**Oceans 11: Marine Biomes test Review**

You should be able to accurately describe/label/explain the following concepts:

**Marine Ecology:**

* Define Marine Ecology
* Define and gives examples of Abiotic and Biotic Factors
* Zones of the Ocean:
  + Pelagic, Benthic
  + Describe the Oceans zones:
    - Light: Euphotic, Disphotic and Aphotic
    - Depth: Epipelaic, Mesopelagic, Bathypelagic, Abyssopelagic, Hadopelagic
    - Surface Layers: Neritic Zone and Epipelagic one

**Trophic Relationships:**

* Describe how energy passes from the sun through to the top consumer
* Oceanic food pyramids, food webs and food chains
* Define and give examples of:
  + Autotrophs, Heterotrophs, Decomposers
* Energy Transfer:
  + Describe how much energy is transferred through the food pyramid (10% to each level)
  + Describe ways in which energy is lost
  + Explain why there are only 4 – 5 levels in a food pyramid?
  + Explain why decomposers are so important to the food web (but are often not shown !)
* Feeding Relationships
  + Predator, Prey, Scavenger
  + Symbiotic Relationships:
    - Commensalism, Mutualism and Parasitism

**Classification of Marine Life:**

* Describe the marine biome (what does it include?)
  + Importance of the marine biome
  + 3 main types of marine biomes
    - Physical, Biological and Chemical characteristics
* Classification of marine organisms:
  + Plankton
    - Why are plankton important?
    - Harmful Algal Blooms (If plankton are so good, how can these be bad?)
  + Neckton
  + Benthos
* Primary productivity
  + Importance of producers in the ocean
  + Ocean acidification (absorption of CO2 by the ocean)
  + Limiting factors of primary productivity
  + Why do we see spring and fall blooms of primary productivity?

**Classification:**

* Explain why we need to classify marine organisms?
* Describe the 5 points as to why we need to classify organisms.
* Binomial Nomenclature
  + Who created this?
  + Why is this system useful?
* 3 Kingdom classification
  + Difference between prokaryotes and Eukaryotes
* 7 Taxonomic classification
  + Know the order (Kingdom, Phylum, Class, Order, Family, Genus, Species)
    - Use an acronym! (**K**erri **P**lease **C**ome **O**ver **F**or **G**ood **S**paghetti)
  + Relatedness among organisms
    - How can you tell which organisms are more closely related?
* Cladograms
  + Describe how cladograms separate organisms
* Dichotomous Keys
  + Describe how dichotomous keys separate organisms?
  + What is one main difference between dichotomous keys and cladograms?

**Adaptations for Marine Life:**

* Define and describe the importance of biodiversity
  + Why is biodiversity important to survival?
  + How is biodiversity affected by adaptations?
* Define and explain the importance of adaptations
* 3 Types of Adaptations
  + Describe and give examples of each:
    - Structural, Physiological, Behavioural
* Specific adaptations for the marine environment
  + Camouflage, counter shading, disruptive coloration
  + Water’s transparency, water pressure, deep ocean (dark)

**Bioaccumulation and Biomagnification**:

* Define Bioaccumulation and Biomagnification
* Persistent Organic Pollutants (POP’s)
  + Characteristics
  + Why are they so harmful?
* Effects of Biomagnification on organisms at the top of the food chain
* Biomagnification in the ocean
  + Why is this a serious issue?
  + Plastics and biomagnification

**Diagrams to Review:**







