



St Joseph's RC Nursery and Primary School – Science Curriculum Overview (2016)

These units can be completed in any order to fit in with topics and other curricular areas.



Year	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
Year 1	<p>Plants – identify and name a variety of common wild & garden plants including deciduous and evergreen trees. Identify the basic structure of a variety of plants and trees.</p>	<p>Everyday materials– Distinguish between an object and material. Identify and name a variety of everyday materials. Describe physical properties and compare and group.</p>	<p>Animals including humans– identify and name common animals including fish, amphibians, reptiles, birds and mammals. Identify carnivores, herbivores and omnivores. Compare structure of a variety of common animals. Identify, name and label parts of the body and link with senses.</p>		<p>Seasonal change- Observe changes across the four seasons and observe and describe weather associated with the seasons and how day length varies.</p>	
Year 2	<p>Everyday materials– Compare the suitability of a variety of everyday materials. Find out how the shapes of solid objects made from some materials can be changed.</p>		<p>Plants – describe how seeds and bulbs grow (what they need). Find out and describe how plants need water, light and suitable temperature to grow and stay healthy.</p>		<p>Animals including humans – know that animals have offspring that turn into adults, basic needs of animals and healthy living for humans. Describe importance for humans of exercise, eating and hygiene.</p>	<p>All living things and their habitats – Explain the differences between things that are living and those that have never been alive. Identify that living things live in habitats to which they are suited, name a variety of plants and animals when studying habitats and look at simple food chains.</p>
Year 3	<p>Plants – Identify the functions of different parts of a plant; identify the requirements of plants for life and growth. Investigate the way in which water is transported within plants. Explore the part that flowers play in the life cycle of a flowering</p>	<p>Animals including humans – Identify that animals including humans need the right types of nutrition. Identify that humans and some animals have skeletons and muscles for support,</p>	<p>Light- Recognise that you need light to see things. Notice that light is reflected off surfaces. Recognise that light from the sun can be dangerous. Recognise how shadows are formed. Find patterns</p>	<p>Rocks – Compare and group rocks based on their physical properties. Describe in simple terms how fossils are formed. Recognise that soils are made from rocks and organic matter.</p>		<p>Forces and magnets – Compare how things move on surfaces. Observe how magnets attract or repel each other. Compare and group a variety of materials on the basis of whether they are attracted to a magnet. Describe magnets.</p>

	plant.	protection and movement.	in the way that size of shadows change.			Predict whether two magnets will attract or repel.
Year 4	<u>Living things and habitats</u> = Recognise that living things can be grouped in a variety of ways. Explore and use classification keys to group, identify and name a variety of living things. Recognise that environments can change.	<u>Animals including humans</u> – construct and interpret a variety of food chains identifying producers, predators and prey. Describe simple functions of the digestive system. Identify different types of teeth and their function.	<u>Sound-</u> Identify how sounds are made. Recognise that vibrations from sounds travel through a medium to the ear. Find patterns between pitch and features of the object that produced it. Find patterns between volume of sound and the strength of the vibration.	<u>Electricity</u> – Describe the use of electricity to power common appliances. Construct a simple circuit. Explain that some materials conduct electricity using a comparative test. Explain about closed and open circuits and purpose of a switch. Recognise some common conductors and insulators.	<u>States of matter</u> – compare and group together materials based on whether they are solids, liquids and gases. Observe that some materials change state when they are heated and cooled and measure or research the temperature at which this happens. Identify the part played by evaporation and condensation in the water cycle.	
Year 5	<u>Earth and space</u> – Describe the movement of the Earth and other planets relative to the sun in the solar system. Describe the movement of the Moon relative to the Earth. Describe the Sun, Earth and Moon as spherical bodies. Use the idea of the earth’s rotation to explain day and night.	<u>Living things and habitats</u> – Describe the differences in the life cycles of a mammal, amphibian, an insect and a bird. Describe the life processes of reproduction in some plants and animals.	<u>Animals including humans</u> – Describe the changes as humans develop from birth to old age.	<u>Properties and changes of materials</u> Compare and group everyday materials through comparative and fair tests. Know that some materials will dissolve in liquid. Look at how mixtures might be separated, through filtering, sieving and evaporating. Demonstrate that dissolving, mixing and changes of state are reversible. Also look at new materials formed by irreversible changes.	<u>Forces and magnets-</u> Explain that unsupported objects fall towards the earth because of gravity. 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.	
Year 6	<u>Living things and habitats</u> - Describe how living things are classified including micro Organisms, plants and animals. Give reasons for classifying plants and animals based on specific characteristics.		<u>Electricity-</u> Associate the brightness of a lamp or the volume of a buzzer with number and voltage of cells used in a circuit. Compare and give reasons for variations in components. Use recognised symbols when representing a simple circuit.	<u>Animals including humans</u> – Describe the ways in which nutrients and water are transported within animals including humans. Identify and name the main parts of the human circulatory system. Recognise the impact of diet, exercise, drugs and lifestyle on the way their bodies function.	<u>Evolution and inheritance-</u> Recognise that living things have changed over time and that fossils provide information about living things. Recognise that living things produce offspring of the same kind but normally offspring vary and are not identical to their parents. Identify how animals and plants are adapted to suit their environment in different ways and that adaptation may lead to	<u>Light</u> – Recognise that light appears to travel in straight lines. Explain that we see things because light travels from light sources to our eyes. Use the idea that light travels in straight lines to explain why shadows have the same shape as the objects that cast them.

					evolution.	
Working Scientifically	Year 1 / 2	<p>These elements should be taught throughout each unit:</p> <ul style="list-style-type: none"> • Asking simple questions and recognising these can be answered in different ways • Observing closely using simple equipment • Performing simple tests • Identifying and classifying • Using their observations and ideas to suggest answers to questions • Gathering and recording data to help answer questions • Pupils should read and spell scientific vocabulary 				
	Year 3 / 4	<p>These elements should be taught throughout each unit:</p> <ul style="list-style-type: none"> • Asking relevant questions and using different types of scientific questions to answer them • Using scientific evidence to answer questions to support their findings • Making systematic and careful observations and taking accurate measurements using standard units • Setting up simple, practical enquiries, comparative and fair tests • Using results to draw simple conclusions • Recording findings • Presenting data in a variety of ways • Reporting on findings from enquiries, including oral and written explanations • Pupils should read and spell scientific vocabulary correctly and with confidence 				
	Year 5 / 6	<p>These elements should be taught throughout each unit:</p> <ul style="list-style-type: none"> • Planning different types of scientific enquiries to answer questions • Identifying scientific evidence that has been used to support or refute ideas or arguments • Taking measurements, using a range of scientific equipment with increasing accuracy • Using test results to make predictions to set up further comparative and fair tests • Recording data and results of increasing complexity • Reporting and presenting findings from enquiries including conclusions, causal relationships and explanations in oral and written forms. • Pupils should read, spell and pronounce scientific vocabulary correctly. 				