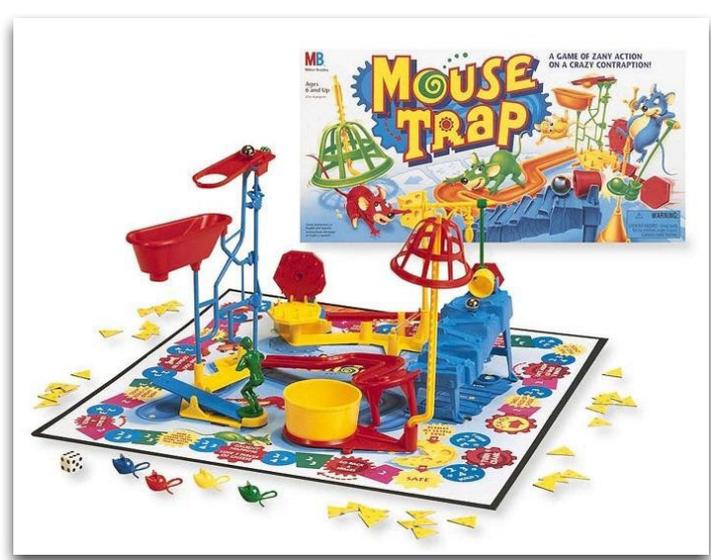


# Make Your Own Rube Goldberg Machine

Have you ever seen videos of contraptions that perform a simple task in an excessively complicated way?

Or have you played the board game Mousetrap?

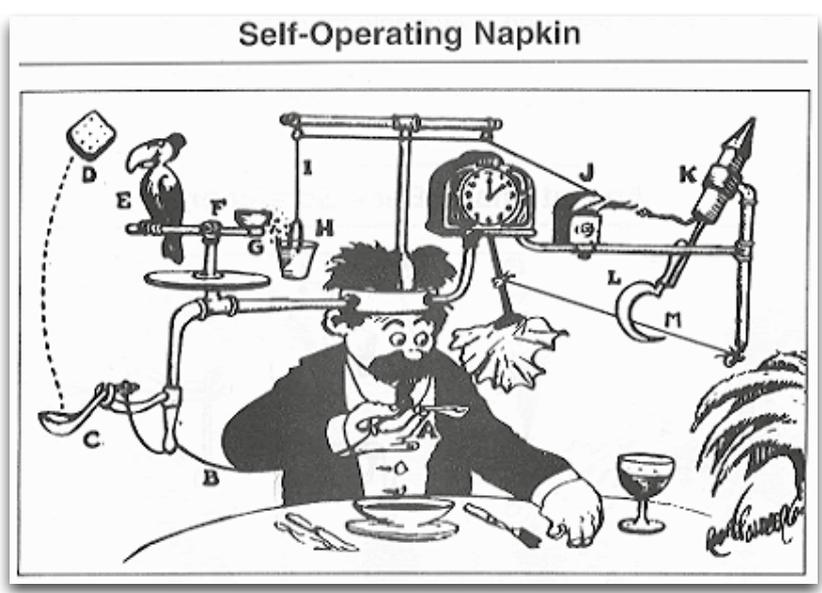
Or have you seen the extravagant machine used to serve sausage and eggs in the film 'Chitty Chitty Bang Bang'?



These are all examples of Rube Goldberg machines - contraptions which are designed to perform simple tasks in indirect and complicated ways.

They are named after American cartoonist, Rube Goldberg, who liked showing intriguing machines in his cartoons.

Making your own Rube Goldberg machine is a really fun way to spend a few hours (or days!), and learn about important physics and engineering principles along the way.



## Resources

There is no fixed list of items you will need for your Rube Goldberg machine - anything and everything can be incorporated somehow. Below are some suggestions of items that might be useful:

### Things that roll:

- Bouncy balls
- Toy cars
- Skateboards
- Tennis balls
- Marbles

### Things that move:

- Toaster (make sure to ask an adult before using electrical or kitchen equipment)
- Dominoes
- Fan
- Wind-up toys

### For making structures:

- Books
- Trays
- Pipes and guttering
- Boxes
- Bottles

### Useful materials:

- String, for linking together movements
- Sellotape, for connecting materials
- Chopsticks
- Blu Tack

## Instructions

Before you start building your machine, it is important to decide what 'problem' you want your machine to solve.

### Maybe it will:

- Pop a balloon
- Ring the doorbell
- Shut a door
- Play a note on an instrument
- Move an object

For more ideas, watch the videos below:

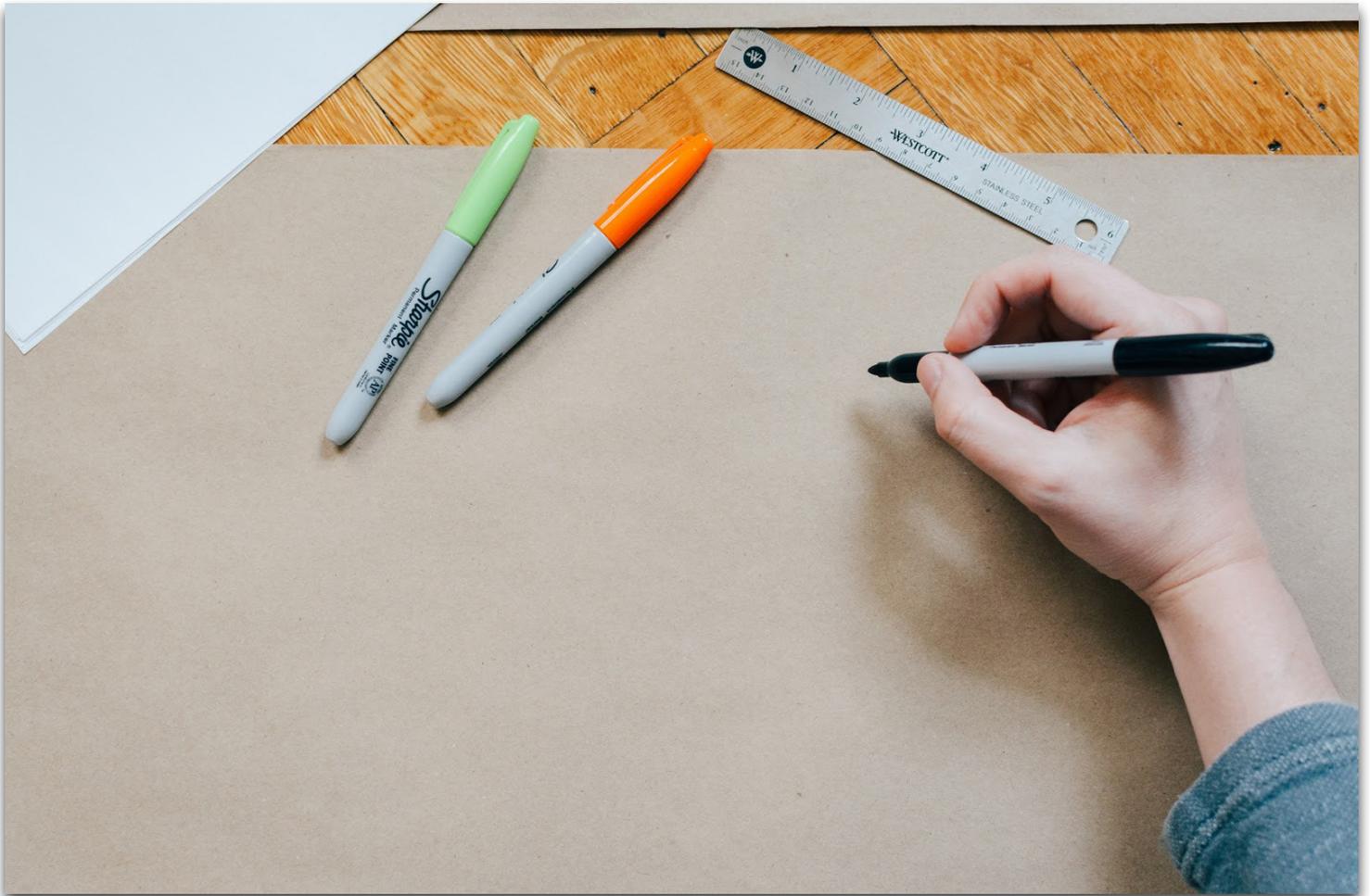
[OK Go: This Too Shall Pass](#)

[Easy Rube Goldberg Ideas](#)

[The Lemonade Machine](#)

Now you have your supplies and decided on the purpose of your machine, it is time to get building. The key concept is a **chain reaction** - every action causes the next action.

It might help to sketch your ideas before you start building to plan what should go where.



As you test and try out different designs, failure is inevitable. Don't be disappointed by this! Behind every world-changing invention, there are hundreds that don't work out. Things going wrong helps us understand 'why' and 'how' to improve our designs.

Good luck, and make sure to share your creations with us using #DynamicEarthOnline!