



**CALIFORNIA STATE SCIENCE FAIR
2009 PROJECT SUMMARY**

Name(s) Alexander R. Lay	Project Number J1518
Project Title The Effect of Insulation Type on Temperature Drop inside Identical Boxes Placed in a Refrigerator	
Abstract Objectives/Goals The objective of this investigation was to learn if textile scraps could be used as a successful insulation. The experiment compared shredded fabric to fiberglass insulation and no insulation. Methods/Materials Three 12" and three 4" square cardboard boxes were made. The small box was placed inside the large box and the 4" of surrounding space filled with either shredded fabric, fiberglass insulation or no insulation. A digital thermometer probe was placed in the small box, then the lid was sealed and the box was placed in the refrigerator for 2 hours. Temperature readings were recorded every ten minutes. Results The results of the data collected through observations showed that the temperature dropped the slowest in the box insulated with shredded fabric. Conclusions/Discussion The results supported the hypothesis that if the temperature drop is measured inside a box that is insulated with either fiberglass or shredded fabric and placed in a refrigerator for two hours then there will be less of a temperature drop inside the box insulated with shredded fabric.	
Summary Statement This project compares the insulation properties of recycled shredded fabric and commercial fiberglass insulation.	
Help Received Mother supervised using boxcutter to make cardboard boxes and cut the fiberglass insulation.	