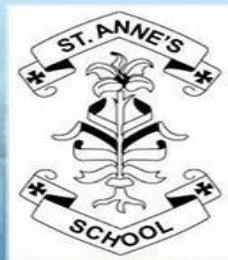


St Anne's

Church of England Primary School



Minds to learn, hearts to care

	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
Year 1	Seasonal Changes Pupils should be taught to: observe changes across the four seasons observe and describe weather associated with the seasons and how day length varies.					
	Seasonal Changes Name the four seasons in order and describe the typical weather in each. Name some activities and events in the four seasons. Describe the appearance of a tree's leaves in each season. Complete a pictogram and use it to answer simple questions. Recall that summer has the most daylight hours and winter has the least daylight hours.	Everyday Materials Name objects and identify the materials they are made from. Recognise that objects are made from materials that suit their purpose. Recall that a property is how a material can be described. Working scientifically Sort objects based on the materials they are made from. Group objects based on their properties.	Sensitive Bodies Draw and label human body parts. Identify the body parts associated with each sense. Compare and group body parts. Begin to recognise patterns in data and use these to answer questions. Record data in a table. Measure using non-standard units.	Comparing Animals Name and describe the physical features of a range of animals. Sort animals into groups based on their similarities and differences. Identify characteristics specific to mammals, birds, reptiles, amphibians and fish. Recall the diets of carnivores, herbivores and omnivores. Working	Introduction to Plants Identify plants and their features. Recall some of the roles that flowering plant parts have. Name some trees and their parts. Identify similarities and differences between deciduous and evergreen leaves. Recall that seeds and bulbs come from plants. Recognise that seeds need water for growth. Working scientifically Raise questions about plants and	Investigating Science through Texts

	<p>Recording data about the temperature across the four seasons.</p> <p>Label a map of the UK with capital cities and seasonal weather symbols.</p>	<p>Suggest ways to test materials for their properties.</p> <p>Make predictions and recognise whether they were accurate.</p> <p>Use their observations to answer questions. Begin to recognise if a test is fair.</p>		<p>scientifically,</p> <p>Use a non-fiction text to find out about specific animals' diets.</p> <p>Recognise that there are different ways to gather data.</p> <p>Record data in a block graph and use this to answer questions.</p> <p>Recognise what the scientist Jane Goodall was known for. Recall some of Jane Goodall's key findings.</p>	<p>respond to suggestions on how to set up an investigation to answer a question.</p> <p>Use a magnifying glass to observe the different parts of flowering plants.</p> <p>Draw and label a diagram of a flowering plant.</p> <p>Use an identification chart to name flowering plants.</p> <p>Sort plants into groups based on specific criteria.</p> <p>Use non-standard units to measure leaf length.</p> <p>Recognise similarities and differences in seeds and bulbs.</p> <p>Recognise that predictions do not always match observations.</p> <p>Identify which plant parts can be eaten. Recognise that scientific research into plants leads to important discoveries.</p>	
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<p>Year 2</p>	<p>Habitats</p> <p>Ask questions to further their knowledge.</p> <p>Recall some life processes, giving examples of how they apply to plants and animals.</p> <p>Classify objects into alive, never been alive, and was once alive, giving reasons for their choices.</p> <p>Match different plants and animals to their habitats.</p> <p>Give examples of how animals use their habitat for food and shelter.</p> <p>Recall that plants produce their own food for energy. Name living things that are producers and place a producer at the beginning of a food chain.</p> <p>Use arrows to show the order in a food chain</p>	<p>Micro-habitats</p> <p>Identify and name a variety of plants and animals.</p> <p>Recall that minibeasts live in microhabitats.</p> <p>Describe microhabitats and their conditions.</p> <p>Describe how microhabitats provide for the basic needs of animals and plants.</p> <p>Describe the job role of a botanist</p> <p>Working Scientifically</p> <p>Group minibeasts and create simple classification keys.</p> <p>Ask questions and recognise that they can be answered in different ways.</p> <p>Gather and record data and use it to answer questions.</p> <p>Plan what observations to make in an experiment. Order the steps of a method. Describe the appearance of</p>	<p>Uses of everyday materials</p> <p>Name objects with the same use that are made from different materials.</p> <p>Name materials that are used to make objects with different uses.</p> <p>Recognise that stretching, twisting, bending and squashing can cause some solid objects to change shape.</p> <p>Name properties that make materials suitable for their use.</p> <p>Working Scientifically</p> <p>Measure using non-standard units.</p> <p>Recording results in a table.</p> <p>Use data to answer a simple question. Record results in a block graph</p>	<p>Life cycle and health</p> <p>Identify stages in the life cycles of different animals, including humans.</p> <p>Describe the basic survival needs of animals.</p> <p>Explain how to take care of personal hygiene.</p> <p>Describe some positive effects of exercise. Identify foods in different food groups.</p> <p>Working scientifically</p> <p>Measure using simple equipment.</p> <p>Record results in a table.</p> <p>Use data to answer a simple question. Research using secondary sources.</p>	<p>Plants</p> <p>Recall that seeds have all the necessary parts inside for plants to grow.</p> <p>Recall that seeds need water and warmth to germinate.</p> <p>Recognise that light is required for healthy plant growth.</p> <p>Sequence the stages of a plant's life cycle.</p> <p>Recognise the importance of healthy plant growth.</p> <p>Describe the influences humans have on plants in the environment.</p> <p>Working scientifically</p> <p>Set up comparative tests.</p> <p>Plan observations and measurements.</p> <p>Use rulers to measure and record stem height.</p>	<p>Plant based materials</p>
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		flowering plants. Use an identification chart to name flowering plants			Record plant growth data in a table. Compare plant growth in different test conditions. Use a magnifying glass to observe and compare plants. Draw diagrams to represent stages of a plant's life cycle.	
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<p>Year 3</p>	<p>Movement and Nutrition</p> <p>Recall the three key functions of the skeleton (movement, support and protection).</p> <p>Describe a vertebrate, invertebrate, endoskeleton and exoskeleton and use this information to group animals.</p> <p>Identify and name the skull, spine, ribs and pelvis on a diagram.</p> <p>Recall that muscles cause movements in the body, some of which we can control consciously.</p> <p>Describe that muscles can cause a movement by shortening and pulling on a bone.</p> <p>Recall that animals, including humans, need to eat food to survive.</p> <p>Describe some examples of how energy is used by the body and make comparisons about the energy demands between people.</p> <p>List some of the seven nutrient groups.</p>	<p>Forces and Magnets</p> <p>Identify examples of pushes, pulls and twists.</p> <p>Define a force including describing, naming and classifying contact and non-contact forces.</p> <p>Describe the relationship between friction and the roughness of a surface.</p> <p>Identify examples of friction being useful or not.</p> <p>Predict attraction and repulsion between like and opposite poles.</p> <p>Identify examples of magnetic and non-magnetic materials.</p> <p>Name some examples of types of magnet and compare their strengths.</p> <p>Describe some examples of the uses of magnets.</p> <p>Working scientifically</p> <p>Use arrows and scientific vocabulary to show the direction of a contact force.</p> <p>Use evidence to support conclusions.</p>	<p>Rocks and Soils</p> <p>Define the term 'rock'.</p> <p>Describe the appearance of different rocks; identifying both crystals and grains.</p> <p>Group rocks by their absorbency, hardness and reaction to acid rain (vinegar).</p> <p>List the different factors that break down rocks.</p> <p>Describe fossil formation and identify fossils in rocks.</p> <p>Describe the work of a palaeontologist.</p> <p>Name, describe and compare some different categories of soil.</p> <p>List some of the benefits of earthworms to the soil.</p> <p>Identify and describe the comparative size and weight of the layers in a sedimentation jar.</p> <p>Working scientifically</p> <p>Use a magnifying glass correctly to observe the appearance of a rock in detail.</p> <p>Use results to choose the appropriate rock type for a specific use, suggest a better choice of rock for a specific use and to predict how a rock will be affected by the weather.</p>	<p>Light and Shadows</p> <p>Recall examples of light sources, objects that do not give out light and that darkness is the absence of light.</p> <p>Describe ways to protect eyes from harm.</p> <p>Describe what happens when light reflects, give examples of reflective surfaces or materials and describe factors that may affect the quality of a reflected image.</p> <p>Describe how shadows form and identify patterns between groups of materials and the shadows produced.</p> <p>Recall factors that affect the way a shadow appears, including what causes shadows to change throughout the</p>	<p>Plant Reproduction</p> <p>Identify what plants need to grow healthily.</p> <p>Describe the structure and function of the parts of flowering plants.</p> <p>Investigate how plants transport water.</p> <p>Describe the life cycle of a flowering plant.</p> <p>Explain seed dispersal methods.</p> <p>Working scientifically</p> <p>Pose relevant questions.</p> <p>Design and record in results tables.</p> <p>Plan a simple enquiry.</p> <p>Complete, read and interpret data in a bar chart.</p> <p>Identify and suggest changes to an enquiry.</p> <p>Use results to draw conclusions.</p>	<p>Does hand span affect grip strength</p>
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	<p>Name foods that are good sources of nutrient groups and describe what they are needed for in the body.</p> <p>Compare two different meals and explain which is more balanced by naming the nutrient groups and commenting on the relevant proportions.</p> <p>Working scientifically</p> <p>Record measurements of different bones and use the data to sort them into size order.</p> <p>Describe some ways scientific research has improved the field of bionics/prosthetics, such as the choice of materials or linking their movement to muscles in the arm.</p> <p>Find relevant data on food packaging and make numerical comparisons.</p>	<p>Identify the variables to change, measure and control.</p> <p>Write a method to explain how to use a magnet to sort and classify materials as magnetic or non-magnetic.</p> <p>Label the axes of a bar chart.</p> <p>Draw bars on a chart accurately.</p> <p>Identify key information from a source.</p> <p>Use more than one source to research a question.</p>	<p>Research and present information on fossil formation using a single source.</p> <p>Use a model of the fossil record to determine the relative age of a fossil, to suggest how a living thing has changed over time and to suggest what living things were around in a certain era.</p> <p>Draw and label the bars on a bar chart.</p> <p>Accurately draw and label the layers of sediment in a sedimentation jar.</p>	<p>day and factors that change the size of a shadow</p> <p>Describe the pattern of changing shadows throughout the day.</p> <p>Describe how the light source's distance affects the shadow's size.</p> <p>Explain why a particular material is appropriate to make a shadow puppet and use knowledge of shadows to animate it.</p> <p>Working scientifically</p> <p>Recall what information needs recording to decide the number of columns in a results table and suggest suitable headings for the results table.</p> <p>Record information in</p>		
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				<p>the correct columns.</p> <p>Identify if a question is testable, explain why and plan ways to answer a testable question.</p> <p>Identify and explain why something is an advantage or disadvantage of a method and suggest an improvement to the experiment.</p> <p>I can describe patterns in data and quote values as evidence of patterns in data.</p> <p>I can identify odd results that do not fit the pattern.</p> <p>I can use patterns to make predictions for missing data.</p>		
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Year 4	Digestion and food	Electricity and Circuits	States of Matter	Sounds and Vibrations	Classification and changing Habitats	How does the flow of liquids compare?
	<p>Describe the functions of the four different types of adult, human teeth, using key vocabulary.</p> <p>Know that good dental care involves brushing their teeth twice a day with toothpaste and a soft toothbrush.</p> <p>Produce a food chain that begins with a plant and has arrows that move up the food chain.</p> <p>Define a producer, predator and prey and identify examples in food chains.</p> <p>Describe digestion, teeth and diets when talking about the observed poo clues.</p> <p>Write a letter that uses a range of scientific vocabulary from the unit.</p> <p>working scientifically, pupils who are secure will be able to:</p> <p>Evaluate a strength or weakness of the digestive system model.</p> <p>Describe an example of evidence that can be used to study teeth.</p> <p>Identify some of the variables that need to be kept the same, predict an outcome</p>	<p>Recall a range of electrical appliances and classify them as mains or battery-powered.</p> <p>Explain why something is either mains or battery-powered.</p> <p>Explain how to test if a circuit works and identify when simple electric circuits will work.</p> <p>Identify symbols for open and closed switches.</p> <p>Predict whether a circuit will work based on whether the switch is open or closed and explain that it works by breaking and completing a circuit.</p> <p>Give examples of how switches are useful.</p> <p>Describe that a material is a good electrical conductor when it is added to an electric circuit and the bulb lights.</p> <p>Describe that a material is a good electrical insulator when it is added to an electric circuit and the bulb does not light.</p> <p>Recall that metals, for example, are good electrical conductors and plastics, for example, are good electrical insulators.</p> <p>Describe that the more</p>	<p>Identify solids, liquids and gases using their properties.</p> <p>Describe melting, freezing, condensing and evaporating.</p> <p>Describe the different stages of the water cycle.</p> <p>Describe how temperature affects the rate of evaporation and therefore the water cycle.</p> <p>Working scientifically</p> <p>Ask relevant questions.</p> <p>Use results to draw simple conclusions.</p> <p>Use thermometers to take accurate measurements.</p> <p>Make predictions for new values.</p> <p>Record findings using labelled diagrams.</p> <p>Research using more than one source.</p>	<p>Describe how sounds are made.</p> <p>Describe how sounds are heard through different mediums.</p> <p>Explain the relationship between vibration strength and volume.</p> <p>Describe the relationship between volume and distance.</p> <p>Describe pitch and how to change it.</p> <p>Explain how insulating materials can be used to muffle sound.</p> <p>Working scientifically</p> <p>To observe closely how different instruments create a sound.</p> <p>Research how whales and dolphins communicate underwater.</p> <p>Present results using a bar chart.</p> <p>Suggest which variables to measure and for how long.</p> <p>Design simple results tables.</p> <p>Identify when results or observations do not</p>	<p>Group animals in various ways, including vertebrates (mammals, birds, reptiles, amphibians, fish) and invertebrates.</p> <p>Group plants in various ways, including flowering and non-flowering plants.</p> <p>Recognise and describe different habitats and their inhabitants.</p> <p>Recognise the impact humans can have on habitats.</p> <p>Recognise the impact of natural disasters on habitats.</p> <p>When working scientifically, pupils who are secure will be able to:</p> <p>Record data in different ways.</p> <p>Apply and create classification keys.</p> <p>Make careful observations.</p> <p>Make and use classification keys.</p>	

	<p>and identify limitations to the experiment. Recall that scientific research needs repeated results before use in society. Identify trends in a predator-prey graph. Draw a results table that has space for observations about different poo samples</p>	<p>bulbs added to a series circuit, the dimmer the bulbs will be. Explain that the bulbs will be dimmer when more are added to a circuit, as less energy is transferred to each of them. Describe precautions for working safely with electricity. Explain some precautions using knowledge of circuit diagrams, electrical components, conductors or insulators. working scientifically,</p> <p>Draw a results table and record a range of appliances under the correct headings 'Mains' or 'Batteries'. Identify and draw simplified electric circuit symbols and use these to draw a simplified circuit diagram. Write a method for the investigation that considers appropriate equipment, ordering clearly written steps and considering safety. Pose questions relating to bulbs in an electrical circuit. Explain why a selected question is testable. Suggest that new inventions will change safety advice</p>		<p>match predictions</p>	<p>Present information in different ways. Research using an information sheet</p>	
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Year 5	Mixtures and Separation	Properties and Changes	Earth and Space	Life Cycles and Reproduction	Unbalanced Forces	Human Timeline	Does the Size of the Asteroid Affect its Impact Strength?
	<p>Define the term 'mixture' and name some common examples.</p> <p>Define the term 'sieving' and explain how sieving separates mixtures.</p> <p>Define the term 'filtering' and explain how filtering separates mixtures.</p> <p>Define the terms 'solution' and 'dissolve' and name some common examples of solutions.</p> <p>Recall some factors that affect the time taken to dissolve.</p> <p>Describe the effect of temperature on the time taken to dissolve.</p> <p>Define the term 'evaporating' and explain how evaporating separates solutions.</p> <p>Identify when sieving, filtering and evaporating should be used.</p>	<p>Determine the hardness of different materials and link this to their uses.</p> <p>Determine the transparency of different materials and link this to their uses.</p> <p>Determine the thermal and electrical conductivity of different materials and link this to their uses.</p> <p>Demonstrate, identify and describe reversible and irreversible changes.</p> <p>Working scientifically</p> <p>Evaluate the hardness test to determine the degree of trust in the results.</p> <p>Plan and draw a table of results.</p> <p>Write a detailed,</p>	<p>Describe the geocentric and heliocentric models.</p> <p>Name and describe the shape of celestial bodies.</p> <p>Describe the orbits of celestial bodies in the Solar System and name the force that keeps them in their orbits.</p> <p>Describe the orbit of the Moon around the Earth and its phases.</p> <p>Explain how day and night occur. Explain how the seasons occur.</p> <p>Explain how a sundial works.</p> <p>List some of the uses of satellites and explain why space junk poses a problem to them.</p> <p>Working Scientifically</p> <p>Pose and identify testable questions about the movement of the celestial bodies in our Solar System.</p>	<p>Describe the life cycle of a plant, including the reproductive stage.</p> <p>Describe the life cycle of a mammal.</p> <p>Describe the life cycle of a bird and compare it with that of a mammal.</p> <p>Describe the life cycle of an amphibian.</p> <p>Describe the life cycle of an insect and compare it with that of an amphibian.</p> <p>Describe asexual reproduction in plants.</p> <p>Working Scientifically</p> <p>Observe and compare equivalent parts in different flowers. Research the life cycles of different mammals.</p> <p>Pose questions to compare the life cycles of different birds.</p> <p>Suggest how one temperature may affect egg hatching.</p> <p>Use data to describe a</p>	<p>Describe gravity and its effects.</p> <p>Describe the relationship between mass and gravity.</p> <p>Describe air resistance and its effects.</p> <p>Describe friction and its effects. Describe water resistance and its effects.</p> <p>Describe the relationship between surface area and air and water resistance.</p> <p>Explain how to make an object aerodynamic or streamlined.</p> <p>Describe the effects of levers, pulleys and simple machines on movement.</p> <p>Working Scientifically</p> <p>Analyse predictions, data and anomalies to write a conclusion.</p> <p>Plan a fair test to</p>		

	<p>Working scientifically</p> <p>Research a mixture to find out what substances it is made from.</p> <p>Draw and annotate a diagram to explain how sieving separates a solid-solid mixture.</p> <p>Identify and justify which type of enquiry to use to answer my testable question.</p> <p>Identify solutions by observing and describing their appearance.</p> <p>Suggest which variables to change, measure and control when investigating how temperature affects the time taken to dissolve.</p>	<p>organised and easy to follow method.</p> <p>Write a prediction using prior knowledge of the states of matter.</p> <p>Analyse observations about rusting and use them to support a conclusion.</p> <p>Measure accurately in centimetres.</p>	<p>Use a model to represent the Solar System.</p> <p>Design and draw a table to record data on moons.</p> <p>Accurately draw day and night and seasons diagrams.</p> <p>Calibrate a sundial using a compass and torch and use it to measure time.</p> <p>Analyse patterns in temperature data for the Earth and use them to predict temperature values for the Earth in the future.</p>	<p>relationship and make predictions.</p> <p>Represent root growth over time on a line graph.</p>	<p>investigate air resistance.</p> <p>Write a method. Evaluate a method and judge the degree of trust.</p> <p>Design a results table.</p> <p>Calculate the mean average from repeat data.</p> <p>Draw and annotate a diagram.</p> <p>To draw an accurate line graph.</p>		
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Year 6	<p align="center">Light</p> <p>Pupils should be taught to:</p> <p>Recognise that light appears to travel in straight lines</p>	<p align="center">Evolution and inheritance</p> <p>Pupils should be taught to:</p> <p>Recognise that living things have changed</p>	<p align="center">Animals inc Humans</p> <p>Pupils should be taught to:</p> <p>Identify and name the main parts of the human</p>	<p align="center">Electricity</p> <p>Pupils should be taught to:</p> <p>Associate the brightness of a lamp or the volume of a</p>	<p align="center">Living things and their Habitats</p> <p>Pupils should be taught to:</p> <p>Describe how living things are classified</p>	<p align="center">Everyday Materials</p> <p>Pupils should be taught to:</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>Use the idea that light travels in straight lines to explain why shadows have the same shape as the objects that cast them.</p>	<p>over time and that fossils provide information about living things that inhabited the 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>circulatory system, and describe the functions of the heart, blood vessels and blood</p> <p>Recognise the impact of diet, exercise, drugs and lifestyle on the way their bodies function</p> <p>Describe the ways in which nutrients and water are transported within animals, including humans.</p>	<p>buzzer with the number and voltage of cells used in the circuit</p> <p>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</p> <p>Use recognised symbols when representing a simple circuit in a diagram.</p>	<p>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>	

