

Pre AP Physics

What do we mean by “understanding” something? We can imagine that this complicated array of moving things which constitutes “the world” is something like a great chess game being played by the gods, and we are the observers of the game. We do not know what the rules of the game are; all we are allowed to do is to *watch* the playing. Of course, if we watch long enough we may eventually catch on to a few of the rules. *The rules of the game* are what we mean by *fundamental physics*. Even if we knew every rule, however, we may not be able to understand why a particular move is made in the game, merely because it is too complicated and our minds are limited. If you play chess you must know that it is easy to learn all the rules, and yet it is often very hard to select the best move or to understand why a player moves as he does. So it is in nature, only much more so; but we may be able to at least find all the rules. Actually we do not have all the rules now. (Every once in a while something like castling is going on that we still do not understand.) Aside from not knowing all of the rules, what we really can explain in terms of those rules is very limited, because almost all situations are so enormously complicated that we cannot follow the plays of the game using the rules, much less tell what is going to happen next. We must, therefore, limit ourselves to the more basic question of the rules of the game. If we know the rules, we consider that we “understand” the world

-Richard Feynman

Topics:

Motion

-position, velocity, acceleration, force, and mass

Momentum

-impulse, collisions, and conservation

Energy

-work, potential, kinetic, heat, and conservation

Waves

-sound, music, light, and optics

Gravity

-fields and forces

Electromagnetic

-electrostatic fields and forces, magnetic fields and forces, current, potential difference, electric energy, and circuits

Quantum

-uncertainty, particles, and waves

Supplies:

-pencils and erasers (no pens please, they are unforgiving)

-paper, graph paper

-scientific calculator

-binder (for your own organizational benefit)

-Textbook : Glencoe Physics, Principles and Problems, 2002, Zitzewitz (this is used mostly for problem sets)

Grades and Such

These are the weights associated with your six week grade

Classwork/Homework – 40%

Classwork/ Homework Quizzes – 20%

Labs – 20%

Six Week Tests – 20%

When classwork/homework is given it is mostly given with the raw answers to the problems so that you may check your answers and rework the problems if you need to. Most classwork/homework assignments will have a respective quiz the next day. You must turn in the CW/HW before you take the quiz for that homework. It will not be accepted after the quiz. The class work will always be started in class but will sometimes need to be finished outside of class.

If you score higher on your six week test than you do on your respective quiz average then you may replace that quiz average with the test score.

Ex:	quiz average	65%
	Six week test score	90%

In this case the quiz average will be replaced by a 90% so that both the quiz average and the test score are 90%

If you should want to do this, it must be directed by you after school.

If you make below a 70% on a six weeks test you can correct it for a 70%.
This corrected score cannot raise the quiz average to a 70%.

Late Work Policy

If you are absent, it is your responsibility to come and get the assignment from me after school or from one of your classmates. You have at least three days to make up the assignment. After those three days, I will put an X over the assignment on the list in the front of the room by my desk. When there is an X across that assignment, quiz, or lab that means you have a zero if you have not yet completed it.

Sometimes I'm forgetful though and I might not have placed the X on the assignment in time. In that case, give it to me as quick as you can and I will accept it.

If you miss a test, you must make it up before I hand the test back to the rest of the class. This gives you at least three school days from the date the test was taken to make up that test. If you have not made up the test by that time then the maximum score you can make is a 70%.

Website

I have a website where you can find lots of helpful stuff like calendars and links to computer based labs and recommended books and movies and what not.

<http://www.myteacherpages.com/webpages/MBetzen/>

Tutoring

See the front door of the classroom or the website.

Two Side Notes

If you make a 69 for your semester average, I will **not** change it to a 70.

If you have any issues about your grade or the syllabus or if you want to disagree with my favorite movie or talk about politics or philosophy, email me at mbetzen@dallasisd.org. Or just come and see me during tutoring.