Science Knowledge Organiser – **Year 2**

Chemistry: Use of everyday materials

Previous knowledge.

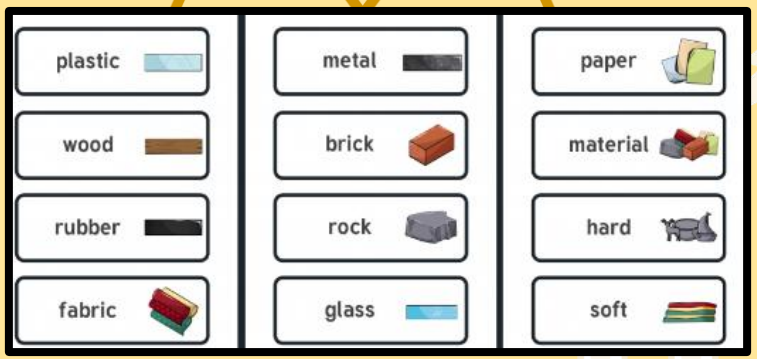
- To know the difference between an object and the material from which it is made
- To be able to name a variety of everyday materials
- To know the simple physical properties of a variety of everyday materials
- To be able to compare and group together a variety of everyday materials

What I will learn in this unit.

- To be able to identify and compare the suitability of a variety of everyday materials, for particular uses.

Word	Definition
Properties	What a material is like and how it behaves
suitability	Having the properties which are right for a specific purpose
materials	Materials from which objects are made

Uses of common materials	
wood	Doors, tables
plastic	Pens, rulers
glass	Windows, glasses
metal	Cars, coins
brick	Houses, walls
Paper	School books, wrapping paper
Some objects can be made from various materials	E.g. a spoon can be made from: plastic, wood or metal.



Scientist study: Charles Macintosh (1766- Scotland)

Charles Macintosh He was a Scottish chemist and the inventor of waterproof fabric. The Mackintosh raincoat (the variant spelling is now standard) is named after him.

Science Knowledge Organiser – **Year 2 Biology:** **Animals including humans**

Previous knowledge.

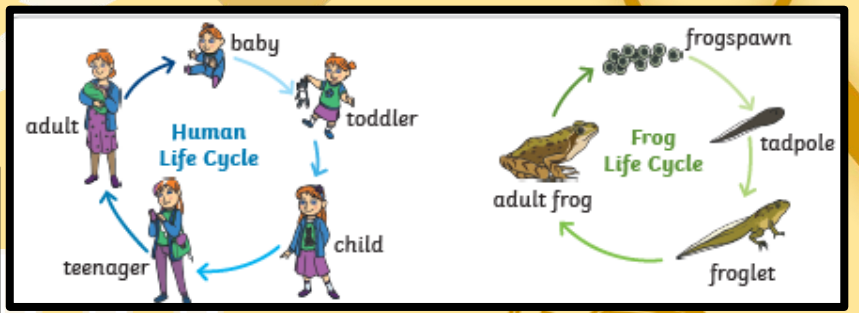
- To be able to identify and name a variety of common animals including fish, amphibians, reptiles, birds and mammals
- To be able to understand the language of carnivores, herbivores and omnivores
- To be able to describe and compare the structure of a variety of common animals.
- To be able to identify parts of the human body and make links to senses.

Being active and **exercising** keeps our bodies and minds healthy.

What I will learn in this unit.

- To be able to notice that animals, including humans, have offspring which grow into adults
- To be able to research and describe the basic needs of animals, including humans, for survival (water, food, air)
- To be able to describe the importance for humans of exercise, eating the right amounts of different types of food, and hygiene.

Word	Definition
survival	Something that continues to live and exist
offspring	The child of an animal
hygiene	How we keep ourselves and the world around us clean
nutrition	Food needed to live
reproduction	The act of being able to produce offspring



To stay alive, all animals have three basic needs for survival:

To stop germs from spreading, it is important to be **hygienic**.

Scientist study: Florence Nightingale: (1820- England),
Florence Nightingale was known as "The Lady With the Lamp," was a British nurse who founded modern nursing. Her experiences as a nurse during the Crimean War were foundational in her views about sanitation. Her efforts to reform healthcare greatly influenced the quality of care in the 19 and 20 centuries.

To grow into a healthy adult, we must eat the right types of food in the right amount and **exercise**.

Science Knowledge Organiser – **Year 2**

Chemistry: Use of everyday materials - properties

Previous knowledge.

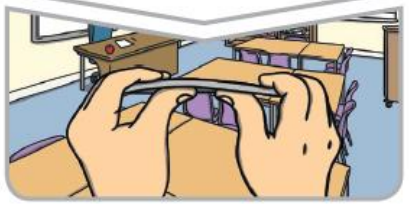
- To know the difference between an object and the material from which it is made
- To be able to name a variety of everyday materials
- To know the simple physical properties of a variety of everyday materials
- To be able to compare and group together a variety of everyday materials

What I will learn in this unit.

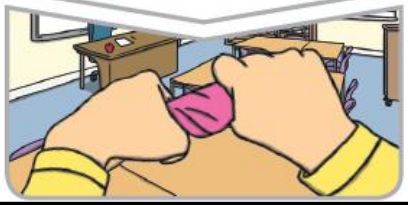
- To be able to find out how the shapes of solid objects made from some materials can by changed by squashing, bending, twisting and stretching

Squash an object by pushing both hands together.

Bend an object by grabbing both ends of the object and bringing the ends inwards together.



Twist an object by turning your hands in opposite directions.



Stretch an object by pulling your hands slowly and gently apart.

Scientist study: John McAdams (1756 - Scotland) John McAdams was a Scottish engineer who experimented with new materials to build roads. His proves was so successful that roads were built in this way right across the word.

Word	Definition
Properties	What a material is like and how it behaves
suitability	Having the properties which are right for a specific purpose
materials	Materials from which objects are made

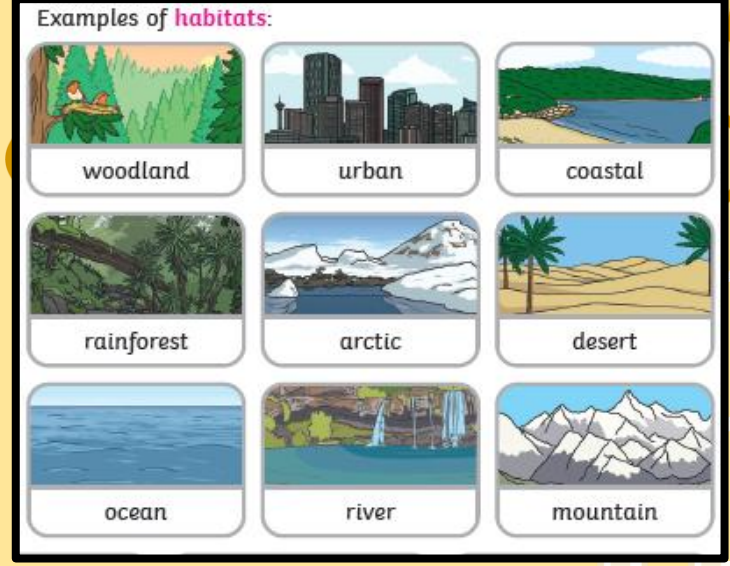
Science Knowledge Organiser – **Year 2 Biology:** **Living things and their habitats**

Previous knowledge.

- To be able to understand the language of carnivores, herbivores and omnivores
- To be able to describe and compare the structure of a variety of common animals.

What I will learn in this unit.

- To be able to explore and compare the differences between things that are living, dead, and things that have never been alive
- To be able to identify that most living things live in habitats to which they are suited
- To be able to understand how animals and their habitats depend on each other
- To be able to identify and name a variety of plants and animals in their habitats



Scientist study: Rachel Carson (1907 – America)

Rachel Carso was a marine biologist she paved the way for women scientists, and became a pioneering environmentalist, whose research shaped the policies for human and environmental health and inspired the world.

Word	Definition
habitats	A habitat is the natural place something lives. A habitat provides everything a living thing needs to survive
micro-habitats	A micro-habitat is a very small habitat. Minibeasts live in microhabitats
food chain	A food chain shows how each animal gets its food
living	Things that are living have all the life processes
dead	Things that are dead but were once living
Never living	Things made out of metal, plastic or rock were never living. They never had the life processes

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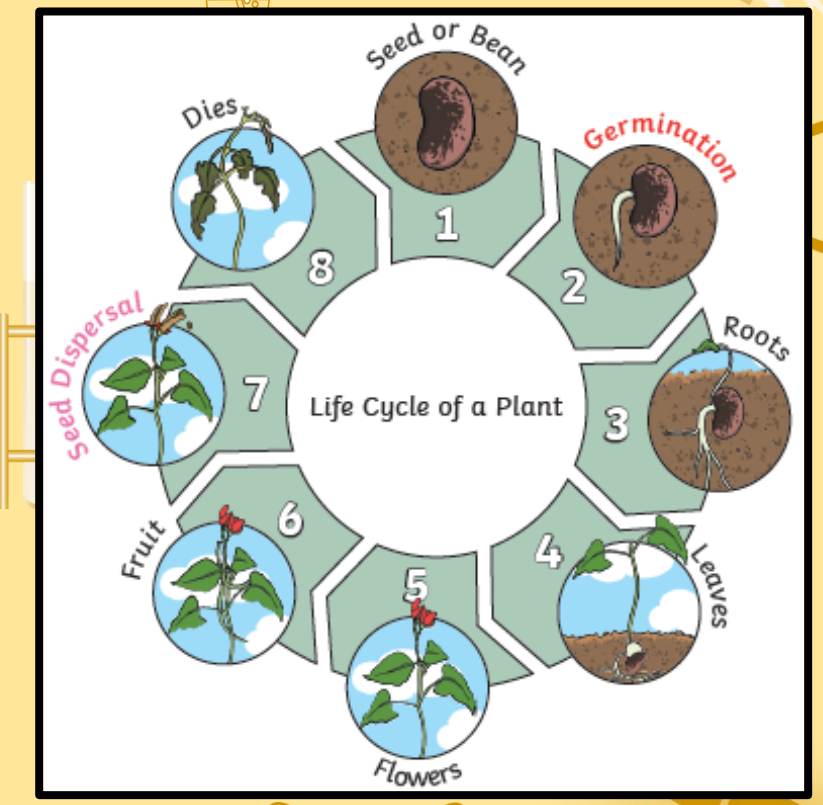
Previous knowledge.

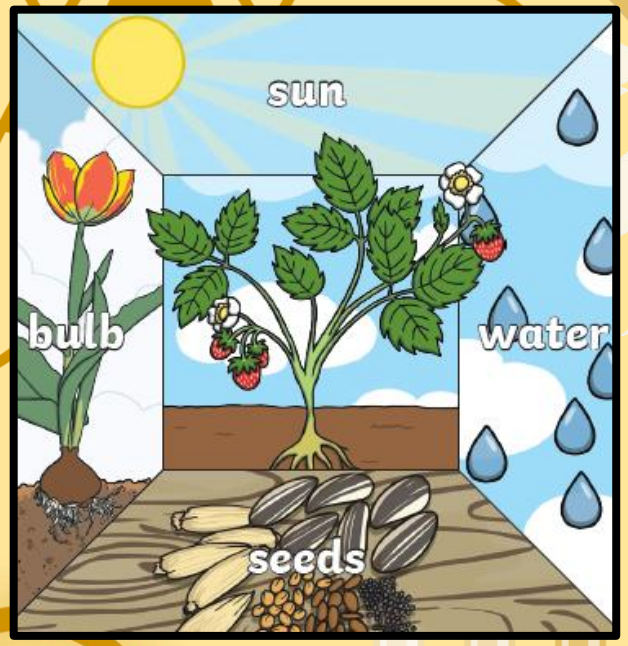
- I can identify and name a variety of common wild and garden plants, including deciduous and evergreen trees.
- I can identify and describe the basic structure of a variety of common flowering plants, including trees.

Science Knowledge Organiser – **Year 2**
Biology: Plants

The Park Academies Trust

- **What I will learn in this unit.**
- To be able to observe and describe how seeds and bulbs grow into mature plants.
- To be able to investigate how plants need water, light and a suitable temperature to grow and stay healthy





Scientist study:
Agnes Arber (1879 – England)
Agnes Arber was a botanist who was a pioneer for woman in science she learned to investigate plants anatomy and wrote books on the anatomy and morphology of plants.

Word	Definition
seed dispersal	This is when seeds are moved away from the parent plant. This can be wind or animal
germination	When the conditions are right, the seed soaks up water and swells and the tiny new plant bursts out of its shell. This is germination
sprout	When a plant sprouts of grows new shoots
shoot	A shoot grows upwards from the seed in search of sunlight
temperature	How warm or cold something is
nutrition	Food or nourishment. Pants make their own food in their leaves from the sunlight