

# Science Fair Logbook

## Automatic Marble Sorting Machine

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Dec. 21, 2025

- Sketched the machine
- Planned the materials that I will need

Dec. 22, 2025

- Gathered all the materials
- Built the prototype
- Tested the prototype

Results:

Small marbles went into the box specified, with no hassle.

Big marbles went into the correct box but not as expected. The big ones bent the card at the end of the balance, which put the marble in the bottom box.

Dec. 23, 2025

- Tested prototype again

Results:

It seemed like the machine may have suffered minor damages overnight, since the marbles rolled away from the machine when they went on the chute. The marbles should have stayed in the balance.

Dec. 24, 2025

- Began building second version of the machine
- Finished second version of the machine
- Tested the machine

Results:

Big marbles didn't sink the balance at all and went up in the top container, where it should not have gone. Small marbles fell down and away from the machine.

Dec. 27, 2025

- After a lot of trial and error, fixed the second version of the machine by adding another counterweight and making a cardboard wall to stop marbles from rolling away.
- Tested this machine

Results:

It worked exactly as expected.

Dec. 30, 2025

- Recapped my machine project
- Printed project guidelines from Google Classroom
- Looked at printouts

Jan. 10, 2026

- Worked on the script for my video

Jan. 11, 2026

- Worked on the script for my video project

Jan. 12, 2026

- Worked on the script for my video project
- Tried my machine with different items, such as erasers and Lego pieces
- Made a data table to include in my video

Jan. 15, 2026

- Added more content to the script

Jan. 17, 2026

- Watched example presentations from Google Classroom
- Typed up script for video

Jan. 22, 2026

- Worked on script
- Prepared for recording

Jan. 24, 2026

- Recorded science fair video
- Edited video

Jan. 25, 2026

- Recorded another part of the video
- Edited the video
- Submitted the video

Jan. 28, 2026

- Passed into finals for CYSF

Feb. 13, 2026

- Went to work on my new machine that has 3 layers. This one will sort 3 marbles with different sizes and weights.

Feb. 14, 2026

- Continued to work on my 3 layered machine. I used more sturdy cardboards this time

Feb. 15, 2026

- Continued building the triple layered machine
- Troubleshooted to try and fix it, because the counterweight on the balance was not affecting the marbles rolling in their respective compartments.

Feb. 16, 2026

- Tried out new marbles to sort with different weights
- Finally got the machine to work

Feb. 17, 2026

- Began typing up the CYSF info
- Info included:
  - Problem
  - Half of the method

Feb. 19, 2026

- Continued typing up CYSF info
- Info included:
  - Completed method

Feb. 21, 2026

- Continued typing up CYSF info
- Info included:
  - Citations
  - Analysis
  - Conclusion
  - Acknowledgements
  - Logbook