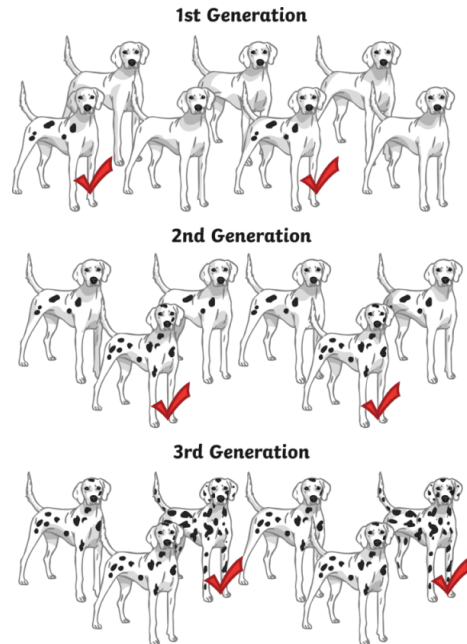


B14 - Variation

Organisms differ from one another. Some of these differences are caused by the genes inherited from previous generations; some differences are due to the environment in which the organism lives.

In most populations of organism, mutations occur. These can have no effect at all or can influence the appearance or behaviour of the organism. Sometimes, if a mutation causes an organism to be better suited to its environment, this can lead to a change in the species by natural selection. The variation makes the organism more likely to survive and pass on its genes, meaning more of the organism will have the new variation.

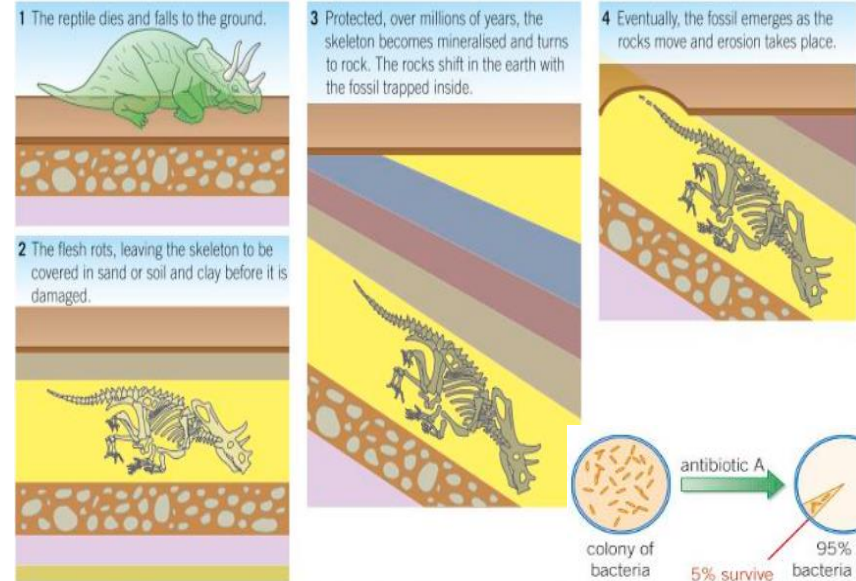
Selective Breeding – where an organism is bred for specific characteristics such as Dalmatians and spots. In each generation, the spottiest dog is chosen to breed meaning the offspring have more spots.



Genetic Engineering – this involves changing the DNA of an organism to have a specific desired trait.

Both can result in undesirable characteristics appearing also

B15 - Evolution

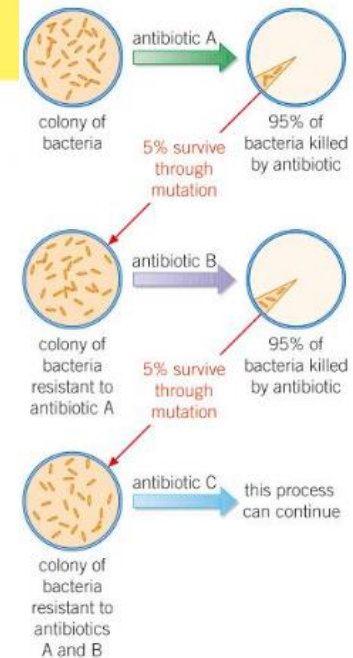


Classification is a system used to organise organisms that have similar DNA to each other.

Fossils can also be used to show how different species evolved over time.

Extinction can be caused by different factors:

- New Predators
- New Diseases
- Competition between organisms
- Sudden environmental changes



B16 – Adaptation and Interdependence

Biotic Factors	Abiotic Factors
Availability of Food	Light intensity
New Pathogens	Temperature
New Predators	Soil pH
Interspecific Competition	Wind intensity

Animals compete for food, territory and mates.
Plants compete for light, water, nutrients and space.

Organisms that live in hot environments need to be able to cope with the lack of water availability.

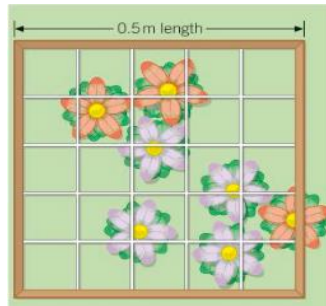
Organisms that live in cold environments need to be able to stay warm or have ways of coping with ice.

Structural adaptations are ways an organisms body form or shape allows it to cope with its environment – such as large eyes or ear.

Behaviour adaptations are the ways that an organism acts to allow it to cope with its environment – such as hunting behaviours

Functional adaptations are the ways that the organisms body works to allow it to cope with its environment – such as being able to digest a certain type of food.

Recording the number of organisms that live in a particular area can be done in many ways, a quadrat or transect are both simple methods. These methods only work for organisms that are stationary.



Videos



Quizzes

