Knowledge Planner

Year 6 - Evolution and Inheritance

What I should already know

- Name a variety of plants and animals in their habitats, including microhabitats describe how animals obtain their food from plants and other animals, using the idea of a simple food chain, and identify and name different sources of food.
- Animals, including humans, need the right types and amount of nutrition, and that they cannot make their own food; they get nutrition from what they eat.
- Animals, including humans, have offspring which grow into adults and know the basic needs of animals, including humans, for survival (water, food and air).
- Fossils are formed when things that have lived are trapped within rock.

natural selection	The process where organisms that are better adapted to their environment tend to survive and produce more offspring.
offspring	The young animal or plant that is produced by the reproduction of that species.
variations	The differences between individuals within a species.

Key Vocabulary	
adaptation	An adaptation is a trait (or characteristic) changing to increase a living thing's chances of surviving and reproducing.
adaptive traits	Genetic features that help a living thing to survive.
characteristics	The distinguishing features or qualities that are specific to that species.
environment	An environment contains many habitats and includes areas where there are both living and non-living things.
evolution	Adaptation over a very long time.
fossil	The remains or imprint of a prehistoric plant or animal, embedded in rock and preserved.
habitat	A specific area or place in which particular plant or animals can live.
inheritance	This is when characteristics are passed onto offspring from their parents.
inherited traits	These are the traits you get from your parents. Within a family, you will often see similar traits, eg. curly hair.

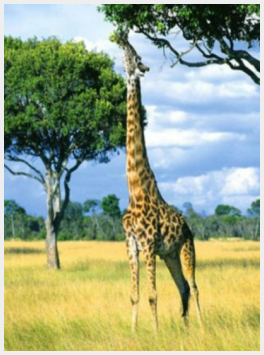
Key Facts

- Living things have changed over time and fossils provide information about living things that inhabited the Earth millions of years ago.
- Living things produce offspring of the same kind, but normally offspring vary and are not identical to their parents.
- Identify how animals and plants have adapted to suit their environment in different ways and adaptation may lead to evolution.

Fossils are the preserved remains, or partial remains of ancient animals and plants. Fossils let scientist know how plants and animals used to look millions of years ago. This is proof that living things have evolved over time.

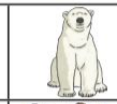
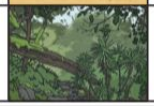
Evolution is the gradual process by which different kinds of living organism have developed from earlier forms over millions of years. Scientists have proof that living things are continuously e

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 produce **offspring** that are similar, but not identical to them. **Offspring** often look like their parents because features are passed on.
In the same way there is **variation** between parents and their offspring, you can see **variation** within any species even plants.

Eye colour is an example of an **inherited trait**, but so are other things like hair colour, the shape of your earlobe and whether you can smell certain flowers. Characteristics that are influenced by the environment the living things live in are examples of **adaptive traits**. These adaptations can develop as a result of many things, such as food and climate.

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.

Possible Investigations

How do different features support survival in a given environment?