

# MARINE BIOLOGY

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**Course Description:** This course is designed to engage students in learning about all forms of life found in salt-water habitats. This course is intended to provide an elective credit for those students who may go into marine biology related students or have a genuine interest in these areas. The student will learn how to apply information pertaining to geological, physical, chemical, and biological characteristics of marine ecosystems. This is an exploratory class that uses a lot of project based and hands on learning. Students will be introduced to new ways of thinking, new ways of approaching concepts, and will be challenged to use their creativity.

## **Fish Tank and Field Trips:**

**Tank:** Because we are a Marine Biology class in the Midwest, we do not have access to a lot of Marine resources. Throughout the semester, students will help design and maintain a saltwater aquarium in the classroom. By doing this, students will learn important requirements that marine organisms require to function within an ecosystem.

**Shedd Aquarium:** Students will have the opportunity to experience the Shedd Aquarium and all it has to offer in Chicago Illinois. (Parent information will be handed out as time gets closer)

**Tropical trip:** I am currently preparing a field trip for all Marine Biology students to the Florida Keys to take place near the end of the year (information will follow). As we move forward in the year, fundraising opportunities will become available for students and parent informational meetings will be scheduled. I will get information out about the trip as soon as possible.

**Timeline/Tentative Schedule:** The basic topics/chapters are as follows

- Chapters 1 and 2: Geography and Oceanography
- Chapters 3 and 4: Physical/Chemical properties of the sea
- Chapters 5 and 6: Microorganisms, Fungi, and Plants
- Chapter 7: Anatomy and Physiology of Marine invertebrates
- Chapter 8: Anatomy and Physiology of fish
- Chapter 9: Anatomy and Physiology of Marine Reptiles, Birds, and Mammals
- Chapters 10-16: Ecology; Marine Ecosystems
- Chapters 17-19: Humans and the Sea

**Assignments :** Your grades will be separated into formative and summative assessments. Formative assessments include quizzes, classroom/daily activities, labs, etc. Summative assessments include tests, projects, and research based activities. Assignments will be used as tools for learning.

## Grading:

A point system will be used to determine your grade. There are several ways to accumulate points, such as tests, quizzes, and labs/activities. The largest portion of points will be from daily classroom activities and projects. The total points will then be converted to a percentage, which will determine your grade.

93% and above	A	73-77%	C
90-92%	A-	70-72%	C-
87-89%	B+	67-69%	D+
83-87%	B	63-67%	D
80-82%	B-	60-62%	D-
77-79%	C+	Below 60%	F

**Quality of work:** Your work is expected to be neat and legible. It is also expected to be yours! There is absolutely no sharing of class work. If at any time you are caught sharing classwork, both students will receive zeros and parents may be called. This also applies to any student cheating at any time. \*\*

**Assessment:** This class is heavily project and collaboration based, therefore, a large portion of your grade will be based on classroom projects. If we do have a test during specific chapters I will inform you of the date in advance.

**Attendance: ATTENDANCE IS A VITAL PART OF SUCCESS IN THE CLASSROOM!** It is your responsibility to become familiar with Senior High School's attendance policy because it will be enforced. Attendance is a vital part of success in the classroom and is critical on lab days!

### Classroom Expectations:

We will discuss classroom expectations as a class. My overall expectations deal with

- Attendance
- Respect
- Willingness to learn and ask questions
- Willingness to experience new things
- A collaborative spirit

### Instructional Strategies:

The course will contain a variety of different learning opportunities for students. Students will be challenged to participate in the creation of their own experiments, lab activities, research, critical and abstract thinking activities, and group lessons.

## **Communication:**

Communication is key in my classroom! I am always willing to do what I can to give you the best learning opportunities in my class but **you also need to communicate with me!** If you are having issues in the class, there is nothing I can do unless you let me know. I expect you to be honest with me and I will do the same. You can contact me by the email listed above or come see me at some point during the day.

I will also send out monthly emails to keep parents updated with where we are at in the classroom.

I will work diligently to get your grades loaded into PowerSchool and keep them updated for you to check at your convenience.

## **District Standards met through this class:**

Learning Area: Science

**#1: The Nature and Process of Science:** Students will illustrate the science is ongoing and inventive, that science models the real world and is based on verifiable evidence, and that scientific knowledge has historically changed as new evidence is found.

**#2: Life and Environmental Sciences:** Students will demonstrate knowledge and understanding of the characteristics, structures, and functions of living things, the processes of life, and how living things interact with each other in their environment.

**#3: Earth and Space Sciences:** Students will demonstrate knowledge and understanding of the features and processes of the Earth, the composition and structure of the universe, and their interactions.

**#4: Science, Technology, and Science Connections:** Students will use technology to study and investigate interrelationships among science, technology, and human activity and demonstrate knowledge and understanding of how scientific study, using technology, impacts life.