

ACIE
MARINE SCIENCE
PRE-RESEARCH

The objective of the pre-research is to educate the student on Marine Science terminology that will be used as a beginning grade. These are common terms used in marine research everyday. The student will define each term(s) and explain its importance in marine research.

Ecosystem

Estuary

Rocky, Muddy, and Sandy shorelines (beaches)

Habitat

Population

Community

Species

Biodiversity- survival techniques

Ecological niche

Symbiosis- mimicry, commensalism, parasitism, mutualism

Producer- marine plants

Consumer

predator

Trophic level

Succession

Photosynthesis- explain

Chemosynthesis- explain

Halocline

Thermocline

Nutrient cycles

Progression of a coral reef , biological progression

Plate tectonics (boundaries, landscape)

Landscape and formations on ocean floor. (all ocean basins)

The result of erosion and sedimentation on a marine ecosystem.

How tides affect marine biodiversity

El Nino

Upwelling

Atlantic gyres (gulf stream, Labrador currents, and N. Atlantic drift)

The following are phyla names of marine species that are affected by the above terms. The student should know these phyla names and various species that are in the phyla group. The student will identify the classes in each phyla, this will prepare the student for their niche in a marine ecosystem.

Algae; chlorophyta, rhodophyta, phaeophyta

Porifera

Echinodermata

Coelenterata

Polychaetes

Mollusca

Arthropods

Chordata

Marine mammals

- *Pinnipeds

- *Sirens

- *Cetaceans

The objective of the instructor is for the student to understand how the above terms affect the Marine ecosystem. What is their function in various marine ecosystem's. The ACIE Marine Science course will research biological, geological, and environmental phenomenon and why these occur. How do these organisms and man will affect the marine ecosystem economically and environmentally.