Science Curriculum Sequence of Knowledge and Skills

		Autumn Term	Spring Term	Summer Term
EYFS	Topic	**Marvellous Me: Parts of the body and senses** (Autumn 1) **Seasonal changes** (Autumn 1 and 2)	**Ready, Steady, Go: Materials** (Spring 1) **What Came First: Life Cycles of Animals** (Spring 2) **Seasonal changes** (Spring 1 and 2)	**Donaldson's Animal Adventures: Environments** (Summer 1) **Superfoods: Healthy Eating** (Summer 2) **Scientific Concepts and Critical Thinking** (Summer 2) **Seasonal changes** (Summer 1 and 2)
	Links to Prior Learning	• Knowledge of simple body parts and their names • Able to point to certain body parts when asked • Experiences of autumn/winter before starting school • Able to describe the weather in simple terms	• Knowledge of the human life cycle (baby, child, grown up) • Experiences of spring before starting school • Knowledge of what happens in autumn and winter and how autumn leads into winter	• Experiences of summer before starting school • Knowledge of what happens in other seasons and how they lead on from one another • Observation skills from Spring Term • Comparing skills from Spring Term
	Knowledge	• Know different body parts have different purpose (e.g. eyes for seeing, nose for smelling) • Begin to understand the changes in the body when doing exercise • Develop an understanding of growth and changes over time in relation to the human life cycle (baby, child, adult) • Develop an understanding of decay and changes over time in relation to autumn and winter, particularly the changes in leaves • Know the names of certain types of weather and recognise them in day to day life • Understand weather that has already happened based on what it has left behind (e.g. puddles, rainbows, snow)	• Know about similarities and differences in relation to objects, materials and living things • Understand why it is important to care for living things and the environment (link in with having the ducklings in school and respect for our school environment) • Develop an understanding of growth and changes over time in relation to life cycles • Know the scientific names for the different stages of a frog, butterfly and duck life cycle • Develop an understanding of growth and changes over time in relation to winter turning into spring	• Know features of their own environment • Know environments vary from one another • Know that some foods are better for you than others • Familiar with basic scientific concepts (floating, sinking, melting, freezing, shapes for rolling, gravity) • Know that certain materials magnetic and others are not • Develop an understanding of growth and changes over time in relation to spring turning into summer • Have an overall understanding of the seasons throughout the year
	Skills	• Comment and ask questions about aspects of the familiar world such as the place where they live or the natural world • Talk about some of the things they have observed such as plants, animals, natural and found objects, with a particular focus on autumn and winter • Talk about different body parts and give examples of their purpose	• Talk about why things happen and how things work • Show care and concern for living things and the environment (link to caring for the ducklings and respect for our school environment) • Look closely at similarities and differences (comparing), patterns and change • Make observations of animals and compare the different stages of their life cycles	• Discuss their own environment and different environments • Make observations of animal habitats • Experiment with different materials to find out which material is best for a purpose (floating, sinking, flying, falling) and for its properties (hard, soft, magnetic, bendy, stretchy, shiny etc.) • Critical thinking ➢ make links to previous learning ➢ make predictions

		• Describe the weather using an increasing vocabulary (foggy, gloomy, misty, chilly etc.)		➢ think of ideas and test, checking how well it is going and changing strategy if needed ➢ review how well their approach worked • Explain why some things occur based on own exploration • Make observations of changes in the plants from each season
	Key Question	Our Body - How does our body work? Seasons - What is changing outside now?	Life cycles - What can we find inside an egg? Seasons - What is changing outside now?	Environments - Where do animals live? Materials – Which material is best? Seasons - What is changing outside now?
	Key Vocabulary	Senses (touch, hearing, sight, smell, taste) Season(s), Autumn, Winter, Colour, Leaves, Weather	Life cycle, Frogspawn, Tadpole, Froglet, Chrysalis Season(s), Spring, Weather, temperature	Environments, Habitat, Materials, Properties, Predict, Experiment, Float, Sink, Melt, Freeze, Gravity, Season(s), Summer, Weather
Year 1	Topic NOTE: Working Scientifically (investigations) all topics throughout the year	**Autumn 1: Seasonal changes –** weather, seasons **Animals, including humans –** parts of the body and senses **Autumn 2: Seasonal changes –** weather, seasons **Animals,** identifying common animals and features **Everyday Materials –** identifying, sorting and comparing, purposefulness for the task **Everyday materials –** physical properties and uses of glass, brick etc	**Spring 1: Seasonal changes –** weather, seasons **Animals,** identifying common animals and features **Spring 2: Seasonal changes –** weather, seasons **Plants–** identifying common wild and garden flowering plants and trees	**Summer 1 & 2: Seasonal changes –** weather, seasons
	Links to Prior Learning	EYFS – Autumn term (seasonal changes and parts of the body and senses) EYFS – Spring term (life cycles of animals) EYFS – Summer term (environments, materials and critical thinking)	Plant seeds and care for growing plants. (Nursery – Plants) • Understand the key features of the life cycle of a plant and an animal. (Nursery – Plants) • Begin to understand the need to respect and care for the natural environment and all living things. (Nursery – Plants) • Explore the natural world around them. (Reception – Living things and their habitats) • Recognise some environments that are different to the one in which they live. (Reception – Living things and their habitats)	EYFS – Summer term (materials, critical thinking and seasonal changes)

	Knowledge	**Autumn 1** • Humans have key parts in common, but these vary from person to person. • Humans (and other animals) find out about the world using their senses. • Humans have five senses – sight, touch, taste, hearing and smelling. These senses are linked to particular parts of the body. **Autumn 2** • All objects are made of one or more materials. • Some objects can be made from different materials e.g., plastic, metal or wooden spoons. • Materials can be described by their properties e.g., shiny, stretchy, rough etc.	**Spring 1 Forest Schools** • Animals vary in many ways having different structures e.g., wings, tails, ears etc. • They also have different skin coverings e.g., scales, feathers, hair. These key features can be used to identify them. • Animals eat certain things - some eat other animals, some eat plants, some eat both plants and animals. **Spring 2** • Growing locally, there will be a vast array of plants which all have specific names. • These can be identified by looking at the key characteristics of the plant. • Plants have common parts, but they vary between the different types of plants • Some trees keep their leaves all year while other trees drop their leaves during autumn and grow them again during spring.	**Summer 1** • Water has many properties. **Summer 2** • Some materials e.g., plastic can be in different forms with very different properties. (linked with D&T) • Materials can be described by their properties e.g., shiny, stretchy, rough etc
		All terms: Seasonal Changes • The weather also changes with the seasons. In the UK, it is usually colder and rainier in winter, and hotter and dryer in the summer. • The change in weather causes many other changes. Some examples are: numbers of minibeasts found outside; seed and plant growth; leaves on trees; and type of clothes worn by people.		
	Skills	**Autumn 1 & 2** • Comparing similarities and differences • Labelling • Filling in simple tables • Making predictions • Observational skills	**Spring 1 & 2** • Sorting and classifying • Making predictions • Investigating and writing up results • Using results to make a simple conclusion • Filling in tables • Observational skills overtime	**Summer 1 & 2** • Sorting and classifying • Making predictions • Investigating and writing up results • Using results to make a simple conclusion • Filling in tables • Observational skills • Asking questions

	Key Vocabulary Throughout: use predict because	**Autumn 1** • Senses: • touch, • taste, • smell • sight, • hearing **Autumn 2** • reflective • fluorescent • rough • smooth	**Spring 1**: NOTE: Key vocabulary in spring 1 is also closely linked with the key vocabulary in history. • carnivore • herbivore • reptile • omnivore • predator **Spring 2**: • stem • leaf • roots • petals • deciduous • evergreen	**Summer 1:** • waterproof • absorbent • floats • sinks • evaporation **Summer 2** • opaque • translucent • transparent • rigid • flexible
Year 2	Topic	Plants (Autumn 1) Uses of everyday materials (Autumn 2)	Living things and their habitats (Spring 1 and Spring 2 Materials (recycling) (Spring 2)	Animals including humans (Summer 1 and 2)
	Links to Prior Learning	Plants (Year 1) Everyday materials (Year 1)	Animals (Year 1) Everyday Materials (Year 2 Autumn)	Animals (Year 1/2) Living things and their habitats (Year 2 Spring 1) Seasonal changes (Year 1)
	Knowledge	• Plants may grow from either seeds or bulbs. • Seeds and bulbs need to be planted outside at particular times of year and they will germinate and grow at different rates. • Some plants are better suited to growing in full sun and some grow better in partial or full shade. • Plants also need different amounts of water and space to grow well and stay healthy. • All objects are made of one or more materials that are chosen specifically because they have suitable properties for the task	• All objects are either living, dead or have never been alive. • Animals and plants live in a habitat to which they are suited, which means that animals have suitable features that help them move and find food and plants have suitable features that help them to grow well. • The habitat provides the basic needs of the animals and plants – shelter, food and water. • The plants and animals in a habitat depend on each other for food and shelter etc. The way that animals obtain their food from plants and other animals can be shown in a food chain • Materials can be recycled	• Animals, including humans, have offspring which grow into adults. • All animals, including humans, have the basic needs of feeding, drinking and breathing that must be satisfied in order to survive. • To grow into healthy adults, they also need the right amounts and types of food and exercise. • Good hygiene is also important in preventing infections and illnesses.

		• A material can be suitable for different purposes and an object can be made of different materials. • Objects made of some materials can be changed in shape by bending, stretching, squashing and twisting. • This can be a property of the material or depend on how the material has been processed e.g., thickness	• Know the process of recycling – paper, glass • Know why materials are recycled and the impact on the planet • Know about single use items and the impact on the natural world	
	Skills	• Grow/observe seeds/bubs changing to mature plants • Identifying and classifying materials • Identify and compare the suitability of a variety of everyday materials • Find out how the shapes of solid objects made from materials can be changed by squashing, bending, twisting and stretching • Performing simple tests • Observe closely using simple equipment	• Identifying and classifying animals and habitats • Explain how animals are suited to a habitat • Organise food chains to show how energy is passed from one animal to another • Identifying and classifying materials • Identify and compare the suitability of a variety of everyday materials	• Sequence the changes that take place between a seed/bulb to a mature plant • Classify foods into different food groups • Explain a balanced diet • Discuss healthy lifestyle choices • Performing simple tests • Observe closely using simple equipment
	Key Vocabulary	• Seed • Bulb • Mature plant • Germinate • Material • Properties • Opaque • Transparent • Translucent • flexible • Rigid	• Living, dead, never alive • Habitat • Micro habitat • Suitable • Adapt • Food chain • Producer, consumer, predator • Material • Properties	• Healthy • Offspring • Food groups • Balanced diet • Exercise • Lifestyle