

# **EXPECTATIONS ENVIRONMENTAL SCIENCE QUIZ “Energy in Ecosystems”**

**STATE** the average trophic efficiency in food chains

**STATE** which form of energy is the lowest quality

**DEFINE** joules

**DEFINE** cogeneration

**DEFINE** biological productivity

**DEFINE** chemosynthesis

**LIST** the two most important decomposers (by large group or kingdom)

**OUTLINE** how you measure biological productivity

**OUTLINE** the first law of thermodynamics

**OUTLINE** the second law of thermodynamics

**ANALYZE** an illustration of an object moving over time compare its relative kinetic and potential energies at different positions

**ANALYZE** a graph

**DEDUCE** a relationship between two variables from a graph

**DESCRIBE** the relationship between biomass and species/habitat diversity

**COMPARE** omnivores, detritivores, herbivores and carnivores

**COMPARE** kinetic and potential energy

**COMPARE** the first law of thermodynamics and the second law of thermodynamics

**COMPARE** food webs in the tropics with food webs of the arctic

**COMPARE** positive and negative correlations

**EXPLAIN** why food webs might vary in length and/or complexity

**DETERMINE** an organism's trophic level when given the community's feeding relationships

**CALCULATE** available energy in trophic levels when given the energy level of another trophic level