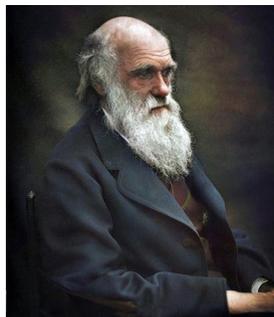


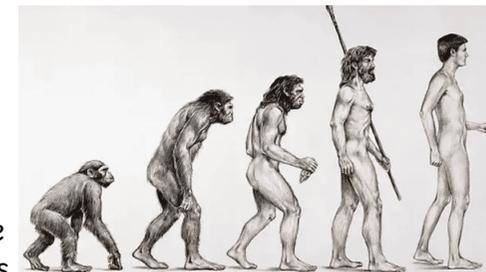
Vocabulary

Word	Meaning
adaptation	An adaptation is when a living thing changes a trait or characteristic to increase its chances of surviving and reproducing.
adaptive traits	Genetic features of a living thing which help it to survive.
characteristics	The distinguishing features or qualities that are specific to a species.
environment	An area containing many different habitats that has both living and non-living things.
evolution	When something changes or adapts over a very long time.
fossil	The remains or imprint of a prehistoric plant or animal, preserved or embedded in rock.
habitat	The area or place in which a specific animal or plant can live.
inheritance	When characteristics are passed on to offspring from their parents.
inherited traits	The traits or characteristics a living thing gets from its parents.
natural selection	When organisms that are better adapted to their environment survive and flourish while others do not.
offspring	The young animal or plant that is produced as a result of the reproduction of that species.
variations	The differences between individuals in a species.
selective breeding	Choosing parents with particular characteristics to produce offspring with more desirable characteristics.

The Science of Evolution

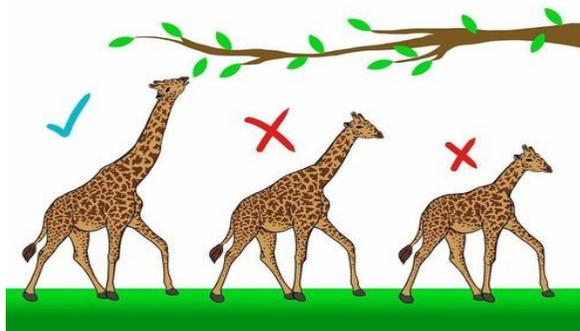


Evolution is the gradual processes by which different kinds of living organism have developed from earlier forms over millions of years. Scientists have proof that living things are continuously **evolving**—even now. Charles Darwin was one of the first scientists to understand the idea of evolution. During his lifetime, Charles Darwin travelled all over the world learning about how different species have evolved. At the time, many people did not believe his “theory of evolution”. He did a lot of his research in the Galapagos Islands—a group of tropical islands in the Pacific Ocean.



Natural Selection

Natural selection happens when the living thing that is better adapted to its surroundings is successful at surviving and reproducing in the area that it lives. The living things that are not well adapted do not survive. An example of this is how the beaks of a group of finches have evolved over time to enable them to get the food they need to survive.



The Fossil Record

Fossils are the preserved remains (or partial remains) of ancient plants and animals. **Fossils** let scientists know how plants and animals used to look millions of years ago. This shows us how they have **evolved** over time. By studying the characteristics of the fossilised remains we can learn a lot about the environment the animal lived in, its diet and its habits (how it moves etc).



Evolution & Inheritance

Generations

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

Variations are slight differences between living things. Just as there is **variation** between parents and their offspring, you can also see variation within a species (e.g. all the different types of dogs)



Traits

Adaptive traits are characteristics that are affected by the environment that a living thing lives in. These **adaptations** can happen as a result of many things such as food and climate.



Inherited traits are the traits that a living thing gets from its parents. In humans, they can include things like hair colour, eye colour, the shape of your ear lobes and differences in some of your senses

Adaptations

Living Things	Habitat	Adaptive Traits
polar bear	arctic	Its white fur enables it to camouflage in the snow.
camel	desert	It has wide feet to make it easier to walk in the sand.
cactus	desert	It stores water in its stem.
toucan	rainforest	Its narrow tongue allows it to eat small fruit and insects.

Where Things Live

The area that something lives in is known as its **habitat**. A good habitat will provide shelter, water, food and enough space for a living thing. There are many different types of **environment** around the world. The climate, landscape and vegetation vary in different environments. Some examples of different environments are:

- Polar regions
- Deserts
- Rainforests
- Oceans
- Rivers
- Grasslands



Extending your learning

5 things you could do at home to extend your learning:

1. Look at family photographs and find features you have inherited from your parents or grandparents.
2. Watch some wildlife in your garden or park—how have they adapted to live in that habitat?
3. Research about Charles Darwin and his theory of evolution.
4. Pick an environment and design a living thing that would be best suited to that place.
5. Visit the Natural History Museum to learn more about evolution and to see examples of fossils.