ADVANCED BIOLOGY: DESCENT WITH MODIFICATION

(USE CHAPTER 22 AS A RESOURCE)

THE DARWINIAN REVOLUTIONO CHALLENGED TRADITIONAL VIEW OF A YOUNG EARTH INHABITED BY UNCHANGING SPECIES

1. Scala Naturae and Classification of Species
2. Ideas About Change over Time
3. Lamarck’s Hypothesis of Evolution

DESCENT WITH MODIFICATIONS BY NATURAL SELECTION EXPLAINS THE ADAPTATIONS OF ORGANISMS AND THE UNITY AND DIVERSITY OF LIFE

1. Darwin’s Research
2. The Voyage of the Beagle
3. Darwin’s Focus on Adaptation
4. Ideas from the *Origin of Species*
5. Descent with Modification



1. Artificial Selection, Natural Selection, and Adaptation
2. Artificial Selection
3. Darwin’s Observations and Inferences
4. Natural Selection: A Summary

EVOLUTION IS SUPPORTED BY AN OVERWHELMING AMOUNT OF SCIENTIFIC EVIDENCE

1. Direct Observations of Evolutionary Change
2. Natural Selection in Response to Introduced Plant Species
3. The Evolution of Drug-Resistance Bacteria
4. Homology
5. Anatomical and Molecular Homologies



Homologous Structures

Vestigial Structures

Molecular Homologies

1. A Different Cause Of Resemblance: Convergent Evolution



1. Convergent Evolution
2. Analogous
3. The Fossil Record
4. Biogeography
5. What is Theoretical About Darwin’s View of Life?