

Charles Darwin

Charles Robert Darwin, FRS was an English naturalist. He established that all species of life have descended over time from common ancestors, and proposed the scientific theory that this branching ... [Wikipedia](#)

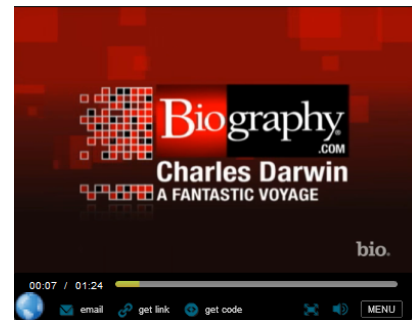
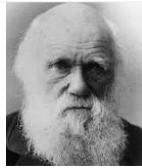
Born: February 12, 1809, [Shrewsbury](#)

Died: April 19, 1882, [Down House](#)

Awards: Copley Medal, Royal Medal, Wollaston Medal

Education: [University of Cambridge](#), [University of Edinburgh](#), [More](#)

Children: [Anne Darwin](#), [George Darwin](#), [Francis Darwin](#), [More](#)



Case Study - Darwin's Voyage.pdf

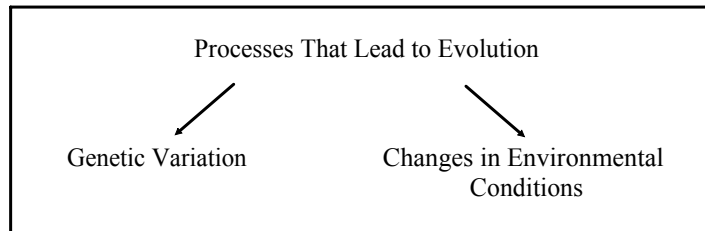


Notes - Biological Evolution, Adaptations and Natural Selection.pdf

Biological Evolution, Adaptations and Natural Selection

(Draper - Page 83)

biological evolution - change in inherited characteristics of a population from generation to successive generation
 - touted as the driving force of adaptation to environmental change



genes - segments of DNA found in chromosomes
 - impart certain inheritable traits in organisms

gene pool - sum of all genes possessed by the individuals of a population

mutations - random and unpredictable changes in DNA molecules that can be transmitted to offspring
 - can be caused by external environmental agents (X-rays, ultraviolet light) and toxic organic chemicals

genetic variability - result of millions of random changes in the DNA molecules of individuals in a population

adaptation - any genetically controlled characteristic (structural, physiological or behavioural) that enhances the chance for members of a population to survive and reproduce in their environment

structural adaptations - coloration, mimicry, protective cover, gripping mechanisms

physiological adaptations - ability to poison prey, give off chemicals to repel predators, hibernate during cold weather

behavioural adaptations - migration, resource partitioning, species interactions (ie/parasitism)

natural selection - process by which the best adapted organisms survive and reproduce in a given environment

speciation - the formation of two or more species from one as the result of divergent natural selection in response to changes in environmental conditions



extinction - process by which a species is eliminated from existence when it cannot adapt genetically and reproduce successfully under new environmental conditions

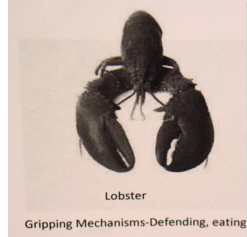
Examples of Adaptions...

Structural Adaptations:

Turtle - Protective Cover



Bald eagle – Gripping Mechanisms



Lobster
Gripping Mechanisms-Defending, eating



Rabbit
Coloration-Changes color to blend with the right environment.

Psychological Adaptations:

Skunks – give off chemicals to repel predators



Bears – hibernate during cold weather



Snake
Ability to Poison Prey-Has poisonous venom to use on prey.



Bear
Hibernation-Hibernates through the cold winters.

Behavioural Adaptations:

Monarch Butterfly – migration



Salmon lice – species interactions (ie/parasitism)



Zebra
Migration-Migrates to greener land.



Geese
Migration-Migrates to warmer weather in the cold.

Attachments

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