

Physics Research Project – 2007/2008

INTRODUCTION:

As we continue our introduction to the science of physics, you are becoming more and more familiar with the way experimental research is accomplished as you carry out the open-ended laboratory investigations associated with this course. You are learning that scientific research focuses on controlling and measuring variables during experimental observation. We then analyze our experimental data to see if our experimental results support our predictions.

This research project will have two parts. The first part will be a group project in which you design and conduct your own experiments, collect data, and then analyze that data to form valid conclusions. For the second part, you will each individually write a descriptive paper that will require some additional specialized research.

Of the three essential entities we deal with in physics, namely mass, length, and time, arguably the most ambiguous is *time*. So this aspect will be the target of your efforts.

REQUIREMENTS:

Part I: The laboratory research piece of your project will be specifically introduced later this month.

Part II: Each student will also be required to write a descriptive paper that deals with a particular scientific aspect of *time*. Your specific subject may be historical, modern day, or futuristic. You may want to investigate how a past civilization developed its calendar. You may want to investigate how mariners used chronometers to determine latitude. You may want to learn about one of the techniques scientists have devised to measure time more precisely. Perhaps you would like to know about the psychological phenomenon of temporal distortion. You might want to begin an investigation into special relativity as it relates to time. You are encouraged to use your imagination in your choice, but I will need to approve your written topic submission before you proceed.

In support of your research, you will be required to use online data bases which are capable of directing you to full text journal articles. A minimum of four published sources (excluding general encyclopedias) will be required.

This third person descriptive paper should adequately discuss your topic, but be no more than three double-spaced pages in length using a 12-point font size. Your work must also include a typewritten works cited page completed in MLA format. Printed copies of your source materials are not required. You must submit your work once to TurnItIn.com., and provide a receipt with your paper.

RESEARCH PROJECT TIME LINE:

November 7:	Introduction of Project: Mr. Clark and Mrs. Colpi
November 12:	Written Topic Submission Handed In For Teacher Approval
Nov. 26, 27, Dec. 3:	Open Lab for Research and Analysis
December 21; 3:00PM:	Project Parts 1& 2 Due – <u>NONE Will Be Accepted After This Deadline</u>