



**CALIFORNIA STATE SCIENCE FAIR  
2002 PROJECT SUMMARY**

<b>Name(s)</b> <b>Phi D. Luong</b>	<b>Project Number</b> <b>S0803</b>
<b>Project Title</b> <b>Creating Compost to Heat Water</b>	
<p style="text-align: center;"><b>Abstract</b></p> <p><b>Objectives/Goals</b> The objective of my experiment was to harness the heat of decomposing organic material to heat water. If water is pumped through tubing surrounded by compost, then the water can absorb usable heat because compost piles generate heat as a result of decomposition.</p> <p><b>Methods/Materials</b> Materials: 4 Buckets with lids 4 Thermometers 2 Water pumps 24 Liters of water 5 Gallons of organic material (green grass, brown leaves, soil, banana peels) 2 Forty-foot tubing</p> <p>Procedure: a. Construct a compost pile in a bucket with a coil of plastic tubing running through it. b. Using a water pump, circulate water through the tubing from another bucket. c. Create an identical setup without using compost. d. Compare the water temperature of the control setup and the compost setup.</p> <p><b>Results</b> The water in the bucket that was cycled through the compost was substantially warmer than the control bucket. There was as much as a 7°C difference between the two buckets of water.</p> <p><b>Conclusions/Discussion</b> The purpose of this experiment was to heat water by utilizing the heat produced from decomposing organic material. The results suggest the heat of decomposing organic material may be harnessed to heat water effectively.</p>	
<b>Summary Statement</b> The heat of decomposing organic material was harnessed and transferred to heat water.	
<b>Help Received</b> Mr. Friedlander assisted in setting up the experiment; used equipment at Valley High School under the supervision of Mrs. Estes	