



California Science Center  
**CALIFORNIA STATE SCIENCE FAIR**  
**2001 PROJECT SUMMARY**

<b>Your Name</b> (List all student names if multiple authors.) <b>Anthony T Nguyen</b>	<b>Science Fair Use Only</b>
<b>Project Title</b> (Limit: 120 characters. Those beyond 120 will be ignored. See pg. 9) <b>What Lies Beneath Your Walls: Thermal Insulation</b>	<b>J1026</b>
<b>Preferred Category</b> (See page 5 for descriptions.) <b>3 - Biochemistry / Molecular Biology</b>	<b>Division</b> <input checked="" type="checkbox"/> <b>Junior (6-8)</b> <input type="checkbox"/> <b>Senior (9-12)</b>
<b>Abstract</b> (Include Objective, Methods, Results, Conclusion. See samples on page 14.) Use no attachments. Only text inside these boxes will be used for category assignment or given to your judges.	
<p><b>Objectives=</b> My project studied the effectiveness of environmentally friendly thermal insulation materials. I also surveyed the public's awareness of thermal insulation. I believe that environmentally friendly thermal insulation materials are effective in reducing the heat loss through the walls of a building.</p> <p><b>Materials and Methods:</b> Ten thermal insulation materials were tested using a wall heat transfer apparatus. The apparatus includes a heater chamber and a wall simulation section. The material tested was placed in the void space between the walls. The heater chamber has a strip heater which was controlled to dissipated a fixed value of heat during all tests. The temperatures on the two walls were recorded using thermocouples. Each thermal insulation materials was tested at least twice during the project.</p> <p><b>Results:</b> Environmentally friendly thermal insulation materials are effective in reducing heat flow through the walls of buildings. The public is aware of thermal insulation, but they do not know about the details and significance of environmentally friendly thermal insulation.</p> <p><b>Conclusions:</b> My conclusion is that by using environmentally friendly thermal insulation materials, we will save money as well as the environment. We need to generate a higher public awareness of environmentally friendly thermal insulation materials in view of California's current energy crisis.</p>	
<b>Summary Statement</b> (In one sentence, state what your project is about.) I studied the effectiveness of environmentally friendly thermal insulation materials and surveyed the public on this subject in view of California's energy crisis	
<b>Help Received in Doing Project</b> (e.g. Mother helped type report; Neighbor helped wire board; Used lab equipment at university X under the supervision of Dr. Y; Participant in NSF Young Scholars Program) See Display Regulation #8 on page 4. Mother helped format various materials. Father helped build the apparatus and edit the report.	