Science Curriculum

Spring Term: Biology
Animals including Humans
Year 1

Prior Knowledge

Things that I know:	Skills I will need:
There are different seasons, environments and about different wildlife in areas close to my school.	Explore the local environment to ask and answer questions. Group and compare animals according to what they eat and how they are identified.
	Take care of animals from their local environment and return them safety after studying them. Group and compare animals according to what they eat and how they are identified.
	Use their observations to compare and contrast animals through videos and photographs.

Knowledge Objectives

- Identify and name a variety of common animals including fish, amphibians, reptiles, birds and mammals.
- Identify and name a variety of common animals that are carnivores, herbivores and omnivores.
- Describe and compare the structure of a variety of common animals (fish, amphibians, reptiles, birds and mammals- including pets).
- Identify, name, draw and label the basic parts of the human body and say which part of the body is associated with each sense.

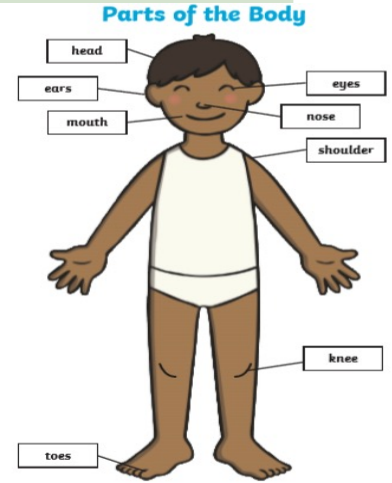
Year 1: Biology- Animals including humans
Key Concept- Functions

Specific Vocabulary	
fish	A fish is a scaly skinned creature with a spine that swims in water and breathes using gills.
amphibians	All amphibians begin their life in water with gills and tails. Examples are frogs and newts.
reptiles	Are animals that are cold-blooded. Most lay eggs and their skin is covered with hard, dry scales.
birds	Birds have feathers and wings. They lay eggs and are warm-blooded animals.
mammals	Mammals are also warm blooded animals. They breath air and have a backbone.
carnivore	A carnivore is a meat-eating animal that gets its food from killing other animals.
herbivore	A herbivore eats plants.
omnivore	An omnivore eats plants and meat.
sense	A faculty by which the body perceives an external stimulus; one of the faculties of sight, smell, hearing, taste, and touch.
smell	Being able to perceive odours through the nose.
sight	Being able to see things.
touch	How things feel when they come into contact with the body.
taste	Is the sensation produced when a substance is put in the mouth.
hear	Being able to perceive sounds, through the ear

Important Facts to know by the end of the plants topic:

- Know the names of common animals that are carnivores, omnivores and herbivores.
- Know the differences between fish, amphibians, reptiles, birds and mammals including pets.
- Know, name and label the basic parts of the human body.
- Know the names of the 5 senses and the body part associated with it (nose – smell, eyes- sight, hands-touch, mouth-taste, ears-hear)

Carnivores	Omnivores	Herbivores
• Lion • Tiger • Eagle • Shark	• Pig • Hen • Bear • Human	• Sheep • Horse • Cow • Giraffe



Prior Knowledge:

There are different seasons, environments and about different wildlife in areas close to my school.

Science Curriculum

Autumn Term: Chemistry
Materials
Year 1

Prior Knowledge

Things that I know:	Skills I will need:
That natural items like pine cones, rocks, shells, twigs, wooden log slices and corks can be found in local areas to school	Observing things closely and using simple equipment.
That material can be sorted and compared in to natural and man made.	Identifying and classifying.
That forest school sessions have helped to understand what objects are around me.	Gathering and recording data

Knowledge Objectives

- Distinguish between an object and the material from which it is made.
- Identity and name a variety of everyday materials, including wood, plastic, glass, metal, water and rock.
- Describe the simple physical properties of a variety of everyday materials.
- Compare and group together a variety of everyday materials on the basis of their simple physical properties.

Year 1: Chemistry- Materials
Key Concept- Materials

Specific Vocabulary	
materials	What something is made of, e.g. wood or plastic.
object	A thing that can be seen or touched.
wood	The material that comes from a tree. It varies in hardness.
plastic	A 'man-made' material that can be shaped or moulded to any shape.
metal	A tough and strong material which can be heated and shaped into anything.
rock	A solid material.
rough	Uneven surface.
smooth	Even surface.
stretch	A stretchy material is one that is like elastic.
stiff	A stiff material is firm and hard and not flexible.
bend	A bendy material is one that can be twisted and is flexible.
waterproof	A material that does not allow water or liquid through.
absorbent	Able to soak up liquid.
shiny	A shiny material is sparkly or glossy and sometimes glittery.
dull	Is not bright or shiny.
opaque	Not able to see through it.
transparent	Able to see through it. And light can pass through.

Important Facts to know by the end of the materials topic:

- I know how to distinguish an object from the material its made from- wood/table glass/window plastic/chair wool/jumper
- I know how to describe simple properties of a variety of everyday materials using the adjectives, shiny, stiff, stretchy and bendy
- I know how to compare objects and group them together based on their properties.

Prior Knowledge:

That natural items like pine cones, rocks, shells, twigs, wooden log slices and corks can be found in local areas to school

That material can be sorted and compared in to natural and man made.

That forest school sessions have helped to understand what objects are around me.

Science Curriculum

Summer Term: Biology
Plants
Year 1

Prior Knowledge

Things that I know:	Skills I will need:
There are different seasons, environments and about different wildlife in areas close to my school.	Explore the local environment to ask and answer questions.
There are different types of plants and that they grow in gardens.	Compare and contrast different types of plants by grouping them and drawing diagrams. Record how plants can change over time.
	Work scientifically by observing, using magnifying glasses.

Knowledge Objectives

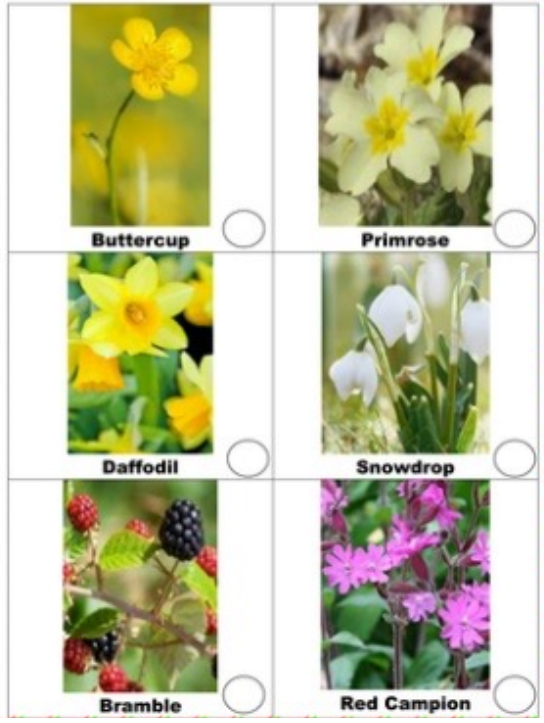
- Identify and name a variety of common wild and garden plants, including deciduous and evergreen trees.
- Identify and describe the basic structure of a variety of common flowering plants, including trees.

Year 1: Biology- Plants
Key Concept- Growth

Specific Vocabulary	
flower	The part of a plant that is often brightly coloured and provides the pollen in the petals that is moved from plant to plant for pollination.
leaf	Leaves produce food for the plant. The leaves of different plants vary widely in size, shape, and colour.
root	The part of a plant which attaches it to the ground or to a support, typically underground, conveying water and nourishment to the rest of the plant via numerous branches and fibres.
stem	The main body or stalk of a plant or shrub
bulbs	The resting stage of a plant that is usually formed underground.
deciduous	Deciduous is the name given to trees that lose their leaves in autumn and are bare in the winter.
evergreen	Evergreen is the name of trees that have leaves all year round.
trunk	A tree's trunk holds up its crown, protects its inner parts and works like a pipeline, transporting essential materials to the different parts of the tree.
branches	Branches come from the tree trunk and grow outwards.
wild plants	These are plants that don't grow in our gardens and are self-seeded.
garden plants	These are plants that grow in our gardens and we can plant them.

Important Facts to know by the end of the plants topic:

- Know the names of a variety of common wild and garden plants
  (Strawberry, Lavender, Rose, Daisy and Dandelion)
- Know the names of a variety of common trees
  (Willow, Conifer and Birch)
- Know the difference between deciduous and evergreen trees
- Know which plants grow in the local environment
- Some plants are carnivores. A well known example of a carnivorous plant is the Venus Flytrap.



Prior Knowledge:

There are different seasons, environments and about different wildlife in areas close to my school.

There are different types of plants and that they grow in gardens.

Science Curriculum

Summer Term: Biology
Seasonal Change
Year 1

Prior Knowledge

Things that I know:	Skills I will need:
There are different seasons, environments and about different wildlife in areas close to my school.	Observe each season change throughout the school year. They should record and talk about the changes that happen.
There are different varieties of common, wild and garden plants, including deciduous and evergreen trees that grow at different times of the year.	Make charts and tables about the weather.
	Make displays of what happens in the world around them, including day length as the seasons change.

Knowledge Objectives

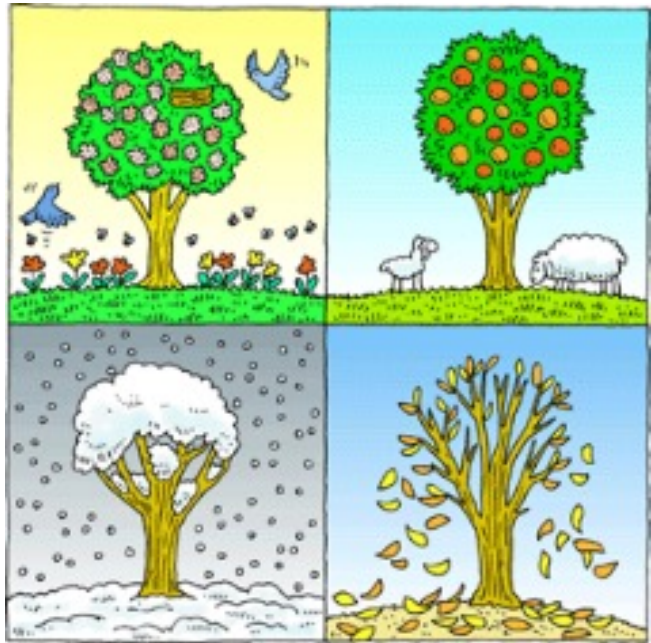
- Observe changes across the four seasons.
- Observe and describe weather associated with the season and how day length varies.

Year 1: Biology- Seasonal Changes
Key Concept: Evolution, adaptation, variation

Specific Vocabulary	
Autumn	The time of year between September and November. Many leaves fall off the trees.
Spring	The time of year between March and May. There is usually lots of signs of new growth in Spring.
Summer	The hottest season in the UK. It happens between June and August. The longest day is June 21st.
Winter	The coldest season in the UK. We can have snow in this season. It occurs between December and February.
weather	Weather is what the sky and the air outside are like, such as cold and cloudy.
temperature	It is measurement of hot or cold that can be measured using a thermometer.
thermometer	This is the instrument that measures the temperature.
weather symbol	These are signs used to help us understand more about our daily weather.
deciduous	Deciduous trees are trees that shed their leaves once a year, usually during the season of autumn.
coniferous	Most conifers are evergreens, or trees that keep their leaves year-round.

Important Facts to know by the end of the plants topic:

- In the UK we have four seasons: spring, summer, autumn and winter.
- Summer is the hottest season and winter the coldest.
- When we have our summer it is winter in the southern hemisphere. When we have our winter Australia has its summer.
- Seasons change throughout the year because of the way the Earth travels around the Sun.
- Pupils should be warned that it is not safe to look directly at the Sun, even earing dark glasses.



Prior Knowledge:

There are different seasons, environments and about different wildlife in areas close to my school.

There are different varieties of common, wild and garden plants, including deciduous and evergreen trees that grow at different times of the year.