

Course Name: 2073 Marine Science
Teacher Name: Meghann Murray

Level: Honors **Points:** 5

Course Description: This elective explores the biological, chemical, ecological, geological, and physical aspects of the marine environment. The course requires that students integrate concepts from a variety of scientific disciplines such as chemistry, physics and biology. Students are expected to complete an individual science fair project. Laboratory, demonstrations and/or hands-on activities will be conducted once in every schedule cycle.

Texts/Instructional Materials:

Course textbook – Castro, Peter, and Michael E. Huber. *Marine biology*. New York, NY: McGraw-Hill Education, 2016. Print.

Course website - msmurraybiology.weebly.com.

Required materials -

- 3-Ring Binder with sections (ex. warm-ups; notes; class-work & labs; homework; and tests & quizzes)
- Lined paper
- Pencil or Pen

Topics of Study:

Principles of Marine Science

- The Science of Marine Biology
 - The Scientific Method
- The Sea Floor
 - The Water Planet
 - Ocean Structure and Basins
 - Provinces of the Ocean

Chemical and Physical Feature of Seawater and the World Ocean

- The Waters of the Ocean
 - Properties of Water
- Ocean Circulation
 - Currents, Waves & Tides

An Introduction to Marine Ecology

- Organization of Communities
- Energy Flow
- Major Marine Environments(Intertidal, Estuaries, Coral Reefs, Ocean surface, Deep ocean)

Organisms of the Sea

- Microbial Organisms
 - Bacteria
 - Diatoms & dinoflagellates
- Multicellular Producers: Seaweeds & Plants
 - Seaweeds
 - Flowering plants
- Marine Invertebrates
 - Sponges
 - Cnidarians (jellyfish, sea anemones, corals, hydroids)
 - Mollusks (bivalves, univalves, cephalopods)
 - Crustaceans (lobsters, crabs, shrimp)
 - Echinoderms (sea stars, sea urchins, sand dollars)
- Marine Vertebrates
 - Marine fishes (jawless, cartilaginous & bony fishes)
 - Marine reptiles, birds & mammals (reptiles, seabirds, marine mammals)

Assignments:

There will be daily classwork assignments and homework will be assigned both from the textbook and in class multiple times a week. Tests will be given at the end of each unit and at least two quizzes will be given each term.

Grading Policy:

Grades will be based on a variety of assessment methods. Tests will be given at the end of each unit and at least two quizzes will be given each term. There will be a midterm exam at the end of the 2nd Quarter and a final exam at the end of the 4th Quarter; each of these will comprise 20% of the grade for those quarters. **A science fair project will make up 20% of the grade for the 3rd Quarter.**

Grades will be broken down as follows:

<u>Assessment</u>	<u>1st Quarter</u>	<u>3rd Quarter</u>	<u>2nd/4th Quarter</u>
Classwork & Labs	30%	24%	24%
Homework	25%	20%	20%
Tests & Quizzes	40%	32%	32%
Class Participation	5%	4%	4%
Science Fair	0%	20%	0%
Midterm/Final Exam	0%	0%	20%

Academic Accountability:

Students will complete the assigned work on time, or with knowledge of the following academic work policies:

Homework Policy:

In order to receive full credit, homework assignments must be turned in at the beginning of class on the day they are due. Homework is graded on a, check plus ($\checkmark+$), check * (\checkmark^*), check (\checkmark), check minus ($\checkmark-$), late (L), very late (VL) and zero (0) scale. Homework grades will be based on correctness as well as completion. Please see homework grading sheet for a more detailed explanation. Homework will not be accepted once a test is given on the subject.

Make-Up Work:

Students must speak with the teacher on the first day back after an absence to discuss make-up work and its due date. Students who are absent on the day of a test/quiz/project should be prepared to take the test/turn in the project on the day of their return. Quizzes and tests must be made up on students' own time (i.e. before/after school), **not** during class. Generally, students will have 3 days to make up work, though this will be determined on a case-by-case basis.

Late Classwork Policy:

In order to receive full credit, work must be turned in by the **end of the period** (unless otherwise discussed). As with homework assignments, for each day classwork is late, the grade will decrease by one increment. Classwork will not be accepted once a test is given on the subject.

Cell Phone Policy: please see attached cell phone policy.

Students are expected to check ASPEN on a regular basis - grades will be updated frequently.

Please complete the portion below. DO NOT REMOVE THIS PORTION OF THE SYLLABUS – KEEP IT AT THE FRONT OF YOUR BINDER!

I, parent/guardian of _____, understand the content and expectations associated with the course described in this course contract/syllabus.

Name/Signature _____ Date _____

I, the student enrolled in the course described in this course contract/syllabus, understand what I can expect and what is expected of me, in this course.

Name/Signature _____ Date _____