

# Plymouth Public Schools' Science and Technology/Engineering Program

## College Prep 1 Oceanography Course Syllabus

STE2023 Oceanography College Prep 1

Semester course intended for students in grades 11 through 12 worth 2.5 credits

### Course Description

This laboratory course is designed for students who are interested in learning about the world's oceans and its inhabitants. It will review some basic biological and ecological concepts. Students will be introduced to general aspects of marine biology, including physical and chemical properties of the oceans, marine zones and communities, a survey of marine organism diversity, relationships between humans and the sea, and careers in marine science. The prerequisites include successful completion of Biology and departmental recommendation.

### Instructional Objectives

Students will independently and collaboratively:

1. Engage in scientific inquiry and engineering design through the use of science and engineering practices.
2. Integrate and evaluate multiple sources of information presented in diverse formats and media (e.g., quantitative data, video, multimedia) in order to answer a question or solve a problem.
3. Draw evidence from literary or informational texts to support analysis, reflection, and research.
4. Produce clear and coherent writing in which the development, organization and style are appropriate to task, purpose and audience.
5. Demonstrate proficiency in ocean-related phenomena associated with Earth and human activity, the structure and process of living things from molecules to organisms, and the interactions, energy, and dynamics of ecosystems.

### Themes and Topics

1. Earth and Human Activity – changes due to variations in climate include changes to sea level; and future impacts to Earth's systems and their effects on oceans
2. Structure and Processes of Living Things from Molecules to Organisms – key functions of body systems of ocean-dwelling organisms
3. Interactions, Energy, and Dynamics of Ecosystems – transfer of energy between trophic levels; ecosystems with greater biodiversity tend to have greater resistance to change and resilience; and direct and indirect effects on human activities on biodiversity and ecosystem health

### Text and Instructional Materials

1. Alexander, Lesley. *Life on an Ocean Planet*. Rancho Santa Margarita, CA: Current Publishing, 2010.
2. Trujillo, Alan P, and Harold V. Thurman. *Essentials of Oceanography.*, 2014.

### Cheating/Plagiarism

The excerpt from the Plymouth Public Schools' Student Handbook on plagiarism and copyright infringement states, "Existing copyright law will govern the use of material accessed through network. The user will not plagiarize works found on the Internet. Plagiarism is taking the ideas or writings of others and presenting them as if they were yours. All copyrighted material used must have the express written permission of the person or organization that owns the copyright. Any student who has cheated on any academic exercise will receive no credit for that exercise. Plagiarism is a form of cheating. A parent/guardian will be notified by the involved teacher in all instances of cheating. The investigation of the claim of cheating and plagiarism will involve the student, teacher, and administration."

### Grading Policy and Assessment

Levels of proficiency on various tasks and assignments determine student grades. During each grading term, students' grades will be based upon the following:

- 15% Class Work and Homework
- 25% Lab Activities and Notebooks
- 60% Assessments: projects, quizzes, tests, etc.

The final course average (semester) will be calculated as follows:

- 45% Term Grade (first of the semester)
- 45% Term Grade (second of the semester)
- 10% Final Exam