The Blue Coat Church of England (Aided) Junior School
Believing, Celebrating, Succeeding

KNOWLEDGE ORGANISER

Living things and their habitats Year 5

What I need to know

- As part of their life cycle, animals reproduce. Most animals reproduce sexually, which involves two parents where the sperm from the male fertilises the female egg.
- Animals, including humans, have offspring that grow into adults. Often, these babies are born live, such as human babies and kittens. In other animals, eggs are laid which hatch and then grow into adults. Examples include snakes and chickens.
- Some young undergo a further change before turning into adults and this is called metamorphosis. For example, caterpillars turn into butterflies.
- Plants reproduce sexually and asexually.
- Sexual reproduction occurs through pollination, usually involving insects or wind.
- Bulbs, tubers and plantlets are examples of asexual reproduction in plants and this involves only one parent. Gardeners may force plants to reproduce asexually by taking cuttings of existing plants.

Sexual plant reproduction

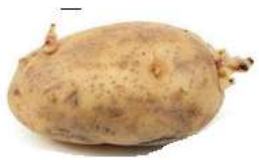
Sexual reproduction in plants is a cycle and follows this process:

1. Germination – the plant grows from a seed. Roots form under the soil and a stem, leaves and flower shoots above the surface.
2. Pollination – pollen produced by the flower is carried by insects or blown by the wind to another flower.
3. Fertilisation – the pollen reaches another flower and makes its way to the ovary, where it is fertilised.
4. Dispersal – the seeds are scattered by animals or wind.

Asexual plant reproduction

This involves plants producing an identical copy of themselves:

1. Some plants produce bulbs like daffodils and tulips.
2. Others, like potatoes, produce tubers.
3. Some plants produce runners which grow across the surface and put down roots. Strawberries produce runners.



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Dr Paula Kahumbu -

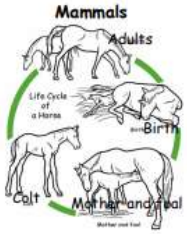
Campaigner for elephants and wildlife. She ran the hands off our elephants campaign to save the elephants.

Key Vocabulary	
Asexual reproduction	When a plant reproduces an exact copy of itself without being fertilised.
Sexual reproduction	The reproduction of offspring where the sperm from a male fertilises a female egg.
Lifecycle	The different stages a plant or animal goes through during its life.
Offspring	A mammal's young or children
Metamorphosis	When an animal or insect goes through a change from one form to another form. For example, a tadpole to a frog.
Reproduction	The production of offspring by a sexual or asexual process

Animal life cycles

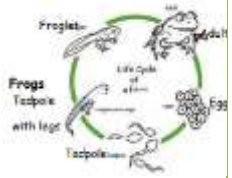
Mammals

3 stage life cycle:
1. The gestation period: the embryo grows inside the mother and is dependent on her.
2. The young mammal grows and develops independence.
3. Adult mates in order to reproduce.



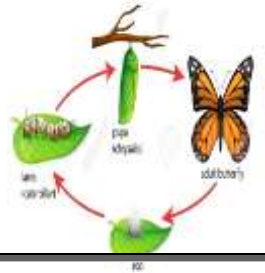
Amphibians

5 stage life cycle of a frog:
1. Female lays eggs, fertilised by the male.
2. Tadpole breathes in water through gills.
3. Grows fins and develops lungs.
4. Tadpole grows front legs and jumps from land to water.
5. Starts to eat insects/plants.
Takes 2-4 years to become an adult.



Insects

4 stage life cycle of an insect going through metamorphosis:
1. Eggs laid by female insect.
2. Eggs hatch into larvae. E.g. caterpillars, maggots, grubs.
3. Pupa (hard coating) is formed. Inside this, the larvae transforms.
4. Tadpole grows front legs and jumps from land to water.
5. The adult breaks out of the pupa and transforms.



Birds

3 stage life cycle:
1. Eggs laid by the mother. Parents care for the eggs until they hatch.
2. Mother and father feed the bird until it is independent.
3. Adult mates in order to reproduce.