

GENETICS

LESSON 10: NATURAL SELECTION

Learning Outcomes

- I can define natural selection.
- I can explain when a mutation can cause a change in a population.
- I can explain how selection pressures can lead to a species extinction.

Natural Selection

- within a population, individuals _____
- examples: _____
- some traits in a population may be more _____ to the survival of those individuals that exhibit that trait
- example: _____



- in these cases, the _____

- individuals with the _____ (allele) are more likely to survive and reproduce so the _____ of their trait (allele) in the population _____
- individuals with a different allele are less likely to survive and so _____ of their trait (allele) in the population _____
- _____ may introduce new alleles to a population that may increase or decrease _____ in that environment.
- natural selection is _____.

- traits that are favoured in one population may not be beneficial in a different population of the same species because of _____.

Speciation

- _____

- _____
- example: _____
 - over thousands of years, horses have slowly gotten _____ and their _____ shape has changed
 - caused by natural selection acting on the _____
- _____

Adaptive Radiation

- _____

Forest Population	Mountain Population
• • •	• • •

- if the two populations change enough compared to each other, they can stop being able to produce _____ together
- example: _____
 - finch population blown to Galapagos Islands (15 islands) from _____
 - different _____ on the different islands
 - finches on different islands gradually evolved different _____ to match the food types

Extinction & Selective Pressure

- _____

- major catastrophic events can lead to dramatic changes in the _____
 - **example:** _____ caused large amounts of dust and soot to be thrown into the atmosphere → _____
→ change in global _____ caused the extinction of the _____
 - fossil records indicate that there have been _____
(75% or greater loss of species)