Study Guide & Vocabulary List - SOL 7 - Population Changes Through Time

2018 Standards

BIO.7 The student will investigate and understand that populations change through time. Key ideas include

a) evidence is found in fossil records and through DNA analysis;

b) genetic variation, reproductive strategies, and environmental pressures affect the survival of populations;

c) natural selection is a mechanism that leads to adaptations and may lead to the emergence of new species; and

d) biological evolution has scientific evidence and explanations.

3.5 billion years
Fossil
Relative dating
Absolute dating
Radioactive decay
Population
Offspring
Variation
Selective pressure
Genetic variation
Reproductive strategies
Environmental pressures
Survival
Extinction
Genetic mutation
Sexual reproduction
Gene frequency
Gene pool
Galapagos Islands
Charles Darwin
Adaptation
antibiotic resistance in bacterial populations
morphological changes in the peppered moth population
development of pesticide resistance in insect populations
Stephen Jay Gould
Punctuated equilibrium
Gradualism

Theory of Natural Selection - a process by which organisms with traits well suited to an environment survive and reproduce at a greater rate than organisms less suited to that environment, and is governed by the principles of genetics. The change in frequency of a gene in a given population leads to a change favoring maintenance of that gene within a population and if so, may result in the emergence of a new species. Natural selection operates on populations over many generations.