

8th Grade Physical Science

Mr. Carlos Hernández

2007/2008

Syllabus

I would like to welcome all of you to an exciting year in Physical Science. This year we will be looking at matter, chemical reactions, atoms and bonding, motion, forces, energy, light, and sound. We will be making musical instruments, launching rockets, experimenting with flight, as well as many other activities. Physical science is a great class and I look forward to a great year with all of you.

Objectives:

Students will demonstrate the skills and knowledge necessary for the study of physical science.

Materials:

Students will need to bring to class daily:

- Agenda book
- Pencils or pens (blue or black ink)
- Composition notebook (An additional notebook will be needed for science fair projects)
- Three ring binder with pockets and notebook paper (College ruled preferred)

Grading:

- Participation skills/ Classroom work 10%
- Quizzes 20%
- Homework 15%
- Tests 30%
- Labs 25%

Participation/Classroom Work (10%)

Class participation is a must! Students will be asked to work on individual and group assignments throughout the year. It will be the student's effort and willingness to participate, which will determine the student's Participation Grade. As long as students are on task, they will receive full credit for the day. The following will result in the student receiving a zero for that day's participation grade.

- Having an unexcused tardy
- Not bringing their agenda book to class
- Not having the required materials in class (pens, paper, notebook)
- Not participating during a lab assignment

Quizzes (20%)

Quizzes will take place from time to time and will consist of five to ten questions based on the week's lesson. Pop-quizzes can occur at any time.

Homework (15%)

Homework is 15% of the grade in this class. Often, it will involve some studying and perhaps some written work. There will be few homework assignments given during the year, however, students are responsible for studying their key terms and notes taken in class. During the first semester, the homework for all students will be to work on science fair. Students will be asked to turn in homework assignments regarding science fair during the first semester. Students will also be responsible for studying their key terms and notes taken in class. Homework cannot be made up unless a student was absent.

Tests (30%)

Tests will be given upon the completion of the current chapter or at Mr. Hernández's discretion. We will have a chapter review a day or two before the test; however, students are still responsible for studying the material on their own.

Labs (25%)

Mr. Hernández loves to have hands-on lab activities that enrich the information covered in class. Whenever possible, lab information will be given prior to the lab activity. Students will be responsible for reading over the lab **BEFORE** coming to class. On the day of the lab, questions regarding the procedures will be addressed before the lab. Although students will be working in groups, each individual student will still be responsible for their individual lab worksheets. Since labs are 25% of the student's grade, students should be prepared for a lab as they would a test.

Success Tips

There are many ways to improve your chance of success in this course:

1. Attend class every day.
2. Do your homework as quickly after class as possible, study it, understand it, and keep it organized.
3. Read your text and make notes of areas not understood.
4. Ask questions of your teacher in and out of class.
5. Form a study group or get a “study buddy”.
6. **DO NOT DELAY SEEKING HELP WHEN NEEDED!**

Absences

When a student is absent from class, it is the **student’s responsibility** to get the make up work and/or assignments from the make up work bin in class. The make up bin is located at the entrance of the classroom on the right hand side. The bins will have labs, worksheets, and/or handouts. Students should check with their classmates for notes taken in class. It depends on how many classes a student was absent when Mr. Hernández will require the student to show the completed work. Usually two days are given for every day the student was absent.

Important reminder:

If a student is absent on the day that a quiz, test, or lab (or the student signs out to go home before class or is late and comes to school after class) that student is required to make up that quiz and/or test **the day they return**. Students will know a week before an exam is given, so quiz and test dates will be known ahead of time. Labs must be made up **within one week** of when it was given or it will be entered as a zero.

Contacting the teacher:

The best way to contact Mr. Hernández is via e-mail at

CarlosHernandez@ssas.org

If a student or parent sends an e-mail, a response will usually get back to them within 48 hours, unless the teacher is absent from school. Phone calls and email will not be answered on the weekends or during school breaks. So, please do not be offended if an email is sent on a Friday and you don’t get a response until Monday.

Parents may also contact Mr. Hernández by calling the school and leaving a message (330-1855 x110). Please keep in mind that it might take me some time to get back to you if phone tag is played! Again e-mail is the best way to get a hold of Mr. Hernández.

Conferences are scheduled shortly after each midterm. Any parent/guardian who is concerned about their student’s progress should call the School Receptionist to schedule a conference for these days.

Expectancies for the Life Science Class for the school year 2006-2007

Students will be required to keep a daily journal, in a composition book, of all bellwork. These books will be submitted to the teacher for review at the close of each unit of study. For the majority of the school year, students will have a set of FCAT daily questions for their bellwork. When bellwork is not an FCAT daily, students are to include the date, question, and answer the composition notebook. The following schedule is indented to be an outline of expected outcomes. Length of time to complete a given unit of study is based on the progress made day to day by each of the classes. There may need to be adjustments due to many factors.

You will note that the first area, dealing with Science Fair, has definite assignments and due dates, while the other areas do not list assignments. Please note that we will cover the regular science units during the times we are not directly working in class on the science fair. Those units will have little to no homework. It is expected that during the science fair preparation time (roughly the first semester) the student's science fair project is their homework!

Science Fair!

Due Date Timeline

***** Week 1-2:*****

- Choose a topic to investigate
- Choose a problem statement
- Choose a hypothesis
- Working on variables in class
- Begin working on your Log Book

WHAT'S DUE?

*Tentative (working) Problem Statement

* Tentative (working) Hypothesis

*Variables (IV and DV)

Due date: Monday 8-27

***** Week 4-5:*****

- Work on filling out the science fair forms
- Begin working on your review of literature
- Continue working on your Log Book

<http://www.sciserv.org/isef/document/index.asp>

WHAT'S DUE?

*Science Fair forms with parent signatures

Due date: Monday 9-17

***** __Week 5-6:*****

- Work on Procedures and Materials in class (9-17)
- Continue working on your Log Book

WHAT'S DUE?

- * Review of Literature
 - *MLA format of sources
 - *Procedures and Materials
- Due date: Monday 9-24

YOU SHOULD BE EXPERIMENTING BY 9/26 UNLESS OTHERWISE ADVISED
BY YOUR TEACHER!!!

***** __Week 10:*****

- Working on experimentation
- Working on how to collect data in class
- Working on conclusions in class
- Continue working on your Log Book

WHAT'S DUE?

- *Nothing at this time

***** __Week 13:*****

- Working on experimentation
- Collecting data
- Continue working on your Log Book
- Go over board set up during class

WHAT'S DUE?

- *Data tables
- *Conclusions

Due date: Monday 11-12

***** __Week 15:*****

- Putting final touches on Science Fair project

WHAT'S DUE?

- *The entire Science Fair Project-
Display Board
Log Book
Research Paper

Due date: Tuesday 11-27

Units of Study

Please note that students are given study guides for each test given. These study guides will, in the beginning, be complete guides, they will not need a book to study with. Later in the second half of the year, students will be given study guides that may contain areas they will need to answer to complete. These study guides then become their complete study guide needs.

First Quarter:

- *Describing Matter
- *Measuring Matter
- *Particles of Matter
- *Describing and Measuring Motion
- *Slow Motion of Planet Earth
- *Acceleration
- *The Nature of Force
- *Force, Mass, and Acceleration
- *Friction and Gravity
- *Action and Reaction

Third Quarter:

- *What are Waves?
- *Properties of Waves
- *Interactions of Waves
- *Nature of Sound
- *Properties of Sound
- *Combining Sound Waves
- *How You Hear Sound
- *Applications of Sound
- *The Nature of Electromagnetic Waves
- *Waves of the Electromagnetic Spectrum
- *Producing Visible Light
- *Wireless Communication
- *Reflection and Mirrors
- *Refraction and Lenses
- *Color
- *Seeing Light
- *Using Light

Second Quarter:

- *Pressure
- *Transmitting Pressure in a Fluid
- *Floating and Sinking
- *Applying Bernoulli's Principle
- *What is Work?
- *Mechanical Advantage and Efficiency
- *Simple Machines
- *Nature of Energy
- *Energy Conversion and Conservation
- *Power

Fourth Quarter:

- *Solids, Liquids, and Gases
- *Behavior of Gases
- *Graphing Gas Behavior
- *Physical and Chemical Changes
- *Organizing the Elements
- *Metals
- *Nonmetals and Metalloids
- *Elements From Stardust
- *Chemical Bonding, Carbon Style
- *Carbon Compounds
- *Describing Chemical Reactions
- *Controlling Chemical Reactions
- *Inside an Atom
- *Atoms in the Periodic Table