Prior knowledge/key knowledge

Year 4 prior knowledge	**Chn have learnt to…** 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.
Microorganisms	Microorganisms are very tiny living things that can only be seen using a microscope. They can be found in and on our bodies, in the air, in water and on objects around us. Microorganisms are viruses, bacteria, moulds and yeast. Some animals (dust mites) and plants (phytoplankton) are also microorganisms.
Carl Linnaeus	In 1735, a Swedish Scientist Carl Linnaeus first published a system for classifying all living things. An adapted version of this system is still used today: The Linnaeus System.
The Linnaeus System	Living things can be classified by these eight levels. The number of living things in each level gets smaller until one animal is left in its species level. This is how a dog would be classified:
Helpful and harmful microorganisms	**Helpful:** bacteria (cheese and yogurt), yeast (bread and wine), penicillium (antibiotics) **Harmful:** bacteria (salmonella –food poisoning), virus (e.g. chicken pox/flu), fungi (mouldy food).

Domain: Eukarya	Jackal, clownfish, cat, dog, ladybird, daisy, rabbit, fox
Kingdom: Animals	Jackal, clownfish, cat, dog, ladybird, rabbit, fox
Phylum: Chorodata	Jackal, clownfish, cat, dog, rabbit, fox
Class: Mammals	Jackal, cat, dog, rabbit, fox
Order: Carnivore	Jackal, cat, dog, fox
Family: Canidae	Jackal, dog, fox
Genus: Canis	Jackal, dog,
Species: Lupus	dog

Each group allows scientists to observe and understand the characteristics of living things more clearly. They group similar things together then split the groups again and again based on their differences.

Big Questions/ Challenging Perceptions

Explore why the duck-billed platypus was so difficult to classify and justify your own classification of it.

Investigate the conditions for mould to grow quickly.

Vocabulary

Bacteria	A single-celled microorganism.
Microorganism	An organism that can only be seen using a microscope, e.g. bacteria, mould and yeast.
Microscope	A piece of equipment that is used to view very tiny (microscopic) things by magnifying their appearance.
Species	A group of animals that can reproduce to produce fertile offspring.
Characteristics	Special qualities or appearances that make an individual or group of things different to others.
Classify	To sort things in to different groups.
Taxonomist	A scientist who classifies different living things in to categories according to their similarities and differences.
Key	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.

Key skills /investigative focus

Key Skill	Use keys to identify animals and plants in the school habitat and carry out research of other habitats and decide where they belong in the classification system
Investigative Focus	Plan different types of scientific enquiries to answer questions, including recognising and controlling variables where necessary (mouldy bread).