



Marine Science Magnet High School

130 Shennecossett Road  Groton, CT
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SCI0610 - Integrated Science 2024-25 SY

Course Description:

Integrated science is mostly a physical science course which develops fundamental knowledge, skills and scientific thinking for many other areas of science. It introduces students to inquiry based learning, problem solving and critical thinking. It is required for all freshman students.

Materials Needed:

Three Ring Binder, 3-Ring Pocket Folder, Pens/Pencils, Loose-Leaf Paper. Non earbud headphones.

Textbook / Required Reading

This course will have digital and paper references and required readings. Classroom textbooks will stay in the classroom. A supplemental resource will be on www.ck12.org. Student will join a class assignment page through google classroom.

Classroom Attendance, Academic and Behavior Expectations

All MSMHS students are required to uphold the attendance, academic and behavioral expectations outlined in the school's Student/Parent Handbook which can be found on the MSMHS website.

Cell Phones

Students are permitted to bring cell phones to school, however, they must be stored in the designated location in each classroom throughout the block, including study hall. Students may not bring cell phones with them when they leave the classroom for any reason. Students may also be required to turn smart watches or other devices to designated locations during class at the request of the teacher. Students found to have violated these expectations will be required to turn their cell phone into school administration and it will be released to the student's parent or guardian. Repeated offenses may result in escalated consequences. Cell phones may not be used in restrooms for any reason. Cell phones may be used before, during lunch, or after school hours.

Course Unit Outline - Enduring Understandings and Tentative Dates:

Unit 1 – The Nature of Science

Introduced in First 3 weeks. Embedded and built upon through the year

Enduring Understandings

Quarter One

- Scientific knowledge is created and communicated using a process called the scientific method and is based on evidence.
- Scientists and engineers engage in specific practices when investigating the natural world or designing solutions to problems.

Unit 2 – Forces and Interactions

Quarter One

Enduring Understandings

- Laws of motion and gravitation are used to explain the effects of forces on the motion of objects.
- The total momentum of a system of objects is conserved when there is no net force on the system.

Unit 3- Energy Transformations & Thermodynamics

Enduring Understandings

Quarter Two

- Energy transformations occur in many systems with varied efficiency.
- All energy pathways can be traced back to the sun

Unit-3

Quarter Two/Three

Enduring Understandings

Quarter Two

- Electrons flow through conductive materials based on their atomic structure with different levels of resistance.
- Magnetic strength depends on the composition of a metal or the presence of electrical energy.

Unit 4 - Elements, Electricity and Magnetism

Quarter Two

Enduring Understandings

- Atoms are the building blocks of matter.
- Electricity can be produced by moving a conductor in a magnetic field or moving a magnetic field over a conductor.

Unit 6 – Waves and The Electromagnetic Spectrum

Quarter Three/Four

Enduring Understandings

- Mechanical waves need a medium to travel through while EM waves can travel through a vacuum of space.
- Wave properties of electromagnetic radiation such as frequency determine how it interacts with matter. Many helpful modern technologies rely on electromagnetic waves.

Unit 7 – Astronomy & Space Technology

Quarter Four

Enduring Understandings

- The creation of the universe and stellar bodies can be supported with at least 3 pieces of evidence
- Physical laws can explain the interactions of astronomical bodies and how they change.
- Knowledge of our galaxy and solar system have increased with the advancement of technology over time.

Late Work

All teachers will accept late work prior to the end of the appropriate quarter by a designated date; 50% is the maximum penalty for a late submission. In order to be accepted, the work must be complete and meet all assignment requirements.

Extra Help:

Students interested in receiving extra help from teachers, or in meeting with their teacher before or after school, need to schedule a mutually agreed upon time to meet with their teacher. Teachers may require specific procedures for requesting appointments for extra help. Please know that teachers will be unable to meet with students on Wednesdays due to regularly scheduled faculty meetings. Academic support is available at different times throughout the day in the Learning Lounge and teachers will be available at scheduled times during Shark Block.

Retake Policy

All students will be allowed to retake assessments (with the possible exception of ECE assessments). This course will have a consistent retake procedure, regardless of the teacher. The retake procedure for this course is _____.

Grade/Grade Reporting:

Overall evaluation in a course is measured in a number of ways in the form of formative and summative assessments.

MSMHS uses the following language for communicating how assignments will be scored and represented in PowerSchool:

- “Graded” – The assignment is evaluated for accuracy (not completion), is given a numeric score, is entered in PowerSchool and is included in the quarter average.
- “Scored” – The assignment is evaluated for accuracy (not completion), is given a numeric score, may be entered into PowerSchool, but is not included in quarter average.
- “Recorded” – The assignment is marked as completed or not completed, not given a numeric score, may be entered into PowerSchool, but is not included in quarter average.

Course grades are calculated by using the following percentages:

Q1 = 20%

Q2 = 20%

Midterms = 10%

Q3 = 20%

Q4 = 20%

Finals = 10%

The following table shows the letter grades equivalent to numerical grades and GPA.

Letter	Numerical Equivalent	GPA Equivalent	Honors Weighting	AP/ECE Weighting
A+	97-100	4.3	4.52	4.73
A	93-96	4.0	4.20	4.40
A-	90-92	3.7	3.89	4.07
B+	87-89	3.3	3.47	3.63

B	83-86	3.0	3.15	3.30
B-	80-82	2.7	2.84	2.97
C+	77-79	2.3	2.42	2.53
C	73-76	2.0	2.10	2.20
C-	70-72	1.7	1.79	1.87
D+	67-69	1.3	1.37	1.43
D	63-66	1.0	1.05	1.10
D-	60-62	0.7	0.74	0.77
F	50-59	0.0	0.0	0.0

Academic Integrity:

All work submitted by students should be a true reflection of their effort and ability. If submitted work or tests are not, then the student has manifested unacceptable academic behavior.

Plagiarism

Plagiarism is defined as intentionally or unintentionally presenting another's work as your own. Any source material (electronic, written, verbal) accessed to complete an assignment must be cited. Plagiarism includes the following:

- Copying verbatim or blending source material with your own without proper attribution,
- Paraphrasing source materials or borrowing ideas, terms, or concepts without acknowledging the source,
- Inventing sources or false attributions for sources,
- Supplying/selling your work to another or purchasing/copying another's work.

Cheating

Cheating is defined as copying all or part of an assignment or assessment or allowing another to copy your work. It is also doing someone's work or having someone else do your work. Cheating includes the following:

- Using unauthorized materials, devices, or assistance of any kind to complete your work or assessment, including on-line transfers,
- Collaborating on a task without the teacher's authorization, as well as providing or receiving information so as to give/gain an unfair advantage,
- Aiding another in cheating.

Other Academic Misconduct

Other forms of serious academic misconduct include:

- Altering grades,
- Stealing or obtaining test/assessment materials or answers,
- Submitting the same (or nearly the same) work for more than one class without disclosure or approval,
- Falsifying information on school related documents and forms.

ANY behavior that can be defined as cheating/plagiarism represents a violation of mutual trust and respect essential to education at MSMHS. Students suspected of cheating should expect to be questioned by their teacher. Students violating this rule are subject to the following penalties:

- Re-do of the assignment, notification to parents/caretakers; disciplinary consequence, written summary of event and action taken given to administration.
- If a student is found to have cheated/plagiarized a second time or is involved in a particularly serious act of cheating/plagiarism, the student will be referred to

administration for appropriate penalties beyond those listed above. Additional penalties include such consequences as notification to award and scholarship committees; suspension from class or school and notification to the student's prospective colleges; loss of or disqualification from honors/privileges and positions (e.g. NHS, school leadership position).