

Aquatic Science Syllabus

Teacher: Coach Michael Bolger **Room:** S2

Contact Information:

E-mail: Michael.Bolger@fortbendisd.com

Phone: 281-634-5240

Conference: 3rd Period

Remind: Download Remind app. Choose "Join a Class" and enter "@bolger52"

COURSE DESCRIPTION

Aquatic Science is a one-year course designed for college-bound students who desire to develop an understanding and appreciation of marine and freshwater habitats. It is the study of marine and freshwater habitats and their support of life through applications of biology, chemistry, physics, geology, meteorology and aquatic resources as they relate to the environment. Students will learn how to set up and maintain aquaria for the purpose of observing animal behavior and gaining knowledge of chemical cycles. The maintenance of aquaria will be used in solving problems arising in the operation of fisheries, aquatic farms, waste disposal, and sanitation and water supply. Students will engage in numerous hands-on activities that serve to illustrate the concepts being taught.

COURSE OBJECTIVES:

By the end of the academic year, students should be able to:

Name and understand the terms associated with aquatic habitats.

- Identify key features and characteristics of atmospheric, geological, hydrological, and biological systems as they relate to aquatic environments.
- Demonstrate basic principles of fluid dynamics, including hydrostatic pressure, density, salinity, and buoyancy.
- Identify the role of carbon, nitrogen, water, and nutrient cycles in an aquatic environment, including upwellings and turnovers.
- Compare and describe how adaptations allow an organism to exist within an aquatic environment.
- Identify how energy flows and matter cycles through both fresh water and salt water aquatic systems, including food webs, chains, and pyramids.
- Predict effects of chemical, organic, physical, and thermal changes from humans on the living and nonliving components of aquatic ecosystems.

Summary of Course Content Units:

Marine Science

- I. Unit 1: Safety/Introduction to Aquatic Science
- II. Unit 2: Aquatic Cycles
- III. Unit 3: Meteorology and Geology
- IV. Unit 4: Water Chemistry and Properties
- V. Unit 5: Water Resources
- VI. Unit 6: Human impact



Marine Science

- VII. Unit 7: Energy Flow and Population Ecology
- VIII. Unit 8 Types of Aquatic Ecosystems and Adaptations
- IX. Unit 9: Brackish Ecosystems and Wetlands
- X. Unit 10: Freshwater Ecosystems
- XI. Unit 11: Tropical Saltwater Ecosystems
- XII. Unit 12: Polar Saltwater Ecosystems

COLLEGE READINESS/PREPARATION:

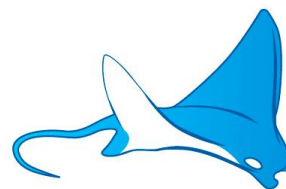
This course objective is to prepare students for college.

Students will engage in various study skills, test-taking strategies, formal scientific writings similar to writing and defending thesis, including a formal double-sided research paper at the end of the school year.

GRADING PROCEDURES:

Student progress and understanding will be measured using a variety of assessments that may include the following:

- FBISD grading policy is 50% daily and 50% major
- 50% daily grades from homework, class assignments, lab exercises and reports, tank maintenance reports, daily quizzes, diagrams, labeling, and participation.
- 50% major grades from major tests, study guide packets and major projects and activities.
- **Cumulative** final exam each semester
- FBISD policy states that retesting will be available for students scoring less than 75 percent on a major exam. The highest grade a student can receive on a retake test is a 75.
- Students must attend a tutorial session or complete other approved remediation activities prior to taking the test.
- Aquatic Science will follow the Retesting Testing Method.



Aquatic Science Syllabus

LABS

Students read date and sign a safety contract, and take a safety test before they will be allowed to work in the lab. Students will read date and sign a student contract that students must follow directions and strict safety procedures at all times or they will be excused from lab work with no score. Attendance during all lab days is extremely important as some lab work can be difficult to make up. An alternative assignment may be required if a lab is missed. This course requires maintenance of aquaria and live aquaria organisms plays an important role in the study and understanding of Aquatic Science. Therefore, **participation is required.**

TUTORIALS: I'm here to help you! Tutorials will be held before school on Tuesdays from 6:45-7:15 & 2:55-3:25. I will be happy to help students at other times before school if needed by appointment.

SUPPLIES NEEDED FOR THIS COURSE: Bring Supplies according to your class period.

All Students will bring supplies that says "ALL STUDENTS"

1. * 2 to 3 subject Spiral Notebook (college ruled or wide ruled) inside of a 3 ring binder-**All Students**
2. Pencils, blue/black pens, red pen-**All Students**
3. Map pencils (colored pencils)-**1st Period Students/1 pack per student**
4. Markers-**1st Period Students/ 1 pack per student**
5. Glue Sticks-**2nd Period Students/ 1 per student**
6. Construction Paper- (In class projects)-**2nd Period Students/1 per student**
7. *Paper Towels-**4th Period Students/ 1 3 pack per student**
8. Tissue Boxes-**4th AND 6th Period Students/1 per student**
9. *Liquid Hand Soap-**6th Period Students/ 1 per student**
10. *Hand Sanitizer-**6th AND 7th Period Students/1 per student**
11. * Non-Latex Surgical Gloves (Count 100) Size: medium or large- **7th Period Students/ 1 per student**
12. *Bring in to your teacher to store for future use
13. *You **MUST** have these items for class the 3rd DAY OF CLASS. (Daily grade: **MUST** have name written on all supplies to receive credit)



ASSIGNMENTS/HOMEWORK/ MAKE-UP

Homework is due at the beginning of class. All work must be shown. If you do not know how to answer a question, you have to demonstrate that you at least tried. It is OK to work in study groups for homework. **It is not OK to copy homework from a classmate.**

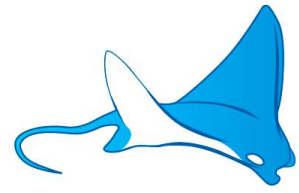
All over-night assignments are due at the beginning of the class period. If absent on the day a project/major grade is due, the student must turn it in early, email it to me, and/or turn it in the next academic calendar school day. **(School Policy)**

Late work by Fort Bend ISD Policy

- a. Daily –10 pts off each day that the assignment is late. After the fifth Day, it will remain a 50.
- b. Major– 10 pts off each day that the assignment is late. After the fifth Day, it will remain a 50.
- c. **NO late work** will be accepted the 9th week of the 9 week grading period.

CLASSROOM TEST/ QUIZ RULES:

- Retesting – Will be available for students scoring less than 75 percent on a major exam for a maximum grade of 75.
- Students must attend a tutorial session or complete other approved remediation activities prior to taking the test.
- Talking and other disruptive behavior is not permitted during a test/quiz or during. Students in Aquatic Science will learn and gain knowledge of marine and fresh water ecosystems, **NOT BE DISRUPTIVE**. During a test or quiz, students will not communicate in any manner with another student or **BECOME DISRUPTIVE** during testing or taking a quiz.
- An **AUTOMATIC ZERO** will be given. If students need any assistance, they are to raise their hands and wait until the teacher can assist them. While you are working on the test/quiz, there will only be a test/quiz paper, pen, and (if permitted) a reference page that may be on your desk. Binders, notebooks, purses, key chains, wallets, bottle water, cell phones or any other electronic devices may not be on the desk or seen. All cell phones and electronic devices will be picked up before the test/quiz. Students will write their name on a sticky note and place it on their e-device and returned to the student when the classes as a whole have completed the assessment. If a student does not turn in their cell phone and/or e-devices, parents will be called before the test/quiz is administered and the Assistant Principal will be notified. Violation of the Aquatic Science test/quiz rules will result in a **ZERO**.



Aquatic Science Syllabus

RULES/CONDUCT

E-Devices:

CELL PHONES, EARPHONES, and IPADS ARE NOT ALLOWED IN AQUATIC SCIENCE UNLESS GIVEN PERMISSION FOR ACADEMIC PURPOSES ONLY. If your cell phone is seen, you will be asked to put it away **AND IMMEDIATELY LOSE POINTS ON ASSIGNMENT.** If it is not put away, you **WILL BE** written up and called to an administrator's office. Further action will be taken from there.

Behavior: There is a **ZERO TOLERANCE POLICY**. I will not tolerate disrespect and disruptive behavior. Disruptive behavior will cause **10 points off** the student grade each time the student continues to be disruptive or disrespectful to the teacher or classmate. Parents will be notified. All students will be treated fairly and with the up most respect. To whom respect is given, respect is received.

Let's Dive into the Ocean and have a Great 2020-2021 School Year!

2020-21 AQUATIC SCIENCE SYLLABUS CONTRACT

I, _____ have read and fully understand the Aquatic Science syllabus. I understand that by signing this document I agree that I will fully comply with the teacher's expectations and rules. I understand that breaking these rules may result in failure of the course and/or disciplinary action by an administrator.

Date: _____ Class Period: _____

Student Name (Printed): _____

Student Signature: _____

Parent/Guardian Name (Printed): _____

Parent/Guardian Signature: _____