#### Review terms...

Notes - Biological Evolution, Adaptations and Natural Selection.pdf

<u>biological evolution</u> - change in inherited characteristics of a population from generation to successive

 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

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

<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

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

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

<u>physiological adaptations</u> - 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

## **EcoPoint Opportunity...**

# [Print Word Document and/or Email]

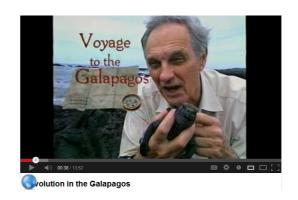
hallihana@nbed.nb.ca

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

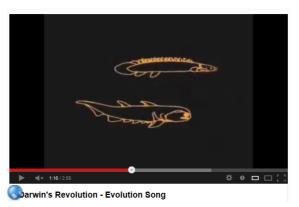
## 5 ecopoints per adaptation

## Processes that lead to Evolution...

Changes to the environment



Changes to the genetics





#### UNIT 1 - An Overview of Environmental Science

- The Issues
- Population Growth and Resource Limitations
- Researching Current Environmental Issues

## 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 <a href="http://atlanticsalmonfederation.org/rivernotes/">http://atlanticsalmonfederation.org/rivernotes/</a>

#### **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. <a href="http://asf.ca/miramichi-salmon-numbers-hit-record-low.html">http://asf.ca/miramichi-salmon-numbers-hit-record-low.html</a>

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!

http://www.stopsprayingnb.ca/



http://www.stopsprayingnb.ca/2017/04/05/videos/



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