



# Aquatic & Marine Science

## Mrs. Chambers

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**Welcome to Aquatic & Marine Science!** This course is designed to introduce students to marine and fresh water ecosystems, the incredible diversity of organisms that live there, and the impact humans are having on these aquatic ecosystems worldwide. This interdisciplinary course will provide you with the opportunity to explore the physical, chemical, geological and biological dynamics of the world's oceans. Whether you live in the Midwest or on the ocean, marine science literacy is for everyone. There is a global need to know and understand our water resources. After all, our Chicago River flows into the Gulf of Mexico, so what we do with our local fresh water resources DOES impact the world's oceans!

### Outline of Topics

- The Ocean Environment  
An introduction to the diverse life and habitat types in the ocean using the classroom reef tanks as an example; ocean chemistry – including how the ocean formed and why it is salty; physical features of the ocean – including ocean currents, how we study the sea floor and hydrothermal vent communities; major ocean zones and defining traits of each
- Marine Invertebrates  
A more in-depth look at marine life, focusing on the major marine invertebrate phyla: sponges, corals, bioluminescent ostracods, cuttlefish, and sea stars; recognizing diverse adaptations each group has for life in the ocean (*this unit will involve 1 dissection*)
- Diversity of Fishes  
A shift to marine vertebrates, starting with the fishes; fish classification and anatomy, comparing bony fish and cartilaginous fish (sharks and rays), investigating myths about sharks and shark behavior (*this unit will involve 2 dissections*)
- Marine Mammals  
A focus on the marine mammals with a brief overview of the various groups – polar bears and sea otters, seals and sea lions, manatees and dugongs, and dolphins and whales; an in-depth look at the evolution of whales, discussion of marine mammal captivity (Blackfish)
- Human Impacts on Aquatic Ecosystems  
An introduction to the freshwater vs. salt water resources on Earth and the Global Water Crisis; exploration of a variety of human impacts, which may include invasive species, chemical pollutants and what fish are safe to eat, plastic pollution, oil spills, global climate change and/or ocean acidification (*depending on the semester*)

### COURSE MATERIALS

Please have the following materials with you daily:

- Aquatic & Marine Science Course Pack (*purchase envelope from the Bookstore*)
- 1.5" 3-ring binder (of good quality)
- 5 tabbed binder dividers (*LABEL: Unit 1, Unit 2, Unit 3, Unit 4, Unit 5*)
- Your Chromebook or personal computer

## GRADING

The grade you earn in this course is based on the following *weighted* categories:

- Classwork/Homework (30% of grade): Includes labs, activities, articles, and work related to maintaining the class ocean reef aquariums
- Assessments (30% of grade): Includes the 5 individual Unit Tests
- Semester Project (20% of grade): This is a summative project; you will create a Marine Science Documentary! Class time will be provided.
- Lab Hours (20% of grade): Includes the class field trip and independent lab hour experiences. ALL lab hours are **extracurricular** and **mandatory**.

### Grading Scale:

Student grades are based on a weighted category scale. Percentages 0.5% and higher will round to the higher letter grade if it is on the “borderline”. For example, a percentage of 89.5% or higher will earn the higher letter grade (A-). This rounding practice applies to all assignments/assessments, quarter grades, and semester grades. All grades are available to view online through Schoology. Cheating of any kind will automatically result in a zero.

	A (100-93%)	A- (92-90%)
B+ (89-87%)	B (86-83%)	B- (82-80%)
C+ (79-77%)	C (76-73%)	C- (72-70%)
D+ (69-67%)	D (66-63%)	D- (62-60%)
	E (below 60%)	

### Grades in Schoology:

I encourage you and your parent(s)/guardian(s) to check Schoology every 1-2 weeks to track your progress in the course. While grades are not updated daily, most assignments, *on average*, will be graded, entered in Schoology, and returned within one to two weeks of the due date. If an assignment appears listed but does not have a “score” value, this means the assignment has been entered into the system, but has not yet been graded. When assignments have been graded, point values will appear next to the assignment. Comments (missing, late, incomplete, etc.) may also be marked for certain assignments. If you have questions regarding your score or the comment marked for an assignment, please notify your teacher.

## LAB HOURS

This science elective only meets for one period; however, you will earn lab credit upon completion. This means you do not have to give up a free period during your day for a science lab, but 12 science “lab hours” must be completed outside of class. The 12 lab hours ARE NOT optional. You will earn credit based on the completion of lab hour activities. The breakdown of the lab hours for this semester course is:

**Class Trip: The Shedd Aquarium, Chicago. Saturday, February 29<sup>th</sup> from 8 AM – 1 PM**

- 6 Lab Hours are earned from participating in this trip! Any conflict that prevents you from going on the class trip MUST BE school-related. Please mark the class trip on your calendar immediately; it is a fun (and FREE!) morning at the Shedd Aquarium.

**Independent Lab Hour Activities (“Lab Hours Opportunities” handout distributed in class)**

- 3 Lab Hours of your choosing will be due **Friday, March 13<sup>th</sup>**
- 3 additional Lab Hours of your choosing will be due **Monday, May 11<sup>th</sup>**

## SEMESTER PROJECT

For the AMS Semester Project you will create a marine science documentary. Class time will be provided to complete most (if not all) of the requirements. While weighted at 20% of your grade, this is not a traditional “Final Exam”. You will not be required to come in during Finals Week. *This is consistent with all one-semester science electives.*

## COURSE EXPECTATIONS

This is not a required science course; as an elective it is expected that you want to be in this class and will participate actively in the classroom discussions, labs, projects, and presentations. Your success in this elective class is dependent upon *your choice* to be an active contributor!

- **Electronic Devices:** Cell phones (silenced) should be put in the hanging pockets as you enter the classroom. Chromebooks and other devices must be put away before class begins. If you fail to do so, consequences (as outlined in the district handbook) will follow. Your teacher will invite you to take these devices out when they are needed for learning.
- **Attendance & Make-Ups:** Regular, punctual attendance is vital to success in the course. Whenever you are absent, it is always your responsibility to find out what material was covered and obtain the necessary handouts or notes *before* setting up a time to review what you missed with me.
  - Authorized absences (field trips, vacations, doctor appt, etc): You are expected to turn in assignments the *day you return*. Anything turned in after this time will be considered late work. If you miss a test, you will have *two school days* to make it up in the Testing Center.
  - Unauthorized absences: Unexcused absences will result in a consequence, to be determined by your instructor and/or your Dean.
  - Tardies: If you are tardy, you will be given one warning. Any subsequent tardy will result in a behavior referral and a detention will be assigned by your Dean. Continued tardiness to class will result in additional consequences, to be determined by your Dean.
- **Late or Missing Work:** Classwork and homework can be collected for correctness or checked for completion, at the teacher’s discretion. In order to receive full credit for any assignment, it must be finished completely and turned in on time (at the *beginning* of the period, unless otherwise noted). When homework is not turned in on time, it is considered late and will receive a point deduction. Once graded & returned, I will accept missing work for HALF credit until the end of that curricular unit. Once the unit test has been given, missing work is no longer able to be submitted for points.
- **Communication:** I encourage you to check your school-issued email address daily as it is the most convenient way to communicate important information. You can also contact me at my district email address ([SLChambers@dist113.org](mailto:SLChambers@dist113.org)) or on my district voicemail (224-632-3276) with any questions or concerns.

**I am excited to have each of you in my class.**

**Let’s have a great semester exploring all of your ocean/marine life questions, together!**

**Mrs. Chambers**

***Live the Warrior Way!***