Our School Values- Science	
Love	We show love by fostering a joy of discovery.
Courage	We show courage by being brave, challenging thinking, asking questions and investigating new ideas. We show courage knowing that we won't always find the answer.
Unity	We show unity by working collaboratively to discover more.
Inspiration	We show inspiration by not giving up and thinking creatively to seek answers.

Year 4
Science
Living things and their habitats

NC Objectives
- 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
- Recognise that environments can change and that this can sometimes pose dangers to living things.

Knowledge I already know

In Year 2:
I know that if something is alive, it has all the features of MRS GREN: movement, respiration, sensitive, growth, reproduction, excretion and nutrition.
I know that animals require food, oxygen and water to live.
I know that plants require sunlight, air, water and soil for nutrients to grow.
I know that plants produce oxygen and animals and humans need this to breathe.
I know that food chains shows how the energy from food travels.
I know that habitats include desert, mountain, ocean and woodland.

Knowledge I will learn

I know that vertebrates are animals with a backbone whereas invertebrates are animals without a backbone.
I know that plants are identified as flowering or non-flowering. Flowering plants reproduce using flowers to make seeds. Non-flowering plants reproduce using spores and seed cones.
I know that an eco-system is how living things interact with their habitat and environment.
I know that ecosystems can be affected by biotic (living things) and abiotic (non-living things).
I know that pollution is harmful or poisonous things that negatively affect an environment.

Key Vocabulary

Word	Definition
Classification	Putting people or things into groups
Environment	The natural world in which people, animals and plants live.
Interdependence	Being dependent on each other
Interact	Communicate with someone while you spend time with them
Beneficial	Have a helpful or useful effect
Hierarchy	A system where people or things are organised into different levels
Vertebrate	An animal with a backbone
Invertebrate	An animal without a backbone
Biotic	Related to living things
Ecosystem	All the plants and organisms in a particular area
Species	A group into which animals and plants are divided
Niche	An organism's job in a habitat

What are the characteristics of living things?	What animals are vertebrates?	What animals are invertebrates?	What groups are plants classified in?	What is classification? How do I use a key?	What happens if an environment in a habitat changes?
Compare x-rays of different animals.	Categorise and compare vertebrates	Research— compare invertebrates	Classification	Create own criteria for classifying birds.	Impacts on eco-systems from human intervention.
Challenge: True or false: small organisms are always classified as invertebrates.	Challenge: what if fish had beaks instead of mouths…	Challenge: 'a spider is an insect' - explain why this is incorrect.	Challenge: true or false— all vegetables come from flowering plants.	Challenge: is it impossible to classify all organisms?	Challenge:
ToE / WS	ToE / WS	ToE / WS	ToE / WS	ToE / WS	ToE / WS