



Ms. Crowe's Physical Science Class 2007-2008

The 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. It is for these reasons that the plans presented below are somewhat vague with no exact dates attached.

You will be more completely informed, and given dates of coverage, assignments and tests through the Team News (hard copies are sent home each Monday, and are located on the school web site.) Class work and assignments are also posted through Edline.

Our units require active participation. It is extremely important that students are present. Students who are absent will need to see the teacher to obtain class notes on the labs, and consult with their lab group. As in all classes, any worksheets, or printed information that was distributed to the group, are placed in the class wall bins for students to pick up upon their return, if the parents have not picked them up from the office.

There will be a preliminary Diagnostic Test of Sunshine State Standards to assess the level of understanding of major concepts the students have mastered. Additionally, students will be assessed on mastery at various times throughout the year. Students will be involved in Daily Science FCAT Questions, which will be posted each day. Students will answer the questions assigned, to their best ability, during Bell Work time. Questions are then "graded" and discussed. When a student has written in the incorrect response, they are required to write in the correct response.

Students will be required to have a plastic, closable folder, which will be kept in the room, in the class period bin. Students will keep their FCAT Daily Book in it, as well as other class work.

When assignments are finished, they are submitted to the teacher. These are collected by the teacher, and placed in a special folder, until they are graded. Ms. Crowe makes every effort to return work as soon as possible, usually within 24 hours to the students.

Missed work is placed in wall bins for students. Graded work is placed in class drawers. Selected students are "in charge" of checking the drawers each day, and handing the work back to their class. It is the responsibility of students who are absent to check the proper bins to collect needed work. If students miss work that cannot be made up, they will receive an excused grade. If a student misses a test, and they received a study guide, they are asked to take that test within a day of their return. If they did not receive a study guide in class, they are to take the test on the day indicated in the student handbook.

A Special Note of Interest:

Science can be a very fun class. We do a great many labs (having more days in labs, and doing activities, than days we read only.) However, this does not mean that we are just playing, or that science is not something that needs to be learned. Everything is science. No matter what we look at, or do, science is at the heart of it. Your teacher firmly believes that we often learn best by "doing" science, and then discussing what we have done. Most students come to the correct conclusions if given a chance to really observe what is going on, especially when given a few clues here and there! Just remember, everything in class has a purpose! We will do nothing "just for the fun of it!" But, it can all be fun!!!!

This can be the class that you will remember forever. This can be the class that you love this year! It is all up to the students. If we come to class prepared to do what needs to be done, I can promise you that you will absolutely love the class, and you will remember the scientific concepts we study, when you are 80 years old!!

Discipline Policy

Every student is expected to follow the SSA+S Discipline Policy at all times. When students follow the policies, all school activities run smoothly, enjoyably, and are conducive to optimal learning. Please refer to the student handbook to understand what is expected of students at SSA+S (<http://www.ssas.org/Administration/SchoolProcedures.htm>).

In addition to the SSA+S Discipline Policy, students in Ms. Crowe's room will:

1. Conduct themselves in a safe and orderly manner during all class periods, in and out of the classroom. If they do not, they will be removed from active participation to a position of observation only. Students who continue to disrupt the class, from this position, will be removed from the room for the duration of the activity.
2. Participate in all activities to the best of their abilities.
3. Smile

Not adhering to Classroom or School Procedures: SSA+S Classroom Discipline Plan

First Offense:	Visual (The Look) or Verbal Warning
Second Offense:	Write classroom rules and parent notification
Third Offense:	Behavior essay with signature from parent(s).
Fourth Offense:	In school morning detention.
Fifth Offense:	County Referral (one or more days out of school suspension).

Student or parent refusal for student to write classroom rules or behavior essay, and also a refusal to do a morning detention will be considered as a fifth offense.

Adhering to Classroom or School Procedures:

None of the above happening
Having happy teachers
Having terrific classes!

Units of Study:

▪ **Science Fair Projects**

- Science Fair will be required of all students at SSA+S.
- Students will form a tentative working topic, hypothesis, and problem statement.
- Students will conduct Background Research, by researching specific required areas approved by the teacher.
- Students will form structured Problem Statements, Hypotheses, and variables, after their research has been completed.
- Students will design their Procedures
- Students will conduct independent Test Trials at their homes
- Students will submit their data, and reach joint conclusions.
- Students will receive the optimal amount of guidance from their teachers during all steps in the Scientific Process.
- The Science Fair Due Dates will be posted in the team news, and on Edline during the first week of school. The students will also be required to write these dates in their agenda books. Please check these sources often.

▪ **Science Fair Due Dates:**

August 31st: Topics, Problem Statements, and Hypotheses

September 14th: Review of Literature Rough Draft

September 17th: Science Fair Forms

October 1st: Procedures Rough Draft

October 8th: Final Procedures

November 12th: Data Due

November 27th: Science Fair Projects

▪ **Brain Power**

A short introduction to our brains, how they work, internal and external influences, and how to get the highest performance results.

▪ **This Elegant Universe: Atomic Theory:**

A brief introduction to Atomic Theory: Old Theories, Accepted Theories, and New Theories

▪ **MOTION! and Force**

In class: Students will discuss the text, and be involved in a number of activity labs. This unit is very activity oriented.

Students will research motion using our text as their primary source of information. They will also be searching additional material, and producing their own research reports in small groups, based on experimentation with computer programs.

Students are evaluated on their behavior during labs, and the resulting written work done in conjunction with the activities.

▪ **FORCE !!**

The nature of force, force, mass, acceleration, friction, gravity, action, and reaction!

In class: An activity driven research, with in-class experimentation and activities.

Students will research all the above using our text as their primary source of information. They will also be searching additional material, and producing their own research reports in small groups.

Force will continue on, adding to our list of forces those forces that involve fluids!

In class: Another activity driven research, with in-class experimentation and activities.

There will be many competitions during this unit on force. Students will build and test a variety of objects that respond to the forces.

▪ **Work and Machines!**

In class: Another activity driven research, with in class experimentation and activities.

This unit will begin with small mini-labs that will help us to understand simple machines. As the unit progresses students will be involved in increasingly more complex machines. Students will generate, as a home assignment one complex machine. They will receive complete directions at that time. They will submit the machines as presentations.

▪ **Sound and Light**

Learning about the predictive behavior of waves enables us to use that knowledge for a variety of purposes, and to protect ourselves from some of the harmful aspects of them.

Sound and Light may at first seem to be very different things, but they both not only have much in common, they are much more involved than they may appear to be.

This unit will be very exciting, as we begin to really explore sound and light waves beyond that which we take for granted in our daily lives.

In Class: This unit will see the students beginning with the study of waves in general. Using that knowledge of common characteristics of all waves, students will be involved in the study of sound and light intensively. There will be a great variety of activities and experimentation with each type of wave within their own unit component.

Students will, at the close of each unit component, participate in performance evaluations that will involve the application of their knowledge base. In addition, students will individually keep a log of their activities, and complete a written conclusion, which will be submitted for evaluation.

▪ **Chemical Building Blocks & Chemical Interactions**

In class: Exploring matter, it's characteristics and properties. This unit will center on the behavior of atoms, the differences between atoms of different elements, and the likenesses, phase changes, physical and chemical changes, and the logic behind the Periodic Chart. Much emphasis is on the historical development of our understanding of the atomic world and how this development of atomic theory is still in progress with the development of new tools of observation.

Students will be actively involved in many labs during this unit. Students will also produce several written assignments. Using the first written assignment as an example of the work is: A Journey to the Center of an Atom. In this assignment students will be asked, given their understanding of what we now know about atoms, to imagine being shrunk to a smaller size than an electron, and asked to travel by a subatomic ship to the center of an atom and to describe what they see, feel, and experience.

Students will also generate a Chemical Family Album, and study the use of elements and their historical use in comic books, in addition to other in class assignments.