

Frank McClarin High School

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Physical Science Syllabus - Semester I & II Fall/Winter/Spring 2008– 2009

Instructor: Ms. Augustine Business Phone: 404-669 – 8080 x 217
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Conference and Tutorial hours:

Tuesday & Thursday: 7:30-8:00am; 3:00-3:30pm
Also by appointments

Required Text:

Glencoe Physical Science

I. Course Description

Course Title: Physical Science

The HS Physical Science curriculum continues students' investigations of the physical sciences that began in Grades K-8 (see Fulton County System wide Science Vertical Instructional Framework). The course is designed as an introductory overview of the major concepts in chemistry and physics to provide students with the necessary knowledge and skills in physical science. The course includes more abstract concepts such as structure of atoms, motion and forces, conservation of matter and energy, action-reaction principle, and the behavior of waves. These concepts are investigated through laboratory experiences and fieldwork designed for students to develop appropriate knowledge and skills in science as inquiry.

Outcome Expectations

At the end of this course students should be able to:

1. Use appropriate scientific tools to observe record, organize, analyze, interpret, write, and present the results of scientific investigations clearly and accurately.
2. Explain the current understanding of the structure of the atom and compare ionic with covalent bonds.
3. Use information, calculations, and predications to explain the nature, properties, classification, and conservation of matter.
4. Explain the nature and process involved in radioactive changes.
5. Explain the trends in the Periodic table and use the knowledge to predict the properties of representative elements.
6. Compare and contrast the phases of matter as a result of atomic and molecular motion.
7. Describe the nature of solutions and the factors that affect the solubility of substances.
8. Explain the transformation and flow of energy in deferent medium relative to the heat capacity of different substances.
9. Use calculations to determine the relationships between forces, mass, and motion.
10. Explain the properties of waves and recognize that all waves transfer energy.
11. Explain the nature and production of static electricity and electric currents based on electron movements.
12. Describe the relationships between electricity and magnetism and explain their applications.

Laboratory experience is an important part of this course. At least 25% of the class time will be spent in the laboratory. All students must satisfy the following requirements before being allowed to participate in any laboratory activity: (1) Take a safety test and make a score of 80% or higher; (2) Sign and have a parent sign the laboratory safety contract provided by the t

I. Course Outline (approximate length in class periods)

- A. Science Process Skills and Safety (10)
- B. Metric conversions/Dimensional analysis/Scientific notation (15)
- C. The Nature of Matter (35)
- D. Motion and Energy(20)
- E. Waves and Wave Properties (20)
- F. Electricity and Magnetism (20)

II. Final Grade Determination

- A. Class work / participation – 20%
- B. Quiz - 15%
- C. Lab - 25%
- D. Project - 20%
- E. Test - 10%
- F. Final exam - 10%

III. Physical Science Tools

The following items are needed for class: Notebook for physical science only, scientific calculator, pens and pencils.

IV. Recovery

Recovery opportunities will be allowed if a student's performance indicates a significant decline in achievement or a failing cumulative grade. Recovery work must be directly related to the course objectives.

V. Extra Help

It is up to you to seek help. Tutorial is available after school from 3:45 to 4:30 PM on Tuesdays and Thursdays. You must obtain a hall pass before coming to a tutorial session and you must arrive by 3:50 in order to attend a tutorial session. Do not let a small problem become a large problem. Ask questions and seek help as soon as a problem arises.

VI. **Test & Quizzes:** Quizzes could be given the first 10 minutes of class. Most tests will be scheduled after we have covered a particular unit and lab /reinforcements of materials have been completed by students. An EOCT exam will be given which will serve as the final exam. A cumulative exam could also be given to determine the amount of knowledge the student gained while taking the class

Pacing Chart: A daily pacing chart will be provided to keep you abreast of daily instructions. There may be slight changes in exact dates a topic is taught as the semester progresses.

Projects: A project is required by Fulton County Schools for each unit in biology. You will be given instructions for the projects as near the end of the unit. The project will require you to use knowledge gained from the unit. Attending class regularly is critical to success with your projects!

End of Course Test (EOCT): At the end of 2nd Semester Physical Science an inclusive end of the course test must be taken. The test is designed by the Georgia Education Department. The questions on it are all from topics covered in both Physical Science classes. This is another reason it is important for you to attend class and participate in all activities. You stand to lose very important information when you are not present!

Policy on All Class Work

Seat Work: Will be monitored and checked daily.

Homework: Given once or twice a week.

Journal: Will be kept at school; further details explained in class

Quizzes/Tests/Sponge Activities: Given per unit & at teacher's discretion

Final Exam: All students must take and pass the final-exam!

Internet: PLAGARISM ON RESEARCH for PROJECTS WILL RESULT IN 0%. NO RECOVERY!!

Recovery Work: For those students who have completed all work, but due to extenuating circumstances the student is not able to pass the course. I will provide opportunity for that student to pass the class. It is the student's responsibility to contact the teacher for recovery opportunity. The work must be completed 10 days prior to end of semester.

Attendance Policy

-Expected to attend class **daily**

-**Be in class BEFORE THE BELL;** after the bell, you are **TARDY!!!**

-Student responsibility to ask for missed assignments (this is only for excused absences). Xerox a copy of your excused note with appropriate contact name and numbers.

Classroom Expectations

- **ON TIME, WITH WRITING UTENSIL**
- **SIGN – IN, GET FOLDER/SPONGE ACTIVITY, BEGIN WORKING**
- **No Book bags** are allowed in class.
- Absences: You cannot miss more than 5 days in each 60 day period.
- **ABSOLUTELY NO EATING/ DRINKING IN CLASS!**
- **ABSOLUTELY NO TALKING OR CHEATING DURING TESTS. A 0% will result.**

You have a brain, as long as you are carrying it around, you might as well use it!

- Dr. Richard A. Goode

Student's Signature

Parent's Sign