

Unit 8: Evolution Vocabulary

Word	Definition
Adaptation	inherited characteristic that improves an organism's ability to survive and reproduce in a particular environment
Adaptive radiation	evolution from a common ancestor of many species adapted to diverse environments
Analogous structures	similarities among unrelated species that result from convergent evolution
Antibiotic	medicine that kills or slows the growth of bacteria
Artificial selection	selective breeding of domesticated plants and animals to produce offspring with desired genetic traits
Binomial	two-part Latin name of a species
Biological species concept	definition of a species as a population or group of populations whose members can breed with one another in nature and produce fertile offspring
Bottleneck effect	a sharp reduction in size of a population due to environmental random events (such as earthquakes, floods, fires, or droughts) or human activities
Cladogram	phylogenetic tree constructed from a series of two-way branch points, suggesting ancestral relationships among species
Derived character	homologous characteristic that unites organisms as a group
Descent with modification	process by which descendants of ancestral organisms spread into various habitats and accumulate adaptations to diverse ways of life
Evolution	generation-to-generation change in the proportion of different inherited genes in a population that account for all of the changes that have transformed life over an immense time
Extinct	no longer existing as a living species on Earth
Fitness	contribution that an individual makes to the gene pool of the next generation compared to the contributions of other individuals
Fossil	preserved remains or marking left by an organism that lived in the past
Fossil record	chronological collection of life's remains in sedimentary rock layers
Founder effect	the loss of genetic variation that occurs when a new population is established by a very small number of individuals from a larger population.
Gene flow	exchange of genes between populations
Gene pool	all of the alleles in all the individuals that make up a population
Genetic drift	change in the gene pool of a population due to chance
Geographic isolation	separation of populations as a result of geographic change or migration to geographically isolated places
Homologous structures	similar structure found in more than one species that share a common ancestor
Macroevolution	major biological changes evident in the fossil record
Microevolution	evolution on the smallest scale—a generation-to-generation change in the frequencies of alleles within a population
Mutations	any change in the nucleotide sequence of DNA
Natural selection	process by which individuals with inherited characteristics well-suited to the environment leave more offspring than other individuals
Phylogenetic tree	branching diagram, suggesting evolutionary relationships, that classifies species into groups within groups
Population	group of individuals of the same species living in a particular area at the same time
Punctuated equilibrium	evolutionary model suggesting species often diverge in spurts of relatively rapid change, followed by long periods of little change
Reproductive isolation	condition in which a reproductive barrier keeps two species from interbreeding
Speciation	formation of new species
Taxonomy	identification, naming, and classification of species
Variation	difference among members of a species
Vestigial structures	remnant of a structure that may have had an important function in a species' ancestors, but has no clear function in the modern species