**Course Syllabus – Physics -** Mr**. Hetcher**

**TAKE THIS HOME AND SHARE IT WITH YOUR PARENTS**

**Overview:**

This outline is designed to help both students and parents by clearly defining the expectations for the upcoming year in Physics. Physics is an elective for students planning on attending a four-year college or university. Successful completion of this course will not only prepare a student for Physics courses at the college level, but it will also help develop critical thinking and problem solving skills applicable to many courses taken at the post-secondary level.

Although it is a challenge, it is also fun. I am looking forward to an exciting and rewarding year in Physics. Every student can do well in this class and it is my goal that we all work together to make sure that happens. If there are any questions, feel free to contact me at school at 725-5116 ext. 166 or by e-mail at [jhetcher@cassvillesd.k12.wi.us](mailto:jhetcher@cassvillesd.k12.wi.us) . Classroom information is available on my website, [mrhetcher.weebly.com](http://mrhetcher.weebly.com) or follow the link at [cassvillesd.k12.wi.us](http://www.cassvillesd.k12.wi.us) .

**Expectations:**

This outline is intended to clarify what I expect from the students and what they can expect from me. Several policies regarding labs, makeup work and tardiness are posted in the room and the following are the rules in effect at all times in the classroom:

* follow directions the first time given
* bring all materials to class every day
* respect other people’s right to talk
* follow all lab safety guidelines

We will spend several days at the beginning of the course discussing procedures and safety guidelines. Students are required to pass a safety quiz and return a signed safety contract before participating in laboratory activities.

As the teacher, I will be responsible for monitoring and recording student behavior. Please be aware there are many more procedures we will follow during the year.

**Grading:**

The quarter grade will be based on the total points earned on the quizzes, tests, and daily understanding checks (DUC). Each quarter will cover approximately two units and each unit will have about two or three quizzes. Each quiz is worth 100 points. The tests are worth 200 points. The DUC is between one and five questions that are designed to assess whether the student met the learning target for the day. Each question is worth one point. Formal lab reports will count for 50 points each, and will amount to about fifteen percent of the quarter grade.

Each quarter grade represents 45% of the semester grade. The remaining 10% of the semester grade will come from the final exam or assessment.

The district approved grading scale will be used.

**Homework Policy:**

Homework is assigned because it reinforces skills and materials learned in class and it prepares students for upcoming tests and quizzes. There are some questions in the homework assignments that are very similar to the questions on the quizzes and tests. Students are urged to complete as much of the assignment as necessary in order to be able to be successful on the quizzes and tests.

The DUC will help the students determine whether they need a lot of practice and also should give them a reason to be attentive during the class period.

Homework is not graded and there are no points assigned to homework assignments. Doing homework is part of the learning process and students need to do them, but they do not represent the final outcome. (What was the score of the Super Bowl at half time? Who cares?) Questions from homework and labs will be on quizzes and tests.

Electronic Communication/Media Devices: These devices may be used in the room for valid instructional reasons. Examples include using an iPod as a stopwatch or camera in the lab, or a calculator, or a way to access the internet in class when the instructor decides it is appropriate. Listening to music is not acceptable.

**Course Content:**

During this school year we will investigate the following concepts. Following each topic are what students should be able to do to provide evidence of mastering the learning objectives and the state standards that are satisfied by successful completion of the unit.

**Quarter 1**

Describing motion

Vectors

Newton's Laws

**Quarter 2**

Circular Motion and Projectile Motion

Universal Law of Gravitation

Kinetic and Potential Energy

**Quarter 3**

Momentum

Work and Energy

Waves

Sound

**Quarter 4**

Light

Optics

Electricity

Main Standards Covered:

Sci-A1 Knows that learning comes from careful observation and simple experiments.

Sci-A6 Designs and conducts a scientific investigation

Sci-A8 Establishes relationships based on evidence and logical arguments

Sci-C5 Knows that energy comes in different forms.

Sci-C8 Knows the properties and behaviors of wave energy.

Sci-D7 Knows that an object's motion can be described and represented graphically according to its position, direction of motion, and speed.

Sci-D18 Understands Newton's three laws of motion and their application.

Sci-E3 Understands the effects of gravity.

Sci-E7 Knows the basic concepts of electrical behavior.

**Materials:** Students will be required to bring a scientific calculator, a dedicated Physics notebook, a writing instrument every day.

**Schedule:**Class meets every day. It is very important for students to have good attendance.