FOSSILIZATION (pg. 302)

"Fossil" comes from the Latin word for something that has been ____________ ______. In general, fossils are recognizable, _____________ evidence of ancient life. The most common fossils are ____________, ____________, ________________, spore capsules, seeds and other ____________ parts. Indirect evidence comes from _____________ fossils, which includes imprints of ___________ and stems, tracks, trails and burrows.

Fossilization begins with burial in _______________________ or ________________ ash. Sooner or later, ________________ infiltrates the organic remains, infusing them with dissolved ___________ ions and other ________________ compounds. Over great spans of time, the ________________ changes and ________________ transform them to stony hardness.

Preservation is favoured when organisms are buried in the absence of ________________.

INTERPRETING THE GEOLOGIC TOMBS (pg. 303)

You can find similar fossil-containing layers of ________________________ rock over vast areas. The layering of sedimentary deposits is called ______________________. The ________________ layers originally were the first ones formed; layers closest to the ________________ were formed last.

Understand how rock layers form, and you realize that fossils within a given layer are from a ________________ age in earth history. Therefore, the older the layer, the ________________ the fossils.

EVIDENCE FROM COMPARATIVE EMBRYOLOGY (pg. 304)

Evidence of _______evolution comes from anatomical comparisons of major lineages. This work is called comparative ______________________.

DEVELOPMENTAL PROGRAMS AMONG THE VERTEBRATES (pg. 304)

Consider the vertebrates, which range from ________________ to amphibians, reptiles, ___________ and _________________. These distinct lineages are spectacularly ________________ however comparisons of the ways in which their ________________ develop provide compelling evidence of their evolutionary connection to one another.

In each lineage, individuals start out life as a ________________ egg. They proceed through various stages of ________________ development before becoming an adult. Early in the developmental program, ________________ of different lineages proceed through strikingly ________________ stages (examine Fig. 20.4, pg. 304).

_______________ embryos strongly resemble one another because they inherit the same ancient plan for development. Tissues form only when cells divide in certain patterns and interact in
prescribed ways. During vertebrate evolution, most ___________________ that disrupted a
early stage of development would have had devastating effects. Embryos of different groups remained
similar because mutations that altered steps in _____________ development were selected
_____________.

How did the adults of vertebrate groups get so different? At least some differences must have
resulted from ___________________ that affected the _______________, rate or _______________
of completion of certain developmental stages.

EVIDENCE OF MORPHOLOGICAL DIVERGENCE (pg. 306-307)

Define Morphological Divergence (pg. 306) and give an example(s):

Define Morphological Convergence (pg. 307) and give an example(s):

List the 3 types of evidence from Comparative Biochemistry (pg. 308-309):

1) ________________________________

2) ________________________________

3) ________________________________