

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

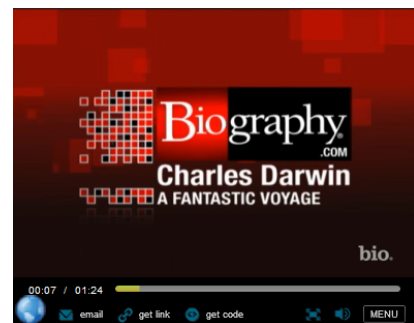
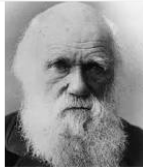
Born: February 12, 1809, [Shrewsbury](#)

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

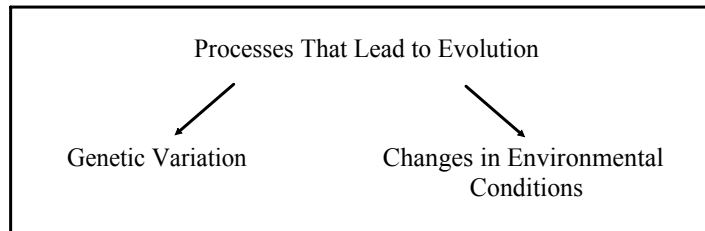


Notes - Biological Evolution, Adaptations and Natural Selection.pdf

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

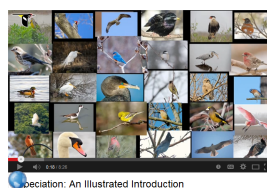
structural adaptations - coloration, mimicry, protective cover, gripping mechanisms

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

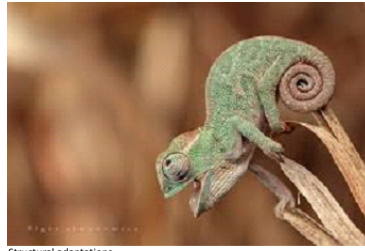
EcoPoint Opportunity...

[Print Word Document and/or Email]

hallihana@nbed.nb.ca

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

5 ecopoints per adaptation

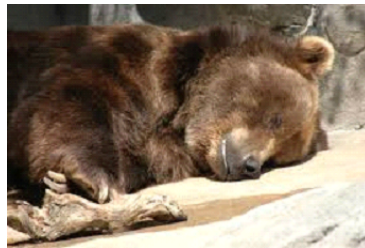


Structural adaptations

Chameleon- has the ability to change colour



Turtle- has hard shell to protect against predators.



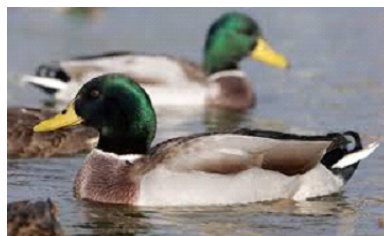
Physiological adaptations

Bear- can hibernate through winter



Skunk- can "spray" to get rid of predators

Behavioural Structures



Geese and ducks migrate during winter

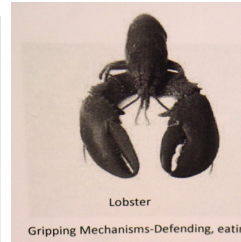
Examples of Adaptions...

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)



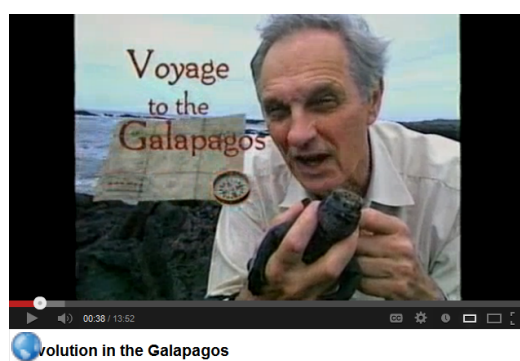
Zebra
Migration-Migrates to greener land.



Geese
Migration-Migrates to warmer weather in the cold.

Processes that lead to Evolution...

1) Changes to the environment



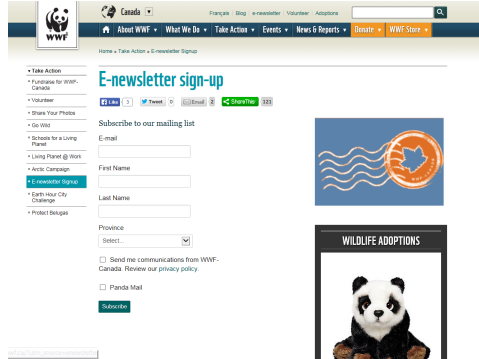
2) Changes to the genetics



5 ECO-POINTS...Join a Environmental Newsletters [Up to 20 EcoPoints Total]

Examples:

<http://www.wwf.ca/>



<http://asf.ca/main.html>



Atlantic Salmon Federation News

Tuesday, Sept. 18, 2014

ASF Rivernotes - Will Scotland's Referendum Affect Salmon?

~~~~~  
 his week's update hits several points, including a new **PHOTO CONTEST**, as well as raising the question of impacts on salmon from the **Scottish Referendum** vote. Plus the latest on river reports across the Atlantic salmon range in North America  
<http://atlanticsalmonfederation.org/rivernotes/>

#### ASF RESEARCH BLOG UPDATE -

ASF researchers continue the process of bringing to the surface acoustic tracking devices with their valuable data, and the assessment of streams with electrofishing gear proves very successful.  
<http://asf.ca/research-in-the-field.html>

#### Where have all the Miramichi Salmon Gone?

~~~~~  
 ASF and the MSA raise the alarm that Miramichi salmon returns this year show the runs are in danger.

ASF's **Bill Taylor** discusses the issue on **CBC's AS IT HAPPENS**
<http://asf.ca/bill-taylor-talks-salmon-on-as-it-happens-.html>

Another perspective is given with coverage in **video** and text.
<http://asf.ca/miramichi-salmon-numbers-hit-record-low.html>

The need for bold action is emphasized:
<http://asf.ca/bold-action-needed-to-save-atlantic-salmon.html>

RESEARCH PAPER...

Continue to gather information from a variety of sources - make use of Twitter & Newletters!

QUIZ...Unit 1 Terminology - Wednesday

Attachments

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