

Review for Marine Science Test on Energy, Trophic Levels, Food Webs, Biogeochemical Cycles, Ocean Zones and Lifestyles (Garrison Chapter 13)

- Review the requirements for life, energy flow in living systems, photosynthesis**
- Review primary productivity, where in the ocean most prim prod occurs, how it is measured**
- Review trophic pyramids and energy transfer efficiency**
- Review the differences between heterotrophs and autotrophs; different levels of producers and consumers; examples of these found in the ocean**
- Review marine food webs**
- Review biogeochemical cycles including the processes that move carbon, nitrogen, and phosphorus among the four spheres**
- Review physical and biological factors that limit/influence life in the ocean**
- Review how temperature effects metabolic rate**
- Review osmosis and the terms hypotonic, hypertonic and isotonic and how these relate to fish in their environment**
- Review the marine lifestyles (plankton and neuston, nekton, benthos) and zones of the ocean including benthic, intertidal (littoral), neritic, pelagic (epipelagic, mesopelagic, bathypelagic, abyssopelagic)**
- Review natural selection**