Year 6 Science Advent 1 Knowledge Organiser Golden Thread: Communication

Objectives and Sticky Knowledge

Prior Knowledge Recap:

- Know the life cycle of different living things e.g. mammal, amphibian, insect and bird and know the differences between these life cycles (mammals develop inside their mothers, amphibians such as frogs and birds are laid in eggs and hatch)
- Know the process of reproduction in plants (male se x stamen ovule cell (pollen) and female cell style (ovules) and female sex cells
- Know the process of reproduction in animals (mammals use sexual reproduction, male sex cell (sperm) fertilises the female sex cells

Land Objectives/ Sticky Knowledge

Classify living things into broad groups according to observable characteristics and based on similarities and differences	Know how living things have been classified	Give reasons for classifying plants and animals in a specific way
-In 1735, 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.	Domain: Eukarya Kingdom: Animalia Phylum: Chordata Class: Mammalia Order: Carnivora Family: Canidae Genus: Canis Species: Lupus	-Microorganisms are viruses, bacteria, moulds and yeast. Some animals (dust mites) and plants (phytoplankton) are also 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. - Bacteria is a single-celled microorganism.

Sea:

Links with 'Communication':

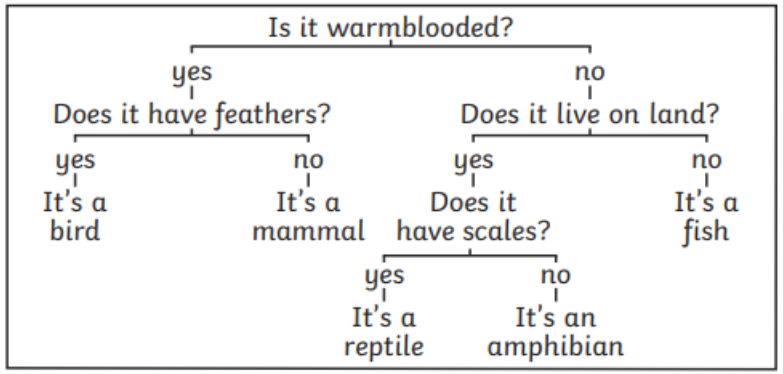
Links with CST and CKA Values Crown:

Year 6 Science Advent 1 Knowledge Organiser

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.

Key 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.

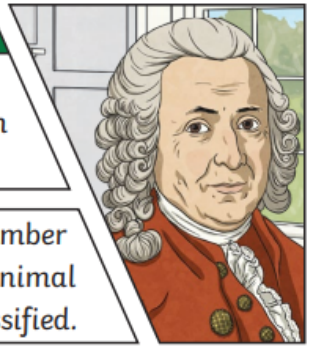
Scientists, called Taxonomists, sort and group living things according to their similarities and differences.



Helpful Microbes	Harmful Microbes
Bacteria – cheese	**Bacteria** – salmonella is a bacterium that can lead to food poisoning
Yeast – wine	Virus – chicken pox and flu are examples of viral diseases
Bacteria – yoghurt	Fungi – athlete's foot
Yeast – bread dough	**Bacteria** – plaque
Penicillium fungi - antibiotics	Fungi - mould

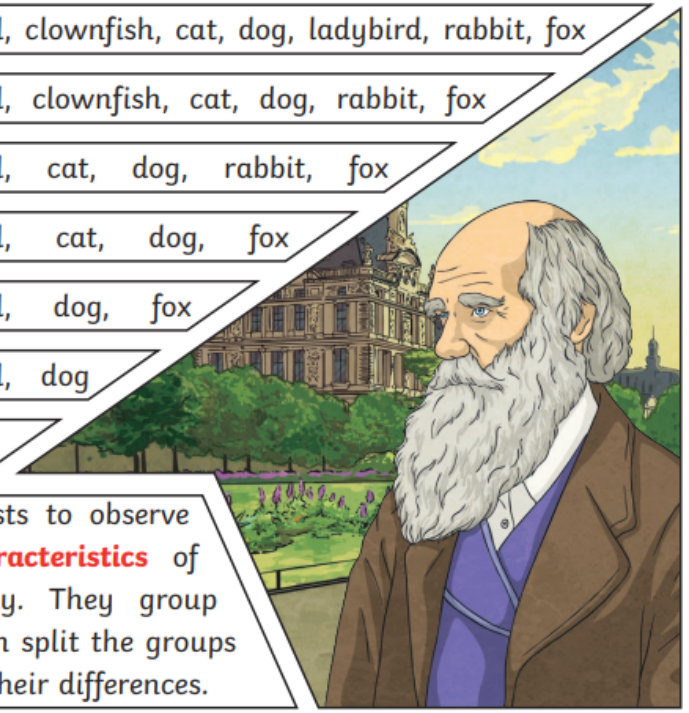
Classification

In 1735, 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.



Living things can be **classified** by these eight levels. The number of living things in each level gets smaller until the one animal is left in its species level. This is how a dog would be classified.

Domain: Eukarya	jackal, clownfish, cat, dog, ladybird, daisy, rabbit, fox
Kingdom: Animalia	jackal, clownfish, cat, dog, ladybird, rabbit, fox
Phylum: Chordata	jackal, clownfish, cat, dog, rabbit, fox
Class: Mammalia	jackal, cat, dog, rabbit, fox
Order: Carnivora	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.

Sky objectives:

1. Ask well-considered questions that closely match personalised enquiries.
2. Skilfully plan and conduct child-led investigations, deciding which variables to control and what observations to make.
3. Use personal knowledge combined with accurate observations and data collection to draw a conclusion.