Coley Primary School – Knowledge Organiser

SUBJECT FOCUS: Biology strand	Science: Living things and their habitats	YEAR 5	TERM 3

WHAT? – Key Knowledge

- Describe the differences in the life cycles of a mammal, an amphibian, an insect and a bird
- Describe the life process of reproduction in some plants and animals.
- Raise questions about their local environment throughout the year.
- Find out about the work of naturalists and animal behaviourists, for example, David Attenborough and Jane Goodall.
- Find out about different types of reproduction, including sexual and asexual reproduction in plants, and sexual reproduction in animals.
- Use scientific language: say, read and spell scientific vocabulary.

Famous Scientist

Jane Goodall



Jane Goodall is a British scientist who has studied chimpanzees for many years. She is considered to be the world expert on chimpanzees and their behaviour.

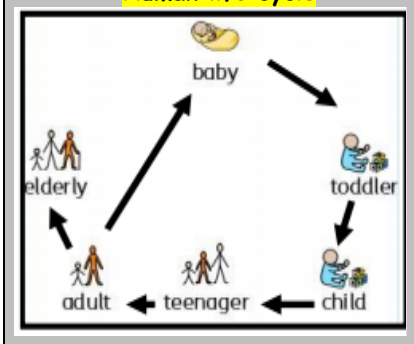
David Attenborough



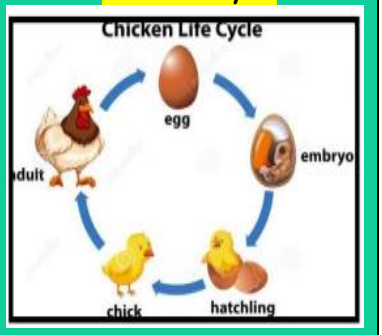
David Attenborough is a British wildlife film-maker and naturalist. This means he is a scientist who studies animals and their behaviour. He has written and presented many popular documentaries about animals and their lives.

Life Cycle

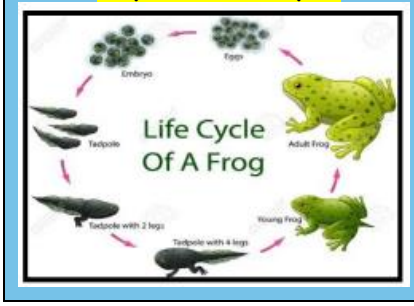
Human life cycle



Bird Life Cycle



Amphibian Life Cycle



Insect Life Cycle



Amazing Facts…

REPRODUCTION IN ANIMALS

For most animals which live on the land, offspring are fertilised inside the mother's body. This happens in 1 of 3 ways:

1) The young develop inside the female and are born alive **(most mammals)**.
2) Fertilised eggs are laid outside the female's body and develop in the egg getting nourishment from the yolk.
3) In some animals the eggs are held within the female and hatch as they are laid e.g. a fruit fly.

I wonder…

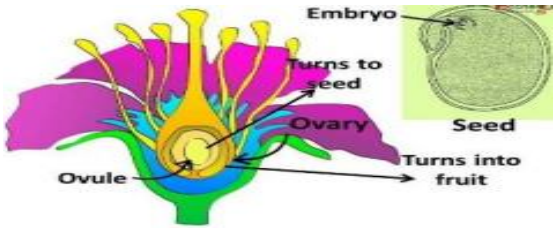
- Can they observe their local environment and draw conclusions about life-cycles? (for example, the vegetable garden or plants in a shrubbery)
- Can they compare the life cycles of plants and animals in their local environment with the life cycles of those around the world, e.g. rainforests?

WHAT? – Key vocabulary

life cycles	The stages a living thing goes through in its life.
reproduction	Living things create other living things. Animals have babies. Plants have seeds which turn into new plants
metamorphosis	A process some animals go through to become adults. It is a series of physical changes. It ends up looking totally different.
embryo	An animal or a plant in its earliest stage of development.
asexual reproduction	Offspring gets genes from one parent so they are clones of their parents.
pollination	The transfer of a pollen to a stigma to allow fertilization.
sexual reproduction	Two parents are needed to make offspring which are similar but not identical to either parent.
fertilise, ovule, anther, stigma, genes, inherit	

Diagrams and symbols

Reproduction in Plants



Pollen is carried by insects or blown by the wind from one flower to another. The pollen travels to the ovary where fertilisation occurs and seeds are made. Seeds are dispersed by **animals** or the **wind** and some seeds will grow into new plants.

Some plants, such as strawberry plants, potatoes, spider plants and daffodils use **asexual reproduction** to create a new plant. They are identical to parent plants.



Working Scientifically Challenge:

Let's think like scientists…

Can they…

- describe and compare the life cycles of a range of animals, including humans, amphibians, insects and birds?
- describe the life cycles of common plants?
- describe and explain the process of respiration in humans and plants?
- talk with knowledge about birth, reproduction and death of familiar animals or plants?
- explore the work of well know naturalists? (David Attenborough and Jane Goodall)

Possible experiences: *Curious minds…*

- **Research:** Compare David Attenborough's work to that of Jane Goodall's.
- **Habitats** (Moving up with Science) by Peter Riley