Progression of Skills in Science
Church Gresley Infant and Nursery School

SCIENCE	Nursery	Reception	Year One	Year Two
Concepts and Key Questions				
Descriptors from Development Matters and the National Curriculum.	Use all their senses in hands on exploration of natural materials. Explore collections of materials with similar or different properties. Talk about the differences between materials and changes they notice. Talk about what they see using a wide vocabulary. Explore how things work. Plant seeds and care for growing plants. Understand the key features of the life cycle of a plant and an animal. Begin to understand the need to respect and care for the natural environment and all living things. Explore and talk about different forces they can feel. (Children in Nursery are regularly encouraged to explore natural and man-made materials using their senses.)	Explore the natural world around them. Describe what they see, hear and feel whilst outside. Recognise some environments that are different to the one in which they live. Understand the effect of changing seasons on the natural world around them. (Children in Reception are encouraged to explore their natural environment on a daily basis with an emphasis on scientific vocabulary. Children use simple equipment and refer to non-fiction books. Children are continuously encouraged to observe and talk about what they see. Role play.)	During years 1 and 2, pupils should be taught to use the following practical scientific methods, processes and skills through the teaching of the programme of study content: Working Scientifically. • ask simple questions and recognise that they can be answered in different ways including using secondary sources. • observe closely, using simple equipment. • perform simple tests. • identify and classify • use their own observations and ideas to suggest answers to questions. • gather and record data to help in answering questions.	
			Pupils should be taught to: - 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. -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	*Pupils should be taught to*: -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 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. -distinguish between an object and the material from which it is made - identify 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 based on their simple physical properties. -observe changes across the four seasons - observe and describe weather associated with the seasons and how day length varies.	-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. -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 -notice that animals, including humans, have offspring which grow into adults -find out about and describe the basic needs of animals, including humans, for survival (water, food and air) - describe the importance for humans of exercise, eating the right amounts of different types of food, and hygiene. -identify and compare the suitability of a variety of everyday materials, including wood, metal, plastic, glass, brick, rock, paper and cardboard for particular uses -find out how the shapes of solid objects made from some materials can be changed by squashing, bending, twisting and stretching.

Autumn	Talk about our own appearance. Name and identify different parts of our bodies. Understand where some of our food comes from (harvest). Talk about what they see outdoors using a wide vocabulary. Describe different forces they can feel. Sort foods into healthy and unhealthy.	Talk about our own appearance and the appearance of others. Name and identify different parts of our bodies using scientific vocabulary. Talk about what they see outdoors using scientific vocabulary. Understand the effects of the changing seasons on the natural world around them. Sort foods into healthy and unhealthy and explain why / how these foods can affect the body.	Identify, name, draw and label basic body parts. Explain which parts of the body are associated with which sense. Ask their own simple questions. Observe using simple equipment. Perform simple tests involving taste and smell. Observe and describe the weather in the autumn and explain how it changes. Classify and group materials. Identify the materials different objects are made from. Identify a range of materials and describe their properties using scientific vocabulary. Plan a simple investigation e.g. 'Which material is the most waterproof' – finding the best material for an umbrella for The Three Little Pigs.	Explain the different elements of the human lifecycle. Explain how to be healthy, including the requirements of a healthy diet, sleep, exercise and good hygiene. Explain and demonstrate how materials can be changed by squashing, bending, twisting and stretching. Sort materials based on their properties including natural and man-made. Identify the properties of materials using a wider range of scientific vocabulary. Identify the suitability of different materials for various purposes. Plan a simple investigation e.g. 'What is the best way to remove germs from hands?' 'Which type of chocolate melts most easily?' or 'Which is the most suitable material for a chocolate wrapper?' – focus on flexibility, texture, absorbance.

Spring	Spring 1 (Year 1 - Books / Traditional Tales) Describe how ingredients change when cooked. Talk about the basic features of an animal life cycle. Begin to understand the need to care for animals. (Year 2 - Animals) Talk about what they see using a wide vocabulary. Begin to understand the need to respect and care for the natural environment and all living things. Understand the key features of the life cycle of an animal. Talk about how to care for a pet. Name and identify a range of animals. Spring 2 (Year 1 – In the Garden) Describe how to plant a seed and care for a growing plant. Identify the basic features of the life cycle of a plant. Begin to understand the need to respect and care for the natural environment and all living things. (Year 2 - Weather)	Recognise environments which are different to the ones they live in. Talk about the key features of hot and cold environments. Discuss the different environments in non-fiction books and stories. Explain some of the differences between hot and cold environments. Plant a bean and talk about what it needs to germinate. Observe how the bean plants grow and talk about what they see. Observe the effects of growing plants in different conditions and talk about what they notice. Start to think of their own questions to investigate. Talk about the life cycle of a frog using picture prompts.	Observe and describe the weather in the winter and explain how it changes. Observe and describe the weather in the spring and explain how it changes. Identify a variety of common wild and garden plants, including deciduous and evergreen trees.	Identify and name a range of baby animals. Identify things which are living, no longer living and have never been alive. Classify animals – mammals, reptiles, amphibians, birds, fish and invertebrates. Explain how animals and plants are suited to their habitat / micro habitat. Draw and label a variety of food chains. Describe the lifecycle of a chicken (living eggs). Plan a simple investigation e.g. 'Which micro habitat contains the most mini beasts?' 'Where do woodlice live?'

	Talk about the different weather conditions they can see and feel using a wide vocabulary. Talk about different forces they can feel. Begin to understand the need to care for animals.			
Summer	Summer 1 (Year 1 – Toys) Explore how things work. Talk about what they see using a wide vocabulary. (Year 2 - Investigating the outdoors) Talk about what they see using a wide vocabulary. Explain how to stay safe in the sun. Describe how to plant a seed and care for a growing plant. Identify the key features of the life cycle of a plant and an animal. Summer 2 (Year 1 – Water / Seaside) Talk about what they see using a wide vocabulary. Name and talk about different animals which live in the sea. Talk about how plants need water. Describe how and why an ice cube melts. (Year 2 – Journeys / transport) Talk about different ways of travelling on land, sea & air,	Talk about the key features of the life cycle of a plant. Understand how life cycles need to be cyclical. Talk about the key features of the life cycle of butterflies / ladybirds and answer questions using non-fiction texts and I pads. Use scientific vocabulary to describe what they observe. Talk about the different stages they observe as caterpillars change into butterflies (butterflies in school). Understand and talk about the need to respect and care for the natural environment and all living things.	Describe the basic structure of a variety of common flowering plants, including trees. 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).	Observe and identify seeds. Plant seeds and bulbs under the correct conditions. Compare the rates of growth / appearance of different germinating seeds in a weekly seed diary. Describe what a seed needs to germinate. Describe what different plants need to grow healthily. Plan a simple investigation e.g. 'Do seeds need soil to germinate?' 'What conditions do plants need to grow healthily?'