Name: Makenna Mead
Science period: p.2
Language A period: p.1

TITLE: The Bi-Metal Bar

QUESTION: How does thermal energy affect the bi- metal bar?

HYPOTHESIS: If we light the candle and stick the bi-metal bar into the flame of the candle, then the bar will heat up, because the candle is giving off thermal energy.

OBSERVATIONS AND DATA: The bar looks burnt and long and flimsy. The bar bent once it was in the flame. Once we put the bar in cold water, the bar went completely straight.

CONCLUSION: I reject my hypothesis, because my hypothesis said if we light the candle and stick the bi-meter into the flame of the candle, then the bar will heat up, because the candle is giving off thermal energy and that didn't happen. The bar didn't heat up; it bent and rusted and once we stuck it in the ice water, the bar went straight again. The energy transformations that took place was thermal energy exchanging throughout the metal bar. Potential energy was when we put the bar in the flame and kinetic energy was when we put the bi-metal bar in the ice water. Energy was conserved when we used fire/ a flame to create energy.

SUMMARY OF STATION ARTICLE: All objects expand once they are heated. Solids don't expand as fast as liquids and gasses. The bar is made up of one side nickel and the other side stainless steal. The stainless steal in the bar expand smote quickly than the nickel side does. Thats why it bent to the right, and not to the left. Bi-metal strips are very useful in thermostats on furnaces and air conditioners to control the temperature.

REAL WORLD APPLICATION: Very useful in thermostats, furnaces and air conditioners.

STATION REPORT SUMMARY	
Report Response	Go to person
What is the bi-metal bar made out of?	Mr. Land
First we lit a candle. Then we took the bi-metal bar and stuck it in the flame. Then the bar started bending. We immediately stuck the bar in a beaker of ice water and it instantly went straight again.	Mr. Land
The energy transformations that took place was thermal energy exchanging throughout the bi-metal bar.	Mr. Land
At my station, the bi-metal bar was bending once it hit the flame from the candle and then went straight again once it hit the coldness of the water.	Mr. Land
The bar also rusted once it hit the flame.	Mr. Land