

~Evolution Homework~

Part A: There are five pieces of evidence that evolution has occurred. They are (A) fossil evidence, (B) homologous structures, (C) embryology, (D) vestigial organs, and (E) biochemical. Write the letter of the type of evidence by the example.

- _____ 1. Bones in a bird's wing and a human's arm are similar in structure.
- _____ 2. All organisms use ATP in energy transfers.
- _____ 3. There are similarities in structure among the early stages of fish, birds and humans.
- _____ 4. Humans, unlike rabbits, have no known use for their appendix.
- _____ 5. Horses have increased in size and decreased in number of toes since the Eocene time period.

Part B: Match the terms in Column 1 with the correct definition or name in Column 2.

Answer	Column 1	Column 2
_____	6. Genetic drift	a. All genes in a population
_____	7. Gradualism	b. Brief periods of change interrupt long stable periods
_____	8. Natural selection	c. Changes in gene frequency in small populations
_____	9. Punctuated equilibrium	d. Darwin
_____	10. Mass extinction	e. Determining age of fossils using half-lives
_____	11. Mutations	f. Gene or chromosome changes
_____	12. Gene pool	g. $p^2 + 2pq + q^2$
_____	13. Convergent evolution	h. Many species vanish at one time
_____	14. Radioactive dating	i. Changes occur gradually over time
_____	15. Hardy Weinberg Principle	j. Unrelated species become more alike

Part C: Fill in the blanks.

16. The members of a population have many different traits. The traits that are the most helpful are those that have allowed the organism to _____.
17. Another term for natural selection is _____.
18. In general, life evolved from very _____ living organisms to those that are more complex.

19. As a population of living things becomes different from others of the same kind, it may evolve into new a new _____.
20. Because living things decay after they die, fossils are often made of only the remaining _____ parts of the dead organism.
21. Scientists can tell if different animals are related by looking at _____ structures in animals.

Part D: Match the terms in Column 1 with the correct definition or name in Column 2.

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| _____ | 22. A living thing of the past, from which other things evolved | A. Adaptation |
| _____ | 23. A process by which living things change over time | B. Natural selection |
| _____ | 24. Development of traits make an organism better able to live in environment | C. Species |
| _____ | 25. Chemicals joined together in a specific, consistent way | D. Evolution |
| _____ | 26. Group of living things that can mate with each other and produce young that can also produce young | E. Fossil |
| _____ | 27. A process by which organisms with certain traits survive and reproduce | F. Ancestor |
| _____ | 28. The preserved remains or traces of a once-living thing | G. Compounds |

Part E: Timeline of Life on Earth: The timeline below shows some of the physical events that have helped to shape life on earth. Fill in the missing life event of Earth.

4.6 billion y/o	
3.5 billion y/o	
1.5 billion y/o	
65 million y/o	
60 million y/o	Birds and mammals become dominant on land.
36 million y/o	Diurnal primates arise
2 million y/o	
1.8 million y/o	
300,000 y/o	
195,000 y/o	