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**Website: <http://homepage.mac.com/colbertiii/>**

## Office Hours

**Tuesday – Friday after regular classes**

## St. Mary's College High School

### • Sophomore Conceptual Physics Syllabus

#### Course Description:

Conceptual physics will use the scientific method to investigate and describe the physical world. You will use mathematical relationships, beyond recipes for computation, but as tools to guide critical thinking. You will be challenged to apply your knowledge of physics through a variety of assessment activities.

#### Materials:

Textbook: Physics Principles and Problems; Glencoe/McGraw-Hill, 2005 edition  
(ISBN: 0-07-845813-7) student edition

Composition Notebook – Marble hard cover composition book (from Mr. Davis \$2)

3-ring Binder with lined paper or spiral notebook

Internet Access at-home is recommended

Pen or pencil

Red pen for corrections

Scientific Calculator

USB storage device

Project Raw Material (note: this is a project based class and the student supply the design and the materials)

#### Website:

<http://homepage.mac.com/colbertiii/>

Bookmark this website on your computer. If you forget an assignment from class or lab, this website will provide regular information, useful web links and some pdf's you can print and complete.

#### Appointment and Telephone Procedures:

Parents and students may use my teacher voice mail box at extension x213 or you may contact me by email at : [cdavis@stmchs.org](mailto:cdavis@stmchs.org).

### • Course Outcomes:

Conceptual Physics will use the scientific method to investigate and describe the physical world. You will use mathematical relationships, beyond recipes for computation, but as tools to guide your critical thinking. You will be challenged to apply your knowledge of physics through a variety of assessment activities (projects).

### • Course Goals and Learning Objectives:

1. Students will be able to accurately describe through writing or oral reports the traditional physics concepts of mechanics, energy transfer or conversion to a different state.



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study groups to review test material. Tests may include multiple choice, problem solving, and short essay questions. Formulas will be provided - students are expected to understand and manipulate them.

## **Projects (10% of grade):**

These will require students to apply course content to the construction of the project. Students may need purchase items to complete these. There are creative ways to approach the construction of the project- please see me if there are difficulties purchasing materials.

Fall Projects: Paper Bridge, Air Powered Rockets, Pinewood Derby Cars, Mouse Trap Powered Vehicle

Spring Projects: Electric Motor I and II, "Musical instrument" Project

Grading for these projects will incorporate planning and preparation scores with performance assessment of the students engineered project.

## **Quizzes (4% of grade):**

Quizzes will review material from homework and laboratory. If you have a foreseeable absence on a quiz day, you must inform me and plan an alternate quiz time. If you miss a quiz during an extended illness I will excuse you from taking this quiz.

## **Homework (15% of grade):**

Each assignment must be completed. You must correctly identify, label and number the assignment if you are to receive full credit. You are expected to write the question and show equations with calculations for numerical answers. The assignments must be numbered and dated and begin on a new page. You should expect to spend 35 minutes with homework each night.

## **Final Exam (14% of grade):**

The final exam is comprehensive in its design, covering concepts developed each semester.

## **Class Participation/Presentation: (4%)**

Students will be provided regular opportunities to present problem solutions in front of the class as a way to aid class comprehension and demonstrate mastery of the content.

## **Class Notes (13%)**

Notes should be taken every class period in Marble hard cover composition book. The notes should include the topics covered in class that day together with any multimedia used for instruction. At the conclusion of note taking students should reflect on the topics covered and complete a written summary of the days concepts.

## **Homework Assignments (10% )/Class Binder: (0%)**

Reading assignments are expected to be completed before you come to class so that you are able to participate in class discussions and activities. You should bring your book to class whenever you think you might need it as a resource.

Homework and written assignments or activities are due in the beginning of class on the due date. Homework must be checked in or turned in the beginning of class. Assignments will be collected, but all will be checked and entered in the computer grade book. The teacher will not accept any late as-

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signments without an absence slip excusing the absence and the student will receive a no credit for any missed assignment.

Students need to keep a neat and organized binder to answer daily questions, to store handouts and keep returned homework and class assignments.(keep all your work all year) This binder must include a table of contents. (more information on Binder Organization handout) Your binder will be checked periodically throughout the semester and turned in at the end of both semesters.

## Laboratory (9% of grade):

Laboratory activities will accompany each chapter. These allows students to experience the chapter concepts in concrete applications. Students will collect notes and record measurements during the laboratory experiment and analyze and explain the concept explored in a lab report. Laboratory procedures and equipment can cause harm and/or be dangerous. Students must exercise self-discipline and follow the directives of the teacher.

Pre-labs must be completed prior to attempting the lab activity so that you can begin the experiment when you get to lab. Because each lab requires set and removal, and because labs may require coordination with other teachers and classes make up opportunities may be impossible. Therefore, if you are going to miss a lab due to a prior commitment school or otherwise you need to communicate this to the teacher prior to your absence. All your laboratory work and data must be kept and noted in your marble notebook. Your notes and measurements will be used to prepare your lab report. You will receive credit twice for this information once in the notebook and once in the report Laboratory reports will be assigned, collected, and evaluated regularly at the completion of a experiment. There is a specific format to be followed (handout) in this process.

## Extra Credit Points Category (5%):

Enrichment projects may be given to students who fall below average in class work. The purpose of this work is to help students achieve C to C+. Extra credit points are never offered to students with B- or higher grades in special incentive situations

### • Office Hours

Students are welcome to come into my office to get questions answered, review class notes, do homework, or study. If necessary, a student may be required to come into study hour to discuss class material with the teacher. Office hours and days are posted on the top of the syllabus and will be posted in the classroom as well.

*NOTE: Many of the classes science teachers teach require after school support on a regular basis. Students coming for assistance should have some understanding of what they want to review or need help with. This is important because students who understand their needs (i.e. students with projects or labs) can be more assertive and get more of the teacher's time leaving students who have no clear purpose not get the support they need. It helps to know what you want to learn.*

### • Grades

Grades are based on all of the work completed by students. Every category of assignment has a designated percent of the grade, every assignment in that category has the same fractional value unless specified by the teacher. If you have any questions, please talk with Mr. Davis.

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Grading is difficult because as a teacher I am to evaluate and quantify your progress in my subject area as fairly as I can. I need to turn your work into a letter or a number and that's sometimes difficult. If for any reason you believe I have assigned the wrong grade to your work please come and see me. One thing that I must consider and you must also consider is the rationale behind the letter grade

Grading System	Grading Criteria
	<b>The "A" Student</b>
A 94 - 100%	<ul style="list-style-type: none"> <li>• Consistently superior comprehension and performance on assessments.</li> </ul>
A- 90 - 93%	<ul style="list-style-type: none"> <li>• Exhibits work with exceptional insight or special creative talents.</li> <li>• Tends toward self-direction in activities and participates in class activities as listener, questioner or commentator.               <ul style="list-style-type: none"> <li>• Completes all assignments</li> </ul> </li> </ul>
	<b>The "B" Student</b>
B+ 87 - 89%	<ul style="list-style-type: none"> <li>• Consistently strong comprehension and performance on assessments but may have difficulties synthesizing concepts.</li> </ul>
B 84 - 86%	<ul style="list-style-type: none"> <li>• Work is consistent but offers little insight or special creative talents.</li> <li>• Shows occasional initiative but tends to rely on teacher direction.               <ul style="list-style-type: none"> <li>• Participates in class activities as listener but is a less frequent questioner or commentator.</li> <li>• Completes all assignments.</li> </ul> </li> </ul>
B- 80 - 83%	
	<b>The "C" Student</b>
C+ 77 - 79%	<ul style="list-style-type: none"> <li>• Inconsistent or fair comprehension and performance on assessments.               <ul style="list-style-type: none"> <li>• Difficulties applying and synthesizing concepts.</li> </ul> </li> <li>• Generally addresses the explicit but seldom offers little insight or special creative talents.               <ul style="list-style-type: none"> <li>• Relies on teacher direction.</li> <li>• Participates in class primarily as a listener.</li> <li>• Usually comments only if questioned.</li> <li>• Completes most assignments</li> </ul> </li> </ul>
C 74 - 76%	
C- 70 - 73%	
	<b>The "D" Student</b>
D+ 67 - 69%	<ul style="list-style-type: none"> <li>• Minimum comprehension and performance on assessments.               <ul style="list-style-type: none"> <li>• Often misses explicit relationships.</li> <li>• Relies on teacher direction.</li> </ul> </li> <li>• Participates in class primarily as a listener.               <ul style="list-style-type: none"> <li>• Comments only if questioned.</li> </ul> </li> <li>• Fair number of assignments are missing.</li> </ul>
D 64 - 66%	
D- 60 - 63%	
F 0 - 59%	

- **Academic Integrity**

I hope to fairly assess your achievement in the course and expect that the work you submit to me is entirely yours. Most students do not have trouble meeting their own grade expectations when they put forth their best effort. Trust and honesty are important to me. Please be trustworthy and honest with me and I will reciprocate.

- **Tardies:**

Tardies are unacceptable unless excused by the attendance office.

- **Absences:**

All of every class period is important! The material we cover will most likely will not be repeated in a timely manner especially lab work. If absent, because of athletics or any other pre arranged reason all work due must be turned in prior to your departure and arrangements for missing class time must be made. If you are absent because of illness or unforeseen circumstances you need to turn in late work within two (2) class periods unless you arrange an alternative with teacher. This policy pertains to missed quizzes and exams as well, but If you are going to be absent on an exam day and you know it in advance let the teacher know. If miss an exam you will receive a zero as a placeholder and you have three (3) class periods to make it up. After a week the zero is permanent.

If you miss class notes, be sure to get them! You don't want to miss something that may be on a quiz or an exam. Leave a space in your notebook for the missing day. You need notes for every class period.

- **Telephone policy:**

There are telephones installed in the classrooms. These phones are for emergency use only and are not to be used by students at any time. If a cellular phone is heard, seen, or used in the classroom, it will be taken away and given to the Assistant Principal (student services).

- **How to be Successful • How to get ahead and stay ahead • Read the fine print !**

- Be in class and seated when the bell rings.
- Bring appropriate materials to class and lab. Be ready and willing to participate each day.
- Notes and work should be legible and understandable to all.
- Don't be absent you'll miss stuff !
- All assignments must be done on time
- Come to class and lab prepared: read assignment the night before and be ready to discuss in class
- Ask questions, participate, and share thoughts and ideas!
- Write down assignments in your *Agenda*.
- Turn in assignments the day they are due absent or not.
- Follow guidelines for projects and assignments.