

# Preston Primary School Knowledge Organiser

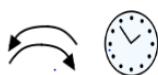
Topic: Science

Term: Spring 1

Year: 5/6

Duration: 5 Lessons

The Powerful Knowledge we will take away from this Learning Enquiry (what I will be learning): How can you classify living things?



- Describe how living things are classified into broad groups according to common observable characteristics.
- Describe how living things are classified into broad groups based on similarities and differences, including micro-organisms, plants, and animals.
- Give reasons for classifying plants and animals based on specific characteristics.
- Use and develop keys and other information records to identify, classify and describe living things.

## What I already know:

In Unit 3 all children learned about:

- parts of a plant and their functions.
- how living things can be grouped in different ways.
- use classification keys to group animals.

Earlier this year, the children learnt about the differences in lifecycles of a mammal, an amphibian, an insect, and a bird.

Our Key Vocabulary:

| Word                | Meaning   |
|---------------------|---|
| Organism            | A living thing such as an animal or a plant.  |
| Reproduction        | Reproduction is the process where living things create young or offspring either sexually or asexually.   |
| Sexual Reproduction | Sexual reproduction requires two parents to make one offspring. The offspring is genetically different from both parents (some plants and all animals). |
| Vertebrate          | An animal with a spine.   |
| Invertebrate        | An animal without a spine.  |
| Classification      | Method of arranging organisms into groups.  |
| Classification key  | A way of separating organisms into groups or types.   |
| Microorganisms      | Tiny organisms such as bacteria, viruses, and fungi.  |
| Bacteria            | Simple, tiny, invisible (to the naked eye) microorganisms.  |
| Viruses             | Tiny microorganisms that need a host.   |
| Fungi               | A group of organisms including mushrooms, mould and yeast.  |

## Characteristics of All Living Things

These are the characteristics that all living things have:

|   |   |
|---|---|
| <b>Characteristics of Living Things</b><br>Movement<br>Respiration<br>Sensitivity<br>Nutrition<br>Excretion<br>Reproduction<br>Growth                               | <b>MRS. NERG Movement</b><br>All living things move.<br>• Animals move around to get from place to place.<br>• Plants grow and turn towards the light.                        |
| <b>MRS. NERG Respiration</b><br>All living things respire.<br>• Plants and animals use oxygen in the air to turn the food they eat into energy.                     | <b>MRS. NERG Sensitivity</b><br>All living things are sensitive.<br>• Every living thing can detect changes in their surroundings.  |
| <b>MRS. NERG Nutrition</b><br>All living things need nutrition.<br>• Food is eaten to provide energy to live.<br>• Green plants make their own food using sunlight. | <b>MRS. NERG Excretion</b><br>All living things excrete.<br>• Waste products are removed from the body.<br>• Both plants and animals have to get rid of excess gas and water. |
| <b>MRS. NERG Reproduction</b><br>All living things reproduce.<br>• Animals have young.<br>• Plants produce seeds from which more plants grow.                       | <b>MRS. NERG Growth</b><br>All living things grow.<br>• Animals grow from babies to adults.<br>• Seeds grow into plants.  |

## Groups of Organisms:

- Vertebrates can be grouped as mammals, birds, fish, amphibians, and reptiles.
- Plants can be grouped as flowering and non-flowering. Flowering plants produce flowers and fruits. Non-flowering plants do not.
- Scientists group organisms to organise animals and plants based on their features.
- Grouping organisms can help us understand how organisms are related to each other.

## Classification Keys

Classification keys are used to classify animals.

- Classification keys can be used to identify different unknown animals based on their features, such as number of legs, having fur or scales.
- A classification key is made up of several questions with yes or no answers.
- These questions can then lead to further questions and answers until the identity of the animal is determined.

