A DIFFERENT LABORATORY EXPERIENCE

(The Bromfield School - Physics)

Physics in Everyday Life Lab

While completing Physics problems in class, many students ask the question, "*When are we ever 'gonna' use this stuff in real life*?" Although this is not a conventional lab, it will help to demonstrate to you how Physics surrounds you, everywhere you go.

During one period, the class will go to the computer lab and go to the interactive Website; *www.Physics.org*. On the Website, click on the section entitled "*Physics Life*". Once you are there, you are given the choice of traveling to a school, playground, house, office building, or to an automobile-manufacturing factory. Click on one, and once inside click on the different objects filling the room. You will be provided examples and explanations as to how and why the objects pertain to science and Physics.

After exploring the setting, provide five examples you found on the site, and explain how they pertain to Physics.

Write-Up Example: Physics in Everyday Life Lab *(Please do not use these specific examples in your report.)*

THE HOUSEHOLD:

Microwave: All food contains water. Microwaves contain electromagnetic waves, which vibrate the water molecules thus heating the water and the food.

Bathtub: Archimedes discovered in his bathtub that any object placed in a liquid would experience an upward force equal to that of the weight of water that the object displaces. This is called Archimedes Principle.

Refrigerator: A gas coolant removes heat from the inside of the compartment. Because there "cold" does not exist, it is just a lack of heat, the coolness one feels when opening their refrigerator is actually heat being drawn from them, not cold coming out of the compartment.

Television: To make the color picture, cathode ray tubes and a 3 color phosphor is used.

Windows: Because heat is lost by conduction, windows use two layers of glass, separated by an insulating air gap.

Conclusion: Additionally and finally, in a short paragraph or two, and whether or not you found the specific subject on the web-site, explain an area of Physics that most interests you and why.