

**Exam Title:**  
**2002530.MarineScience2Honors.GR912.FLAGLEREOC**  
**Courses Assessed by this Exam: Marine Science 2**  
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**Key Vocabulary** Hypothesis, data, experiment, ocean currents, surface currents, abiotic factors, biotic factors, density, acidity, lipid, upwelling, biological productivity, surface winds, freezing point, primary and secondary succession, trophic levels, Taylor Wells Oil Spill, plankton, algae, producers, Enhydra lutris, immigration, emigration, dissolved oxygen, non-native, carnivore, herbivore, cellular respiration, photosynthesis, carbon cycle, biosphere, nitrification, ammonia, nitrite, nodules, greenhouse gases, ozone, algal blooms, dredging, runoff, CO<sub>2</sub> emissions, biodiesel, reliability, repeatability, biodegradable, seasonal variations, bleaching, chlorofluorocarbons, greenhouse gas, climate change, predators, heat capacity, solar radiation, biodegradable, hydroelectric, fossil fuels, mangrove, depletion, biodiversity, sustainable, vertebrates, invertebrates, symmetry, asymmetry, bilateral, autotrophic, exoskeleton, coelom, denitrification

**Student Tasks:**

Be able to understand components of a valid scientific experiment.  
Be able to make inferences regarding a scientific experiment.  
Be able to draw conclusions regarding the results of a scientific experiment.  
Know the steps of the scientific method  
Understand what drives ocean currents and the movement of surface waters.  
Understand the difference between surface currents and deep currents  
Compare and contrast a scientific theory and scientific law  
Know what a thermocline is and where they occur  
Know the various characteristics of water and how these characteristics can impact properties of life and ecosystems.  
Know how upwelling affects productivity  
Understand how the ocean plays a role in climate change.  
Know the various factors that contribute to global warming as well as plausible evidence of global warming.  
Know the characteristics of El Nino.  
Be aware of various negative human impacts on ecosystems  
Know how freezing point can be impacted by salinity changes  
Know the difference between coastal waters, brackish waters, equatorial oceans, and polar oceans.  
Be able to make inferences regarding population sizes if given a scenario.  
Know what carrying capacity is and be able to identify it.  
Understand how various factors may increase or decrease the carrying capacity of a species.

Understand how the introduction of a new species may impact the population of a competing species.

Be able to determine a population size if given specific birth rate and death rate data.

Know the difference between biotic and abiotic factors and be able to provide examples of each.

Know the carbon cycle

Know the water cycle and how it can be impacted by changes in abiotic factors.

Know the nitrogen cycle and the role of bacteria in this cycle

Understand how changes in biotic factors may impact specific populations.

Understand how changes in abiotic factors may impact specific populations.

Know how oil spills specifically affect aquatic environments.

Know the reactants and products of cellular respiration

Understand how death rate and birth rate can impact a population.

Be able to provide examples of primary succession and secondary succession.

Know the difference between primary succession and secondary succession

Understand how fertilizer runoff can negatively impact an ecosystem

Know the difference between seasonal variations and climate change.

Know the difference between seasonal variations and succession

Be able to identify valid sources of information for research

Be able to identify methods of improving a scientific experiment

Be able to identify examples of bias in an experiment.

Be able to explain factors that have an affect on the amounts of carbon being emitted

Know the main causes of algal blooms