

James Peacock Infant and Nursery School

Science Progression

Peacock Pathway



	<u>Materials</u>	<u>Animals including humans</u>	<u>Plants</u>	<u>Living things and their habitats</u>	<u>Seasonal change</u>	<u>forces</u>	<u>Electricity</u>	<u>Light</u>	<u>Sound</u>	<u>Earth and Space</u>
Nursery	<ul style="list-style-type: none"> To explore natural materials from the surrounding environment and describe what they can see, feel and hear. To explore collections of materials with similar and/or different properties and begin to describe how they are similar or different To be able to talk about the changes they notice to materials (e.g. ice melting, cake mix setting) To explore and learn how to shape and join materials using glue and tape or pushing parts together To be able to combine and mix ingredients and notice how they change 	<ul style="list-style-type: none"> To be able to understand the key features of the life cycle of an animal. To begin to understand the need to respect and care for the natural environment and all living things. To be able to talk about what is the same and different when comparing adult animals to their babies To observe how baby animals change over time To know the names of UK farm animals and their young (cow/calf, pig/piglet, sheep/lamb, chicken/chick, goose/gosling, duck/duckling, dog/puppy, cat/kitten) To know how they are going to grow and change. To know how to take care of themselves by washing their hands before eating and after using the toilet or when dirty; putting on more clothes when cold or taking them off when too hot. To know that they have eyes which they use to see, a nose which they use to smell things, ears which they use to 	<ul style="list-style-type: none"> To be able to understand the key features of the life cycle of a plant. To know how to plant seeds. To know how to care for growing plants. 	<ul style="list-style-type: none"> To Explore the surrounding natural environment To explore natural objects from the surrounding environment and describe what they can see, feel and hear. To be able to create small world settings where characters can live. 	<ul style="list-style-type: none"> Play and explore outside in all seasons and in different weather 	<ul style="list-style-type: none"> To be able to feel forces by: <ul style="list-style-type: none"> standing outside on a windy day and feeling how the wind pushes against their body. Helping to pull a heavy object across a surface Helping to lift heavy objects and realising what would happen if they let go. Running their hands through water and noticing that there is a push against their fingers. Playing with magnets and noticing they pull towards an object before they touch it. Explore how objects/materials are affected by forces 	<ul style="list-style-type: none"> To know which equipment uses electricity to power it. To know that they must not touch electrical plugs or batteries – it is an adult’s job. To use battery-powered devices. 	<ul style="list-style-type: none"> To know some everyday sources of light (the sun, ceiling lights, torches, car headlights) To explore and describe what happens when they shine light on or through different materials. 	<ul style="list-style-type: none"> To know the sources of everyday sounds including: <ul style="list-style-type: none"> Bird song Common vehicles – emergency vehicles, tractors, motorbikes, cars Everyday household equipment – Hoover, washing machine, kettle, gas hob Animal sounds (UK farm animals) To explore the sounds that different materials make and how they can be changed (e.g. playing a drum louder/quieter) 	<ul style="list-style-type: none"> To know the difference between day and night. To listen to information stories about the planets. To be able to identify rockets and astronauts.

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		listen, a mouth which they use to taste and skin which they use to feel.								
Reception	<ul style="list-style-type: none"> To be able to talk about the changes they notice to materials and what might be causing these changes (e.g. ice melting because it is getting warmer, cake mix setting because it has been heated in the oven...) 	<ul style="list-style-type: none"> To be able to name and describe animals that live in different habitats – explaining how these animals are the same or different. (Ruddington specific: garden birds, Asian animals, Coral Reef animals, UK farm animals,) To know that ‘animal’ refers to everything that is alive and is not a plant. To be able to describe people who are familiar to them To know there are certain choices we can make which will lead to good growth and health – healthy eating, daily exercise, drinking water, protecting our skin from the sun, caring for our feelings/emotions, seeking help when we do not feel well or to prevent illness. 	<ul style="list-style-type: none"> To know the basic parts of a plant (inc. leaves, flowers, roots and stems) To know that seeds will not grow if they have too much water or too little water. 	<ul style="list-style-type: none"> To Explore the surrounding natural environment To be able to describe different habitats – how they are the same and how they are different. To discover and explore the plants in the surrounding natural environment To discover and explore the animals in the surrounding natural environment To discover if the plants and animals in a contrasting natural environment are the same as in Ruddington 	<ul style="list-style-type: none"> Play and explore outside in all seasons and in different weather To observe living things throughout the year 	<ul style="list-style-type: none"> To explore how the wind can move objects. To explore how objects move in water. To understand the words, float and sink. To explore which objects float and sink. 	<ul style="list-style-type: none"> To know that they must not touch electrical plugs or batteries – it is an adult’s job. That a lot of electrical devices must not be used in water. To know that for some electrical devices to work they must be plugged into a wall and the power switched on. To know that some electrical devices have a battery that requires charging by plugging it into a wall. 	<ul style="list-style-type: none"> To know that the dark shape created on a surface is called a shadow. To be able to identify their own shadow and notice how it changes as they move. To know that on a sunny day it is easier to find an objects shadow. To know that any light source can create a shadow from an object. To be able to identify a rainbow. To know that a rainbow is seen when it has been raining and is sunny at the same time. 	<ul style="list-style-type: none"> To know that different surfaces make different sounds under our feet. To know that different materials make different sounds when struck (e.g. with a wooden stick). To be able to identify the direction from which a sound is heard. To be able notice the differences between some sounds (Ruddington specific: the sounds that some garden birds make (pigeon and blackbird), the sounds that some vehicles make) To explore making sounds and how they can be changed. 	<ul style="list-style-type: none"> To know that we live on the Earth. To know that the light we see in the sky is called the sun. To know that it is dangerous for us to look at the sun so we must not do this. To know that the lights up in the sky at night are called stars. To know that there are other planets up in space as well as the Earth. To know that you would need to be an astronaut and have a space rocket to be able to travel into space
Year 1	<ul style="list-style-type: none"> Identify the difference between object and material it is made Identify some materials and their properties Group objects according to some physical properties Carry out simple investigations to test some materials and their properties. 	<ul style="list-style-type: none"> 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 	<ul style="list-style-type: none"> identify and name a variety of common wild and garden plants, including deciduous and evergreen tree identify and describe the basic structure of a variety of common flowering plants, including trees. 		<ul style="list-style-type: none"> recall the 4 seasons able to discuss the different weather associated with each season begin to explain how day length varies work scientifically to record weather patterns in tables/ charts 					

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		<p>(fish, amphibians, reptiles, birds and mammals, including pets)</p> <ul style="list-style-type: none"> 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 2	<ul style="list-style-type: none"> Identify and compare the uses of everyday materials for particular uses Explain how solid objects made from some materials can be changed by squishing, bending, twisting and stretching Name at least one inventor of new materials e.g. John Dunlop, Charles Macintosh, John McAdam, 	<ul style="list-style-type: none"> describe the importance for humans of exercise, eating the right amounts of different types of food, and hygiene. describe the importance for humans of exercise, eating the right amounts of different types of food, and hygiene. identify that most living things live in habitats to which they are suited and describe how different habitats provide for the basic needs of different kinds of animals and plants, and how they depend on each other identify and name a variety of plants and animals in their habitats, including microhabitats 	<ul style="list-style-type: none"> observe and describe how seeds and bulbs grow into mature plants find out and describe how plants need water, light and a suitable temperature to grow and stay healthy. 	<ul style="list-style-type: none"> explore and compare the differences between things that are living, dead, and things that have never been alive identify that most living things live in habitats to which they are suited and describe how different habitats provide for the basic needs of different kinds of animals and plants, and how they depend on each other identify and name a variety of plants and animals in their habitats, including microhabitats describe how animals obtain their food from plants and other animals, using the idea of a simple food chain, and identify and name different sources of food. 						