CALIFORNIA STATE SCIENCE FAIR
2013 PROJECT SUMMARY

Name(s)
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Project Number
S1816

Project Title
It Is a Bird! It Is a Plane! No, It Is a Film Canister Rocket

Abstract

Objectives/Goals
To determine the effect of air temperature on the flight distance of a fueled film canister.

Methods/Materials
Two blocks of wood were screwed together with one cut at a 45 degree angle to form a launch pad. The film canister lid was screwed to the launch pad. A hole was drilled through the launch pad and lid to allow two wires to run from an electronic ignitor through the hole to form a spark gap for the ignition source. The film canister was sprayed with hair spray, and the canister was attached to the cap. The electronic ignitor was activated which caused the canister to be launched into the air.

Results
As the air temperature dropped, the average flight distance of the canister increased.

Conclusions/Discussion
The fuel (hairspray) contains alcohol. The reason the canister flew further as the air temperature dropped is because more of the fuel was contained in the canister at lower air temperatures due to lack of lift and evaporation of the hairspray in the container.

Summary Statement
To see how far a fueled film canister will fly depending on air temperature.

Help Received
Father recorded results of each launch. Mother helped tape pieces of paper together.