

# North Lancing Primary School – Understanding the World/The Natural World (Reception)



Reception	Topic:	Prior Knowledge:	Key New Knowledge:	Key Vocabulary:	Working Scientifically:
Autumn 1	<p>Explore the natural world around them, making observations and drawing pictures of animals and plants.                      Know some similarities and differences between the natural world around them and contrasting environments, drawing on their experiences and what has been read in class.                      Understand some important processes and changes in the natural world around them, including the seasons and changing states of matter.</p>				
	Marvellous me!	Children will be able to talk about changes in the environment; they will explore their natural environment and be able to talk about why things happen, for example, when seasons change, so does the appearance of our surroundings. Children will know that humans are different at different ages.	To talk about how they have changed since they were a baby. To talk about the changes they observe in their environment.	Seasons, Autumn, Spring, Summer, Winter, similarities and differences, grow, change, develop.	Observe changes across the four seasons. Observe and describe weather associated with the seasons and how day length varies.
Autumn 2	Animals and habitats	To begin to understand the changes that occurs in the outside world using seasonal language. To be able to categorise animals by their characteristics.	Observe changes across the four seasons. Observe and describe weather associated with the seasons and how day length varies. To understand living conditions animals need and to know that some animals are nocturnal.	Similarities, differences, day length. Wild animals, domestic, nocturnal, hibernating, hedgehog, burrowing, den. Desert, jungle, tundra, ocean.	Identify and name animals that are nocturnal. Identify features of different habitats that make them suitable for different animals.
Spring 1	Let's investigate	To have some basic experiences of floating and sinking, freezing and melting without necessarily understanding these as natural processes.	To know how to test whether materials will float or sink. To explore and discuss the absence of light and to identify sources of light. To talk about freezing and melting and the effect of heat on these conditions.	freeze, melt, float, sink, light, dark, source of light	Make observations based on what they have witnessed and begin to find explanations for these. Beginning to understand how to make an experiment. To begin to record their observations in an organised way.
Spring 2	People who help us	Some familiarity with the concept of 'healthy' and 'unhealthy' food. To know that it is important to brush your teeth.	To begin to understand the difference between healthy and unhealthy foods. To know why it is important to brush your teeth and how and when to do this effectively. To know the importance and effect of exercise on our bodies. To know which professionals help us to keep healthy.	Healthy, unhealthy, teeth, brushing, hygiene, heart, blood, exercise. Dentist, doctor, vet	Record healthy and unhealthy foods in an organised way. To be able to demonstrate a correct procedure for a task to others (teeth brushing)
Summer 1	Once upon a time	To begin to understand that things change over time.	To know that every living thing follows a similar growth pattern and make comparisons. To talk about the life cycle of plants and what they need to survive. To understand what materials are used for such as waterproof clothing, warm, soft and recycled materials. Why we different materials of clothing during the summer months.	Soil, seeds, bulbs, sun, air, water, grow, farm, plants ,food lifecycle. fabric, comfortable,	Planting a variety of seeds and plants. Children to care for them, water and observe their growth. To make comparisons of temperatures looking at the outside thermometer. Through discussion, books and video clips to see seasonal changes. To test a variety of materials to see if it's soft enough for a 'princess' (Princess and the Pea link)
Summer 2	Protect our world!	To understand the importance of looking after our environment.	To know that we need to use water for living things more during the summer. To know the changes around us where the days are longer, warmer and nights are shorter. To begin to understand that humans have an impact on the planet. Particularly with refence to animal habitats and ecosystems.	Months, May, June, July , August, September, heat, sunrays, sunrise, sunset, thermometer Deforestation, recycling, human development, ecosystems and environments.	Planting 'Wangari' trees of peace and understanding how to plant effectively. Tending to their own plants and harvesting edible plants.

# North Lancing Primary School – Knowledge Progression in Science (Year 1)



Year 1	Topic:	Prior Knowledge:	Key New Knowledge:	Key Vocabulary:	Working Scientifically:
Autumn 1	<b>Fabulous Food</b>	In Reception the children learnt to identify, name, draw and label basic parts of the human body and say which part of the body is associated with each sense.	<b>Animals, including humans:</b> Identify, name, draw and label the basic parts of the human body and say which part is associated with which sense	Human, body, names of main body parts, mouth, nose, ears, eyes, hands, skin, and taste, smell, hear, see and touch	Enable pupils to experience and observe phenomena, looking more closely at the world around them. They will do this via observing closely, Identifying & classifying, using observations & ideas to suggest answers to questions.
Autumn 2	<b>Traditional Tales</b>	In Reception the children tested a variety of materials to see if it's soft enough for a princess (Princess and the Pea link)	<b>Materials and their properties:</b> Distinguish between an object and a material from which it is made. Identify and name a variety of everyday materials (wood, plastic, glass, metal, water and rock). Describe the simple physical properties of a variety of everyday materials. Compare and group materials.	Hard/soft; stretchy/stiff; shiny/dull; rough/smooth; bendy/not bendy; waterproof/not waterproof; absorbent/not absorbent; opaque/transparent, brick, paper, fabrics, elastic, foil.	Develop their understanding of scientific ideas by performing simple tests to explore the questions: 'What is the best material for....?', identifying & classifying and using observations & ideas to suggest answers to questions
Spring 1	<b>The aliens are coming</b>	In Reception the children tested a variety of materials to see if it's soft enough for a princess (Princess and the Pea link)	<b>Seasonal Change:</b> Observe changes across the four seasons. Observe and describe weather associated with the seasons and how day length varies.	Spring, summer, autumn, winter, months of the year, simple weather vocabulary associated with the seasons	Enable pupils to experience and observe phenomena, looking more closely at the world around them. They will develop their understanding by using different types of scientific enquiry to answer their own questions.
Spring 2	<b>Heroes and Villains</b>	In Reception the children observed changes across the four seasons as well as observing and describe weather associated with the seasons and how day length varies.	<b>Seasonal Change:</b> Observe changes across the four seasons. Observe and describe weather associated with the seasons and how day length varies.	Spring, summer, autumn, winter, months of the year, daylight simple weather vocabulary associated with the seasons, observe and compare	Enable pupils to experience and observe phenomena, looking more closely at the world around them. They will develop their understanding by using different types of scientific enquiry to answer their own questions.
Summer 1	<b>Wonderful world and amazing animals</b>	In Reception the children learnt to identify and name animals that are nocturnal. They made comparisons of temperatures looking at the outside thermometer. Through discussion, books and video clips to see seasonal changes.	<b>Animals:</b> Identify and name a variety of common animals, including fish, amphibians, reptiles and birds. Identify and name a variety of common animals that are carnivores, herbivories and omnivore Describe and compare the structure of a variety of common animals (fish, amphibians, reptiles, birds and mammals, including pets)	Common names of some fish, amphibians, reptiles, birds and mammals. carnivores, herbivories and omnivore	Develop their understanding of identifying & classifying and using observations & ideas to suggest answers to questions. They will use simple scientific language to talk about what they have found out.
Summer 2	<b>In the garden</b>	In Reception the children planted a variety of seeds and plants. They cared for them, watered them and observed their growth.	<b>Plants</b> Identify and name a variety of wild and garden plants including deciduous and evergreen. Identify and describe the basic structure of a variety of common flowering plants including trees.	Common names of flowers, examples of deciduous and evergreen trees, and plant structures (including leaves, flowers, blossom, petals, fruit, roots, bulb, seed, trunk, branches, stem).	They will develop their understanding by using different types of scientific enquiry to answer their own questions. Use first hand, practical experiences to support learning including using magnifying glasses to explore in detail, compare and contrast familiar plants, describe how they were able to identify and group them, draw diagrams showing the parts of different plants including trees and gather & record data to help in answering questions

# North Lancing Primary School – Knowledge Progression in Science (Year 2)



Year 2	Topic:	Prior Knowledge:	Key New Knowledge:	Key Vocabulary:	Working Scientifically:
Autumn	Animals including humans and healthy living	To talk about how they have changed since they were a baby. To talk about the changes they observe in their environment. Identify, name, draw and label the basic parts of the human body and say which part is associated with which sense	Notice that humans, have offspring which grow into adults. Find out about and describe the basic needs of animals, including humans, for survival. Describe the importance for humans of exercise, eating the right amounts of different types of food, and hygiene. Understand how being hygienic prevents the spread of germs. Learn about how germs spread.	offspring, reproduction, growth, baby, toddler, child, teenager, adult, old person, survive, survival, water, food, air, exercise, heartbeat, breathing, hygiene, germs, disease, food types (e.g. meat, fish, vegetables, bread, rice, pasta, dairy), suited, suitable, basic needs, food, shelter, move, feed, water, air	Observing, through video or first-hand observation and measurement, how different animals, including humans, grow. Asking questions about what things animals need for survival and what humans need to stay healthy; and suggesting ways to find answers to their questions.
Spring 1	Everyday materials – Uses	Distinguish between an object and a material from which it is made. Identify and name a variety of everyday materials (wood, plastic, glass, metal, water and rock). Describe the simple physical properties of a variety of everyday materials. Compare and group materials	Everyday materials and their suitability for particular uses. How shapes of solid objects made from some materials can be changed. Compare suitability of materials for making specific objects. Discuss the properties which make a material suited or unsuited to making specific objects. Draw conclusions based on data and observations using evidence to justify ideas and scientific knowledge to explain findings.	Identify, compare, material, properties, every day, suitable, flexible, rigid. Properties of materials e.g. bendy, rough, smooth etc	Comparing the uses of everyday materials in and around the school with materials found in other places Observing closely, identifying and classifying the uses of different materials, and recording their observations.
Spring 2	Plants	Identify and name a variety of wild and garden plants including deciduous and evergreen. Identify and describe the basic structure of a variety of common flowering plants including trees.	Observe and describe how seeds and bulbs grow into mature plants. Find out and describe how plants need water, light and suitable temperature to grow and stay healthy.	Seeds, bulbs, growth, plants, water, light, temperature, suitability, healthy, germinate, stem, stamen, stigma, pollination, petals	Observing and recording, with some accuracy. Observing similar plants at different stages of growth. Setting up a comparative test to show that plants need light and water to stay healthy.
Summer	Living things and their habitats	Describe and compare the structure of a variety of common animals (fish, amphibians, reptiles, birds and mammals, including pets)	Differences between things that are living, dead, and things that have never been alive. Habitats and microhabitats. Simple food chains and identifying and naming different food sources. Research and compare how different animals grow. Notice that animals have offspring which grow into adults.	Differences living, dead, habitats, Plants, animals, Interdependence, Microhabitats, Food sources, Food chain, prey, predator, adaptation, environment	Sorting and classifying things according to whether they are living, dead or were never alive, and recording their findings using charts. Construct a simple food chain that includes humans (e.g. grass, cow, human). Describe the conditions in different habitats and micro-habitats (under log, on stony path, under bushes) and find out how the conditions affect the number and type(s) of plants and animals that live there.

# North Lancing Primary School – Knowledge Progression in Science (Year 3)



Year 3	Topic:	Prior Knowledge:	Key New Knowledge:	Key Vocabulary:	Working Scientifically:
Autumn 1	Rocks and fossils	How shapes of solid objects made from some materials can be changed. Draw conclusions based on data and observations using evidence to justify ideas and scientific knowledge to explain findings.	Comparing and grouping different types of rocks. Finding ways that rocks can be transformed into soil Investigating how fossils are formed Recording and presenting of data to answer questions.	Rocks, fossils , permeable, impermeable, sediment, lava, magma, metamorphic rock, sedimentary rock, igneous, erosion, soil, fossilisation, palaeontology, properties	Observing rocks and fossils Hand held lens or microscope Research and discuss Exploration into how fossils are formed
Autumn 2/ Spring 1	Animals & humans	Describe the basic needs of animals, including humans, for survival. Describe the importance for humans of exercise, eating the right amounts of different types of food, and hygiene.	Identify that animals, including humans, need the right types and amount of nutrition, and that they cannot make their own food; they get nutrition from what they eat  Identify that humans and some other animals have skeletons and muscles for support, protection and movement	Saturated fats, unsaturated fats, nutrients, muscles, tendons, joints, vertebrate, invertebrate, energy, healthy, skeleton, diet	Identifying and grouping invertebrates and vertebrates. Comparing animals and humans movements. Investigating what would happen if humans did not have skeletons. Compare and contrast diets. Research different food groups. Design a healthy meal.
Spring 1/ Spring 2	Forces and magnets	Everyday materials and their suitability for particular uses. Discuss the properties which make a material suited or unsuited to making specific objects. Draw conclusions based on data and observations using evidence to justify ideas and scientific knowledge to explain findings.	Know and compare movement on different surfaces. Attracting and repelling of magnets and materials. Comparing and grouping materials based on attracting and repelling magnets. Identifying magnetic materials. Describing magnets as having two poles. Predicting of repelling/attracting based on which poles are facing.	Force, Push, Pull, Magnet, Magnetic, Attract, Repel, Magnetic Poles, North, South, Metal, Iron, Steel, Friction, surface, friction, poles, field	Record scientific information. Observe magnetic forces and their behaviours. Predict and experiment using magnets. Developing an understanding of fair testing. Evaluating against their predictions
Summer 1	Light and shadow	Observe changes across the four seasons. Observe and describe weather associated with the seasons and how day length varies.	Understand that light is needed to see things and dark is the absence of light. Reflection of light from surfaces. Recognise that light is dangerous and we need to protect our eyes from the sun. Recognise that shadows are formed when the light from a light source is blocked by an opaque object. Find patterns in the way that the size of shadows change.	Light, Vision, Dark, light source, shadow, Reflect, Reflection, ray, Translucent Transparent, Opaque	Exploring and discuss how light is reflected. Experiment to see how a shadow of an object changes depending on how close the light source is to the object gathering data. Discuss the dangers of the sun. Form shadows in the sun answering questions about light.
Summer 2	Plants	Observe and describe how seeds and bulbs grow into mature plants. Find out and describe how plants need water, light and suitable temperature to grow and stay healthy.	Identify and describe the functions of different parts of flowering plants. Explore the requirements of plants for life and growth including variations. Investigating how water is transported within plants The life cycle of flowering plants	Evaporation, evaporate, nutrients, pollination, seed dispersal, fertilisation, stamen, carpel, sepal, germination, pollen, pollinator, roots, stem, leaves, flower, plants, reproduction, air, light, water, seed formation	Experiment by comparing the effect of different factors on plant growth. Gather, record and present data from their plant growth experiment. Fair testing. Observe plant life cycles. Observe transportation of water

# North Lancing Primary School – Knowledge Progression in Science (Year 4)



Year 4	Topic:	Prior Knowledge:	Key New Knowledge:	Key Vocabulary:	Working Scientifically:
Autumn	Animals including humans	Identify and name a variety of common animals that are carnivores, herbivores and omnivore. Simple food chains and identifying and naming different food sources.	To know the names of and identify parts of the digestive system. To understand the process of digestion in the human body. Know that humans have different shape teeth for different purposes and to understand what these are. To know the parts of a tooth and the function of each part within a tooth. To understand what a food chain and food web are and the producers, predators and prey within different food chains and webs. To understand why the teeth are different in carnivores and herbivores.	Digestion, digest, mouth, tongue, saliva, salivary glands, oesophagus, stomach, small intestine, large intestine, rectum, teeth, incisor, canine, pre-molar, molar, enamel, dentine, pulp, root, crown, gums, nerve, Food chain, food web, producer, primary consumer, secondary consumer, tertiary consumer, predator, prey, herbivore, carnivore, omnivore.	Ask relevant questions. Make observations and comparisons by setting up simple practical enquiries. Record findings using simple scientific language. Use drawings, labelled diagrams. Use results to make predictions and draw simple conclusions. Vocabulary: predict, observe, compare, conclusion, result, fair test.
Spring 1	Electricity	Everyday materials and their suitability for particular uses. Discuss the properties which make a material suited or unsuited to making specific objects. Draw conclusions based on data and observations using evidence to justify ideas and scientific knowledge to explain findings.	To identify common appliances that run on electricity. To know lightning and static electricity are examples of electricity occurring naturally but for us to use electricity to power appliances, we need to make it. To know some common conductors and insulators and understand that metals are good conductors. To know how to construct a simple series electrical circuit, recognising its basic parts and the need for a complete circuit in order for electricity to flow. To know that a switch can be used to make or break a circuit to turn things off and on.	Electricity, appliances, current, conductor, insulator, metal, circuit, cells/batteries, wires, bulbs, switches, buzzers, motor, renewable, non-renewable, generate.	Ask relevant questions. Observe patterns). Record findings using simple scientific language. Use results to make predictions and draw simple conclusions (understand that metals tend to be conductors of electricity). Some materials can and some cannot be used to connect across a gap in a circuit. Vocabulary: predict, observe, compare, conclusion, result, fair test.
Spring 2	States of matter	Everyday materials and their suitability for particular uses. Discuss the properties which make a material suited or unsuited to making specific objects. Draw conclusions based on data and observations using evidence to justify ideas and scientific knowledge to explain findings.	Understand there are three states of matter – solid, liquid and gas. Know that: Solids: Particles are close together, they can't move, they can only vibrate. Liquid: Particles are close together but can move around each other easily. Gas: Particles are spread out and can move around in all directions. To know that when water and other liquids reach a certain temperature, they change state into a solid or gas. The temperature that these changes happen are called, boiling, freezing or melting point. To understand what condensation and evaporation are. To understand what the water cycle is and the changes in states of matter within it.	States of matter, solids, liquids, gases, melt, freeze, water vapour, evaporate, evaporation, condensation, precipitation.	Ask relevant questions. Group and classify different materials. Explore the effect of temperature on substances (chocolate – make chocolate crispy cakes). Observe and record evaporation over a period of time. Vocabulary: predict, observe, compare, conclusion, result, fair test.
Summer 1	Sound	Identify, name, draw and label the basic parts of the human body and say which part is associated with which sense.	To know that sound can travel through solids, liquids and gases. Sound travels as a wave, vibrating the particles in the medium it is travelling in. Sound cannot travel through a vacuum. To know the structure of the ear and how sound is received and processed within the ear. To know what pitch is and that faster vibrations create a higher pitch and slower vibrations cause a lower pitch. To know the size of the vibration is called amplitude.	Ear, particles, distance, soundproof, absorb, vacuum, eardrum, vibration, sound wave, volume, amplitude, pitch.	To ask relevant questions. To find patterns in sounds that are made by different objects, such as sauce pan lids of different sizes or elastic bands of different thickness. Vocabulary: predict, observe, compare, conclusion, result, fair test.
Summer 2	Living things and their habitats	Identify that animals, including humans, need the right types and amount of nutrition, and that they cannot make their own food; they get nutrition from what they eat. Habitats and microhabitats.	To know that in order to stay alive and healthy, all living things need certain conditions that let them carry out the seven life processes (MRS NERG) To understand that animals can be grouped in lots of different ways based upon their characteristics. To know that vertebrates can be separated into 5 broad groups: mammals, fish, birds, reptiles and amphibians. To know how to use classification keys To understand changes to an environment and that these can be either natural or man-made. To understand how we can limit the changes to an environment caused by human action.	Organisms, life processes, respiration, sensitivity, reproduction, excretion, nutrition, growth, habitat, environment, endangered species, extinct, classification, vertebrates, invertebrates, specimen, characteristics.	To make or use simple guides or keys to explore and identify local plants and animals. To raise an answer questions based upon their observations of animals and what they have found out about other animals that they have researched. Vocabulary: research, classify, observe, group.

# North Lancing Primary School – Knowledge Progression in Science (Year 5)



Year 5	Topic:	Prior Knowledge:	Key New Knowledge:	Key Vocabulary:	Working Scientifically:
Autumn 1	Materials and their properties	To know common conductors and insulators and understand that metals are good conductors. Identifying magnetic materials. Understand there are three states of matter – solid, liquid and gas. To understand what condensation and evaporation are	To understand what makes different materials: good electrical and thermal conductors; magnetic; and transparent. To understand the process of dissolving and that some substances dissolve and others do not. To understand that dissolving, mixing and changes of state are reversible. To understand how to recover a substance from a solution. To understand how sieving, filtering and evaporating can be used to separate mixtures. To understand that irreversible changes cannot be reversed and that new substances are made.	Conductor, dissolve, evaporation, flexible, gas, insulator, irreversible, liquid, magnetic, material, opaque, reversible, solid, soluble, thermal, transparent.	To recognise and control variables in a scientific enquiry. To choose the most appropriate equipment. To record results in a table. To identify scientific evidence to support ideas.
Autumn 2	Human development from birth to old age	Research and compare how different animals grow. Notice that animals have offspring which grow into adults.	To understand the development and growth of an embryo to full term foetus. The meaning of gestation period. To understand the relationship between size of animal and the average gestation period. To understand the progression of skills that a child goes through from new-born to 4 years old. To understand the physical and mental changes that occur during puberty (including menstruation – taught to the girls) To know the physical/mental changes from adult to old age.	Adolescent, adult, child, embryo, foetus, gestation, life expectancy, mammal, offspring, puberty, reproduction, young adult, middle aged adult, old age.	To record data in tables and line graphs. To identify scientific evidence that has been used to support ideas.
Spring 1	Forces	Attracting and repelling of magnets and materials. Draw conclusions based on data and observations using evidence to justify ideas and scientific knowledge to explain findings.	Understand that unsupported objects fall towards the Earth because of the force of gravity acting between the Earth and the falling object. Identify the effects of air resistance, water resistance and friction that act between moving surfaces. Recognise that some mechanisms including levers, pulleys and gears allow a smaller force to have a greater effect.	Air resistance, force, friction, gears, gravity, levers, mass, pull force, pulleys, push force, water resistance	Planning different types of scientific enquiries to answer questions, including recognising and controlling variables where necessary. Reporting and presenting findings from enquiries, including conclusions, causal relationships and explanations of and a degree of trust in results, in oral and written forms.
Spring 2	Earth and Space	Understand that light is needed to see things and dark is the absence of light. Reflection of light from surfaces. Recognise that light is dangerous and we need to protect our eyes from the sun. Recognise that shadows are formed when the light from a light source is blocked by an opaque object.	Understand the movement of the Earth and other planets relative to the sun in the solar system. Understand the movement of the moon relative to the Earth. Understand the sun, Earth and moon as approximately spherical bodies. Understand the idea of the Earth's rotation to explain day and night and the apparent movement of the sun across the sky.	Asteroid, axis, celestial, day, dwarf planet, geocentric, heliocentric, moon, waxing crescent, waxing quarter, waxing gibbous, full moon, waning gibbous, waning quarter, waning crescent, night, orbit, planet, rotation, solar system, star, sun, Mercury, Venus, Earth, Mars, Jupiter, Saturn, Uranus, Neptune.	Identifying scientific evidence that has been used to support or refute ideas or arguments.
Summer	Living things and their habitats (linked to rivers and coasts topic)	Habitats and microhabitats. To understand changes to an environment (natural or man-made.) To understand how we can limit the changes to an environment caused by human action. The life cycle of flowering plants.	Understand the life process of asexual and sexual reproduction in some river and coastal plants and river and coastal animals. Know the differences in the life cycles of a river and coastal mammals, a river dwelling amphibian, a river dwelling insect and a coastal bird. Understand the work of naturalist, David Attenborough.	Amphibian, asexual reproduction, bird, habitat, insect, invertebrate, life cycle, mammal, metamorphosis, sexual reproduction, vertebrate, rivers, coasts.	Record data using scientific diagrams. Identifying scientific evidence that has been used to support or refute ideas or arguments.

# North Lancing Primary School – Knowledge Progression in Science (Year 6)



Year 6	Topic:	Prior Knowledge:	Key New Knowledge:	Key Vocabulary:	Working Scientifically:
Autumn 1	<b>Evolution and inheritance:</b> Fossils; Mary Anning;	To understand changes to an environment and that these can be either natural or man-made. To understand how we can limit the changes to an environment caused by human action.	Know that living things have changed over time and that fossils provide information about living things that inhabited the Earth millions of years ago. Know about the work of Mary Anning as a palaeontologist. Know how fossils were formed.	Fossils, extinction, Anning, palaeontologist, formation, sedimentary, mould, resin, trace body	<ul style="list-style-type: none"> <li>• Explore palaeontologist skills</li> <li>• Investigate types of fossil</li> <li>• Recording data in investigation</li> <li>• Make predictions</li> </ul>
Autumn 2	<b>Evolution and inheritance</b> Plant and Animal adaptation; evolution and adaptation: Charles Darwin	To know the physical/mental changes from adult to old age. Identify and describe the functions of different parts of flowering plants. Explore the requirements of plants for life and growth including variations. Investigating how water is transported within plants. The life cycle of flowering plants.	Know that animals adapt through their body function, appearance and behaviour according to their environment. Know that plants adapt to their environment – why and how. Find out about Charles Darwin – his background, voyage and subsequent work on evolution and adaptation	Natural selection, characteristic, inherited, environmental, parent, species, offspring, inherit, adapt, adaptation, evolve, breed, evidence, ancestors, Darwin, Galapagos, Mosses, ferns, flowering plants, conifers, algae,	<ul style="list-style-type: none"> <li>• Draw diagrams</li> <li>• Compare sources</li> <li>• Study different scientific resources to source information</li> <li>• identifying scientific evidence that has been used to support or refute ideas or arguments</li> </ul>
Spring 1/ Spring 2	<b>Living things and their habitats</b> Biomes; seed dispersal; micro-organism; classification; vertebrates and invertebrates	To understand that animals can be grouped in lots of different ways based upon their characteristics. To know that vertebrates can be separated into 5 broad groups: mammals, fish, birds, reptiles and amphibians. To know how to use classification keys.	Understand the concept of a biome and be able to name and identify the biomes of the world. To identify plants and animals that have adapted to live and survive in each of the biomes. To understand the concept of classification and how classification came about. To recognise vertebrates and invertebrates and other animals classifications including bird, fish, reptile, mammal, insect. To understand the concept of seed dispersal and how plants have adapted their dispersal methods to suit their environment. To identify different types of micro-organisms and learn about their benefits and also those that are harmful.	Micro-organism, characteristic, classify, mammal, reptile, amphibian, fungi, virus, bacteria, vertebrate, invertebrate, species, Mosses, ferns, flowering plants, conifers, algae, preservation	<ul style="list-style-type: none"> <li>• Use microscopes (easi-view)</li> <li>• Draw diagrams</li> <li>• Reporting and presenting findings in oral and written forms such as displays and other presentations</li> <li>• Using scientific diagrams and labels, classification keys</li> </ul>
Spring 2/ Summer 1	<b>Animals including humans</b> Circulatory system; transportation of nutrition and water.	To know the names of and identify parts of the digestive system. To understand the process of digestion in the human body. To know that in order to stay alive and healthy, all living things need certain conditions that let them carry out the seven life processes.	To recognise the different parts of the circulatory system and how each part plays its role as a whole system in the body. To recognise that organs make up systems. To understand how nutrition and water is transported around the body. To recognise the impact of diet, exercise and lifestyle on the body.	Circulation, heart, blood vessel, veins, capillaries, lungs, respiration, pulse, ventricle, aorta, atrium, artery, oxygen, lungs, blood cell, inhale, breathing	<ul style="list-style-type: none"> <li>• Recording data and results of increasing complexity using scientific diagrams and labels, classification keys, tables, scatter graphs, bar and line graphs.</li> </ul>
Summer 2	<b>Light</b> Reflection; refraction; shadows; the eye	Understand that light is needed to see things and dark is the absence of light. Reflection of light from surfaces. Recognise that light is dangerous and we need to protect our eyes from the sun. Recognise that shadows are formed when the light from a light source is blocked by an opaque object.	To know about the different parts of the eye and how we see. To recognise refraction and what this word means. To know that light travels in straight lines. To understand the difference between a reflector and a source of light. To understand reflection including with angles and mirrors. To know how to recognise shadows and how these are formed	Reflect, reflection, shadow, light ray, transmit, opaque, transparent, translucent, emit, absorb, prism, pupil, retina, iris, optic nerve, lens, image, mirror	Recording data and results of increasing complexity using scientific diagrams and labels, classification keys, tables, graphs: scatter, bar, line. Taking measurements, using a range of scientific equipment, with increasing accuracy and precision.