

Exam Title:
2002530.MarineScience2Honors.GR912.FLAGLEREOC
Courses Assessed by this Exam: Marine Science 2

Key Vocabulary: Abiotic factors, academic source, algal bloom, algae oils, alternative fuels, ammonia oxidates, aquatic ecosystems, barnacles, biodiesel, biomagnification, biofuel, biotic factors, carbon cycle, carbon dioxide, carnivore-herbivore relationship, cellular respiration, chlorofluorocarbons, coastal waters, clams, brackish, climate change, condensation, continents, coral reef, Coriolis effect, crustal plates, denitrification, dredging, dolphins, Earth's rotation, empirical evidence, *Enhydra lutris*, Environmental Protection Agency, erosion, evaporation, evaporating cooling, equatorial oceans/seas, experimenter bias, farmland fertilizer, formulate, genetic activity, Great Lakes, greenhouse gases, Gulf of Mexico, Humpback Whales, krill, mammal, migrations, nitrite, nitrate, nitrogen fixation, Northern Pike, ocean currents, ozone depleting chemicals, parasites, patterns of ocean currents, pH, photosynthesis, phytoplankton, plankton, polar oceans/seas, pool of scientific knowledge, precipitation, primary succession, Prince Harald Coast, Antarctica, qualitative study, region, renourishment, reliability, salinity, scientific statement, seals, seasonal variations, sea cucumbers, sewage, snails, soil, solubility, sunflower sea stars, surface currents, southern latitudes, testable hypothesis, The Taylor Wells oil spill, thermocline, theory, transpiration, trophic levels, tropical regions, tropical storms, tsunami, upwelling, UV radiation, voracious predators, water cycle

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.