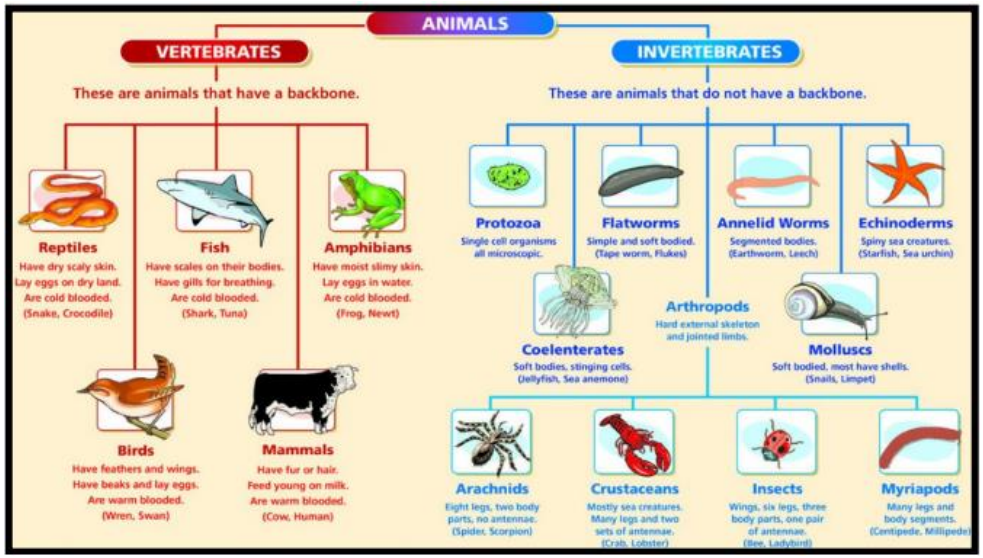
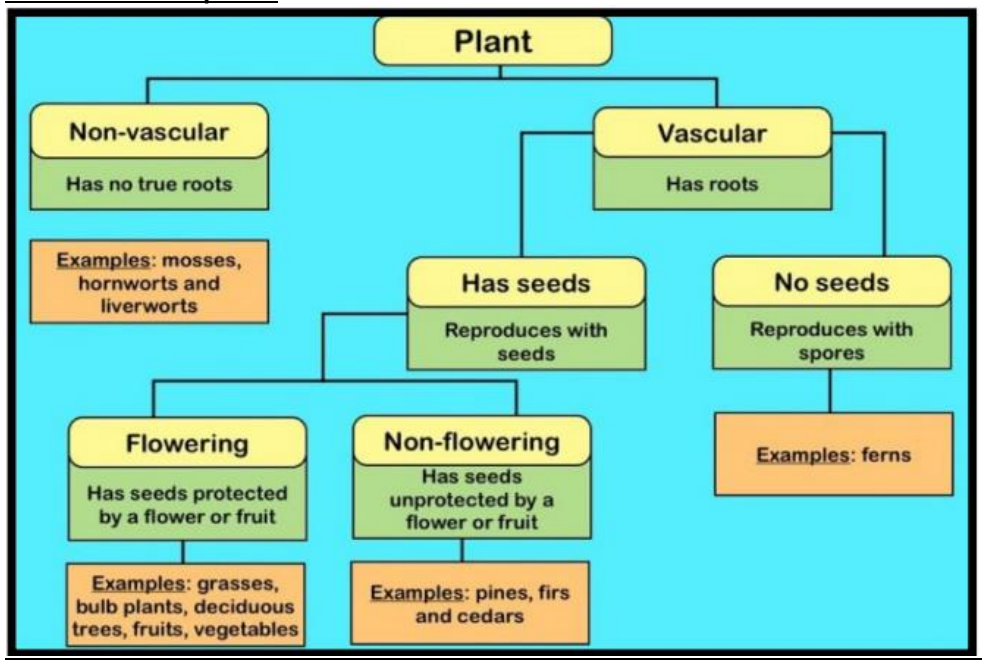
Living things and their habitats – Year 5 & 6 – Spring Term 2024

National Curriculum Science Knowledge	Key Learning	Vocabulary
• 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.	**Micro-organisms** Micro-organisms are very tiny little things. They are so small they are not visible to the human eye, so a microscope is needed to see them. Micro-organisms can be found all around us. They can live on and in our bodies, in the air, in the water and on objects around us. They can be found in almost every habitat on Earth.  **Classification of animals** 	**Algae** – A single or multi-cellular organism that has no roots, stems or leaves and is often found in water. **Bacteria** – Tiny little organisms that are all around us. **Classification** – The arrangement of organisms into orderly groups based on their similarities and presumed evolutionary relationships. **Fungi** – A classification or group of living organisms. This means they are not animals, plants or bacteria. Invertebrate – An invertebrate does not have a backbone and 97% of creatures belong to this group. **Micro-organism** – An organism that is microscopic meaning it is too small to be seen by the human eye. **Organism** – An individual animal, plant, or single-celled life form.

Working Scientifically

- Planning different types of scientific enquiries to answer questions, including recognising and controlling variables where necessary.
- Taking measurements, using a range of scientific equipment, with increasing accuracy and precision, taking repeat readings when appropriate.
- Recording data and results of increasing complexity using scientific diagrams and labels, classification keys, tables, scatter graphs, bar and line graphs.
- Using test results to make predictions to set up further comparative and fair tests.
- Reporting and presenting findings from enquiries, including conclusions, causal relationships and explanations of and degree of trust in results, in oral and written forms such as displays and other presentations.
- Identifying scientific evidence that has been used to support or refute ideas or arguments.

Classification of plants



Famous Scientists

Aristotle (1799-1847)
Philosopher and scientist

Carl Linnaeus (1707-1778)
Father of classification

Species – A group of closely related organisms that are very similar to each other.
Taxonomy – The science of naming, identifying and classifying organisms.
Vertebrate – An animal that has a backbone.
Virus – A small infectious agent that replicates only inside the living cells of an organism.

Key Learning	
1	**How are animals classified based on their features?** Give reasons for classifying plants and animals based on specific characteristics in the context of sorting and grouping animals for a zoo.
2	**How living things are classified using the Linnaean system?** Describe how living things are classified into broad groups according to common observable characteristics and based on similarities and differences, including micro-organisms, plants and animals by finding out about the Linnaean System of classification.
3	**How can we match the types of animals to their characteristics?** 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 by identifying the characteristics of mammals, birds, insects, reptiles, amphibians, fish, arachnids, annelids, crustaceans, echinoderms and molluscs. Design a new creature that belongs to a specific group of animals based on its characteristics.
4 & 5	**What is mould and what conditions does it need to grow?** Plan and conduct an investigation to show what conditions are needed to grow mould on bread. Thinking specifically about the variables and making the investigation a fair test. Take regular observations of the bread and write conclusions based on what has been seen over the course of a couple of weeks. Write up the investigation using scientific vocabulary.
6	**What are the different types of micro-organisms and are any of them beneficial?** Look at the different types of micro-organisms and if they are beneficial or harmful to humans. Create fact files about different types of micro-organisms.