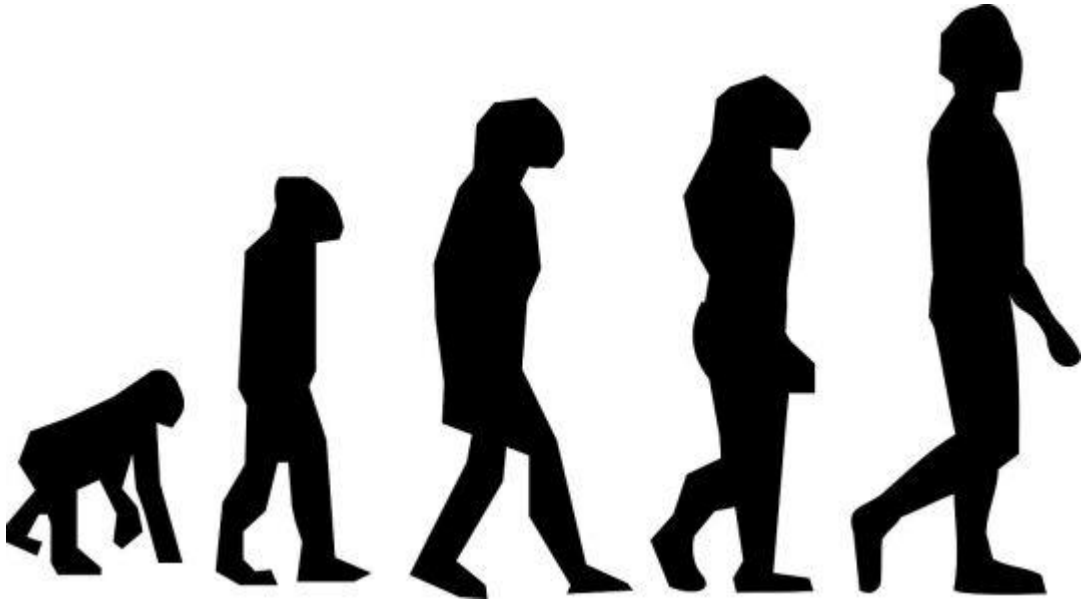
My Knowledge Journal



Evolution and Inheritance

Name: _____

Pre Knowledge Quiz

Q1. Evolution occurs when there is competition to survive. This is called…

Variation		Reproduction		Natural Selection	

Q2. Evidence of evolution comes from… Tick two.

Museums		Living Things	
Fossils		Food Chains	

Q3. When we have the same characteristic as our parents or ancestors, we have _____ that characteristic.

Q4. The dodo was unable to adapt to its environment to survive. This means that the dodo is now _____.

Q5. Animals adapt to survive in their environments. Write down an example of an animal that has adapted and the reason it can survive in its environment.

_____

_____

Evolution and Inheritance Knowledge Organiser

What should I already know?

- Which things are living and which are not
- Animals that are carnivores, herbivores and omnivores.
- The basic needs of animals for survival (water, food, air)
- Some animals have skeletons for support, protection and movement
- Food chains, food webs and the role of predators and prey
- Features of habitats and the animals and plants that exist there (biodiversity)
- Examples of different biomes
- The life cycle of some animals and plants
- Sometimes environments can change and this has an effect on the plants and animals that exist there
- Living things breed to produce offspring which grow into adults. This is called reproduction
- The features of some rocks and the role they play in the formation of fossils

Key Vocabulary	
Ancestor	An early type of animal or plant from which a later, usually dissimilar, type has evolved
Biome	A large naturally occurring community of animals and plants occupying a major habitat
Breeding	The process of producing plants or animals by reproduction
Characteristics	The qualities or features that belong to them and make them recognisable
Environment	All the circumstances, people, things, and events around them that influence their life
Extinct	No longer has any living members, either in the world or in a particular place
Fossil	The hard remains of a prehistoric animal or plant that are found inside a rock
Generation	The act or process of bringing into being; through reproduction, especially of offspring
Maladaptation	The failure to adapt properly to a new situation or environment
Mutation	Characteristics that are not inherited from the parents or ancestors and appear as new characteristics
Natural Selection	A process by which species of animals and plants that are best adapted to their environment survive and reproduce, while those that are less well adapted die out
Offspring	A person's children or an animal's young
Reproduction	When an animal or plant produces one or more individuals similar to itself
Species	A class of plants or animals whose members have the same main characteristics and are able to breed with each other
Survive	Continue to exist
Theory	A formal idea or set of ideas that is intended to explain something
Variation	A change or slight difference

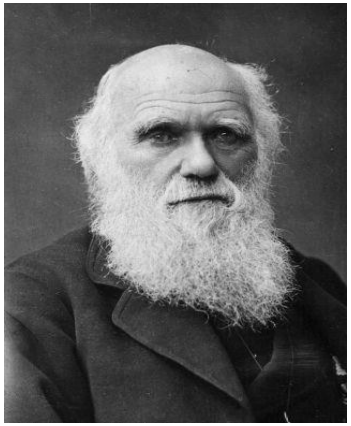
What is the Theory of Evolution?

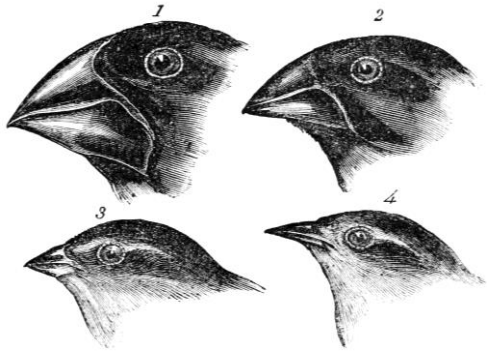
- Evolution is a process of change that takes place over many generations, during which species of animals, plants, or insects slowly change some of their physical characteristics. This is because offspring are not identical to their parents
- It occurs when there is competition to survive. This is called natural selection
- Evidence of evolution comes from fossils - when these are compared to living creatures from today, palaeontologists can compare similarities and differences

Charles Darwin

12 February 1809 – 19 April 1882

Charles Darwin was an English naturalist, geologist and biologist, best known for his contributions to the science of evolution. His proposition that all species of life have descended over time is now widely accepted, and considered a foundational concept in science.
He is most famous for his work on natural selection, the idea that all species of life have evolved over time from common ancestors. This process involves favourable traits becoming more common in successive generations of living things while at the same time unfavourable traits become less common.
Charles Darwin's work on finches was some of his most famous.





Inheritance

- Inheritance is when characteristics are passed on from generation to the next
- The difference within a species (for example between parents and offspring) can be caused by inheritance and mutations
- Mutations in characteristics are not inherited from the parents and appear as new characteristics.

Adaptation

Adaptation is when animals and plants have evolved so that they have adapted to survive in their environments. For example, polar bears have a thick layer of blubber under their fur to survive the cold, harsh environment of the Arctic while giraffes have long necks to reach the leaves on trees.
Some environments provide challenges yet some animals and plants have adapted to survive there.
Sometimes adaptations can be disadvantageous, One example of this can be the dodo, which became extinct as it lost its ability to fly through evolution. Flying was unnecessary for the dodo as it had lived for so many years without predators, until its native island became inhabited.
When adaptations are more harmful than helpful, these are called maladaptation.

My Knowledge Builder

My Previous Knowledge…	
New knowledge …	
Week 1	• • •
Week 2	• • •
Week 3	• • •

Week 4	• • •
Week 5	• • •
Week 6	• • •
Week 7	• • •

Post Knowledge Quiz

Q1. Evolution occurs when there is competition to survive. This is called…

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