

7.4 THE EVIDENCE OF EVOLUTION p. 296



1. FOSSIL RECORD
2. BIOGEOGRAPHY

3. COMPARATIVE ANATOMY

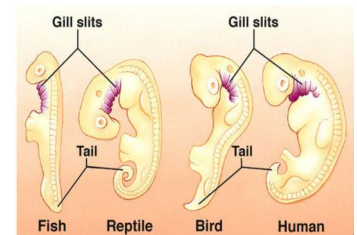
HOMOLOGOUS FEATURES

ANALOGOUS FEATURES

VESTIGIAL FEATURES ex. Buffon's pig toes

Explain why humans have goosebumps.

4. EMBRYOLOGY



In the late 1830's Darwin read *Essay on the Principle of Population*, by Malthus. How did this essay influence Darwin's thoughts?

5. MOLECULAR BIOLOGY

p.303 #1, 2, 5

7.5 ON THE ORIGIN OF SPECIES p. 304

The Theory of Evolution by Natural Selection

Natural Selection

Adaptation

In order for natural selection to occur, the following conditions are necessary:

1. In each generation,

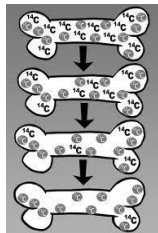
2. Individuals within the population
3. Some variations are adaptations
4. Over time, the population will change to

Polar bears have grown in size over thousands of years as their habitat for hunting grew, providing them with more prey. Climate change has recently dramatically reduced the amount of ice on which polar bears live. Predict the future for polar bears, based on the theory of evolution by natural selection.

p. 307 #1, 2, 7

7.6 THE MODERN THEORY OF EVOLUTION p. 308

Until well into the nineteenth century, many people believed the Earth was less than years old. Today scientific consensus says the Earth and our solar system is



Radiometric Dating

What are radioisotopes?

What is meant by the value, “half-life”?

Gene Pool

What are homologous genes?

What are pseudogenes? Give an example.

Gene duplication is possible on a chromosome due to an error in crossing over. Explain.

Explain why the ability to smell sugar is an adaptation.

If you had gene duplication for this gene, the second gene is obsolete (assuming no advantage due to the ability to detect a lower concentration with double proteins). How could a point mutation on this double cause the owner to be able to smell something new and how this could be selected for.

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