

Name _____

Evolution Facts & Fallacies

Mark each statement as “SA” – Scientifically Accurate or “SI” – Scientifically Inaccurate.

1. _____ In order to catch their prey, cheetahs had to evolve lean bodies and strong legs with a powerful heart.
2. _____ In facing a changing environment, organisms can only migrate, adapt or die.
3. _____ In order to attract female mates, peacocks evolved increasingly elaborate tail feathers.
4. _____ The early ancestors of the modern giraffe lived in an environment with high levels of competition from other herbivores. To obtain food, the giraffe ancestors reached higher and higher into the trees for leaves thereby stretching their necks. Giraffes continued to stretch their necks a little farther with each generation until eventually the long-necked giraffes of today came into being.
5. _____ Organisms do not necessarily become more complex as they evolve.
6. _____ During the industrial revolution, trees in the pepper moth’s environment became darker via pollution. Correspondingly, the moths had to evolve darker wings in order to avoid detection by predators.
7. _____ Genetic variation is random, natural selection is not random
8. _____ Each generation of a species becomes a little more adapted to their environment.
9. _____ Only the strongest and fittest mountain lions are able to survive in nature.
10. _____ A creator gave impala more speed so they could outrun their predators.
11. _____ Natural selection and therefore nature has no room for organisms that are “second best”.
12. _____ In most cases, the extinct species that are found in the fossil record represent species that were never adapted to their environment.
13. _____ Natural selection selects for adaptive traits and selects against non-adaptive traits.
14. _____ Salamanders that live in caves did not use their eyes and therefore as a result cave salamanders have become blind over many generations.
15. _____ As species evolve, they increase in complexity and therefore adaptability.
16. _____ The extinction of species is a natural event and >95% of all species that have ever occurred on Earth are now extinct.

17. _____ Mutations are counter productive to the evolution of new species.
18. _____ Webbed feet appeared in aquatic birds because they needed to propel themselves through the water.
19. _____ An adapted individual is one that is able to produce offspring that survive long enough to reproduce.
20. _____ The fossil record indicates that all species give rise to more complex species.
21. _____ The fossil record indicates an increasing diversity of life forms over time.
22. _____ Extinction of a species indicates that the species was never adapted to its environment.
23. _____ Less-adapted organisms die without producing any offspring.
24. _____ Evolutionary stasis states that there is absolutely no change in the gene pool over an extended period of time.
25. _____ Humans evolved from chimpanzees.
26. _____ Longer legs allowed herons to wade in deeper water while searching for food.
27. _____ If mammals are the most complex animals, correspondingly, they are the most adapted to their environment.
28. _____ Some lineages of snails lost their shells via mutations so they could fit into tight spaces that their shelled-relatives could not fit.
29. _____ Natural selection acts upon the individual directly and not upon the species directly.
30. _____ No person has ever been able to observe the natural emergence of a new species during their life as the development of a new species can take many thousands of years.