



Colorado Science and Engineering Fair

2025 Individual Project Abstract Form

Please print 2 copies of the completed form. Sign both copies, keep 1 for your notebook and submit 1 copy to your Regional Fair Director with your other paperwork.

Title of Project: Marble Roller Coaster

Finalist's Name: Yezan Kassir

School and City: Crescent View Academy, Aurora

Sponsor's Name: Nessrin Kayali

Category: Physics & Astronomy

Division: Junior (grades 6 - 8)

Abstract (250 words or less):

This experiment investigates how a marble rolling down a track is influenced by kinetic energy (KE) and potential energy (PE), while accounting for the opposing effects of friction, air resistance, and other factors that slow its motion. By altering the release height, the study examines the transformation of potential energy into kinetic energy, with real-world applications to vehicle safety systems, where understanding and controlling energy flow is essential for minimizing risk during impacts and ensuring passenger protection. As well as understanding the principles of energy transfer and biomechanics, which play a significant role in how we move and interact with our environment.

I hereby certify that the above statements are correct and the information provided in the Abstract is the result of one year's research. I also attest that the above properly reflects my own work.

Finalist's Signature:

Date:

In addition, all students must complete the ISEF Student Checklist (1A), Research Plan, Approval Form (1B), and Checklist for Adult Sponsor (1), and any other ISEF forms required for this type of project. See the International Rules and Guidelines for form requirements. Return COPIES of all of these forms to your Regional Fair Director with you Finalist Verification/Permission Form. **A signed copy of this form must be included in your notebook.**