**Physics**  Mr. Glende- Office Rm 217J

mglende@west-fargo.k12.nd.us

**Overview**

Physics is a course where you will learn about how the world around you works. While there is some basic algebra and geometry required, I will be reviewing all of these concepts. Do not let the fear of math scare you away. You all know physics because you see it and experience it every day in virtually everything you do. This class will teach you the physics terminology and explain why and how things work.

**Textbook** *Holt Physics* 2012 edition by Serway & Faughn (available online)

**Classroom Techniques**

Students will take charge of their own learning in this course. Time in class will be devoted to working together for labs and solving problems on whiteboards to share solutions with the class. You will get out of this class what you choose to put into it.

**Main Objectives- (along with topics covered)**

1. Analyze problems involving 1D kinematics ; motion graphs, velocity, acceleration
2. Analyze problems involving vectors and 2D kinematics; vectors, projectile motion, relative motion
3. Using Newton’s 3 Laws, analyze the motion of objects; Newton’s 1st, 2nd, and 3rd Laws, friction, free-body diagrams
4. Use work, energy and power relationships to analyze motion of objects; work, energy, conservation of energy, power
5. Analyze collisions using conservation of linear momentum and impulse
6. Analyze the motion of objects that are immersed in a fluid; buoyant force, pressure
7. Analyze objects at different temperatures; temperature, heat,
8. Analyze wave motion; simple harmonic motion, waves, sound, interference
9. Analyze the behavior of light, mirrors, color, polarization, refraction, lenses, interference
10. Explain electric charges, analyze the interaction between nearby charges; insulators and conductors, Coulomb’s Law
11. Use Ohm’s Law to calculate current through a conductor; Ohm’s law;
12. Analyze simple and complex DC circuits; simple and complex loops; power

**Course Expectations**

1. Respect others, the equipment and yourself.
   1. Stay home if you are sick (everything we do in class can be done virtually)
   2. Wear a mask at all times
   3. Sanitize your desk and any other classroom materials you use during the class period
   4. Wash your hands (sinks with soap are available in the lab)
2. Follow all WFHS rules.

**Course Resources**

1. **Schoology:** Starting point where weekly expectations and links will be accessed.
2. **EdPuzzle:** Site through which video notes will be presented
3. **Online Textbook:** Unless requested, your only textbook will be the online version. Instructions on how to access can be found on my Schoology site in the Welcome Folder.
4. **Quest:** This is an online homework system we will use all year. You are given 7 attempts to answer a problem. Make sure you DO NOT round as this system is picky. **You MUST turn in your work for all the problems on the due date.**

**Course Grading**

I will only give credit for work shown with correct units on answers. LATE WORK IS **NOT** ACCEPTED. Online grades are updated frequently. Please check to make sure that no mistakes have been made. You are expected to be an active participant in this class. There are never any dumb questions or answers. All I ask is that you always try to do your best.

1. **Assignments/WB/Quizzes (20%)**
   1. **Homework** is just considered practice for the exams, but VERY important for you to make sure you know what you are doing. Online homework is done through Quest. You MUST turn in your work for full credit.
   2. **Whiteboard problems** are worked on in class in groups. Each set of WB problems will earn you 0, 5, or 10 points depending on how you are participating. If you are absent on a WB day, you must complete the WB problems by the weekly due date to earn the points.
   3. **Quizzes** will be weekly and are **open note** but not open friend.
2. **Labs (30%)** Complete each lab.
3. **Exams/Projects (50%)** 
   1. **Exams** will be composed of problems and performance assessments.
   2. **Projects** will be assigned as time permits and they meet the curriculum requirements.

* Grade scale is one used by all of WFHS and is found in the students handbook

A 90-100% B 80-89% C 70-79% D 60-69% F below 60%

**Absences:** Absences are a fact of life, but you must be responsible for what you missed. Try to make up work ahead of any absence if possible. It is your responsibility to make up what you have missed ASAP. At the pace we will be going, getting behind is NOT an option, so keep on top of things.

Let the FUN begin!!!!