Living things and their habitas	**Science** **Knowledge Organiser**	**Learning Lens: Biology** **Class**: Year 5

Previous Knowledge

Y3 plants

Project Hook or 'Wow' memory

Rooting powder cuttings.

Learning Steps	Key Knowledge (answers)
Do all plants reproduce in the same way? **(identifying and classifying)**	Not every plant grows from a seed. Some plants, like ferns and mosses, grow from spores. Other plants use asexual vegetative reproduction and grow new plants from root-like subterranean stem s or tubers that usually sends roots below and sends up shoots. Plants can reproduce sexually or asexually
What are the differences between life cycles of insects and mammals? (Research)	Some insects undergo complete metamorphosis (4 stages: egg, larva, pupa and adult) and some go through incomplete metamorphosis (3 stages: egg, nymph, adult). A mammal is a particular type of animal. ... Most mammals are placentals: their young grow inside the female's body and are born when they are fully developed.
Do all mammals have the same life cycle? **(comparative study)**	Duck-billed platypus and the spiny anteater (are called monotremes and are found in Australia and New Guinea.and lay eggs. Another type of mammal called a marsupial, e.g. kangaroo, wallaby and koala bear are found mostly in Australasia and the Americas and they have a slightly different life cycle as well – they give birth to poorly developed babies who after birth crawl into a pouch in which they can suckle on the mammary glands to grow and develop further
Does the size of an animal affect the gestation period? **(pattern seeking)**	Animal size / mass – larger animals tend to have longer gestation periods (as they tend to produce larger offspring) The level of development at birth – more developed infants will typically require a longer gestation period.
How has he work of famous maturalists improved our understanding of animal behaviour?	Naturaliss study animals Feeding, sleeping, finding/building shelter, interacting with other members of their species or with other animals, reacting to stimuli, playing, fighting, learning skills, mating or reproducing, excreting, etc. They introduce people who are not scientists to many interesting and wonderful aspects of animal and plant life. People can see things happening or visit places virtually which they are unlikely to see or visit themselves.

The key skills we want pupils to use during this topic:

Observing and comparing the life cycles of plants.

Ask pertinent questions and suggest reasons for similarities and differences

Observe changes over time

Key vocabulary

Sexual reproduction	Two parents needed to make offspring which are similar but not identical to either parent.
Asexual reproduction	One parent needed to create an offspring, which is an exact copy of the parent
fertilise	The action of fusing the male and female sex cells in order to develop an egg.
pollination	The transfer of pollen to a stigma to foolow fertilisation
reproduction	The process of new living things being made.
metamorphosis	An abrupt and obvious change in the structure of an animals body and their behaviour.

Statutory Requirements

a1: describe the differences in the life cycles of a mammal, an amphibian, an insect and a bird

5a2: describe the life process of reproduction in some plants and animals.

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