

## INTRODUCTION TO PHYSICAL SCIENCE

Foundation in Chemistry and Physics is an introductory course with the following goals:

1. To develop an understanding of basic concepts and skills in chemistry and physics, especially as these concepts relate to energy, stability, patterns of changes, scale and structure, and systems and interactions.
2. To relate the study of physical sciences to current environmental issues.
3. To develop laboratory skills and the ability to communicate the results of laboratory investigations.
4. To develop an appreciation for current science topics and the ability to research science topics.
5. To develop several systematic approaches to studying science and to problem-solving in science including cooperative learning, concept mapping, and graphical analysis.

### COURSE OUTLINE:

#### First Semester

1. Science Skills
2. Properties of Matter
3. States of Matter
4. Atomic Structure
5. The Periodic Table
6. Chemical Bonds
7. Chemical Reactions
8. Solutions: Acids & Bases
9. Carbon Chemistry

#### Second Semester

1. Motion
2. Forces & Motion
3. Work Power & Machines
4. Energy
5. Thermal Energy & Heat
6. Mechanical Waves & Sound
7. Light & Optics
8. Electricity & Magnetism

[Schedule is subject to change based on constraints of time and the particular needs of our students.]

### Grading

- 40% Tests (expect a test about every 2 weeks)
- 40% Lab Reports, class presentations, homework, and quizzes
- 20% Semester comprehensive exam

### Materials

1. Textbook: Physical Science: Concepts in Action
2. Notebook: 3-ring binder (with appropriate paper)
3. Calculator with your name on it in permanent marker
4. Pen, pencils, and metric ruler
5. A copy of this syllabus

## Academic Expectations

1. Assignments are due the following day unless otherwise noted. Assignments will be posted on the board and/or online. It is your responsibility to write down and complete your work.
2. Assignments are to be turned in on posted due date!
3. A test will be given after each chapter is completed.
4. Unannounced quizzes may be given to evaluate student progress and understanding of course material.
5. Unannounced homework checks will be made periodically to evaluate student progress and understanding of course material.
6. All work should be in complete sentences.
7. All students will adhere to safety rules and science department rules.
8. All homework will be posted ahead of time on the SPX website under our webpages and the calendar will be tentative. If something new arises because of time restraints, it will be posted on the calendar that day.
9. Extra credit will be given periodically. There is no penalty for not doing it but to receive credit, the question must be answered completely (i.e. no partial credit).
10. Homework = All questions must be attempted & all vocabulary = 100%  
= One question not attempted or vocabulary work missing = 0%

## Additional Information

Students who have been absent for several days are responsible on the day of their return to make arrangements to make up tests which have been missed. Make-up of tests must be done within three days of the student's return to school. Students who have been absent for one or two days only, and have missed a test, must make up the test on the day of their return to school. Any student missing a major test due to late arrival, early dismissal, or medical appointment, must contact his/her instructor during that school day and arrange to take the test during a free period, at their lunch period, or after school. **STUDENTS, WHO FAIL TO SEE THE INSTRUCTOR TO MAKE THESE ARRANGEMENTS ON THAT DAY, WILL NOT BE ALLOWED TO MAKE UP THE TEST AND WILL RECEIVE A GRADE OF ZERO!**

In addition, it is the responsibility of the student who has been absent from class to find out what assignments have been missed and to complete them within a designated time.

## SCIENCE DEPARTMENT RULES

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1. Students may not touch science equipment without authorization from teacher.
2. Students must follow written safety regulations at all times.
3. Laboratory procedures must be followed exactly; students may not use equipment in any other manner.

## Classroom Procedures

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4. STUDENTS ARE EXPECTED TO BRING TO CLASS: TEXTBOOK, STUDY GUIDE, NOTEBOOK, PENCIL, PEN, AND ANY OTHER ASSIGNED EQUIPMENT EVERY DAY.
5. Each student is expected to be seated quickly in his/her seat when the bell rings to begin class.
6. Students are expected to remain in their seats and be attentive during class.
7. Students will raise their hands and wait to be called upon before speaking in class.
8. Grades are available online and are the responsibility of the student and parent to view them.
9. Students who miss class should check the web and complete homework/lab assignments during absence. It is not the responsibility of the teacher to ask the student to make up missed work.
10. Students may obtain course information on the Science Department Academic Web pages.

### If Absent:

Email teacher or call teacher at school and leave a message the day before the assignment is due if the absence is planned. If absence is not planned, the teacher must be informed via email or voicemail by the student or parent the day of the absence. The assignment can also be emailed.

## CLASSROOM DISCIPLINE

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1. Violators of the safety and equipment regulations will be referred to the Discipline Office.
2. Violators of the rules of classroom procedure will be warned that their behavior interferes with the progress of class. Continued disregard of the rules will result in detention. Exceptionally disruptive or discourteous students may receive detention or Discipline Office referrals without warning.
3. Chewing gum is not permitted on the St. Pius campus. Chewing gum in a science laboratory is a safety issue. Students who chew gum can expect detention each time this rule is violated.
4. Students must be in proper uniform as outlined in the student handbook.

### Classroom Rules:

- \* No talking while the teacher is talking or anyone who asks permission to speak
- \* "The Golden Rule" - Do unto others as you wish to be done to you
- \* Only science work should be attempted during science class unless permission by the instructor is given.
- \* Any time I feel it necessary or a problem arises, I will make another rule

Student Signature Section

I, \_\_\_\_\_, have read the syllabus and understand the following:

- |  | Initial Here |
|--|--------------|
| 1. I am to come to class with all necessary materials.<br>I will not be allowed to go back to my locker.   | _____        |
| 2. I will regularly check my grades on-line.   | _____        |
| 3. I will see my teacher to make arrangements for make-up tests<br>on a test day if I check in late or leave early.  | _____        |
| 4. I understand that tests are announced in advance.<br>If I feel that I am going to be absent due to illness, I will take<br>home my books and be prepared to take the test upon my return. | _____        |
| 5. I will adhere to all safety lab rules.  | _____        |

\_\_\_\_\_  
Signature

\_\_\_\_\_  
Date

Parent Signature Section

I, \_\_\_\_\_, understand my student participating in a lab science class and will be expected to follow all safety rules. Anytime I want an update of how my student is doing in class, I can check on net classroom for grades.

\_\_\_\_\_  
Signature

\_\_\_\_\_  
Date