



**CALIFORNIA STATE SCIENCE FAIR  
2005 PROJECT SUMMARY**

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<b>Project Title</b> Don't Hesitate to Insulate	
<b>Abstract</b> <b>Objectives/Goals</b> Different kinds of fabrics are being used today to create insulating clothing to protect humans from the elements of nature. Wool fibers has a long history of being one of the best fabrics for insulating. However, new technology has created new man made fabrics that are replacing the use of wool. <b>Methods/Materials</b> The insulating abilities of wool, and five other fabrics, cotton, linen, acrylic, polyester fleece, and vinyl were tested in this experiment. The hypothesis of this experiment was that wool would keep the water temperature the warmest, for the longest amount of time. Each of the six fabrics were wrapped around glass jars, and hot water was poured into the jar. At 30 minute intervals, the water in the six fabric covered jars were tested. At the 180 minute mark, the water in the wool covered jar and the water in the polyester fleece covered jar were the same temperature. <b>Results</b> The results of this experiment were expected and unexpected. <b>Conclusions/Discussion</b> Wool did prove to keep the heat from escaping the jar for a longer period of time, however the polyester fleece did just as well.	
<b>Summary Statement</b> The insulating abilities of wool, and five other fabrics were compared.	
<b>Help Received</b> Parents helped in proof reading and editing.	