Colorado Science and Engineering Fair

2024 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: Can I Break the law of conservation of energy by making a magnetic motor run only on

Finalist's Name: Madison Kirchhoff

School and City: Craver middle school Colorado city

Sponsor's Name: Bethany Bak

Category: Engineering (ENGR)

Division: Junior (6th - 8th grades)

Abstract (250 words or less):

Abstract

The law of conservation of energy is a law stating that energy cannot be created nor destroyed. I would like to potentially break this law by using a magnetic motor only running off of magnetic potential energy. The reason why I'm using the magnetic motor as my example is because a magnetic motor that independently creates energy cannot exist because of the law of conservation. Science studies show that the magnetic motor will not have enough force to move forever and will return to the equilibrium position, because perpetual energy cannot exist on earth. Here we show that when we used the magnets to make the magnetic motor spin maybe only once or twice until the magnetic motor stopped the friction then went back to floating in the air until being used again. The reason for this is because when the motor spins it doesn't gain or lose energy. The science experiment was a failure because perpetual energy cannot exist but I do think it's possible to make the magnetic motor spin longer underwater since magnets work better underwater than in a vacuum or air. The reason this was a failure is because of two things: yes energy cannot be created but can be converted from one form to another and that magnetic motor myth isn't true because magnets cannot make enough magnetic potential energy to make it spin no longer than 30 seconds.

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: Madison Kirchhoff Date: 3-4-24

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 o 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.