

Turing Tumble

The hidden world of computers is made up of creativity and logic all squeezed into chips and tiny switches called transistors. These are controlled by the push of electrons flowing through the circuitry. The clever way switches are connected together make the computer smart and have infinite number of possibilities.

Design thinking is about problem-solving and uses the ability to recognize and manipulate patterns.

Every challenge has an **objective**. Create a machine that completes the objective.

To start the machine, press the start button down ONCE.

Once the machine is in motion, you can NOT touch the machine.

Your machine cannot let balls drop freely for any distance.



The parts all have names – Can you think what the “crossovers” would be in computer language?

More information can be found on turingtumble.com.

Challenge #1 - GRAVITY

Objective: build a machine where **only** the blue balls reach the end. (The red stays.)

Start the circuit board as shown.

You will only have 4 extra green RAMPS to use.

*Can you think of another way to do this using a different configuration?

*Can you get through to Challenge 21 – binary numbers are introduced.

Think About: What did you do when things did not go as planned?

