Subject	Term	Unit
Science- Year 6	Autumn 1	Living things and their habitats

Intent

At Hurst Hill, we nurture young scientists by fostering curiosity and developing strong scientific knowledge and enquiry skills. Children learn to investigate, observe and evaluate confidently, understanding how science shapes the past, present and future while building firm foundations for lifelong scientific learning.

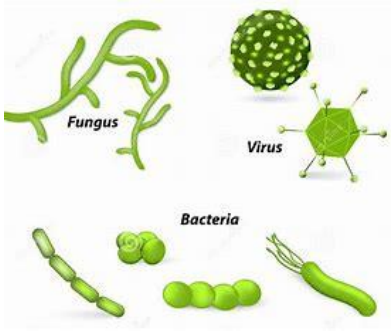
Prior knowledge	National Curriculum
• recognise that living things can be grouped in a variety of ways • explore and use classification keys to help group, identify and name a variety of living things in their local and wider environment • recognise that environments can change and that this can sometimes pose dangers to living things	• describe how living things are classified into broad groups according to common observable characteristics and based on similarities and differences, including microorganisms, plants and animals • give reasons for classifying plants and animals based on specific characteristics

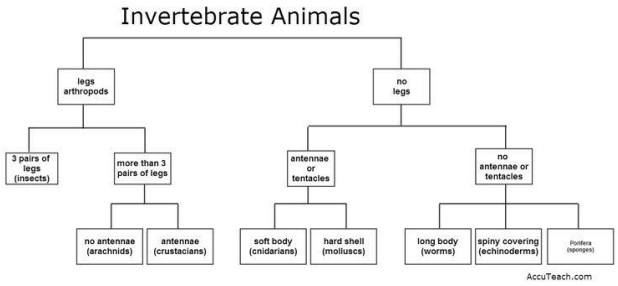
What?	To learn how living things are categorised. They will look at features of animals in order to classify them correctly.
Why?	To enhance their knowledge of animal classification and with their identification of different species. This will link to the topic of evolution.
How?	Through observation and research.

Vocabulary	
Adaptation	A change in structure or function that improves he chance of survival for an animal or plant within a given environment.
Carnivore	An animal that eats meat.
Environment	All the circumstances, people, things and events around them that influence their life.
Evolution	A process of change that takes place over many generations, during which species of animals, plants, or insects slowly change some of their physical characteristics.
Food Chain	A series of living things that are linked to each other because each thing feeds on the one next to it in the series.

Habitat	The natural environment in which an animal or plant normally lives or grows.
Herbivore	An animal that only eats plants.
Invertebrate	A creature that does not have a spine, for example an insect, worm or octopus.
Microhabitat	A small part of the environment that supports the habitat such as a fallen log in a forest.
Microorganism	A very small living thing that you can only see if you see a microscope.
Mini Beast	A small invertebrate such as an insect or spider.
Omnivore	Person or animal that eats all kinds of food including meats and plants.
Organism	A living thing.
Predator	An animal that kills and eats other animals.
Prey	An animal hunted or captured by another for food.
Species	A class of plants or animals whose members have the same main characteristics and are able to breed with each other.
Vertebrate	A creature which has a spine.

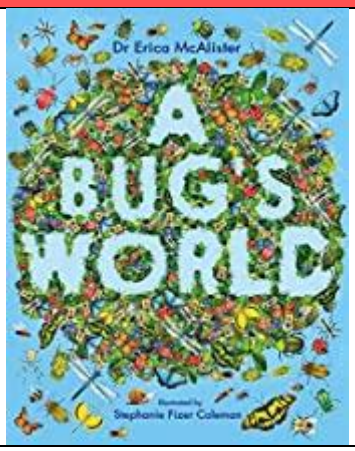
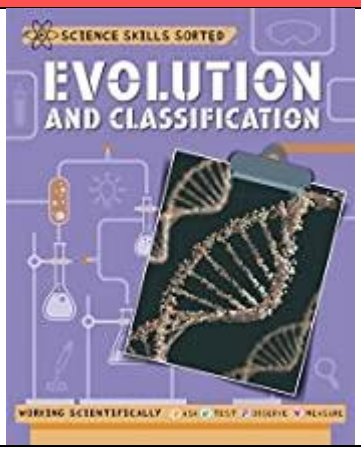
Learning	
Objective	**Learning**
Can I explain the impact of Carl Linnaeus' and classification?	**Ideas over Time** Research the work of Carl Linnaeus Classification key How did it revolutionise the understanding of living things? Science KS2: The work of Carl Linnaeus - BBC Teach Use the clip to introduce how Carl Linnaeus classified animals. Look at different Latin names for common animals? Talk about Genus and Species e.g. Homo sapiens, Ratus ratus. How did he develop his system? How was his system ordered? How did his system work? Why was his system useful?
	Observation over-time · **Microorganisms** are very tiny **organisms** where a microscope has to be used to see them- use online images. · Examples of **micro-organisms** include dust mites, bacteria and fungi, such as mould.

Can I explain what a micro-organism is?	Some **microorganisms** can be helpful in certain situations. Others can be harmful and spread needs to be controlled or contained. Describe how microorganisms could be classified. Good microorganism - yeast in baking or harmful infectious diseases. · What do they look like? · What are their features? · How are the different groups different to each other? 
Can I classify organisms?	**Identifying and classifying** Sort vertebrates and invertebrate animals into groups, describing their key features and based on similarities and differences. Sort vertebrates into mammals, fish, birds, amphibians and reptiles. Discuss detailed features of each- live young in mammals, cold blood in reptiles and amphibians. Use a **classification key** to identify which group of vertebrates animals belong to and then create own. 
Can I classify invertebrates?	**Pattern Seeking** Describe how these invertebrates could be classified. Arachnids (8 legs), insects (6 legs), molluscs (no legs) - What do they look like? What are their features? How are the different groups different to each other?

	Look at the features of each and create their own key to sort these creatures.  Add in other types of invertebrates for more able children.
Can I select the most appropriate method to present my findings?	**Observing over Time / Identifying and Classifying** Use classification systems and keys to identify plants in the local environment. Record these in a variety of ways · Venn diagrams · Carrol diagrams · Tables · Classification key Let the children look through leaf mold or under a stone. Use what they find and classify the invertebrates in their own way. Present their findings to the rest of the class.
Can I explain why some organisms are more difficult to classify?	**Research** For example, the <u>platypus</u> · The **platypus** is **hard to classify** because it is part mammal and part reptile. · It lays eggs, just like reptiles do, but it has fur and he is warm-blooded. <u>Bats</u> · Bats are mammals because they are warm-blooded and they have fur. They also give milk to their babies. But bats have wings that they use to fly. · Other mammals such as flying squirrels just glide. Explain why based on characteristics and similarities and differences. The children can research other animals which are hard to classify and explain why they are. E.g. a pangolin.

	They could make up their own animals which would be hard to classify based on what they have learnt. Record the reasons why they are hard to classify.

Websites
Science KS2: The work of Carl Linnaeus - BBC Teach Year 6 Classification (4 fully resourced lessons) | Teaching Resources (tes.com) Living things and their habitats: Year 6 (Classification) | Lesson Plans for Teachers | Young People's Trust For the Environment (ypte.org.uk) What is classification? - BBC Bitesize

Recommended Reads		
		

Golden Thread
Animals and their habitats