



St Patrick's Catholic Primary School Science Curriculum Intent



	Advent	Lent	Pentecost
Nursery	<p>Understanding the word – the natural word</p> <p>Knows how to play with small-world models such as a farm, a garage or a train track.</p> <p>Knows about and notices features of objects in the Environment</p> <p>Knows how to use all their senses in hands-on exploration of natural materials.</p> <p>Knows to show care and concern for living things and the environment</p>	<p>Understanding the word – the natural word</p> <p>Knows how to explore collections of materials with similar and/or different properties.</p> <p>Knows how to plant seeds and care for growing plants.</p> <p>Knows that they need to respect and care for the natural environment and all living things. (starting to)</p> <p>Knows how to talk about what they see, using a wide vocabulary.</p> <p>Knows how to explore and talk about different forces they can feel.</p> <p>Knows how to talk about the differences between materials and changes they notice.</p>	<p>Understanding the word – the natural word</p> <p>Knows how to ask questions about aspects of my familiar world such as the place where I live or the natural world.</p> <p>Knows how to talk about some of the things I have observed such as plants, animals, natural and found objects.</p> <p>Knows how to talk about why things happen and how things work.</p> <p>Knows about and is developing an understanding of growth, decay and changes over time.</p> <p>Knows about and understands the key features of the life cycle of a plant and an animal.</p>
Reception	<p>Understanding the word – the natural word</p> <p>Knows how to ask questions about aspects of my familiar world such as the place where I live or the natural world.</p> <p>Knows how to talk about some of the things I have observed such as plants, animals, natural and found objects.</p>	<p>Understanding the word – the natural word</p> <p>Knows how to talk about why things happen and how things work.</p> <p>Knows how to describe what they see, hear and feel whilst outside.</p>	<p>Understanding the word – the natural word</p> <p>Explore the natural world around them, making observations and drawing pictures of animals and plants;</p> <p>Know some similarities and differences between the natural world around them and</p>



	<p>Knows about and is developing an understanding of growth, decay and changes over time.</p> <p>Knows how to show care and concern for living things and the environment.</p> <p>Knows how to explore the natural world around them.</p>		<p>Knows how to recognise some environments that are different to the one in which they live.</p> <p>Knows and understands the effect of changing seasons on the natural world around them.</p>	<p>contrasting environments, drawing on their experiences and what has been read in class;</p> <p>Understand some important processes and changes in the natural world around them, including the seasons and changing states of matter.</p>
Y1	<p>Animals including humans</p> <p>Know a variety and the structure of common fish.</p> <p>Know a variety and the structure of common amphibians.</p> <p>Know a variety and the structure of common reptiles.</p> <p>Know a variety and the structure of common birds.</p> <p>Know a variety and the structure of common mammals.</p> <p>To know the difference between carnivores,</p>	<p>Plants</p> <p>Know the parts of a plant.</p> <p>Know the parts of a tree.</p> <p>Know what a plant needs to be able to survive.</p> <p>Know the names of some common wild and garden plants including evergreen and deciduous trees.</p> <p>Investigation: Scientist:</p>	<p>Use of Everyday Materials</p> <p>Know the difference between an object and the material it is made from.</p> <p>Know a variety of everyday materials.</p> <p>Know the simple physical properties of a variety of everyday materials.</p> <p>Know how to compare and group together a variety of everyday materials based on their simple physical properties.</p> <p>Investigation: Scientist:</p>	<p>Seasonal changes</p> <p>Know the characteristics of each season.</p> <p>Know how to observe changes across the four seasons.</p> <p>Know how to observe and describe weather and length of day associated with the seasons.</p> <p>Investigation: Scientist:</p>



	<p>herbivores and omnivores. Know a variety and the structure of common animals that are carnivores, herbivores and omnivores. Know the basic parts of the human body and the associated sense.</p> <p>Investigation: Scientist:</p>			
Y2	<p>Living things and their habitats</p> <p>Know the difference between things that are living, dead and things that have never been alive. Know that most living things live in habitats suited to their needs. Know a variety of plants and animals in their habitats including micro-habitats. Know how animals obtain their food from</p>	<p>Animals including humans</p> <p>Know that animals, have offspring which grow into adults. Know and describe the basic needs of animals for survival. Know the importance for humans of exercise. Know the importance for humans of healthy eating. Know the importance for humans of hygiene.</p>	<p>Plants</p> <p>Know the names of variety of plants. Know how seeds and bulbs grow into mature plants Know how plants need water, light and a suitable temperature to grow and stay healthy</p> <p>Investigation: Scientist:</p>	<p>Uses of everyday Materials</p> <p>Know the suitability of a variety of everyday materials. Know how to compare the suitability of a variety of everyday materials. Know how solid objects can change shape.</p> <p>Investigation: Scientist: Charles Macintosh</p>



	plants and other animals within food chains. Investigation: Scientist:	Investigation: Scientist: Rachel Carson			
Y3	<p>Animals including humans- skeletons and digestive system</p> <p>Know the types of nutrition animals need. Know that animals need to right amount of nutrition. Know that humans and some other animal have skeletons. Know that humans and some other animals have muscles.</p> <p>Investigation: Scientist: Marie Curie</p>	<p>Plants- Living things</p> <p>Know the functions of different parts of flowering plants: roots, stem / trunk, leaves and flowers. Know 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. Know the way in which water is transported within plants. Know the part that flowers play in the life cycle of flowering plants, including pollination, seed formation and seed dispersal.</p>	<p>Rocks</p> <p>Know how to group different types of rocks based on their physical properties. Know how fossils are formed. Know that soils are made from rocks and organic matter.</p> <p>Investigation: Scientist: William Smith</p>	<p>Forces and Magnets</p> <p>Know how things move on different surfaces. Know what a contact force is. Know that magnets have two poles. Know how magnets attract or repel. Know how to group magnetic and non-magnetic materials. Know when a magnet will attract and repel.</p> <p>Investigation: Scientist:</p>	<p>Light</p> <p>Know that we need light to see things. Know that light is reflected from surfaces. Know how to protect your eyes from the dangers from sun. Know how shadows are formed. Know how the size of the shadows can change.</p> <p>Investigation: Scientist:</p>



		Investigation: Scientist: George Washington Carver			
Y4	<p>Living things and their habitats</p> <p>Know how to group living things. Know how to use a classification key. Know that environments can change.</p> <p>Investigation: Classify living things in local and wider environments. Scientist:</p>	<p>Animals including humans</p> <p>Know the simple functions of the basic parts of the digestive system. Know the different types of teeth in humans. Know the functions of teeth in humans. Know how to construct a variety of food chains.</p> <p>Investigation: Scientist:</p>	<p>States of matter</p> <p>Know the properties of solids, liquids and gases. Know how to compare and group materials together. Know that some materials change state when heated or cooled. Know what the water cycle is.</p> <p>Investigation: Scientist:</p>	<p>Sound</p> <p>Know how sounds are made. Know that sound is made from vibrations. Know that pitch of the sound differs based on the objects used. Know that the strength of vibration changes the strength of volume. Know that sounds get fainter with distance.</p> <p>Investigation: Scientist: Alexander Graham Bell</p>	<p>Electricity</p> <p>Know that appliances run on electricity. Know the different elements of a circuit. Know how to construct a simple series circuit. Know how to light a lamp in a simple series circuit. Know whether a simple series circuit is complete. Know that a switch opens and closes a circuit. Know some common conductors and insulators.</p> <p>Investigation: Scientist: Thomas Edison</p>
Y5	<p>Living things and their habitats</p>	<p>Animals including humans</p>	<p>Properties and changes of materials</p>	<p>Forces</p> <p>Know what gravity is.</p>	<p>Earth and Space</p> <p>Know how the Earth and other planets move in the solar system.</p>



	<p>Know the life cycle of a mammal. Know the life cycle of an amphibian. Know the life cycle of an insect. Know the life cycle of a bird. Know how to compare the life cycles of different animals. Know the process of reproduction in some plants and animals.</p> <p>Investigation: Compare lifecycles. Scientist: Eva Crane</p>	<p>Know how humans develop to old age.</p> <p>Investigation: Survey of different family members. Scientist:</p>	<p>Know how to group everyday materials based on their properties. Know that some materials will dissolve to liquid to form a solution. Know how solids, liquids and gases can be separated. Know why particular materials are used based on evidence. Know that dissolving, mixing and changes of state are reversible changes. Know that some changes are irreversible.</p> <p>Investigation: Scientist: Stephanie Kwolek</p>	<p>Know how gravity works. Know the effects of resistance and friction. Know how mechanisms can affect forces.</p> <p>Investigation: Scientist: Isaac Newton.</p>	<p>Know how the Moon moves in relation to the Earth. Know that the Sun, Earth and Moon are spherical. Know that the Earth rotates to cause day and night.</p> <p>Investigation: Scientist:</p>
Y6	Living things and their habitats	Evolution and Inheritance	Animals including humans	Electricity	Light
				Know the symbols which represent a simple circuit.	Know that light travels in straight lines. Know what reflection is and how it allows us to see.



	<p>Know that living things are classified into broad groups. Know how to classify living things into broad groups. Know why living things are classified based on specific characteristics.</p> <p>Investigation: Classify living things in local area. Scientist: Carl Linnaeus</p>	<p>Know that living things have changed over time. Know that fossils provide information about living things from years ago. Know that living things produce offspring of the same kind. Know what variation is. Know how plants and animals are adapted to their environment. Know what evolution is.</p> <p>Investigation: Analysing fossils. Scientist: Charles Darwin.</p>	<p>Know the main parts of the human circulatory system. Know the impact of diet on the body's function. Know the impact of exercise on the body's function. Know the impact of drugs on the body's function. Know how nutrients and water are transported through the body.</p> <p>Investigation: Impact on exercise on pulse. Scientist: Marie Maynard Daly.</p>	<p>Know that the brightness of a lamp is affected by the voltage of cells. Know that the volume of a buzzer is affected by the voltage of cells. Know why the functions of components vary.</p> <p>Investigation: How voltage affects components. Scientist: Steve Jobs</p>	<p>Know that we see things because light travels from light sources, to our eyes and to objects. Know that shadows have to have the same shape as the objects that cast them.</p> <p>Investigation: Shadows. Scientist: Isaac Newton.</p>
	Biology	Physics	Chemistry		

