

- c. Scientific Facts and Theories
 - i. A scientific fact is a direct and repeatable observation of any aspect of the natural world
 - ii. A scientific theory is a major idea that has been supported by many different observations and experiments.
 - d. The Characteristics of Living Organisms
 - i. Because of their common evolutionary organs all living organism have certain key characteristics in common
 - ii. All living organisms are built of cells reproduced using DNA to pass genetic information from parent to offspring take in energy from their environment sense and respond to their environments maintain constant internal conditions and evolve as a groups
 - e. Biological Evolution and the Unity and Diversity of Life
 - i. Biological evolution is a change in the overall genetic characteristics of a population across generations from parent to offspring.
 - ii. Natural selection is a key evolutionary mechanism it causes evolution by favoring the survival and reproduction of individuals that are best suited to their environment
 - iii. Natural selection makes a population or species better adapt to its environment
 - iv. All life on earth can be classified into three domains bacteria archaea and eukaryote
 - f. The Biological Hierarchy
 - i. The term biological hierarchy refers to the many levels at which life can be studied atom molecule cell tissue organ system individual population community ecosystem biome biosphere
 - ii. The individuals of a given species in an area consists of a population populations of different species in an area make up a community communities along with the physical habitat they live in constitute ecosystems
 - iii. Ecosystems make up a biomes large regions of the world that are defined by the climate and the distinctive communities found there all the biomes on earth make up one single biosphere
3. Vocabulary
- a. Biology
 - i. the scientific of life, by asking what is meant by the powerful word: life
 - b. Technology
 - i. refers to the practical application of scientific techniques and principles
 - c. Science
 - i. a body of knowledge about the natural world and evidence based process for acquiring that knowledge
 - d. Scientific Hypothesis
 - i. is an educated guess that seeks to explain observations of nature? The person who poses the hypothesis must be the one who tests it.
 - e. Observations
 - i. is a description measurement or record of an object or phenomenon?