

Automata

Technology, Engineering, & Design
Mr. Arnoczy



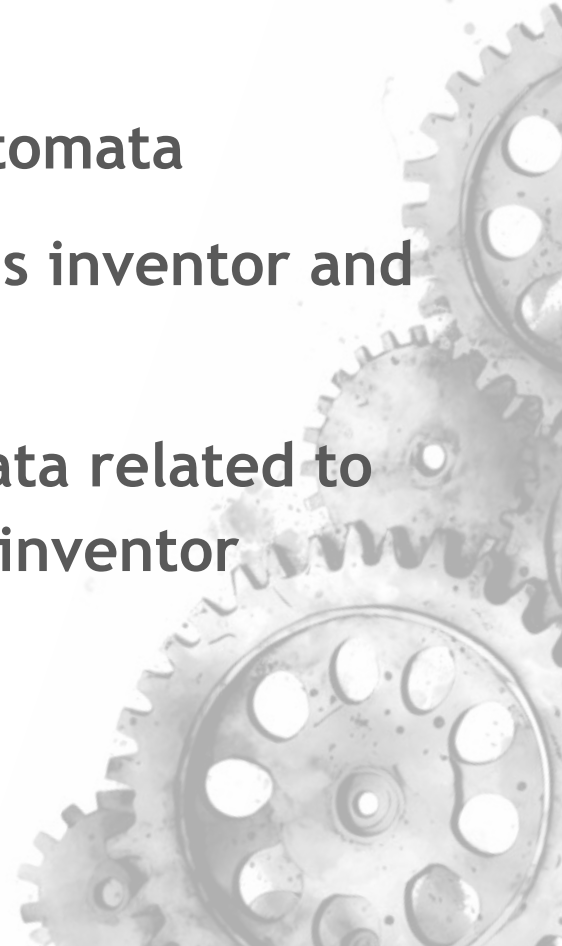
Over the next couple of weeks

We will

Learn about automata

Choose a famous inventor and
invention

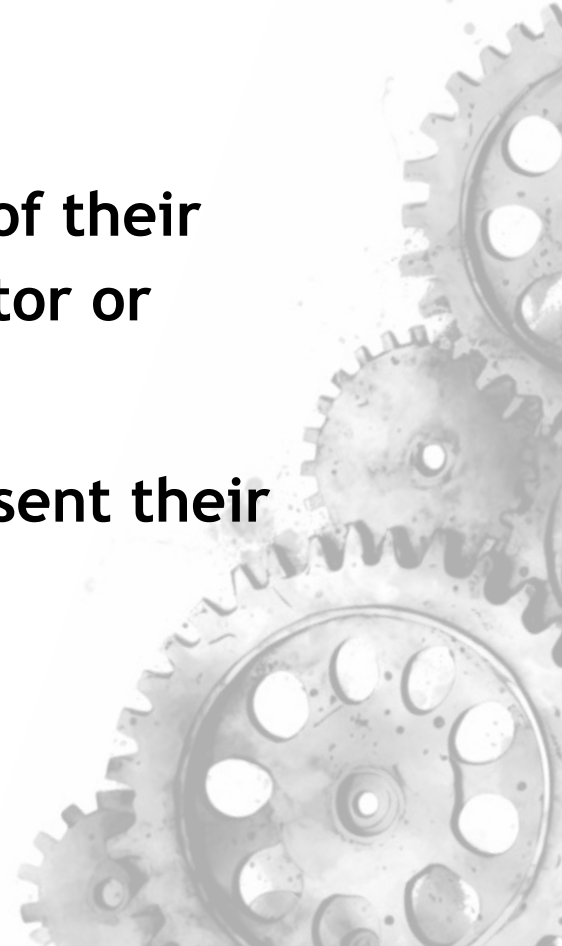
Build an automata related to
the invention / inventor



Automata Project

In teams of 2, students will build automata of their own design to represent their chosen inventor or invention.

At the end of this project, students will present their inventors and automata.



What is an Automata?



What is an Automata?

In this case:

A small, manually operated device that uses a hand-crank to generate motion.

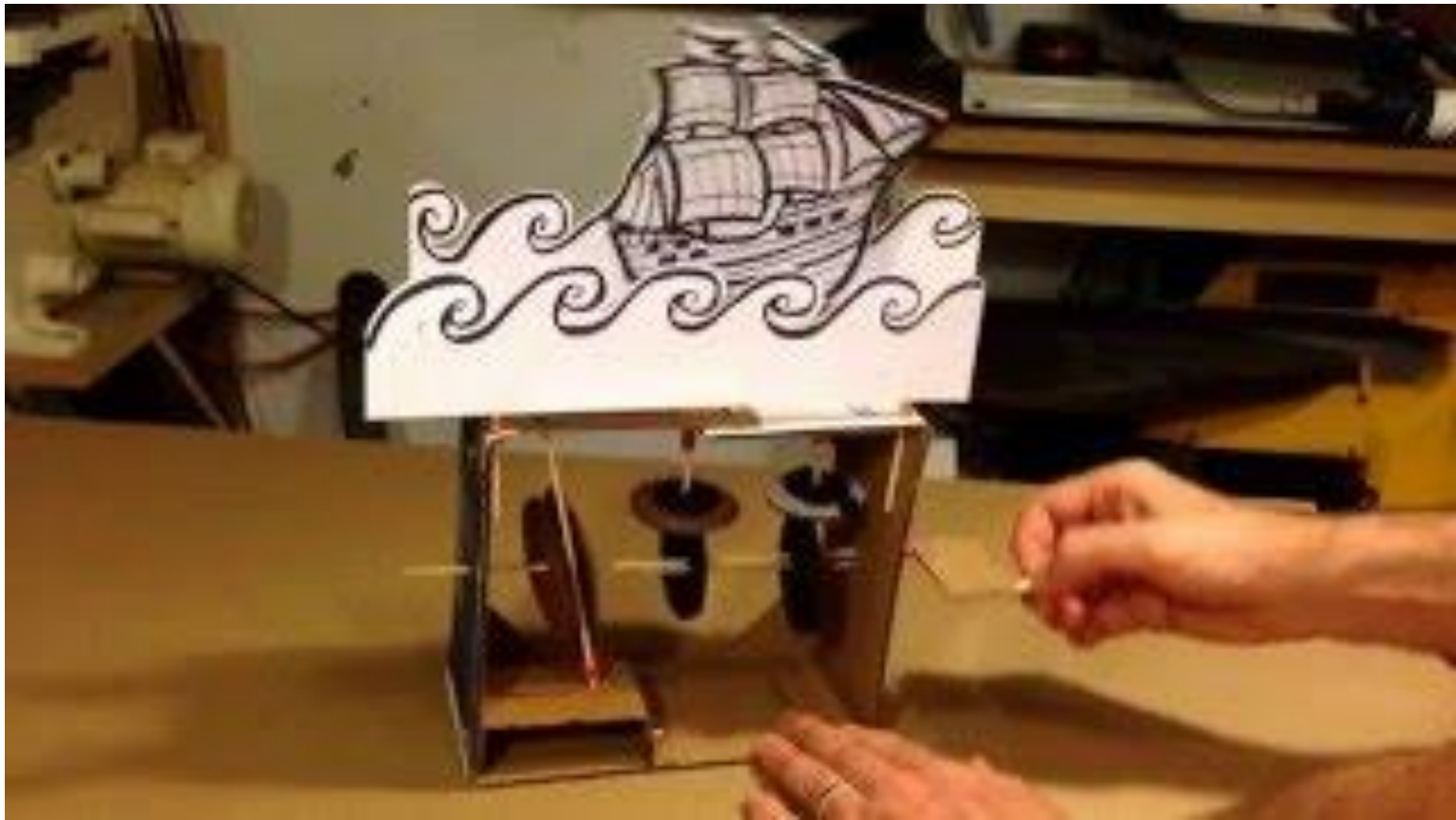
They often depict scenes, figures, or simple actions.





Examples of Automata





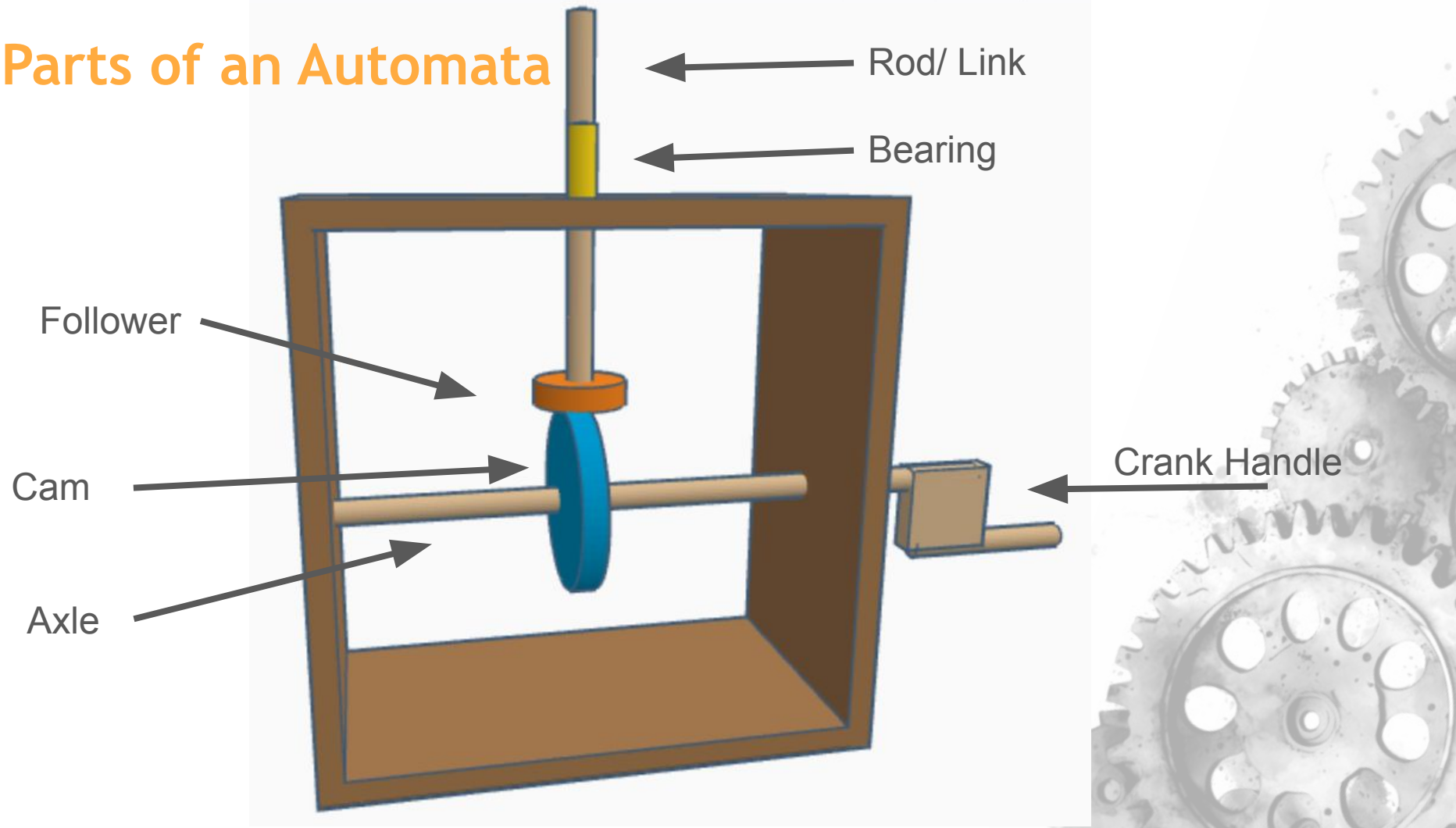
Examples of Automata



Complete the Automata EdPuzzle on Canvas



Parts of an Automata



Researching Our Inventors



Researching Our Inventors

We want to look into:

- Who is your inventor?
- What problem were they solving?
- How has the invention changed the world?

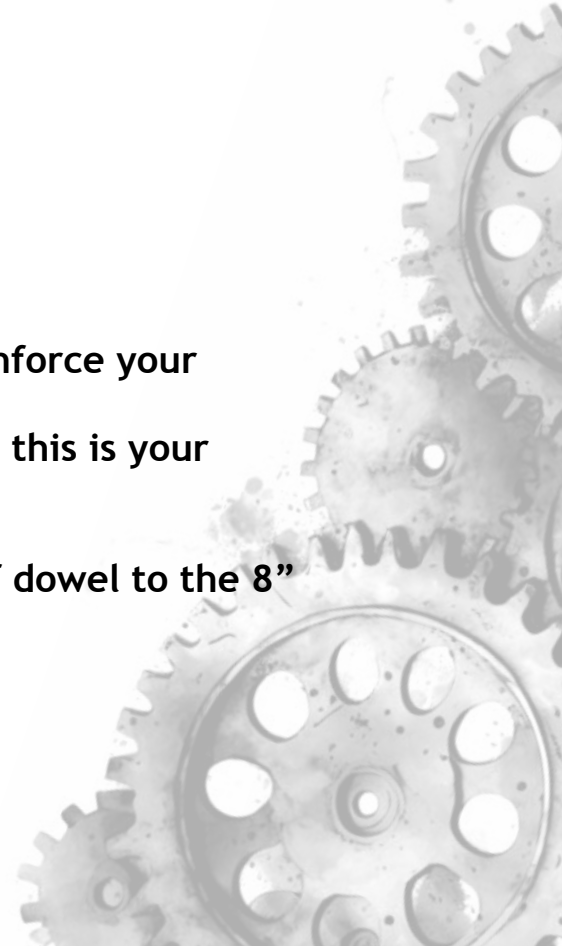


Building a Simple Automata

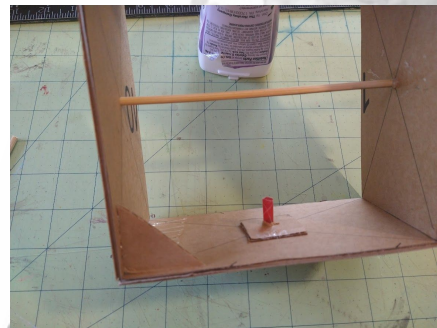
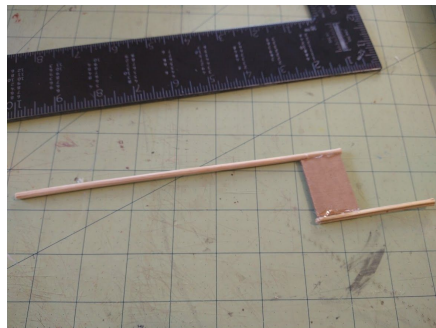
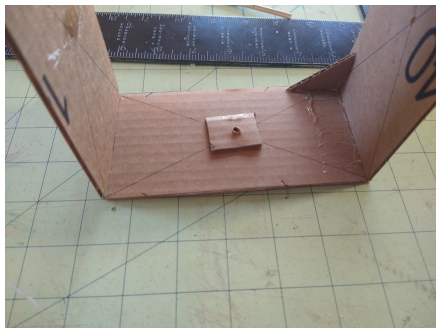
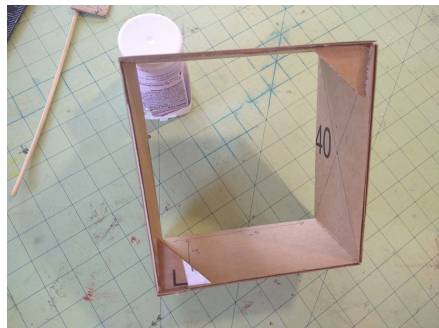
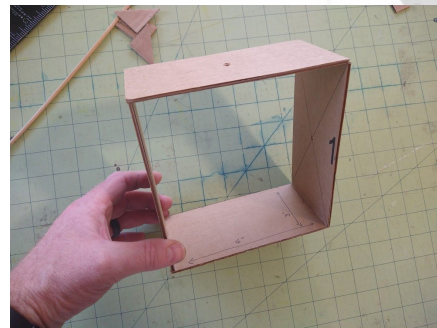
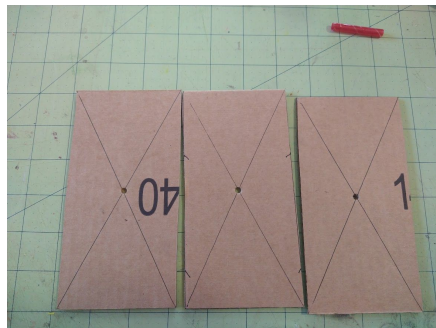
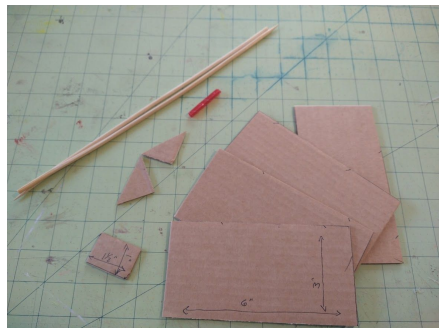


Building Our Box

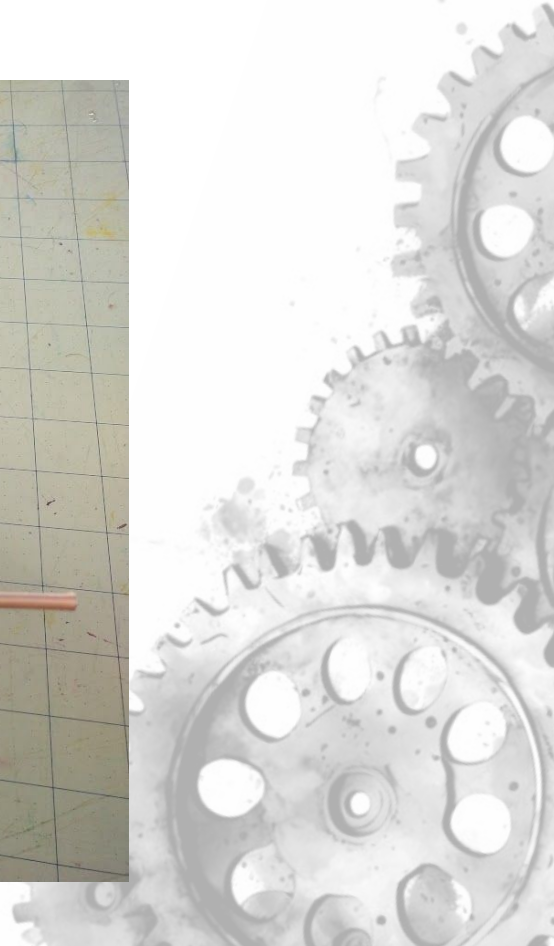
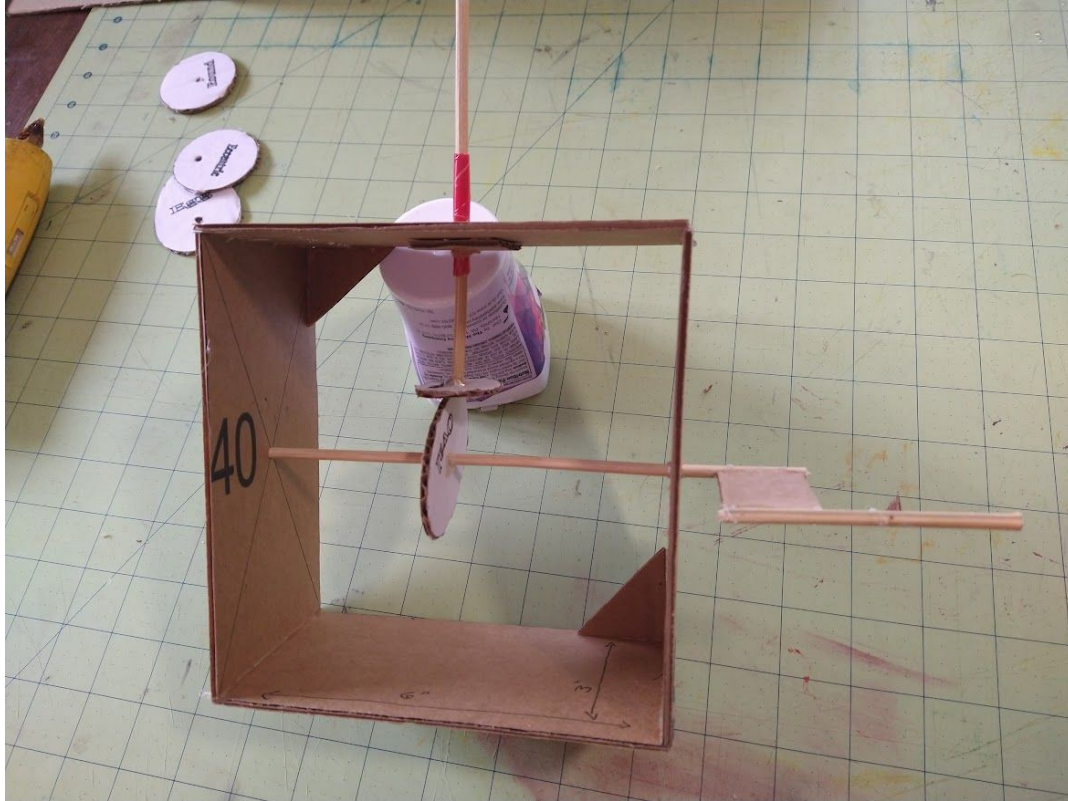
1. Collect your materials
2. Cut out 4 pieces of cardboard - 6" x 3"
3. Poke a hole in the center of 3 pieces
4. Glue them up into a box
5. Glue small triangles into the corner as braces
6. Glue a small piece of cardboard under the top hole - this will reinforce your bearing and keep it from leaning
7. Cut a 1.5" piece off of your straw and place it into the top hole - this is your bearing
8. Cut one of your dowels down to 8"
9. Glue a piece of cardboard (1" x 1.5") and the remaining piece of dowel to the 8" dowel - this is your axle and hand crank
10. Cut the second dowel down to 6" - this is your vertical rod
11. Place your vertical rod into the bearing
12. Place your axle through the side holes



Building Our Box



Building Our Box



Looking at Automata Cams

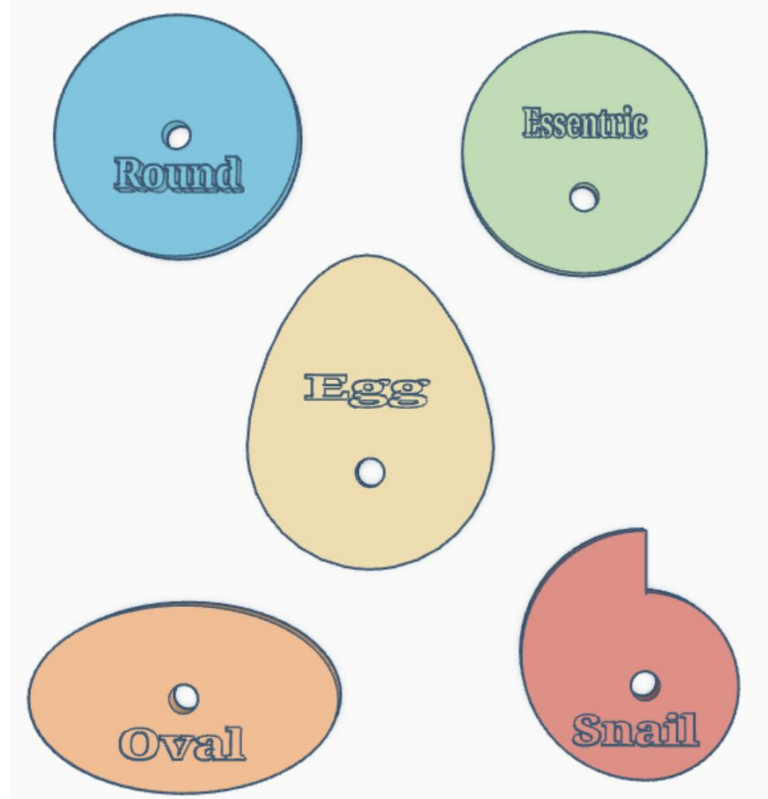


Automata Cams

Now that we have our basic box, we're going to research the different kinds of cams available to us and think about how we can use them in our own automata scene



Examples of Cams - what do they do?

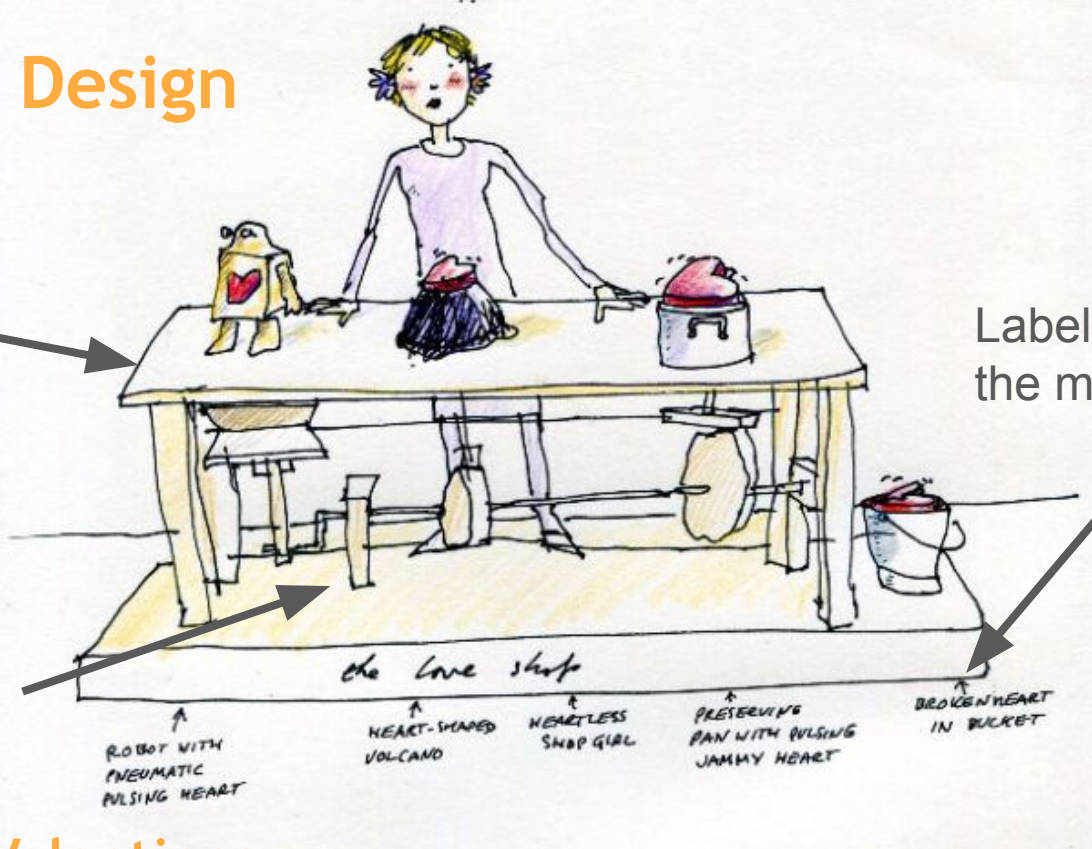


Designing our Automata



Examples of Design

Displays the scene

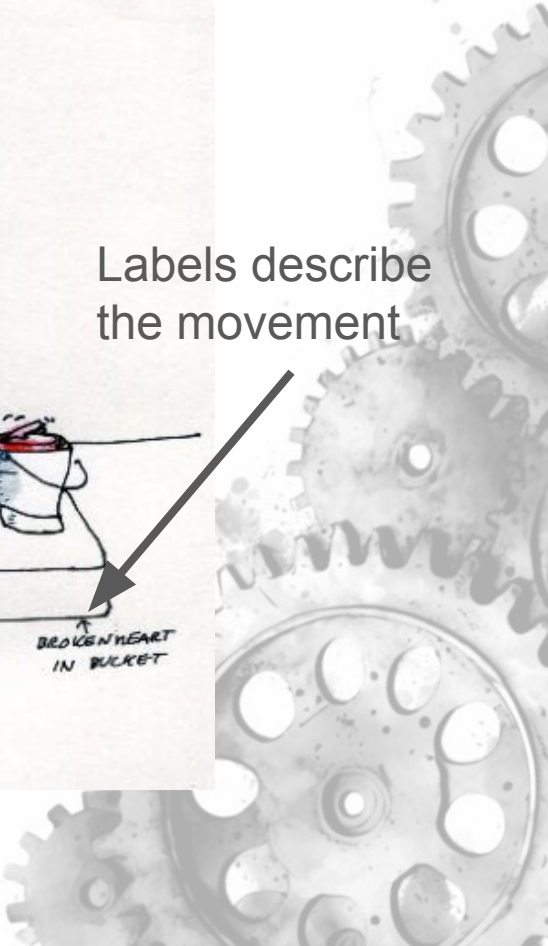


Labels describe the movement



Shows the cam placement

Paul Spooner - Valentines



Time to Build

You'll have 4 days to build your scene



Communicate



On Monday

You will present your automata and discuss:

- Who your inventor is
- What their invention was
- Why is the invention important?
- What your scene is
- How you could improve your design



Wrap up questions



Thank you!

