Knowledge Organiser	Subject: Science	Topic: Classifying Organisms	Year: 6

Key Knowledge

Living things can be formally grouped according to characteristics. Plants and animals are two main groups but there are other livings things that do not fit into these groups e.g. micro-organisms such as bacteria and yeast, and toadstools and mushrooms. Plants can make their own food whereas animals cannot. Animals can be divided into two main groups: those that have backbones (vertebrates); and those that do not (invertebrates). Vertebrates can be divided into five small groups: fish; amphibians; reptiles; birds; and mammals. Each group has common characteristics. Invertebrates can be divided into a number of groups, including insects, spiders, snails and worms. Plants can be divided broadly into two main groups: flowering plants; and non-flowering plants.

Key Learning

To explore ways of distinguishing between organisms that have similar characteristics.
To be able to classify plants according to their characteristics.
To explore what microorganisms are and how they can be grouped.

Disciplinary Skills

- Classification
- Giving reasons for classification
- Using sources to collect information

Key Concepts

Classification of Living Things:

Living things can be grouped based on characteristics.

Main groups include plants and animals, but there are also micro-organisms like bacteria and yeast, as well as fungi such as toadstools and mushrooms.

Animal Classification:

Animals can be categorised into two primary groups: vertebrates (animals with backbones) and invertebrates (animals without backbones).

Vertebrates are further divided into five sub-groups: fish, amphibians, reptiles, birds, and mammals, each with distinct characteristics.

Invertebrates include groups like insects, spiders, snails, and worms.

Plant Classification:

Plants are classified into two broad groups: flowering plants and non-flowering plants.

A key difference between plants and animals is that plants can make their own food through photosynthesis, whereas animals cannot.

The Big Question

How can organisms be classified?

Key Vocabulary	
characteristics	Special qualities or appearances that make an individual or group of things different to others.
classify	To sort things into different groups.
taxonomist	A scientist who classifies different living things into categories.
key	A key is a series of questions about the characteristics of living things. A key is used to identify a living thing or decide which group it belongs to by answering 'yes' or 'no' questions.
bacteria	A single-celled microorganism
microorganism	An organism that can only be seen using a microscope, e.g. bacteria, mould and yeast.

Linking Thinking Across Our Learning Journey						
Early Years	**Year One**	**Year Two**	**Year Three**	**Year Four**	**Year Five**	**Year Six**
				Y4 - Living things and their habitats 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.	**Y5 - Living things and their habitats** 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.	**Classifying Organisms**