

# Cunningham Hill Junior School - Science Knowledge Organiser - Year 4 - Living Things and Their Habitats

## Key Vocabulary:

1	<b>organisms</b>	This is another word that can be used to mean 'living things'.
2	<b>predator</b>	An animal that consumes other animals.
3	<b>prey</b>	An animal that is eaten by other animals
4	<b>producer</b>	Green plants that use sunlight to make food.
5	<b>environment</b>	An <b>environment</b> contains many <b>habitats</b> and these include areas where there are both living and non-living things.
6	<b>habitat</b>	The specific area or place in which particular animals or plants may live.
7	<b>vegetation</b>	Plant life - particularly within a <b>habitat</b>
8	<b>vertebrate</b>	Animals with an internal backbone.
9	<b>invertebrate</b>	Animals without an internal backbone.
10	<b>endangered species</b>	A plant or animal where there are not many of their species left and scientists are concerned that the species may become <b>extinct</b> .
11	<b>extinct</b>	When a species has no more members alive on the planet.
12	<b>life processes</b>	The things living things do to stay alive. (MRS GREN)

## Vertebrates:

**Organisms** that have a back bone are classified as **Vertebrates**. The internal backbone supports the body and allows these animals to move. There are 5 broad groups of **vertebrates**, but each group has many of its own characteristics.

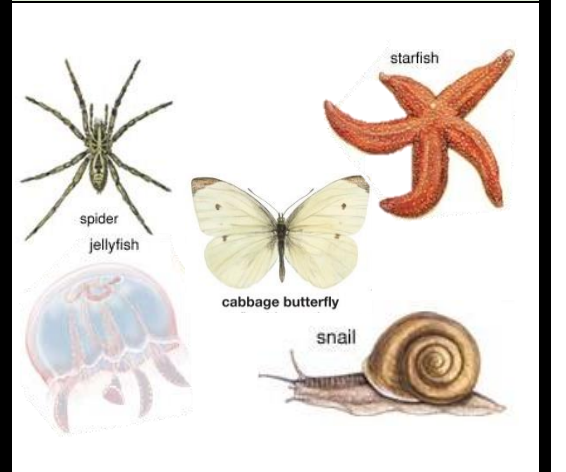
Mammals	Birds	Reptiles	Amphibians	Fish
Warm - blooded	Warm - blooded	Cold - blooded	Cold - blooded	Cold - blooded
Have live young	Lay eggs	Lay eggs	Lay eggs	Lay eggs
Have hair or fur	Have feathers	Breathe air		Breathe through gills

Plants are also classified based on their characteristics, for example:

Flowering Plants:	Non- Flowering Plants:

## Invertebrates:

**Invertebrates** are **organisms** that do not have backbones, some have an exoskeleton instead, but some do not.



## Exo-skeleton:

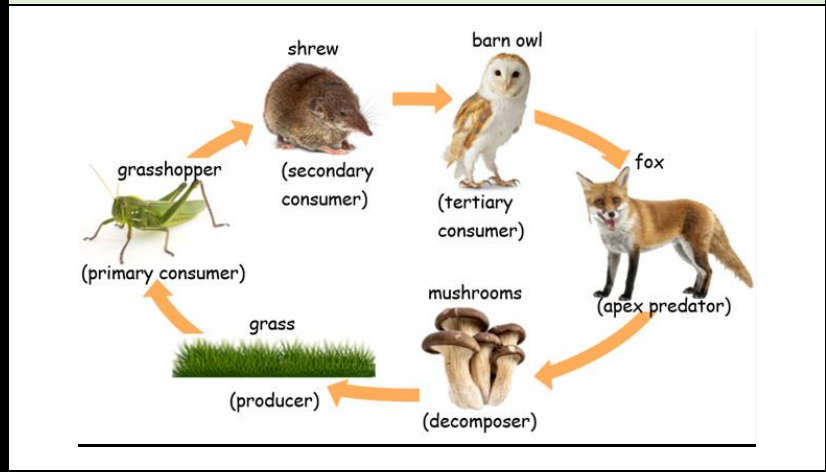
An exo-skeleton is a hard outer shell or rigid outside layer that protects the body inside.

## MRS GREN:

MRS GREN is an acronym to remember the 7 things that are essential for all living things.

<b>M</b>	<b>Movement</b>	All living things move - including plants. For example many flowering plants turn to face the sun.
<b>R</b>	<b>Respiration</b>	A process where plants and animals use oxygen gas from the air to help turn their food into energy.
<b>S</b>	<b>Sensitivity</b>	The way living things react to changes in their <b>environment</b> .
<b>G</b>	<b>Growth</b>	All living things grow throughout their lifetimes.
<b>R</b>	<b>Reproduction</b>	The process through which young are produced.
<b>E</b>	<b>Excretion</b>	The process by which living things get rid of waste products
<b>N</b>	<b>Nutrition</b>	The process of obtaining food to provide living things with energy to live and stay healthy.

## Food Chain:



Food chains always begin with a green plant called a **producer**. These **producers** turn energy from sunlight into food and ultimately become the source of food for all animals.

## Exceptions:

Some **organisms** are harder to classify as they have characteristics of more than one group for example the platypus, the echidna and bats.



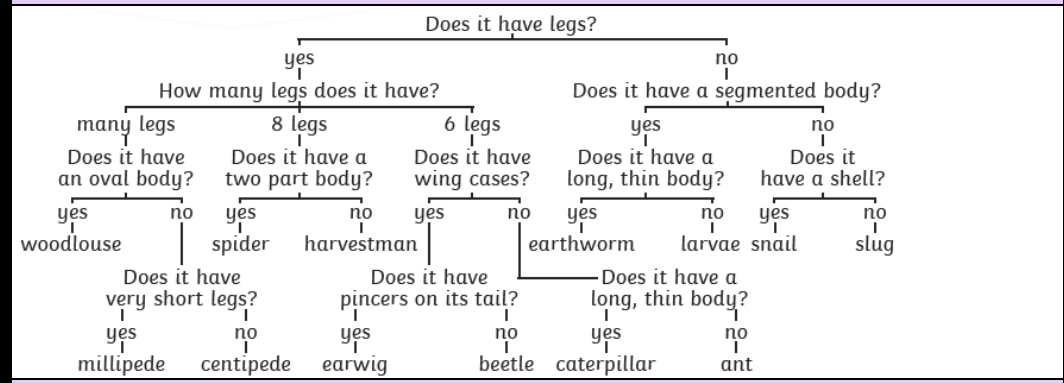
## Scientist Study:

Professor Seirian Sumner (born 1974) is a British entomologist who specialises in the social behaviours of insects such as ants, wasps and bees.



## Classification:

Classification keys are tools that help to group, identify and name a variety of living things. A series of simple questions, sort the **organisms** by their physical characteristics, branching to other questions to identify the unknown **organism**.



This classification key sorts a sample of mini-beasts that can be found locally.

## Habitats:

Changes may occur in any **environment**, they might be natural or caused by humans. These changes may effect some or all of the species in the **environment** in positive or negative ways. Some of these changes pose a danger to animals and plants living in that **environment**.

Animals are suited to their natural **habitats** in a variety of different ways.

	Polar bears have white fur to camouflage with the snow.		Camels store fat in their hump to keep them going without water in the dessert.
--	---	--	---

Natural impacts:	Human impacts:
- Earthquakes	- Deforestation
- Storms	- Pollution
- Floods	- Urbanisation
- Droughts	- Introduction of new species
- Wildfires	- Nature reserves
- The seasons	