



**CALIFORNIA STATE SCIENCE FAIR  
2010 PROJECT SUMMARY**

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<b>Project Title</b> Which Fabric Makes the Best Insulator?	
<p style="text-align: center;"><b>Abstract</b></p> <p><b>Objectives/Goals</b> To determine which fabric would keep water temperature insulated from decreasing. Each jar was wrapped in a different type of fabric and the water temperature was measured at specific intervals. The goal of the project was to determine which fabric made the best insulator.</p> <p><b>Methods/Materials</b> I used 6 mason jars, 6 different types of fabric, digital thermometer and water. The fabric types were: cotton, wool, denim, fleece, velvet, and terry cloth.</p> <p>Each jar and lid was firmly wrapped in the appropriate fabric. I boiled water and put 500 ml in each jar. The fabric wrapped lids were secured on each jar. At timed intervals the water temperature was taken and recorded.</p> <p><b>Results</b> The fabric that proved to be the best insulator was between terry cloth and fleece. Both fabrics kept the water hot for the longest amount of time. Next was wool and then velvet.</p> <p><b>Conclusions/Discussion</b> If you want to be insulated against the cold, you should wear terry cloth or fleece. These materials will maintain the beginning temperature better than other fabric choices.</p>	
<b>Summary Statement</b> Terry cloth and fleece are the best fabrics to maintain heat and insulate you from the outside elements.	
<b>Help Received</b> The experiment was supervised by family friend, Justin Mattly.	