

Review Questions - Chapter 4

Answer the following questions using your OWN WORDS!!!! DO NOT copy right out of the book!!! Please attach this handout with your answers. All answers should be hand-written!!

1. Describe the conditions that make life on the earth just right for life as we know it.
2. Distinguish between chemical evolution and biological evolution.
3. What are fossils, and how do they help us formulate ideas about how life developed on the earth?
4. Distinguish among biological evolution, the theory of evolution, microevolution, and macroevolution.
5. What is coevolution, and what is its importance?
6. What is the ecological niche of a species, and why is it important to understand the niches of species? What is the difference between a species' habitat and its niche? What is the difference between a species' fundamental niche and its realized niche?
7. Distinguish between the niches of specialist and generalist species. Explain why cockroaches have been such a successful species.
8. List two factors that limit adaptation.
9. What are two common misconceptions about evolution?
10. What is speciation? Distinguish between geographic isolation and reproductive isolation, and explain how they can lead to speciation through divergent evolution.
11. What is extinction? Distinguish among background extinction, mass extinction, and mass depletion.
12. What is an adaptive radiation? How can such a radiation lead to recovery after a mass extinction or depletion?
13. Explain how speciation and extinction result in the planet's biodiversity.