

# Exam Title: 2002500 Marine Science 1

## Courses Assessed by this Exam: Marine Science 1

**Key Vocabulary:** independent variable, hypothesis, dependent variable, density, inference, observation, natural selection, inherited variable, biotic, abiotic, salinity, carnivore, herbivore, omnivore, ecosystem, parasitism, symbiotic, commensalism, mutualism, predation, appendages, predator-prey relationship, primary consumer, secondary consumer, estuary, global warming, non-native species, native, consumer, food chain, food web, keystone species, trophic levels, photosynthesis, abyssal zone, bathyal zone, photic zone, hadal zone, benthic, exoskeleton, population, intertidal zone, greenhouse gases, precipitation, algal bloom, El Nino, La Nina, adaptation, evaporation, condensation, transpiration, combustion, emigration, cohesive, polarity, hydrogen bonds, surface tension, upwelling, productivity, Marianas Trench, divergent, subduction, reservoirs, sustainability, renewable resources, nonrenewable resources, hydrosphere, lithosphere, biosphere, geosphere, expansion, static

### Student Tasks:

- Be able to distinguish a dependent variable and an independent variable from a scientific scenario or experiment.
- Be able to identify a proper hypothesis of experiments.
- Distinguish the difference between an observation and inference.
- Be able to identify reliable, scientific investigations.
- Know Identify examples of inherited variation associated with natural selection.
- Be able to identify biotic and abiotic factors in a marine ecosystem.
- Identify examples and differences between the symbiotic relationships (mutualism, commensalism, parasitism).
- Explain the predator-prey relationship involved in a marine food web.
- Differentiate between a primary consumer and a secondary consumer. Give examples.
- Understand population dynamics in a marine ecosystem.
- Identify factors that may affect population dynamics.
- Define and give examples of non-native species in a marine ecosystem. Identify the effects to that environment.
- Identify the difference between a food chain and a food web. Give examples.
- Define and give examples of a keystone species and how it relates to a food web or food chain.
- Explain the energy transfer in an ecosystem.
- Be familiar with the different ocean zones and characteristics of each.
- Understand the effects of greenhouse gas on the environment.
- Explain characteristics and differences between El Nino and La Nina.
- Differentiate between evaporation, condensation, and transpiration.
- Explain the Carbon Cycle and the different processes involved.
- Explain the different properties of water.
- Understand the concept of density and how salinity and temperature relate.

- Define and explain upwelling.
- Explain how early ocean and ocean features form.
- Understand the effects of major catastrophic events to marine ecosystems.
- Understand the difference between renewable and nonrenewable resources and the effect on sustainability.
- Know low, middle, high zone in intertidal zone
- Understand the relationship between CO<sub>2</sub> and Ocean pH