



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: Bone Trauma Analysis

Finalist's Name: Izzy Michael

School and City: Green Mountain High School, Lakewood, CO 80228

Sponsor's Name: Jen Flores

Category: Physics & Astronomy

Division: Senior (grades 9 - 12)

Abstract (250 words or less):

The conduct of breaking and analyzing the trauma caused to bones was an act to grow the understanding of how different fractures can affect the fatality rate for organisms. In this experiment, with great care and responsible storage of the bone, the risk in the data collection when experimenting isn't going to be as great, in addition, adjusting the bone at various angles to apply forceful pressure down upon it, to purposely cause damage. Equally important, data such as weight, distance from the bone to the object applying force, and the time the force was applied to the bone are collected. To perform formulas for velocity, kinetic energy, and impact force, enforce the idea of keeping the data collected closely similar when in a chart. Nevertheless, understanding how fractures created in the bones from the angle change affects the fatality. In lieu, the fracture changes are caused by the different amounts of impact forces being applied to the bones. Bone trauma analysis is supposed to show what happened to create such bone trauma in an individual—used in several sciences like forensic science, palaeontology, and archaeology to find information about each other. Regardless of the organism/identity of the bones, age, and what happened to the organism to which the bone belonged. That's why the hypothesis, that if impact force is applied to bones at different angles, then the fatality rate of the fracture would change because different fractures can create different internal wounds within the organism, is being tested.

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.**