

# SMRP Science Knowledge Organiser for Year 6 Evolution and Inheritance



Selective dog breeding over many years has resulted in many different breeds suited to different purposes.

## Science knowledge

Living things produce **offspring** of the same kind, but normally offspring vary and are not identical to their parents.

**Genetics** is the study of what offspring **inherit** from their parents.

Children inherit **traits** and characteristics from their parents. Eye colour is an example of **inherited trait**, but so are things like hair colour and even the shape of your earlobes!

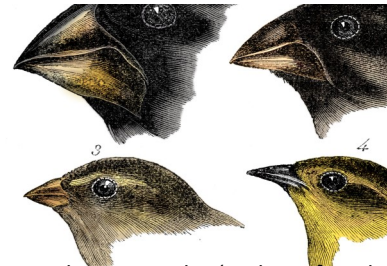
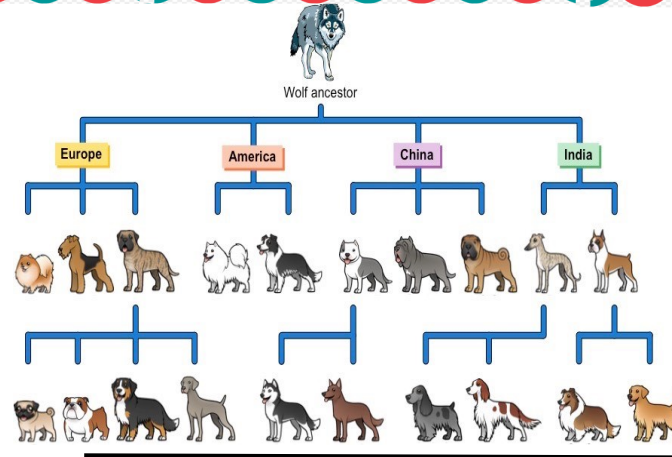
Fossils are the persevered remains, or partial remains of ancient animals and plants.

Fossils let scientists know how plants and animals used to look millions of years ago. This is proof that living things have evolved over time. By studying fossils, scientists can identify what the animal ate, where it lived and how it died.

Fossils of giraffes from millions of years ago show that they used to have shorter necks. They have gradually evolved through **natural selection** to have longer necks so that they can reach the top leaves on taller trees.

Animals and plants are adapted to suit their environment in a variety of ways and **adaptation** may lead to **evolution**; if the environment changes.

Animals and plants with variations that are best suited to survival will reproduce and pass their characteristics onto their young.

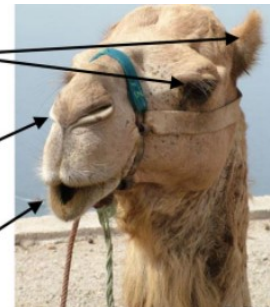


Charles Darwin was known as the 'Father of evolution' for his observations of finch beaks.

long eyelashes and furry ears prevent sand and dust from getting in

nostrils can be closed for protection during sandstorms

very varied diet, ranging from grass and bark to thorns and bones.



Above shows how camels have adapted to their environment.

## Science Vocabulary

Word	Definition
<b>Adaptation</b>	The process of change to better suit a habitat.
<b>Evolution</b>	How plants and animals have developed/changed over long periods of time.
<b>Inheritance</b>	When living things reproduce and pass on characteristics to their offspring.
<b>Genetics</b>	The study of how people inherit traits from their parents.
<b>Natural selection</b>	Process by which a species changes over time in response to changes in the environment, or competition between organisms.
<b>trait</b>	A specific characteristic, like hair or eye colour.
<b>Offspring</b>	The young born of living organisms.
<b>Characteristics:</b> <b>inherited and acquired</b>	<p>Characteristic: As distinguishing quality</p> <p>Acquired: a characteristic that is learnt through interaction, environment and/or life experiences.</p> <p>Inherited: a characteristic that is genetically passed from parents to offspring.</p>