

# Course Syllabus

## Conceptual Physics

Year: 2013 - 2014

Instructor: Mr. O'Neill

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Text: Physical Science with Earth Science  
Glencoe/McGraw-Hill © 2006

### Course description:

Conceptual Physics is a practical physics course designed to involve less mathematics than the traditional Physics. Topics covered may include energy and motion, forces, electricity, and magnetism.

Second Semester will also include preparation for the Kansas science assessment.

Recommended for Juniors not planning to take Physics and not planning on college. Also recommended that Sophomores planning on Vo-Tech take CP, and during Junior year take Biology as long as current class schedule is in effect.

### Course objectives:

1. implement the Scientific Method and refine its use.
2. become proficient at using mathematics to solve real-world problems.
3. explain the relationships between position, velocity, and acceleration.
4. graph motion, and interpret the type of motion from graphs.
5. describe the relationship of energy to work.
6. explain how simple machines may help do work and calculate the benefit gained.
7. describe various aspects of waves, and relate the wave motion of sound and light.
8. compare direct and alternating current.
9. construct various electrical circuits and describe their usage.
10. prepare students to meet the acceptable range on state assessments.
11. evaluate current concepts in environmental ecology.
12. defend a position about global warming.
13. measure and record water quality in stream sampling.

Grade calculations:

- |                  |     |                               |
|------------------|-----|-------------------------------|
| 1. Homework      | 20% | (Independent Guided Practice) |
| 2. Project (lab) | 20% |                               |
| 3. Quiz          | 20% |                               |
| 4. Test          | 40% |                               |

Semester grades will be an equal average of the two quarter grades.

Grading Scale:

- |   |   |           |
|---|---|-----------|
| A | = | 90 - 100% |
| B | = | 80 - 89%  |
| C | = | 70 - 79%  |
| F | = | below 70% |

A grade of D may be given to students with a score of 65-70% provided they have made significant effort to improve. This would include at least 3 ASAP sessions per quarter, and not have excessive absences.

Daily work (Independent Guided Practice) is usually begun in class-time, and if not finished then will become homework. It is expected that students will work independently on such work and not copy.

Laboratories will usually involve a lab write-up, and will be graded by a 20-point rubric included in this syllabus.

Quizzes will be given after Daily work has been given over a particular topic, or over a reading assignment after time has been allowed to do the reading. Basically, the main difference between Daily work and Quizzes is that a Quiz **MUST** be done independently, and will be monitored as such.

Tests will be given two to four times per quarter, after unit information has been presented, reinforced, and usually quizzed. PLEASE keep all work leading up to a test in order to study and prepare for the test.

Course Sequence:

Semester I

Quarter 1

1. Math Review & Test
2. Velocity, Acceleration, Force (3)
3. Newton's 3 Laws (4)

Quarter 2

1. Energy (5)
2. Work & Machines (6)

Semester II

Quarter 3

- Waves & Sound (10)
- Light (11)
- Guided practice - state assessment

Quarter 4

- State Assessment
- Electricity (13)

What is expected of you, the student:

I. Academic

- A. Most work will be done in class in CP. If an assignment is not finished in class it will become homework. Homework should be completed by the beginning of class time the day it is due. Completed homework should be placed on the table at the front of the classroom by the time the bell rings to begin class. If you find you need help with homework, please ask **before** you come in for class the day it is due. Please place your name, date, and class period in the upper right corner of all assignments.
- B. If you are absent from class **YOU** are responsible for obtaining missed assignments. **Please hand make-up work directly to me** - do not put it in with other work or leave it on my desk.
- C. A loose-leaf notebook or folder is recommended for retaining notes and homework. Work will not be accepted on paper with spiral-fringed edges.
- D. Students found cheating will receive no credit for that test, quiz, or assignment. Copying another student's work is considered cheating in this class!!
- E. I will be available for help before and after school until March. Times will then vary depending on track schedules. If necessary, appointments can be made for help or make-up work during Activity Period.

II. Procedural

- A. Please be punctual in getting to class. When the bell rings, take your seat quickly and quietly. You may often have work to do as roll is taken at the beginning of class. (Remember, homework is due before the bell.)
- B. Since this is a laboratory where potentially dangerous chemicals are used, no food or drink should be consumed during labs, and care should be taken to avoid contamination.
- C. The chemical supply room and greenhouse through the south door are off limits to students. Please do not go into these areas unless you have permission.
- D. Safety glasses and lab aprons are to be worn during all labs where dangerous chemicals are used or a danger to the eyes exists.
- E. If it is necessary to leave the classroom you must have a hall pass. Your student planner is your pass. Write the pass in the calendar on the date you are leaving the room and bring it to me for an initial. Passes for personal request will cost 5 minutes b/a school.
- G. Proper classroom attitude will be maintained. Please do not be a disruptive influence.
- E. Laboratories are serious business. Please refrain from pranks that may endanger fellow students. Acquaint yourself with emergency and aid stations.

# Makeup work, Late Work, Re-takes

## Mr. O'Neill's classes

I will attempt to keep an updated copy of my lesson plans on the bulletin board at the front of the room so at any time you may check to see assignments missed.

- I. Makeup work due to missing class.
  - A. See me for assignment the first school day back from absence.
  - B. You have 2 days (48 hours from the absence) to make up work for each day absent.
  - C. Work assigned and due the day of an absence becomes due the first day back at school.
  - D. Write the **Date absent** and **Date turned in** on your work.
  - E. All makeup work is due before a test is taken over the material. No makeup for a unit will be credited after the student takes the test.
  - F. It is **YOUR** responsibility to get assignments from me, and **YOUR** responsibility to remember to turn it in to me by the due date. Don't use the excuse "the teacher never gave me the assignment".
  
- II. Late work will be accepted according to the following criteria:
  - A. Late work must be turned in before a test is taken over the material.
  - B. Late work turned in before graded papers are returned to students and the assignment explained in class will be credited at 75%- that is 87.5% of points earned up to a maximum of 75%.
  - C. Late work turned in after graded papers are returned or the assignment gone over in class will be credited at 50%- that is 75% of points earned up to a maximum of 50%.
  
- III. Retakes. There are two types of re-takes I will allow.
  - A. Tests, and some quizzes and assignments may be re-taken for a higher grade (not labs).
  - B. Tests and quizzes will usually require at least one study session before you will be allowed a re-take. Study sessions may be during the school day (seminar/before/after).
  - C. Retakes will be credited a maximum of 75% points possible- that is 87.5% of points earned up to a maximum of 75%.
  - D. All retakes will be completely done over- no partials. Assignments will need to be re-done in the presence of the instructor- just turning it in makes it late work.
  - E. Most re-takes will be done outside the school day (ASAP, before, after).
  
- IV. Grade codes: On PowerSchool you may see the following grade codes.
  - .9 = work turned in later, receives full credit usually due to absence
  - .8 = work re-done or re-taken for maximum score 75%, usually ASAP
  - .7 = work turned in late receiving 75% credit
  - .4 = work turned in late receiving 50% credit

## Lab and Assignment Rubric O'Neill's classes

Points	Description
20	<ul style="list-style-type: none"> <li>• Work exceeds <u>requirements</u> of project</li> <li>• All work is of exceptional quality</li> <li>• No spelling, grammatical, or writing errors</li> <li>• Clearly demonstrates understanding of project</li> </ul>
18-19	<ul style="list-style-type: none"> <li>• Work demonstrates some extended concepts</li> <li>• Work is of exceptional quality</li> <li>• No spelling, grammatical, or writing errors</li> <li>• Demonstrates understanding of project</li> </ul>
16-17	<ul style="list-style-type: none"> <li>• Work meets requirements of project</li> <li>• Work is of good quality</li> <li>• Few spelling, grammatical, or writing errors</li> <li>• Some reservations about understanding of project</li> </ul>
14-15	<ul style="list-style-type: none"> <li>• Work is lacking in some aspects of project requirements</li> <li>• Work is of fair quality and neatness</li> <li>• Some spelling, grammatical, or writing errors</li> <li>• Shows evidence of failure to comprehend some aspects</li> </ul>
12-13	<ul style="list-style-type: none"> <li>• Work is incomplete or lacks certain aspects of requirements</li> <li>• Work is of poor quality</li> <li>• Includes spelling, grammatical, or writing errors</li> <li>• Failure to comprehend major aspects of project</li> </ul>
10	<ul style="list-style-type: none"> <li>• Work is incomplete, but shows some comprehension of project</li> <li>• Present at lab, but no write-up turned in</li> <li>• Did not show evidence of independent work on lab (too much copied from partner or other groups)</li> </ul>
0	<ul style="list-style-type: none"> <li>• Not present at lab and not made up</li> <li>• Lab needs to be finished for credit.</li> </ul>