#### **REVIEW...**

# 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

Processes That Lead to Evolution

Genetic Variation

Changes in Environmental Conditions

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

of a population

**gene pool** - sum of all genes possessed by the individuals

<u>mutations</u> - 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

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

<u>structural adaptations</u> - coloration, mimicry, protective cover, gripping mechanisms

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

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

<u>natural selection</u> - 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

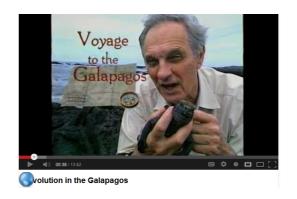
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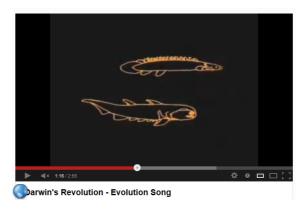
## **ACTIVITY: Adaptations**



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### Darwin's Finches...





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## HOMEWORK...

- 1) 75 Eco-points Due Wednesday
- 2) Graphic Organizer Due Wed.
- 3) Quiz on Terms Tues.
- 4) Unit Test on Thursday

Notes - Biological Evolution, Adaptations and Natural Selection.pdf