

Oceanography/Ocean Chemistry Syllabus
2019 - 2020 / Trimester 2
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“Oceanography” is a very broad topic covering physical, earth and space, and life science concepts. For this trimester we will focus on: the 5 world oceans, marine animals and their adaptations, and ocean conservation. The Ocean Chemistry portion of the class will begin with a focus on the basics of Chemistry. We will cover Lab Safety & Procedures, the Scientific Method, Matter, Changes of State, and the Periodic Table.

Students will focus on informational text, research and current happenings.

Students will be graded individually and occasionally as a group (lab group assignments), so discipline, collaboration and teamwork will be critical.

Essential Questions:

- What lies beneath and within Earth’s oceans?
- What creates ocean currents?
- What is the ocean made out of?

Next Generation Science Standards

ESS2.C: The Roles of Water in Earth's Surface Processes

The complex patterns of the changes and the movement of water in the atmosphere, determined by winds, landforms, and ocean temperatures and currents, are major determinants of local weather patterns. (MS-ESS2-5)

Global movements of water and its changes in form are propelled by sunlight and gravity. (MS-ESS2-4)

Variations in density due to variations in temperature and salinity drive a global pattern of interconnected ocean currents. (MS-ESS2-6)

PS1.A: Structure and Properties of Matter

Matter of any type can be subdivided into particles that are too small to see, but even then the matter still exists and can be detected by other means. A model showing that gases are made from matter particles that are too small to see and are moving freely around in space can explain many observations, including the inflation and shape of a balloon and the effects of air on larger particles or objects. (5-PS1-1)

PS1.B: Chemical Reactions

When two or more different substances are mixed, a new substance with different properties may be formed. (5-PS1-4)

Class Structure and Grading:

Projects, Presentations & Labs 40%

Some of the work in this course will be in the science lab. Some of the work will require group and individual work. This work will culminate in projects and presentations.

Assessments 20%

Quizzes and tests will be given from time to time with adequate opportunity for student preparation and study provided.

Homework/Classwork 40%

Homework assignments provide needed background information for activities to follow, and to enhance lab work. Homework is to be turned in on time for credit to be given. Unless due to absence or unforeseen circumstances, late work (24 hours) will only be graded up to a score of 80, afterwards it will not be accepted for credit. Classwork will consist of reinforcing information to be completed "in class".

Class and Work Expectations/HOWL Rubric

Using our HOWL (Habits of Work & Learning) rubric, students will also be graded on class participation, time management and punctuality, as well as other topics to assist with students' personal growth & learning.

Class & Work Expectations

Students are expected to arrive on time and prepared each day. They are also expected to turn in work on the day it is due, except in the case of absence. If there are special circumstances that will prevent a student from completing work by the due date, it is the student's responsibility to talk to the teacher before the work is due. If a student misses school, it is his/her responsibility to speak to the teacher immediately upon return to school to find out what was missed and when the missed work will be due.