

Year 5 – Living Things and their Habitats – Circle of Life

What it looked like last year

- Recognise that living things can be grouped in a variety of ways.
- Explore and use classification keys to help group, identify and name a variety of living things in their local and wider environment.
- Recognise that environments can change and that this can sometimes pose dangers to living things.

What it looks like next year

- Describe how living things are classified into broad groups according to common observable characteristics and based on similarities & differences, including micro-organisms, plants and animals.
- Give reasons for classifying plants and animals based on specific characteristics.

Vocabulary (definitions)

life cycle - a series of stages a living thing goes through during its life.

reproduce - the process by which a living organism creates a likeness of itself.

metamorphosis - the process of transformation from an immature form to an adult form in two or more distinct stages.

asexual - in this form of reproduction, a single organism or cell makes a copy of itself.

sexual	sperm	fertilizes
egg	live young	plantlets
runners	bulbs	cuttings

Sequence of Learning

1. Compare and contrast different animal life cycles.
2. Explore the life cycles of a variety of mammals & identify some common characteristics.
3. Explore the life cycles of amphibians, identifying some common characteristics including the process of metamorphosis.
4. Explore the life cycles of a variety of insects.
5. Explore the life cycles of a variety of birds.
6. Invent an animal, describe in detail each stage of its life cycle and how this will ensure its long-term success.
7. Find out the ways in which humans use science to help endangered animals complete their lifecycles.

Cultural Capital

- To be able to describe the differences in the life cycles of a mammal, an amphibian, an insect and a bird.
- To be able to describe the life processes of reproduction in some plants and animals.
- The real life knowledge that links is: using secondary sources for research,
- The jobs it can be used in are: Biologist, Gardener, Horticulture, Vet, Zoologist, Zoo keeper.

Principles of Teaching Science.

Exploring – when we look at how things work in the world

Questioning – when we question what will happen

Understanding – when we use scientific language to explain

Investigating – when we can explore and are hands on

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Predicting – when we use our previous knowledge to say what we think will happen.

Mammals

1.) Gestation - An embryo grows inside the mother, reliant on her for everything it needs.



2.) Young - Growth and development is independent from parents.



3.) Independent Adult - Seeks company in order to mate and now nurses their young.



Amphibians

1.) Eggs - Female lays eggs which are fertilised by the male.

2.) Tadpole - After 2-25 days the tadpole hatches from the egg and swims.

3.) Jumps on Land - Grows front legs and uses nutrients in its tail as food.

4.) Grows fins and hind legs - Develops lungs and its tail shrinks.

5.) Adult Frog - Eats insects instead of plants and after 2-4 years it becomes an adult frog and can lay eggs.



Insects

1.) Eggs – laid by the female insect.

2.) Larva – Eggs hatch and larva is born. It looks different to its adult self (e.g. caterpillar/maggots).

3.) Pupa – When the larva moults for the last time, a pupa is formed. It acts as a camouflaged, protective shell for the larva to transform.



4.) Adult – The adult breaks out of the pupa and matures.

