Year Six Science - Summer 2 - Evolution and inheritance

Key Vocabulary

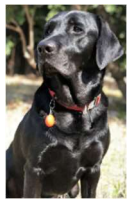
Inheritance	The passing of characteristics from a parent to its offspring.
Variation	Changes between one thing and another.
Characteristics	A feature that makes one thing different or similar to another.
Adaptation	A change in a characteristic of an organism. These occur naturally all of the time.
Evolution	Adaptations made in a species over a very long time.
Natural selection	Adaptations to an environment and ever changing organisms living there match better than other organisms – enabling those organisms to live long enough to continue to reproduce.
Selective breeding	Organisms from the same species chosen to breed together, to encourage characteristics to be passed on to their offspring, e.g. dogs
Survival of the fittest	Relating to natural selection, this phrase refers to those in the species which are best suited (fittest) the environment in which they find themselves.
Charles Darwin	A key scientist in the field of evolution and natural selection.
Palaeontologist	A scientist who studies fossils
Sediment	Layers of mud that turn to stone
Trace fossils	Leave 'traces' of an animal from when it was alive behind such as a footprint
Coprolite	Fossilised excrement that determine if the animal was a herbivore, carnivore or omnivore

Inherited characteristics

These are things about the offspring (children) that are similar to the parents.

- Bart, Lisa and Maggie all have spikey hair, just like their dad.
- Lisa and Maggie have long eyelashes like their mum.
- Bart has no eyelashes like his dad.
- All of the family have three fingers and a thumb.

Selective breeding

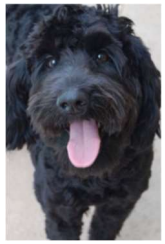


Labrador:

Extremely loyal, strong and caring. Easily trained.

Poodle:

Hypoallergenic (allergy friendly), good stamina, good companion.



Offspring = Labradoodle:

Extremely loyal, strong and caring. Easily trained, with hypoallergenic fur – ideal for people with pet fur allergies.

Natural selection

Bullfinch:
Fat strong beak (bill) suited to crushing big, tough seed shells.

Linnet finch:
Smaller narrower beak (bill) suited to eating very small

If all of the smaller seeded plants stopped growing in the UK, the linnet would run out of food and would not be able to live = no more offspring.

Other finches (such as the bullfinch) with bigger, stronger beaks would still be able to eat plants which produce larger seeds.

This is natural selection – traits selected as advantageous following changes in the natural environment.

Fossil records

Sea urchin

Ammonite

Crinoid

Fossils can be traced back to a specific point on the timeline.

- Fossils have been found to look very similar to some species we still see today, but they are dated at being from millions of years ago.
- Fossils provide a map of where species have come from.
- Fossils provide a record of slight adaptations and overall evolution of a species.