



St. Peter's Catholic Academy Whole School Curriculum Map for Science 2023-2024



A1	Nursery	Reception	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7
7 weeks & 3 days World Space Week	Learn the names of basic body parts. Explore changes within the season of autumn.	Learn the names of a wider range of body parts. Learn about the season of autumn and learn a wider range of vocabulary. Learn about the lifecycle of a Pumpkin. Explore the effects of heat on ingredients when making vegetable soup. Learn the importance of healthy	<u>Animals including Humans (humans)</u> Identify, name, draw and label the basic parts of the human body and say which part of the body is associated with each sense. <u>Seasonal changes (2 weeks)</u> Name the season of autumn and the key changes within this season. Compare/observe deciduous and evergreen	<u>Animals including Humans (human health and lifestyles)</u> 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.	<u>Rocks and Soils</u> Compare and group together different kinds of rocks on the basis of their appearance and simple physical properties Describe in simple terms how fossils are formed when things that have lived are trapped within rock Recognise that soils are made from rocks and organic matter	<u>Electricity</u> Identify common appliances that run on electricity. Construct a simple series electrical circuit, identifying and naming its basic parts, including cells, wires, bulbs, switches and buzzers. Identify 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. Recognise that a switch opens and closes a circuit and associate this with whether or not a	<u>Living things and their habitats</u> Describe the differences in the life cycles of a mammal, an amphibian, an insect and a bird. Describe the life process of reproduction in some plants and animals Learn about the work of naturalists and animal behaviourists - David Attenborough and Jane Goodall.	<u>Electricity</u> Associate the brightness of a lamp or the volume of a buzzer with the number and voltage of cells used in the circuit. Compare and give reasons for variations in how components function, including the brightness of bulbs, the loudness of buzzers and the on/off position of switches. Use recognised symbols when representing a	<u>Safety</u> An introduction into the use of laboratory equipment and rules and basic science skills. <u>Atoms</u> Atomic structure and use of Periodic table.



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		<p>lifestyle choices and oral hygiene.</p>	<p>trees (link to plants).</p> <p>Observe and describe weather and day length associated with autumn.</p>			<p>lamp lights in a simple series circuit.</p> <p>Recognise some common conductors and insulators, and associate metals with being good conductors.</p>		<p>simple circuit in a diagram.</p>	
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A2	Nursery	Reception	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7
7 weeks	<p>Learn that some animals are nocturnal .</p> <p>Learn how we can look after hedgehog s in the wild.</p> <p>Explore the changes as the season changes to winter.</p> <p>Explore changes to ingredien ts when baking</p>	<p>Learn about the season of winter and learn a wider range of vocabulary.</p> <p>Learn that some animals hibernate during the winter.</p> <p>Children will explore what materials a magnet attracts.</p>	<p><u>Animals including Humans (animals)</u> Identify and name a variety of common animals including fish, amphibians, reptiles, birds and mammals.</p> <p>Identify and name a variety of common animals that are carnivores, herbivores and omnivores</p> <p>Describe and compare the structure of a variety of common animals (fish, amphibians, reptiles, birds</p>	<p><u>Animals including Humans (lifecycles)</u> Notice that animals, including humans, have offspring which grow into adults.</p> <p><u>Plants</u> Identify and classify seeds and bulbs.</p> <p>Observe and describe how bulbs grow into mature plants (plant daffodil bulbs).</p>	<p><u>Animals including Humans</u> Identify 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.</p> <p>Identify that humans and some other animals have skeletons and muscles for support, protection and movement.</p>	<p><u>States of matter</u> Compare and group materials together, according to whether they are solids, liquids or gases</p> <p>Observe that some materials change state when they are heated or cooled, and measure or research the temperature at which this happens in degrees Celsius (°C)</p> <p>Identify the part played by evaporation and condensation in the water cycle and associate the rate of evaporation with temperature</p>	<p><u>Animals including humans</u> Describe changes as humans develop from birth to old age.</p> <p>Investigate gestation periods and life spans of different species.</p>	<p><u>Animals including humans</u> Learn about the heart and circulatory system including lungs and blood.</p> <p>Describe the functions of the heart, blood vessels and blood.</p> <p>Describe the ways that water and nutrients and transported within animals, including humans.</p> <p>Learn the effects that diet, alcohol, drugs and exercise can have upon the body.</p>	<p><u>Cells</u> Cell structure and use of microscopes.</p> <p><u>Forces</u> Types of forces.</p> <p>Balanced and unbalanced forces.</p> <p><u>Atoms</u> Separation techniques.</p>



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	gingerbread biscuits.		and mammals including pets).						
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Sp1	Nursery	Reception	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7
5 weeks	Continue to explore seasonal changes in winter. Learn how winter can affect	Continue to learn about the season of winter and learn a wider range of vocabulary. Learn the names of common	<u>Seasonal changes (2 weeks)</u> Name the season of winter and the key changes within this season. Compare/observe	<u>Living things and their habitats</u> Explore and compare the differences between things that are living, dead, and things that have never been alive. Identify that most living things	<u>Forces and Magnets</u> Compare how things move on different surfaces. Notice that some forces need contact between 2 objects, but magnetic forces	<u>Sound</u> Identify how sounds are made, associating some of them with something vibrating. Recognise that vibrations from sounds travel	<u>Forces</u> Explain that unsupported objects fall towards the Earth because of the force of gravity acting between the Earth and the falling object.	<u>Evolution and Inheritance</u> Recognise that living things have changed over time and that fossils provide information about living things that inhabited the	<u>Forces (continued)</u> Types of forces. Balanced and unbalanced forces. <u>Atoms (continued)</u>



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<p>wildlife and make bird feeders. Experience freezing and melting through ice exploration</p> <p>Learn the names of wild animals and where they live.</p> <p>Explore changes to ingredients when making porridge.</p>	<p>birds and participate in big bird watch.</p> <p>Take part in simple investigations to explore what makes ice melt faster.</p> <p>Learn about animals that live in the Arctic and Antarctic and how they are able to survive these conditions.</p> <p>Learn about the exploration of cold</p>	<p>deciduous and evergreen trees (link to plants).</p> <p>Observe and describe weather and day length associated with winter.</p> <p>Materials Distinguish between an object and the material from which it is made.</p> <p>Identify and name a variety of everyday materials, including wood, plastic, glass, metal, water, and rock</p> <p>Describe the simple physical properties of a</p>	<p>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 (local and microhabitats).</p> <p>Identify and name a variety of plants and animals in their habitats, including microhabitats (local and microhabitats).</p>	<p>can act at a distance.</p> <p>Observe how magnets attract or repel each other and attract some materials and not others.</p> <p>Compare and group together a variety of everyday materials on the basis of whether they are attracted to a magnet and identify some magnetic materials.</p> <p>Describe magnets as having 2 poles</p> <p>Predict whether 2 magnets will attract or repel</p>	<p>through a medium to the ear.</p> <p>Find patterns between the pitch of a sound and features of the object that produced it.</p> <p>Find patterns between the volume of a sound and the strength of the vibrations that produced it.</p> <p>Recognise that sounds get fainter as the distance from the sound source increases.</p>	<p>Identify the effects of air resistance, water resistance and friction, that act between moving surfaces.</p> <p>Recognise that some mechanisms including levers, pulleys and gears allow a smaller force to have a greater effect.</p> <p>Learn about how scientists helped to develop the theory of gravitation.</p>	<p>Earth millions of years ago.</p> <p>Recognise that living things produce offspring of the same kind, but normally offspring vary and are not identical to their parents.</p> <p>Identify how animals and plants are adapted to suit their environment in different ways and that adaptation may lead to evolution</p> <p>Learn about the work of palaeontologists and theories of evolution.</p>	<p>Separation techniques.</p>
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		places through the work of Ernest Shackleton.	variety of everyday materials.		each other, depending on which poles are facing.				
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Sp2	Nursery	Reception	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	
5 weeks British Science Week	Learn the names of farm animals. Learn about new life on the farm at spring. Learn the key stages of the	Revisit the lifecycle of a hen in more detail and learn new vocabulary. Learn the lifecycle of a duck. Compare the environment of a farm to previous	<u>Materials (continued)</u> Compare and group together a variety of everyday materials on the basis of their simple physical properties (based upon a range of investigations).	<u>Living things and their habitats (continued)</u> 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	<u>Light</u> Recognise that they need light in order to see things and that dark is the absence of light. Notice that light is reflected from surfaces. Recognise that light from the sun can be dangerous and that there are	<u>Living things and their habitats</u> Recognise that living things can be grouped in a variety of ways Explore and use classification keys to help group, identify and name a variety of living things in their local and wider environment.	<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	<u>Living things and their habitats</u> Describe how living things are classified into broad groups according to common observable characteristics and based on similarities and differences, including micro-organisms,	<u>Energy</u> Types of energy; Efficiency <u>Systems</u> Animal reproduction. Plant reproduction. The skeleton. <u>Reactions</u> Acids and alkali's; neutralisation.	



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<p>lifecycle of a hen.</p> <p>Explore changes within the season of spring.</p>	<p>environmental changes learnt.</p> <p>Explore changes to ingredients when baking bread.</p> <p>Learn about the season of spring and learn a wider range of vocabulary.</p> <p>Introduction to the key stages within the lifecycle of a human.</p> <p>Learn about and discuss healthy lifestyles.</p>	<p><u>Seasonal changes (2 weeks)</u></p> <p>Name the season of spring and the key changes within this season. Compare/observe deciduous and evergreen trees (link to plants).</p> <p>Observe and describe weather and day length associated with spring.</p>	<p>each other (world habitats).</p> <p>Identify and name a variety of plants and animals in their habitats, including microhabitats (world habitats).</p> <p>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.</p>	<p>ways to protect their eyes.</p> <p>Recognise that shadows are formed when the light from a light source is blocked by an opaque object.</p> <p>Find patterns in the way that the size of shadows change.</p>	<p>Recognise that environments can change and that this can sometimes pose dangers to living things.</p>	<p>approximately spherical bodies.</p> <p>Use the idea of the Earth's rotation to explain day and night and the apparent movement of the sun across the sky.</p> <p>Find out about the way that ideas about the solar system have developed.</p>	<p>plants and animals</p> <p>Give reasons for classifying plants and animals based on specific characteristics.</p>	
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Su1	Nursery	Reception	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7
7 weeks	<p>Look at baby photograph and talk about own life story.</p> <p>Introduction to healthy lifestyle choices. Explore different fruits.</p> <p>Learn the name of some animals that live in Africa.</p> <p>Learn about the key stages of</p>	<p>Plant potatoes to use within cooking next half term.</p> <p>Learn about the lifecycle of a strawberry and observe changes. Use strawberries to make jam and observe changes in state.</p> <p>Learn about the lifecycle of a frog.</p>	<p>Plants Identify and name a variety of common wild and garden plants, including deciduous and evergreen trees.</p> <p>Identify and describe the basic structure of a variety of common flowering plants, including trees.</p>	<p>Plants Observe and describe how seeds and bulbs grow into mature plants.</p> <p>Find out and describe how plants need water, light and a suitable temperature to grow and stay healthy.</p>	<p>Plants Identify and describe the functions of different parts of flowering plants: roots, stem/trunk, leaves and flowers.</p> <p>Explore 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.</p> <p>Investigate the way in which water is transported within plants.</p>	<p>Animals including humans Describe the simple functions of the basic parts of the digestive system in humans.</p> <p>Identify the different types of teeth in humans and their simple functions.</p>	<p>Properties and changes of materials (properties of materials) Compare and group together everyday materials on the basis of their properties, including their hardness, solubility, transparency, conductivity (electrical and thermal), and response to magnets.</p> <p>Give reasons, based on evidence from comparative and fair tests, for the particular uses of everyday materials, including metals, wood and plastic.</p>	<p>Living things and their habitats (continued) Describe how living things are classified into broad groups according to common observable characteristics and based on similarities and differences, including micro-organisms, plants and animals</p> <p>Give reasons for classifying plants and animals based on specific characteristics.</p>	<p>Systems (continued) Animal reproduction. Plant reproduction. The skeleton.</p> <p>Reactions (continued) Acids and alkali's; neutralisation.</p>



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	<p>the lifecycle of a butterfly .</p> <p>Learn basic requirements of what plant needs to grow.</p> <p>Plant a sunflower seed and a bean and observe changes.</p>	<p>Revisit the lifecycle of a bean and sunflower in more detail and learn new vocabulary.</p> <p>Revisit the lifecycle of a butterfly.</p>			<p>Explore the part that flowers play in the life cycle of flowering plants, including pollination, seed formation and seed dispersal.</p>			<p><i>Light unit to start at the end of this term (see below).</i></p>	
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Su2	Nursery	Reception	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7
7 weeks Great Science Share	<p>Explore changes within the season of summer.</p> <p>Observe and explore the effects of leaving ice in the sun.</p> <p>Continue to observe changes in plants and will learn about the key stages within the lifecycle</p>	<p>Learn about the season of summer and will look back at all four seasons.</p> <p>Revisit the names of minibeasts. Look closely at worms and make a wormery - observing over time.</p> <p>Learn about bees, their habitats and how they make honey.</p> <p>Learn that some animals live underwater and will talk about the</p>	<p>Plants (continued) Identify and name a variety of common wild and garden plants, including deciduous and evergreen trees.</p> <p>Identify and describe the basic structure of a variety of common flowering plants, including trees.</p> <p>Seasonal changes (2 weeks) Name the season of</p>	<p>Materials Identify and compare the suitability of a variety of everyday materials, including wood, metal, plastic, glass, brick, rock, paper and cardboard for particular uses.</p> <p>Find out how the shapes of solid objects made from some materials can be changed by squashing, bending, twisting and stretching.</p> <p>Find out about people who have developed useful new materials.</p>	<p>Plants (continued) Identify and describe the functions of different parts of flowering plants: roots, stem/trunk, leaves and flowers.</p> <p>Explore 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.</p> <p>Investigate the way in which water is transported within plants.</p>	<p>Animals including humans (continued) Construct and interpret a variety of food chains, identifying producers, predators and prey.</p>	<p>Properties and changes of materials (changes of materials) Know that some materials will dissolve in liquid to form a solution and describe how to recover a substance from a solution.</p> <p>Use knowledge of solids, liquids and gases to decide how mixtures might be separated, including through filtering, sieving and evaporating.</p> <p>Demonstrate that dissolving, mixing and changes of state are</p>	<p>Light Recognise that light appears to travel in straight lines</p> <p>Use the idea that light travels in straight lines to explain that objects are seen because they give out or reflect light into the eye.</p> <p>Explain that we see things because light travels from light sources to our eyes or from light sources to objects and then to our eyes</p>	<p>Radiation Light; Reflection and refraction.</p> <p>Fields The solar system; stars and the moon.</p> <p>Electricity Static charge.</p>





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	<p>of a plant (sunflower/ bean).</p> <p>Explore different forces such as floating and sinking, magnet exploration and will experience activities with air (link to Pentecost).</p> <p>Introduction to the names of common minibeasts.</p>	<p>different habitats that animals are best suited to, drawing upon learning throughout the year.</p> <p>Harvest plants grown.</p>	<p>summer and the key changes within this season. Compare/ observe deciduous and evergreen trees (link to plants).</p> <p>Observe and describe weather and day length associated with summer. Look back at all seasons - name and compare all four seasons.</p>		<p>Explore the part that flowers play in the life cycle of flowering plants, including pollination, seed formation and seed dispersal.</p>		<p>reversible changes.</p> <p>Explain that some changes result in the 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.</p>	<p>Use the idea that light travels in straight lines to explain why shadows have the same shape as the objects that cast them</p>	
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	<p>Search for minibeasts in the garden and talk about the locations that they were found.</p> <p>Learn the names of some common animals found at the seaside. Learn that some animals live underwater.</p> <p>Explore the properties of</p>								
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	<p>natural items found at the seaside.</p> <p>Learn about the impact that plastic pollution can have upon the Ocean.</p>								
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