Eight Key Concepts of Environmental Science

I.) WAYS OF KNOWING
(Scientific Method, Observations, Technology, Informatics, Habits of Mind, Faith)
"Reflection on how we know what we believe will help our understanding"

II.) HUMAN INTERACTIONS
(Sustainability, Ocean Policy and Management, Human Health)
"Currently, the human species is significantly affecting and is affected by earth systems, but has the ability to choose its relationship with the environment"

III.) ECOSYSTEMS
(Biological Communities, Population Ecology, Habitats)
"The survival and health of individuals and groups of organisms are intimately coupled to their environment"

IV.) EARTH SYSTEM SCIENCE
(System Properties, Oceanography, Atmospheric Science, Earth Science)
"The Earth as a whole acts as a complex set of interacting systems with emergent properties"

V.) EVOLUTION-BIODIVERSITY
(Species Diversity, Natural Selection, Biogeography)
"Evolution explains both the unity and diversity of life"

VI.) ENERGY FLOW AND TRANSFORMATION
(Forms of Energy, Thermodynamics, Conservation of Energy, Energy Use, Motion)
"Energy transformations drive physical, chemical, and biological processes. Total energy is conserved and flows to more diffuse forms"

VII.) CONSERVATION OF MASS
(Input/Output Models, Elemental Cycles, Hydrological Cycle, Stoichiometry, Equilibrium)
"Mass is conserved as it is transferred from one pool to another"

VIII.) SPATIO-TEMPORAL RELATIONSHIPS
(Geospatial Position, Mapping, Historical Trends, Coordinate Systems)
"Choosing the appropriate reference frame is the key to understanding one's environment."

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