

B2 – Fossils and Speciation Quiz

1. Why do scientists only find fossilised skeletons of extinct animals?

Because the soft body parts decayed. Bones don't decay.

2. What is a fossil?

Remains of an organism/ bone/ shell found in a rock

3. How do fossils form?

Animal dies and falls to ground. Flesh is decomposed. Skeleton is covered in soil. Bones dissolved over time and replaced by minerals which harden and turn to rock. Some animals or plants are preserved in ice where it is too cold for bacteria to decompose the organism. Some fossils are footprints or droppings. Some are trapped in oxygen free conditions so don't decompose.

4. How do fossils show that animals evolved from simpler organisms?

Fossils found have similar features to today's organisms but have simpler features the older they are.

5. Describe different causes of extinction.

New competitors which use up food and space; diseases which spread quickly in small habitats; natural disasters; new predators

6. Why are scientists uncertain about how life began?

There is a lack of evidence as early organisms were soft bodied and other remains were destroyed by geological action.

7. Why can't scientists be certain what early animals looked like?

Only some bones remain and the soft parts have decayed.

8. How do fossilised foot prints form?

Animal walks on soft ground which dries, hardens and turns to rock.

9. What does the word extinct mean?

Died out

10. Describe how different species of the same animal develop.

Animals become separated and isolated by geographical barrier (e.g. mountains, sea). Gene mutation leads to variation. Different conditions (e.g. Food, predator, climate) leads to survival of those that are adapted. Eventually a new species develops.

11. What is a species?

A group of organisms which have many features in common and can produce fertile offspring.

12. How has the mammoth evolved from its ancestor?

Mutations caused some animals with more hair to be born. In colder conditions these animals were better adapted as hair is a good insulator. These animals were more likely to survive and pass on their genes to succeeding generations.

13. What does the word endemic mean?

A species that evolves in isolation and is found only in one place in the world is said to be endemic to that area.

14. What is the meaning of the word speciation?

Speciation means that an isolated population becomes so different from the original population that successful interbreeding can no longer take place.

15. What is the difference between geographic and environmental isolation?

Geographical isolation: separation by sea, mountain, river, island formation. Environmental isolation: climate changes in one area but not in another.