

Physics First
Northland Preparatory Academy
2014-2015
Jeff Hartig

Physics -The Basic Science

Physics is the basic science. It's about the nature of basic things such as motion, forces, energy, matter, heat, sound, light, and the structure of atoms. An understanding of science begins with an understanding of physics.

Course Book: **Conceptual Physics by Paul G. Hewitt**

Course Description: Instruction is organized into modeling cycles which move students through all phases of model development, evaluation and application in concrete situations. First the teacher will set the stage for a student activity, typically with a demonstration and class discussion to establish common understanding of a question to be asked of nature. Then, in small groups, students collaborate in planning and conducting experiments to answer or clarify the question. The students then will present and justify their conclusions in oral and/or written form, including a formulation of models for the phenomena in question and evaluation of the models by comparison with data. The teacher will guide student inquiry and discussion as required with "Socratic" questioning and remarks. At the end of this process the class reaches consensus on an appropriate model to describe the behavior that was observed. Assessments of student learning will take several forms ranging from written testing to a graded lab practical.

Attendance: As can be seen in the course description, classroom participation is a major portion of this class. Every student is expected to come to class every day prepared to give 100%.

Absences and Late Work: If a student is absent during the week, it is expected that they will make up any assignments in a time frame equal to the number of days missed. Failure to complete the assignment in the number of days missed will result in a zero for the assignment.

Extra Help/Make-up work: If you are having difficulty with anything in this course, please come see me as soon as practicable.

Restroom policy: As noted earlier, classroom experiences, including labs, are a huge part of this course. Time missed in class can very adversely affect the student's learning. To go to the restroom you will sign out on the clipboard by the door, and take the bathroom pass with you. If your name is on the clipboard frequently to go to the restroom we will have a conference to try and understand why you are missing so much of our class time.

Required supplies: All students will need a calculator capable of simple trigonometric functions. A graphing calculator is not necessary. Each student should also bring several dry erase markers to every class.

Students and parents will acknowledge the receipt and understanding of this syllabus by sending me an email stating such to: JHartig@Northlandprep.org
No paper copy is required.