MIT Class of 2024 Rube Goldberg Challenge

Your Mission (should you choose to accept it) 🚀

The goal of a Rube Goldberg machine is to build a complex chain reaction to perform a relatively simple task. In this case, the task is to transmit a short message. The message can take any form. You could make the machine tap it out in Morse code, unroll a handwritten note, trigger a recorded audio message, reveal invisible ink, throw a paper airplane, etc. as long as the machine is responsible for transmitting the message.

Unfamiliar with Rube Goldberg machines? Check out the MIT Museum's Friday After Thanksgiving chain reactions from years past, this music video by OK Go, or COVID-era machines such as this socially distant way to pass the salt. 🧂

Materials 🧶

Anything you can find, have permission to use, and can use safely is fair game. There is no need to spend money on this. Instead, try to use household objects and repurposed materials. For your convenience, we have included string, masking tape, a golf ball, and a marble in your CARE Package to get you started, but the use of these materials is entirely optional.

Requirements 🎯

1. The machine must include at least 5 transfers of energy. In this case, we are only counting transfers of energy between different types of objects (i.e. a marble hitting a domino would count but a domino hitting another domino would not).

2. The machine may be initiated through human contact but must progress through subsequent steps without interference.

3. At least two sizes of "balls" must be used. Using the marble and golf ball would meet this requirement, but feel free to be creative. Any more-or-less spherical object can count as a ball (a ball of yarn, an orange, etc.).

4. The goal of the machine is to transmit a message to Tim the Beaver's home base back on Earth (MIT). The message should be short and share a greeting or hope for your MIT community. Something simple like "See you soon!", "Hello from [your current location]", or "Destination: Cambridge, MA. ETA: [February or September 2021]" would be appropriate. Feel free to be creative, but keep it positive and school-appropriate. 😊

5. Try to keep it short. You can make your machine as long as you like, but we likely will not be able to include more than 15 seconds of it in the final video.

6. Feel free to rope in people in your household/COVID pod to help you.

Video Submission 🎥

To showcase your hard work to your classmates and the broader MIT community, the Office of the Vice Chancellor will be editing your submissions into a video that shows off the best parts of the different machines. If you would like to have your video included in this compilation, please submit the file using this Google form: https://forms.gle/ZrpNoZm6nenFuUKz6.

Video Requirements:

1. Single take
2. MP4 filetype
3. 30 MB max
4. Up to 20 seconds long (ideally <15)
5. Landscape orientation

Try to use good lighting and keep the camera steady, but feel free to record the video using your phone or iPad. There is no need for you to edit the video, but you are welcome to do so.