

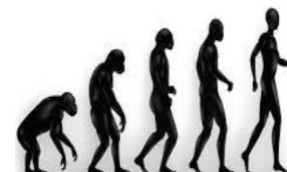
Evolution and Inheritance



WHS Year 6

How have living things changed over time?

- **Evolution** is a change over time. It occurs when there is competition to survive (natural selection).
- Characteristics are passed from parents to their offspring. This is called **inheritance**.
- Offspring are not identical to their parents. Some characteristics are inherited, but some are new in the offspring – these are called **mutations**.
- **Fossils** are remains of living things, and provide evidence about living things from the past.
- Animals and plants are suited to their environments, and adaptation leads to **advantageous changes**.

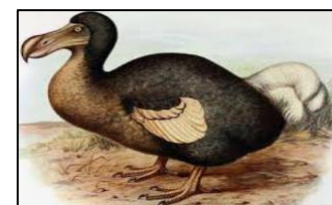
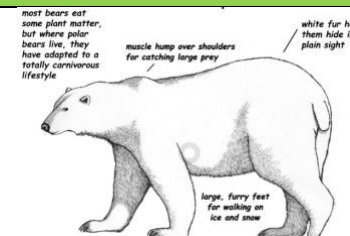


Key Questions:

- How have living things changed over time?
- Do living things produce offspring of the same kind?
- How are animals adapted to suit their environment?
- Does adaptation lead to evolution?

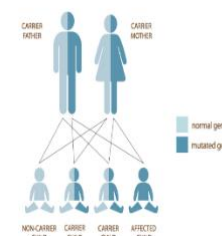
How are animals suited to their environment?

- Sometimes, changes that offspring have from their parents are advantageous – they allow the offspring to cope better in their environment.
- However, often the changes are not advantageous (called maladaptation). When this is the case, the offspring will find it more difficult to thrive.
- Natural selection can ensure that, over time, the advantageous characteristics survive in the species.
- For example, many polar animals have adapted to possess layers of blubber and/or fur (for warmth) and white outer coats (for camouflage).
- The dodo, with no predators on its island, had adapted in a number of ways that made it unable to survive when humans arrived (maladaptation).



Do living things produce offspring of the same kind?

- Living things produce **offspring** of the same kind.
- Some of a parent's characteristics are passed down to the offspring – this is called inheritance.
- This is why we often share similar features with our parents, and some conditions are shared (see image).
- Inheritance is **genetic**, not environmental. E.g. If two blonde-haired parents dye their hair black, this does not mean they will have a black-haired child.
- Some features are new to the offspring. These are called **mutations**. This is why we are not exact copies of our parents.
- These changes in offspring **over time** allow evolution to take place.



Key vocabulary:

- ❖ Evolution – the way in which living things change and develop over time
- ❖ Inheritance – a physical or mental characteristic passed down by parents to their offspring
- ❖ Adaptation – the process of changing to suit conditions
- ❖ Offspring – the young of an animal
- ❖ Environment – the air, water and land in or on which people, animals and plants live
- ❖ Characteristics – a typical or noticeable feature of a living thing
- ❖ Genes – carry the information that determines your traits and characteristics
- ❖ Mutations – a change in the DNA of a living thing

End of unit quiz



Prior learning:

Year 1 – 5 Animals Including Humans units of work.

Adapted to Warm Environments

Camels



Fennec Fox



Kangaroo



Penguin



Seal



Adapted to Cold Environments

Polar Bear

