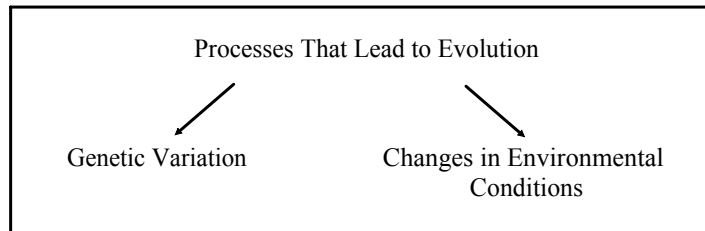


Notes - Biological Evolution, Adaptations and Natural Selection.pdf

## 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

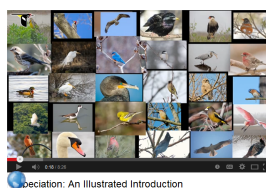
**structural adaptations** - coloration, mimicry, protective cover, gripping mechanisms

**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

## **EcoPoint Opportunity...**

[Print Word Document and/or Email]

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- 2 species per adaptation (structural/physiological/behavioral)
- state the adaptation & need pictures for each

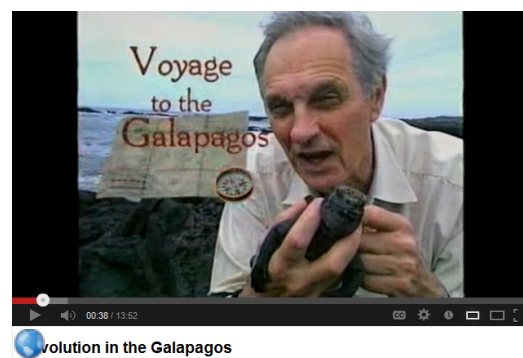
**5 ecopoints per adaptation**

## ACTIVITY: Adaptations



## Processes that lead to Evolution...

1) Changes to the environment



2) Changes to the genetics

## Attachments

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