

All children – regardless of gender, starting point or background – will have the opportunity to engage with a high-quality science education. They will be equipped with the knowledge, skills and vocabulary to understand how science can be used to explain what is occurring, predict how things will behave and analyse caused. We intend to inspire a sense of enjoyment and curiosity about science.

Living Things and Their Habitats

Spring 2

Igniting Prior Knowledge:

- Living things can be grouped (classified) in different ways according to their features. A classification key is a set of questions about the characteristics of living things.
- Classification keys can be used to identify and name living things.
- You can use a key to identify a living thing or decide which group it belongs to by answering the questions.
- Environments may change naturally e.g. with the seasons, through flooding, fire, earthquakes etc.
- Environmental change affects habitats differently.
- Change can affect the flora and fauna found there.
- Humans also cause the environment to change. This can be in a good way (i.e. positive human impact, such as setting up nature reserves/rewilding) or in a bad way (i.e. negative human impact, such as littering, plastic ocean/deforestation, global warming).
- Rewilding is restoring ecosystems to the point where nature can take care of itself, and restoring our relationship with the natural world.
- Negative changes to an environment can sometimes pose dangers and have an impact on living things. These include: loss of habitats, broken food chains, loss of breeding grounds, death.
- Positive changes include a reduction in pollution during National Lockdowns.
- An organism that dies out completely is classed as extinct.

Key Vocabulary:

- life cycle
- Reproduce
- Sexual
- Sperm
- Fertilizes
- Egg
- Live young
- Metamorphosis
- Asexual
- plantlets
- Runners
- Bulbs
- Cuttings



New Knowledge:

- As part of their life cycle, plants and animals reproduce.
- Most plants reproduce sexually. This means the male cell (pollen) fertilizes the female cell (egg/ovum).
- Sexual reproduction in plants occurs through pollination, usually involving wind or insects.
- This will produce offspring that is similar to, but not identical to the parent plant.
- Some plants reproduce asexually. This means it only involves one parent.
- Asexual reproduction produces offspring that is identical to the parent. These are called clones.
- Bulbs, tubers, runners, and plantlets are examples of asexual plant reproduction which involves only one parent.
- Gardeners may force plants to reproduce asexually by taking cuttings.
- Animals, including humans, have offspring which grow into adults.
- Most animals reproduce sexually. This involves two parents (a male and a female) where the sperm from the male fertilises the female egg.
- Sexual reproduction produces offspring that are similar to the parents but not identical.
- In humans and some animals, these offspring will be born live, such as babies or kittens, and then grow into adults.
- In other animals, such as chickens or snakes, there may be eggs laid that hatch to young which then grow to adults.
- Some young undergo a further change before becoming adults e.g. caterpillars to butterflies. This is called a metamorphosis.

