



Year 5: Living Things and Their Habitats – Science Knowledge Organiser (Biology)



Enquiry Journey:

1) What is a life cycle and are they all the same?	2) How are the life cycles of birds and amphibians different from mammals?	3) What are the main stages in the life cycle of insects?	4) What is pollination in the lifecycle of a flowering plant?	5) How do plants spread their seeds?
1.) A life cycle is the series of stages a living thing goes through during its life. 2.) A life cycle includes growth, development, reproduction and death. 3.) Reproduction is the process by which living things produce offspring. 4.) Reproduction can be sexual or asexual. 5.) Sexual reproduction involves genetic material from two parents. 6.) Asexual reproduction involves one parent. 7.) Life cycles are different between different species. 8.) Life cycles repeat when new living things grow and reproduce.	1.) Mammals usually give birth to live young. 2.) Mammal young grow and develop into adults. 3.) Birds lay eggs containing developing embryos. 4.) Bird eggs are fertilised inside the female's body. 5.) Amphibians usually lay eggs in water. 6.) Amphibian eggs are usually fertilised outside the female's body. 7.) Amphibians often go through metamorphosis, such as a tadpole becoming a frog. 8.) Birds and mammals do not go through the same type of metamorphosis as amphibians.	1.) Many insects go through four main stages in their life cycle. 2.) The first stage is the egg. 3.) The second stage is the larva. 4.) The third stage is the pupa. 5.) The final stage is the adult insect. 6.) During metamorphosis, the insect changes greatly in appearance. 7.) The larva and adult can look and behave very differently. 8.) Butterflies and dragonflies are examples of insects that go through metamorphosis.	1.) Flowering plants reproduce using their flowers. 2.) The stamen is the male part of a flower and produces pollen. 3.) The stigma is part of the female reproductive structure. 4.) Pollination happens when pollen is transferred from the anther to a stigma. 5.) Insects can carry pollen from one flower to another. 6.) Wind can also transfer pollen between flowers. 7.) Fertilisation happens when pollen joins with an egg cell inside the ovule. 8.) After fertilisation, the ovule develops into a seed.	1.) Seed dispersal moves seeds away from the parent plant. 2.) Dispersal gives seeds a better chance of surviving and growing. 3.) Seeds can be dispersed by the wind. 4.) Some seeds are carried by water. 5.) Animals can carry seeds on their fur. 6.) Some seeds are spread when animals eat fruit and pass the seeds out. 7.) Seeds need water, oxygen and warmth to germinate. 8.) A seedling needs nutrients, water and light to continue growing.
Scientific Lense: Observing Over Time	Scientific Lense: Observing Over Time	Scientific Lense: Observing Over Time	Scientific Lense: Observing Over Time	Scientific Lense: Pattern Seeking
Key Vocabulary: • Life cycle – The stages a living thing goes through during its life. • Reproduction – The process of producing offspring. • Offspring – The young produced by a living thing. • Sexual reproduction – Reproduction involving genetic material from two parents. • Asexual reproduction – Reproduction involving one parent. • Species – A group of similar living things that can reproduce. • Embryo – A developing living thing before it is fully formed.	Key Vocabulary: • Mammal – An animal that usually gives birth to live young and feeds them milk. • Amphibian – An animal that can live on land and in water during its life cycle. • Bird – An animal that lays eggs and has feathers. • Embryo – A developing animal inside an egg or body. • Fertilised – When a sperm cell joins with an egg cell. • Metamorphosis – A major change in an animal's body during its life cycle. • Gestation – The time a developing mammal spends inside its mother.	Key Vocabulary: • Insect – An animal with six legs and three main body parts. • Life cycle – The stages a living thing goes through during its life. • Egg – The first stage in the life cycle of many insects. • Larva – The young stage of an insect after it hatches. • Pupa – The stage when an insect changes before becoming an adult. • Metamorphosis – A major change in an animal's body during its life cycle. • Adult – The fully grown stage of an animal.	Key Vocabulary: • Pollination – The transfer of pollen from an anther to a stigma. • Pollen – Tiny grains made by the male part of a flower. • Stamen – The male part of a flower. • Anther – The part of the stamen that produces pollen. • Stigma – The part of a flower that receives pollen. • Fertilisation – When pollen joins with an egg cell. • Ovule – The part of a flower that contains the egg cell and can develop into a seed.	Key Vocabulary: • Seed dispersal – The movement of seeds away from the parent plant. • Dispersal – The spreading or movement of something. • Germination – When a seed begins to grow. • Seedling – A young plant growing from a seed. • Parent plant – The plant that produced the seed. • Nutrients – Substances that living things need to grow and stay healthy. • Survival – Continuing to live and grow.

