

# Honors Freshman Physical Science Course Syllabus

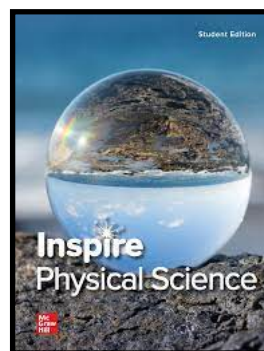
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## Essential Course Resources

**Mr. Stello's Landing Page**  
<http://www.mmscience.rocks>

**Hard Copy Text:**  
*McGraw/Hill Inspire Physical Science*  
(classroom set - available for library checkout)



## Course Description & Rationale

*In this course we will study the properties, structures, and interactions of matter and energy while extending the habits of scientific inquiry that were introduced in middle school. Learning this material is important because it promotes curiosity and a sense of wonder, encourages lifelong exploration, and serves as a means to satisfy the intrinsic human need to understand ourselves and our world. Furthermore, this material is important in helping you prepare to live in a world that is becoming increasingly influenced by science and technology. It is this dual notion of science as a vehicle for both personal growth and responsible citizenry that provides the foundation for learning in this course.*

## Description of Assignments, Assessments, and Projects:

*Our modern understanding of science and the discoveries that have been made will be learned through a balanced approach of lecture, readings, the use of technology, guided laboratory investigations, individual review assignments, group work/projects, and authentic laboratory problems posed to students.*

*All work in this class will be done in small units designed to help students understand a particular concept or core idea in science. The students will keep this class/lab work for the duration of the unit in a Science Journal and turn in the entire collection of work on the day of the unit exam. This class/lab work will be checked several times during the unit to ensure successful progress, and these checks make-up a portion of the units overall grade. Large projects or labs are typically done at the end of each unit (after the exam) to extend the knowledge that was learned. These are varied and typically take a week or two to complete.*

## Outline of Topics:

- *Metric Measurements*
- *The Scientific Method*
- *Properties & Classification of Matter*
- *Atomic Structure Fundamentals*
- *The Periodic Table*
- *Chemical Bonding & Reactions*
- *Introduction to Chemical Quantities (Stoichiometry)*
- *Nuclear Chemistry*

----- Semester

- *Describing Motion*
- *Force & Newton's Laws*
- *Work & Mechanical Energy*
- *Fluids & Gasses*
- *Heat & Thermal Energy*
- *Waves (Sound & Light)*
- *Electrical Charge & Current*
- *Modern Physics*

## Attendance, Assignment Make-up, and Late Work Policies:

*Routine attendance is expected, and excessive absences will inevitably lead to a reduction in student learning and possibly a loss of credit. The participation portion of the course grade is also affected by attendance – you cannot participate if you are not in class. It is crucial that you make every attempt to be in class every day.*

*It is the responsibility of the student to find out what work was missed during an absence and no make-up work (including exams) will be accepted for unexcused absences. Students who have an excused absence on exam days are responsible for taking the test on the day of their return. All other work missed due to excused absences, including extended absences due to illness, will be handled according to the policies outlined in student handbook. Please read these policies!*

## Grading Criteria:

*I believe it is important that each student understand exactly what is expected, and that everyone can have success if they do the required work. In keeping with this philosophy, I believe that each of you should be evaluated based on how well you achieve the course goals rather than how you compare to other students. This will allow each of you to be responsible for your own success.*

*The Mark Morris standard grading scale (refer to the student handbook) will be used and grades in this course will be based on the following types of work:*

- *Unit Lab/Class Journal Work* 45% of grade
- *Unit Exams* 45% of grade
- *Class Participation & Attendance* 10% of grade

*Students may retake any exam by appointment after school. Work of reasonable lateness will always be excepted without penalty, but the expectations for outstanding work increase significantly!*

### **Extra credit:**

*Students will occasionally have the opportunity for extra credit, but this will always be associated with required assignments, labs, or exams. In general, these opportunities are rare and offered to the entire class. Individualized extra credit will NOT be offered.*

### **Academic Integrity:**

*It is expected that students do their own work at all times, unless specifically instructed to work in a group. Cheating is never acceptable, and the first time a student is caught a zero will be given on the exam or a 25% reduction in the overall Science Journal score for that unit, parents will be contacted, and disciplinary measures will be assigned. If cheating occurs again, the previously mentioned consequences will be implemented as well a required parent conference.*

### **Classroom Expectations:**

*I am eagerly anticipating the adventure before us. As with any new undertaking, it is good to establish guidelines that will ensure success for everyone. My expectation is that you will act with maturity and be accountable for your own conduct. It is your responsibility to contribute positively to the class, and as your teacher, I am willing to work to help everyone gain this responsibility. However, it is not within my power to make any of you do anything - it will be the choices you make that govern your behavior, and ultimately your success in this course.*