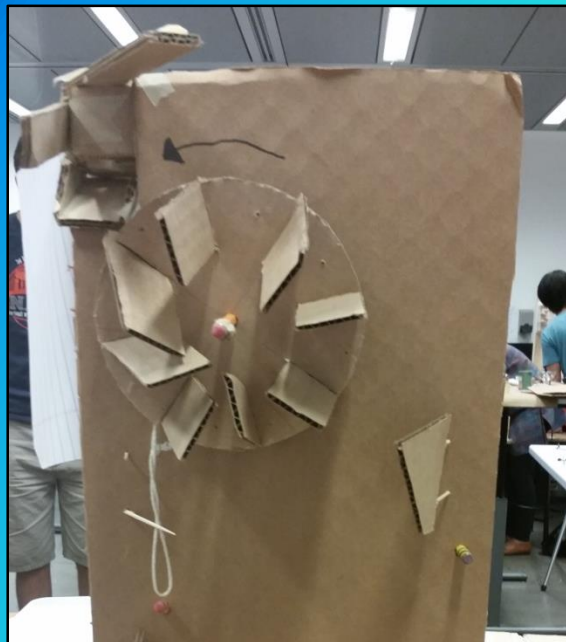
Water
Pollution
and
Hydropower

- 1) Timing
- 2) Understandable
- 3) Interesting
- 4) Reliability
- 5) Energy Efficiency
- 6) Space Usage / Size
- 7) Creativity



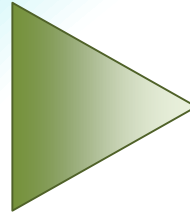
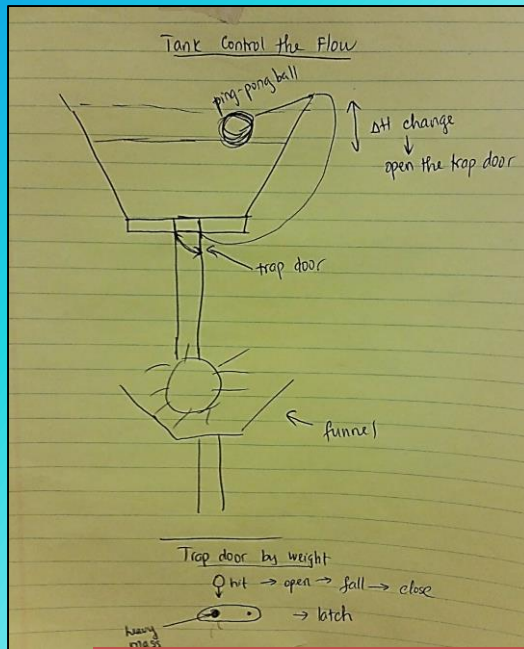
Preliminary Ideas/Cartoons



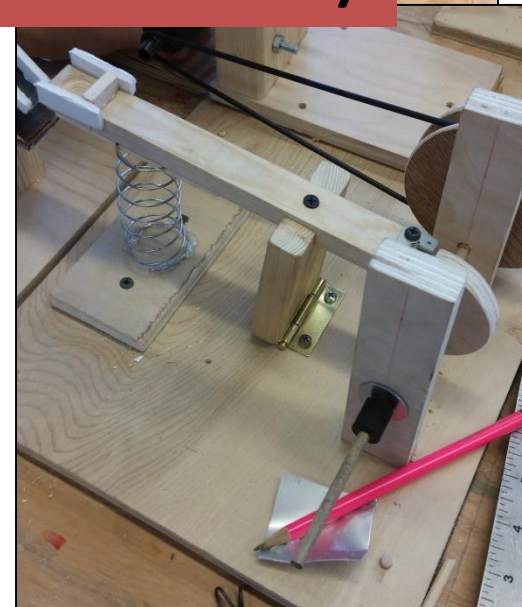
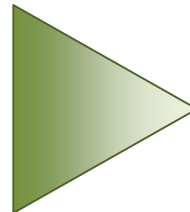
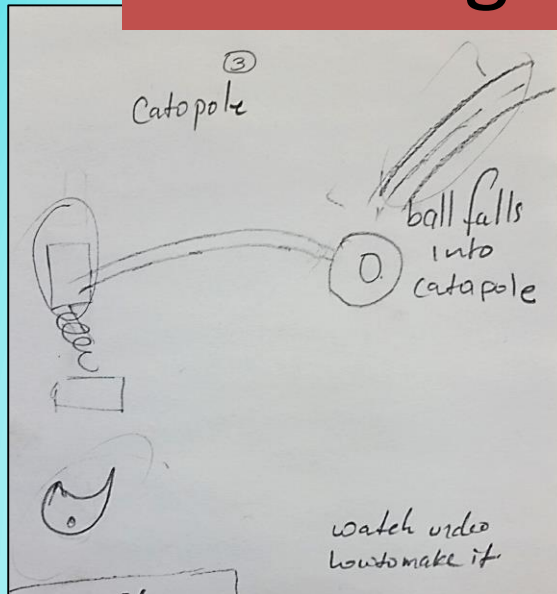


Brainstorming and Prototyping

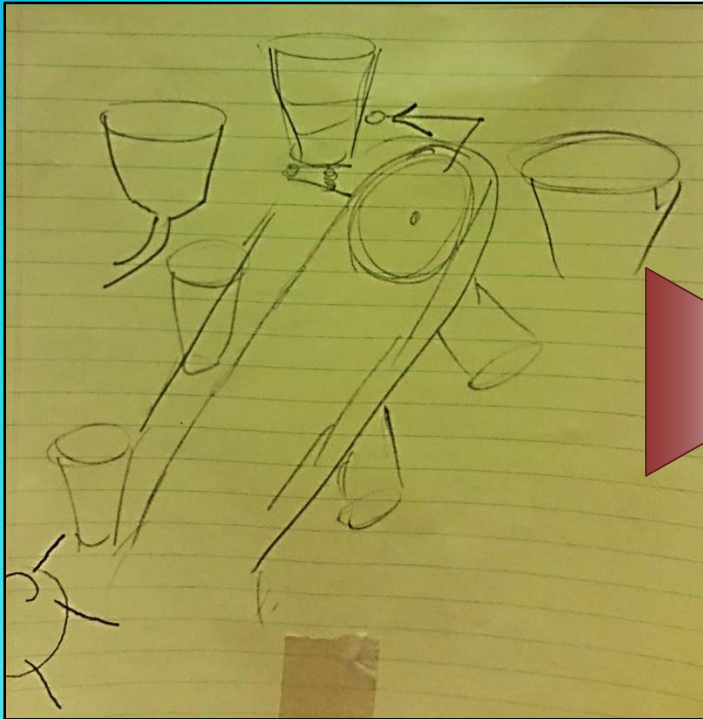




Some Highlights and History

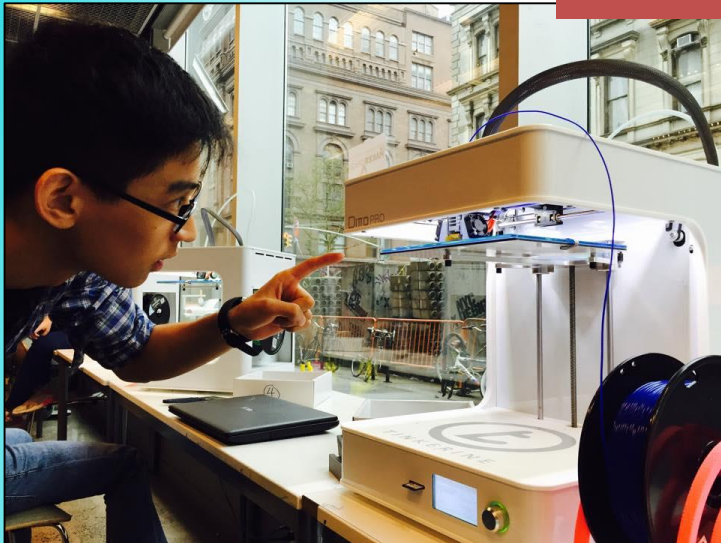


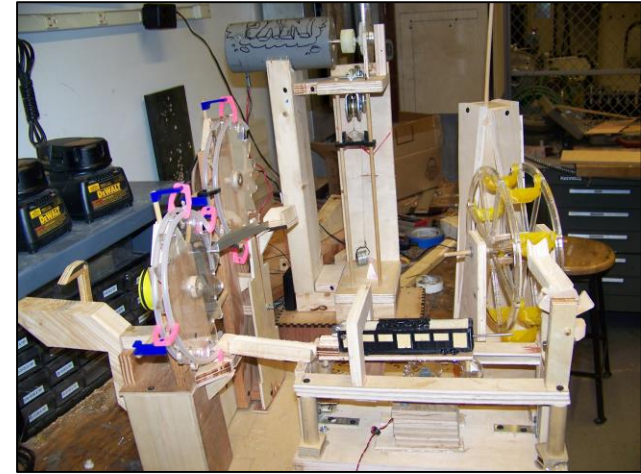
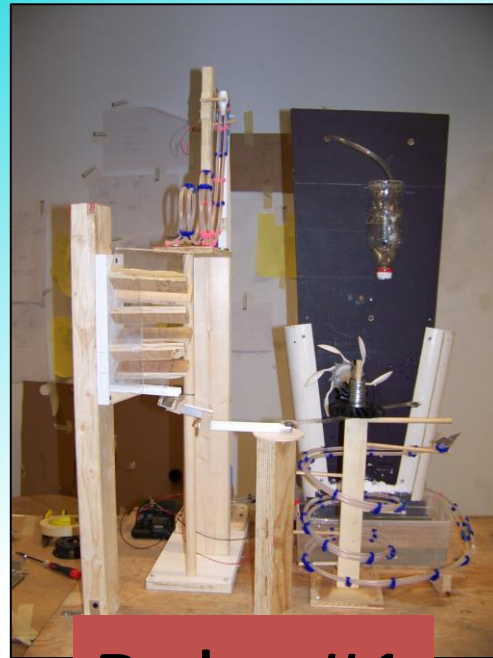
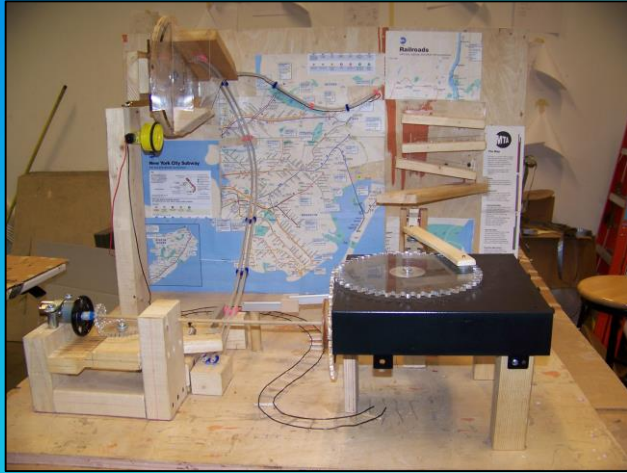
...and sometimes you have to
abandon some ideas





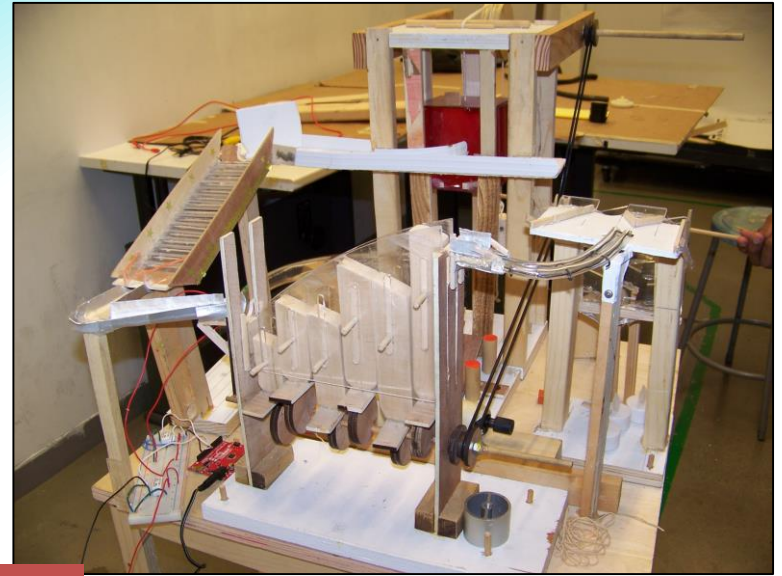
Fabrication



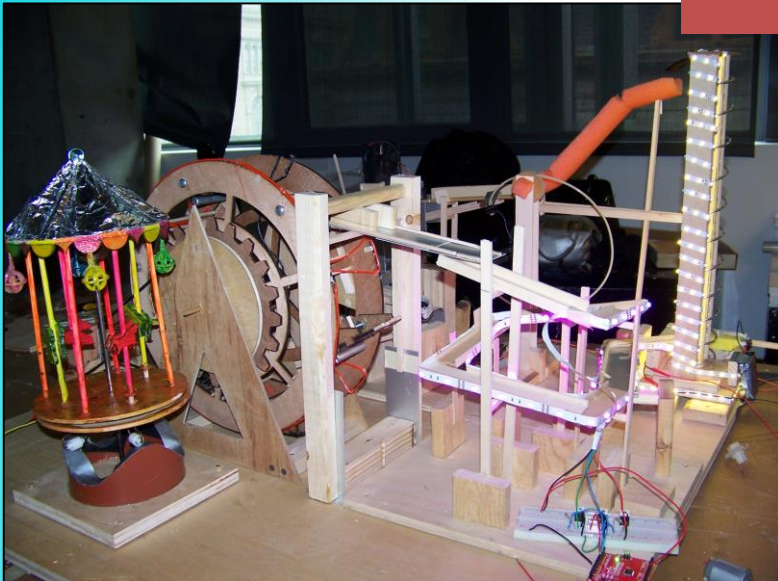


Rube #1





Rube #2



WORKING AS A TEAM

Challenges

- Different personalities and ideas
- Communicating effectively

Solutions

- Working effectively
- Compromising
- Planning and discussing before practical work
- Maintaining a positive mindset
- Goal setting and time management

BUILDING A MACHINE

Challenges

- Limited raw materials
- Lack of experience
- Perfecting a design

Solutions

- Creative applications of materials
- Getting help
- Building prototypes

Acknowledgments

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Thank you!

