**Evolution:**

**Mechanisms:**

Modern Synthesis: the theory of natural selection combined with genetics

evolution: The gradual change in a species over time

gene flow: Movement of alleles into or out of a population due to the migration of individuals to or from the population

speciation: the formation of new and distinct species in the course of evolution.

mutation: change in a DNA sequence that affects genetic information

genetic drift: A change in the allele frequency of a population as a result of chance events rather than natural selection.

founder effect: genetic drift that occurs after a small number of individuals colonize a new area

bottleneck effect: Genetic drift resulting from the reduction of a population, typically by a natural disaster, such that the surviving population is no longer genetically representative of the original population.

sexual selection: A form of natural selection in which individuals with certain inherited characteristics are more likely than other individuals to obtain mates.

immigration: Movement of individuals into a population

emigration: movement of individuals out of a population

**Diversity of Life:**

natural selection: the process by which traits become more or less

common in a population due to consistent environmental effects upon the survival or

reproduction of the individual with the trait

Hardy-Weinberg Equilibrium: The condition describing a non-evolving population (one that is in genetic equilibrium).

Hardy-Weinberg Equation: p2 + 2pq + q2 = 1; p + q = 1

Hardy-Weinberg Principle: principle that allele frequencies in a population will remain constant unless one or more factors cause the frequencies to change

descent with modification: principle that each living species has descended, with changes, from other species over time

cladogram: A diagram that is based on patterns of shared, derived traits and that shows the evolutionary relationships between groups of organisms

phylogenetic tree: diagram showing evolutionary relationships of organisms with a common ancestor; resembles a tree

morphology: study of form

heritable characteristics: characteristics that are capable of being passed from one generation to the next through the genes.

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