

**GUARDIAN ANGELS' RCPS
SEQUENCING OF SCIENCE UNITS OF WORK**

NURSERY

Learning Journey One		Learning Journey Two		Learning Journey Three
Children will use their own understanding of themselves and their place in the world around them.		Children understand some important processes and changes in the natural world around them, including the seasons and changing states of matter.		Children will recognise that humans share the world with animals and plants and these can change over time. Children continue to understand that the world changes around them.



RECEPTION

Learning Journey One		Learning Journey Two		Learning Journey Three
Children will develop an understanding of their immediate environment through observation, discussion and stories of the seasons. Children will use their own understanding of materials and recognise that certain objects can be made from the materials.		Children understand some important processes and changes in the natural world around them, including the seasons and changing states of matter. They will also explore the life cycles of animals and their habitats during the different seasons. They will be able to name a variety of animal types.		Children will recognise that humans share the world with animals and plants and these can change over time. Children will also understand that the sun can be dangerous.

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YEAR 1

YEAR 1				
Learning Journey One Animals Including Humans Children have an understanding of different animal types they will now begin to name of a variety of common animals including fish, amphibians, reptiles, birds and mammals and the names of a variety of common animals that are carnivores, herbivores and omnivores. They will look at structures of a variety of common animals as well as basic parts of the human body and which part of the body is associated with each sense. Children will have prior knowledge of parts of the body covered in PSHE.		Learning Journey Two Everyday Materials Children will have already looked at how certain objects can be made out of the same materials The children will develop their understanding that there is a difference between an object and the material from which it is made. They will be able to name a variety of everyday materials and their simple physical properties. They will develop the ability to compare and group together a variety of everyday materials on the basis of their simple physical properties		Learning Journey Three Plants Children will have explored that plants change over time. They will now identify names of a variety of common wild and garden plants, including deciduous and evergreen trees and the basic structure of a variety of common flowering plants, including trees.



YEAR 2

Learning Journey One Living Things and their Habitats

Children will begin to look at the differences between things that are living, dead, and things that have never been alive.

Be able to name varieties of plants and animals in their habitats, including micro-habitats.

Know that most living things live in habitats to which they are suited and different habitats provide for the basic needs of different kinds of animals and plants, and they depend on each other.

They will look at how animals obtain their food from plants and other animals, using the idea of a simple food chain, and different sources of food.



Learning Journey Two Everyday Materials Animals Including Humans

Children will have already looked at objects made out of similar materials and are able to identify the material an object is made from as well as naming some of the properties.

The children will develop their understanding of Suitability of a variety of everyday materials for particular uses and look at how the shapes of solid objects made from some materials can be changed by *squashing, bending, twisting and stretching*.



Children have an understanding of different animal types and structures of a variety of common animals as well as basic parts of the human body.

They will then build on their understanding of animals, including humans, have offspring which grow into adults.
Begin to look at the basic needs of animals, including humans, for survival (water, food and air) and know the importance for humans of exercise, eating the right amounts of different types of food, and hygiene.



Learning Journey Three Plants

Children have had experience of looking at and identifying a variety of common garden plants and are able to orally talk about the basic structure of a plant.

They will now develop their understanding of how seeds and bulbs grow into mature plants know what plants need water, light and a suitable temperature to grow and stay healthy and learn how seeds and bulbs grow into mature plants.



YEAR 3

Learning Journey One Animals Including Humans

Children recap what they have learnt about a balanced diet and the importance of exercise.

Children then look in detail 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. They will also learn that humans and some other animals have skeletons and muscles for support, protection and movement.



Learning Journey Two Rocks Forces and Magnets

Children will begin to look at and know that different kinds of rocks can be grouped together on the basis of their appearance and simple physical properties. They will know that fossils are formed when things that have lived are trapped within rock and soils are made from rocks and organic matter.

Children will have knowledge from covering human features, coastlines and erosion in Geography.

The children are ready to look things move differently on different surfaces. To know that some forces need contact between two objects, but magnetic forces can act at a distance. Two magnets will attract or repel each other, depending on which poles are facing and some materials are attracted by magnets and others are not.

Children will have an understanding of how different things move on different surfaces from their previous History topic (transport)



Learning Journey Three Light Plants

Children will be able to identify that we need light in order to see things and that dark is the absence of light. That light is reflected from surfaces. They will learn that light from the sun can be dangerous and that there are ways to protect their eyes and that shadows are formed when the light from a light source is blocked by an opaque object.

Children have had experience of looking at basic structures of a plant and what a plant will need in order to stay healthy and grow.

They will then look at functions of different parts of flowering plants. The requirements of plants for life and growth (air, light, water, nutrients from soil, and room to grow) and how they vary from plant to plant. How water is transported within plants and what part flowers play in the life cycle of flowering plants.



YEAR 4

Learning Journey One Animals Including Humans

Children build on their knowledge and skills of nutrition and the importance of muscles

They will then identify the key features of simple functions of the basic parts of the digestive system in humans. Look at different types of teeth in humans and their simple functions and a variety of food chains, identifying producers, predators and prey.



Learning Journey Two Sound States of Matter

Children will have an understanding of sound vibrations and how sound travels through their music lessons.

Children will begin to know how sounds are made, associated with something vibrating. That vibrations from sounds travel through a medium to the ear.

There are patterns between the pitch of a sound and features of the object that produced it. There are patterns between the volume of a sound and the strength of the vibrations that produced it and sounds get fainter as the distance from the sound source increases.

Children will have knowledge of water cycles after covering it in Geography.

Children build on their knowledge of everyday materials and begin to know that materials can be grouped together, according to whether they are solids, liquids or gases.



Learning Journey Three Living Things and Their Habitats Electricity

Children use the knowledge they have gained from prior study to know that animals are suited to the habitats they live in and what they need to survive.

Children will now look at how living things can be grouped in a variety of ways. Classification keys can help group, identify and names of a variety of living things in their local and wider environment and environments can change and that this can sometimes pose dangers to living things.

Children will begin to use names of common appliances that run on electricity. The names of basic parts of simple circuits. Whether or not a lamp will light in a simple series circuit, based on whether or not the lamp is part of a complete loop with a battery. They will know a switch opens and closes a circuit and determines whether or not a lamp lights in a simple series circuit and



		Know that some materials change state when they are heated or cooled, at different temperatures in degrees Celsius (°C) and evaporation and condensation plays a part in the water cycle and the rate of evaporation is affected by temperature.		some common conductors and insulators, and metals are good conductors.
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YEAR 5

YEAR 5				
Learning Journey One Forces Earth and Space Children continue to look at unsupported objects fall towards the Earth because of the force of gravity acting between the Earth and the falling object. Know that air resistance, water resistance and friction all have an effect when they act between moving surfaces and some mechanisms, including levers, pulleys and gears, allow a smaller force to have a greater effect. As the children mature, they are able to look at the movement of the Earth, and other planets, relative to the Sun in the solar system. Know that the Sun, Earth and Moon	➔	Learning Journey Two Properties and changes of materials Living Things and Their Habitats Children expand on their understanding of how objects and materials can be changed when heated and either be a solid, liquid or a gas. They then look at how some materials will dissolve in liquid to form a solution, and how to recover a substance from a solution. How mixtures might be separated. The reasons for the particular uses of everyday materials for specific products, including metals, wood and plastic How dissolving, mixing and changes of state are reversible changes and how some changes result in the	➔	Learning Journey Three Animals Including Humans Children can now use their knowledge of the digestive system and the functions of teeth. The children are now able to focus on their skills to identify the changes in the human body as they grow into adults.

are approximately spherical bodies. Look at the movement of the Moon relative to the Earth and the Earth's rotation explains day and night and the apparent movement of the sun across the sky.		formation of new materials, and that this kind of change is not usually reversible, including changes associated with burning and the action of acid on bicarbonate of soda. The children are now well equipped to look in greater detail at the differences in the life cycles of a mammal, an amphibian, an insect and a bird and be able to describe the life process of reproduction in some plants and animals.		
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YEAR 6

Learning Journey One Animals Including Humans Evolution and Inheritance		Learning Journey Two Electricity		Learning Journey Three Living Things and Their Habitats Light
Now that children understand that the body changes as it becomes an adult, the children will look at names of the main parts of the human circulatory system, and describe the functions of the heart, blood vessels and blood. They will learn about the impact of diet, exercise, drugs and lifestyle on the way their bodies function and ways in which nutrients and water are transported within animals, including humans.		The final study of electricity allows them to build on what they have learned about simple circuits and begin to look at the brightness of a lamp or the volume of a buzzer is affected by the number and voltage of cells used in the circuit. To know about variations in how components function, including the brightness of bulbs, the loudness of buzzers and the on/off position of switches and be able to Recognise symbols for representing a simple circuit in a diagram.		Children use all their knowledge of life cycles of animals and the reproduction system they will now look at the classification of Living things and be able to put them into broad groups according to common observable characteristics and based on similarities and differences, including micro-organisms, plants and animals. Children's skills and understanding of light now allows them to know light appears to travel in straight line, that objects are seen because they give out or reflect light into the

As the children mature they will look at how living things have changed over time and that fossils provide information about living things that inhabited the Earth millions of years ago. How living things produce offspring of the same kind, but normally offspring vary and are not identical to their parents. Know that animals and plants are adapted to suit their environment in different ways and that adaptation may lead to evolution.				eye. We see things because light travels from light sources to our eyes or from light sources to objects and then to our eyes. Shadows have the same shape as the objects that cast them.
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