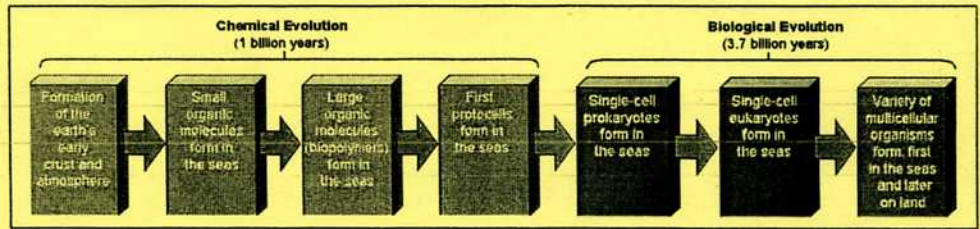


1. Describe 3 conditions that make Earth conducive for supporting life.

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?

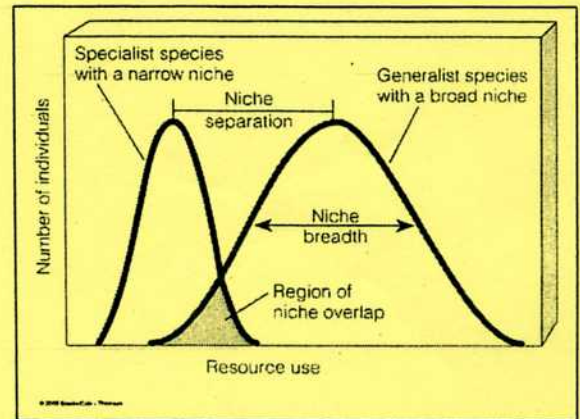
4. Explain in your own words what the theory of evolution is and how it applies to both macro and micro-evolution.

5. Distinguish among *genes*, *gene pool*, *alleles*, *mutations*, *natural selection*, and *differential reproduction*, and explain their roles in microevolution.

6. What is *coevolution*, and what is its importance?

7. What is the *ecological niche* of a species, and why is it important to understand the niches of species?

8. What is the difference between a species' *fundamental niche* and its *realized niche*?



9. Distinguish between the lifestyles or roles of specialist vs. generalist species.

10. List and describe two common misconceptions about evolution?

11. What is *speciation*? Distinguish between *geographic isolation* and *reproductive isolation*, and explain how they can lead to speciation through divergent evolution.

12. What is *extinction*? Distinguish among *background extinction*, *mass extinction*, and *mass depletion*.

13. What is an *adaptive radiation*? How can such a radiation lead to recovery after a mass extinction or depletion?

14. Explain how speciation and extinction result in the planet's biodiversity.

15. Describe how genetically improved crop strains are developed by (a) *artificial selection* (*crossbreeding*) and (b) *genetic engineering*.

16. List and describe two traits that that *Homo sapiens* have that distinguishes us from other species and how they have led to our success as a species.

