



# As Scientists, our big question is... Have we always looked like this?



## REMEMBERING Prior Learning

**Environments**  
There are many types of **environment** around the world. Polar regions, deserts, rainforests, oceans, rivers, and grasslands are all **environments**.



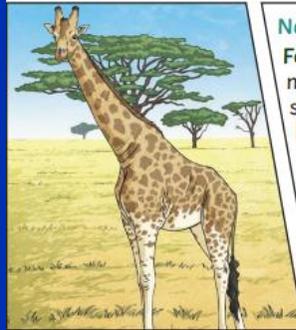
A habitat is the natural home of a plant or animal. Ideal habitats have access to shelter, space, food, and water. There are lots of different habitats across the world and each plant and animal that lives there is specifically adapted to live and survive there.



**Fossils** are the preserved 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.



## UNDERSTANDING Sticky Knowledge



**Natural Selection**  
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.

**Variation**  
In the same way that there is **variation** between parents and their **offspring**, you can see **variation** within any species, even plants.



**Adaptive Traits**  
**Characteristics** that are influenced by the **environment** the living things live in. These **adaptations** can develop as a result of many things, such as food and climate.



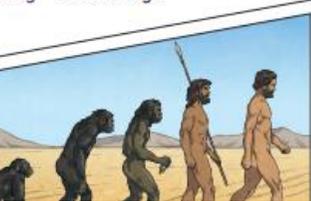
**Inherited Traits**  
Eye colour is an example of an **inherited** trait, but so are things like hair colour, the shape of your earlobes and whether or not you can smell certain flowers.



**Offspring**  
Animals and plants produce **offspring** that are similar but not identical to them. **Offspring** often look like their parents because features are passed on.

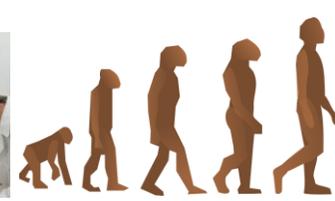


**Evolution** is the gradual process by which different kinds of living organism have developed from earlier forms over millions of years. Scientists have proof that living things are continuously **evolving** - even today!



## APPLYING My Aspirations

An evolutionary biologist works at a research lab or a university and **studies the evolution of life on earth** in an attempt to arrive at new theories and conclusions for human and animal development and adaptation.



## Vocabulary

Off-spring	Adaptation	Evolution	Inheritance	Chromosomes	Genes
When living things reproduce they pass on characteristics to their <b>offspring</b> . All living things produce <b>offspring</b> of the same kind, but normally <b>offspring</b> are not identical to their parents.	Adaptation is the process by which animals, plants and other living things have changed so that they better suit their habitat.	Evolution is the theory that all the kinds of living things that exist today developed from earlier types.	When living things reproduce, they pass on characteristics to their <b>offspring</b> . This is known as inheritance.	Chromosomes are tiny structures inside cells made from DNA and protein.	Genes that are passed on to you can determine many of your traits, such as your hair colour and skin colour.



As Historians, our big question is...

How can we rediscover the wonders of the Indus Valley?



REMEMBERING

Prior Learning

Facts about India:

Where in the World?

India is located in the continent Asia and neighbours: China, Bangladesh and Pakistan.

Other Ancient Civilisations

In previous years, you have studied other ancient civilisations to find out how these periods of history influence the way we may live today.

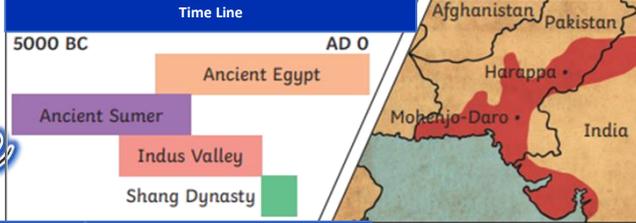
You have studied Ancient Greece and Ancient Rome.

Can you remember any facts or knowledge about these ancient civilisations?



UNDERSTANDING

Sticky Knowledge



Discovery

The ruined cities lay undiscovered until 1826 when Charles Masson noted mounds of bricks, which were actually buildings from Harappa. In 1856, workers building the Great Indian Railway found and used old bricks which were also from buildings in Harappa.

Key Events		Cities	Houses
3300 BC	Farmers start small settlements in the Indus Valley, in what is now south-east Afghanistan, Pakistan and north-west India.	Although lots of farmers, fishermen and traders lived in small villages, it is thought that up to 80,000 people lived in Mohenjo-Daro and Harappa, the biggest of many cities. A huge amount of planning went into the cities before they were built. Water was very important and cities had complex drainage systems. Reservoirs were built for storing water.	It is thought that the most important buildings were located in a city's <b>citadel</b> and that the rulers of the city lived there. Buildings were made from mud bricks and <b>bitumen tar</b> was used to make them waterproof. Houses had thick walls to keep them cool inside. Flat roofs created an outdoor space where people could cool off, socialise or store <b>goods</b> .
3200 BC	An early form of the Indus script begins to be used.		
2650 BC	The cities of Mohenjo-Daro and Harappa flourish, with living conditions comparable to Sumer and better than those in Egypt.		
2600 BC	A variety of evidence shows that ploughs and Indus script are being widely used.		
2500 BC	Soft clay <b>seals</b> are being used by traders to mark their <b>goods</b> .	By looking at images from <b>seals</b> and other artefacts, historians can tell what types of clothes and jewellery were probably worn in the Indus Valley. Clothing was likely made from cotton and dyed a variety of colours. Men wore tunics or a simple <b>loincloth</b> . Women wore long dresses but sometimes just skirts.	The Indus people were among the first to make jewellery, which was worn by both men and women. Beads were initially made from clay and painted, but later they were made from precious stones like agate and jasper.
2400 BC	The Indus Valley civilisation is at its peak, with a possible estimated population of over 5 million people.		
2000 BC	The Indus people are referred to in Sumerian writings, recording the connections between the two cultures.		
1800 BC	The Indus civilisation begins to decline after 800 years of wealth.		
1500 BC	The Indus civilisation comes to an end.		

**Decline**  
The Ghaggar-Hakra river now only flows during the monsoon rain season. It is thought that it dried up around 2000 BC and that this led to the decline of the Indus civilisation.

APPLYING My Aspirations

Archaeologist

A person who studies human history and prehistory through the excavation of sites and the analysis of artefacts and other physical remains.

Vocabulary

<b>Soapstone</b> A soft rock that can be carved easily.	<b>Seal</b> A small stamp with an individual design, used for pressing into a soft material like clay to show who made or sent an item. 'Seal' can also refer to the stamped clay.	<b>Loincloth</b> A piece of cloth wrapped around the hips, similar to a skirt but generally worn by men.	<b>Citadel</b> An area on a mound of land, higher than the rest of a city. Sometimes citadels have walls to separate them from the rest of the city	<b>Bitumen Tar</b> A semi-solid, sticky, black substance.	<b>Charles Masson</b> Charles Masson had been in the British army in India. Other people who contributed to the discovery and excavations of Harappa and MohenjoDaro include Sir John Marshall, Rai Bahadur Daya Ram Sahni, RD Banerji and Sir Alexander Cunningham
--	---	---	--	--	--