















Park Road Science Overview










YEAR	Autumn		Spring		Summer	
1	<u>Who am I? (Animals including humans)</u>	<u>Celebrations (Materials)</u>	<u>On Safari (Animals including humans)</u>	<u>Polar places (Animals including humans and materials)</u>	<u>Plants and animals</u>	<u>Holidays Seasonal change</u>
Scientific enquiry 	 Comparative/Fair testing	 Identifying and classifying	 Pattern seeking	 Research	 Identifying and classifying	 Identifying and classifying
Working Scientifically skills KSI	Ask simple questions and recognise that they can be answered in different ways. Observe closely, using simple equipment. Perform simple tests. Identify and classify. Use their observations and ideas to suggest answers to questions. Gather and record data to help in answering questions.					
English links	To write labels for different parts of the body	To explain choices of classifying. To write observations.	To create questions to ask about invertebrates such as 'Are snails born with shells?'	To research a polar animal	To label different parts of a tree	To research a marine animal. To write months and seasons.
Maths links	Use a simple table to record results Use a tally chart	Sorting objects into groups	To classify invertebrates	To carry out a fair test and look at results	To create a tally chart	To use test results to make links to observations.
Stem links	To make a smell pot and offer reasons as to what makes the smell.	To create a drum using different materials.	To use hand lenses to make observations	To make observations about what changes happen to ingredients when they become hot.	To create a bird feeder	To apply knowledge of materials to make a pair of sunglasses.









YEAR	Autumn		Spring	Summer	
2	<u>Healthy me</u>	<u>Materials - Squash, bend, twist, stretch</u>	<u>Materials monster</u>	<u>Plants</u> <u>Little Masterchefs</u> <u>Our local environment</u>	
Scientific enquiry 	 Identifying and classifying	 Identifying and classifying	 Identifying and classifying	 Observation over time	 Identifying and classifying
Working Scientifically skills KSI	Asking questions, observing and measuring, using books, photos and the Internet to find answers, recording information, looking for patterns - sorting and grouping, performing simple tests and using equipment, saying why a test is unfair, explaining results and what we have found out.				
English links	To write a plan for a healthy snack	Record observations		Instructions on how to grow a daffodil/tulip and explaining what it needs to survive	To write a plan for a healthy meal Write a report about an animal
Maths links	To create a pictograph to show favourite types of foods.	To carry out tests into the properties of materials and record data numerically.		Measure the growth of a bulb	To classify food into different groups. To record data in a tally chart
Stem links	To create an exercise plan	To create a model by squashing, bending, twisting and stretching	To make a materials monster	Grow bulbs.	Choose the best material to make a chef's hat

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3	<u>Rocks and Fossils</u>	<u>Humans and animals</u>	<u>Light and shadows</u>	<u>Forces and magnets</u>	<u>Plants</u>	<u>The Nappy Challenge</u>
Scientific enquiry 	 Identifying and classifying	 Research	 Pattern seeking	 Identifying and classifying  Comparative/Fair testing	 Observation over time	 Pattern seeking
Working Scientifically skills KS2	<p>Ask relevant questions and use different types of scientific enquiries to answer them.</p> <p>Gather, record, classify and present data in a variety of ways to help in answering questions.</p> <p>Record findings using simple scientific language, drawings, labelled diagrams, keys, bar graphs and tables.</p> <p>Report on findings from enquiries, including oral and written explanations, displays or presentations of results and conclusions.</p> <p>Set up simple practical enquiries, comparative and fair tests.</p> <p>Make systematic and careful observations and, where appropriate, take accurate measurements using standard units, using a range of equipment including thermometers and data loggers.</p> <p>Use results to draw simple conclusions, make predictions for new values, suggest improvements and raise further questions.</p> <p>Identify differences, similarities or changes related to simple scientific ideas and processes.</p> <p>Use straightforward scientific evidence to answer questions or to support their findings.</p>					







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English links	To research and write a biography of Mary Anning.	To label a diagram of the human skeleton Write a letter to the mini makers	To write conclusions from investigations	Write instructions for a game	To annotate growth of a seedling To dissect a flower and identify the parts Write a poem	Ask questions based on previous knowledge
Maths links	To classify rocks based on Friedrich Mohs' scratch test scale	To gather data in a tally chart and convert the results into a bar graph.	To measure shadows	To use my results to draw conclusions.	To carry out fair tests over a period of time and record my observations in a table. To gather data about plants within the local environment.	Gather data
Stem links	Create a mould fossil	To make different movements with my body and explain which muscles I am using.	To investigate how shadows behave, finding ways to make shadows move and make them longer and shorter.	To explore magnetism and a variety of materials.	To set up a comparative test to investigate the way in which water is transported within plants.	To create a nappy using a variety of materials.

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4	<i>States of matter</i>	<i>Electricity</i>	<i>Sound</i>	<i>Teeth and Digestion</i>	<i>Habitats</i>	<i>Bridges</i>
Scientific enquiry 	 Observation over time	 Comparison and fair testing	 Comparison and fair testing	 Identifying and classifying	 Pattern seeking	 Pattern seeking
Working Scientifically skills KS2	<p>Ask relevant questions and use different types of scientific enquiries to answer them.</p> <p>Gather, record, classify and present data in a variety of ways to help in answering questions.</p> <p>Record findings using simple scientific language, drawings, labelled diagrams, keys, bar graphs and tables.</p> <p>Report on findings from enquiries, including oral and written explanations, displays or presentations of results and conclusions.</p> <p>Set up simple practical enquiries, comparative and fair tests.</p> <p>Make systematic and careful observations and, where appropriate, take accurate measurements using standard units, using a range of equipment including thermometers and data loggers.</p> <p>Use results to draw simple conclusions, make predictions for new values, suggest improvements and raise further questions.</p> <p>Identify differences, similarities or changes related to simple scientific ideas and processes.</p> <p>Use straightforward scientific evidence to answer questions or to support their findings.</p>					
English links	To describe the properties of a solid, liquid and gas. To explain how evaporation and condensation are part of the water cycle.	To explain which circuits will and won't work	Explain how we hear things using scientific vocabulary	To label a diagram of the digestive system and describe how it works. Non-chronological report about teeth	Persuasive writing - environmental changes	To research an animal and investigate how it has built its home.

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Maths links	To use thermometers to take temperatures To record temperatures within graphs accurately	To collate data through a tally chart and record this into a graph	Measure and record regularly the distance from the sound source and how the sound changes until they can no longer hear the sound, using a trundle wheel.		To produce a tally chart of the invertebrates identified in different habitats within the school environment. To use numerical data to create a bar graph.	To record data in a tally chart and use this to create a bar graph.
Stem links	To create a plastic bag water cycle and show what is happening. To draw diagrams and use written examples to show the processes of evaporation and condensation.	To create citrus fruit batteries and test them within a circuit	To create an instrument and investigate the pattern between vibrations and volume of sound To create a guitar using recycled materials and change the volume and pitch of the sound.	To find out how drinks affect our teeth		To use spaghetti and mini marshmallows to make the different shapes to carry out comparative tests to find out which one keeps its shape best

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5	<u>Forces</u>	<u>Materials - Reversible and Irreversible</u>	<u>Earth and Space</u>	<u>Materials</u>	<u>Life cycles</u>	<u>Growing up/old</u>
Scientific enquiry 	 Comparative and fair testing	 Comparative and fair testing	 Observation over time	 Comparative and fair testing	 Research  Observation over time	 Identifying and classifying
Working Scientifically skills KS2	<p>Plan different types of scientific enquiries to answer questions, including recognising and controlling variables where necessary.</p> <p>Take measurements, using a range of scientific equipment, with increasing accuracy and precision, taking repeat readings when appropriate. Record data and results of increasing complexity using scientific diagrams and labels, classification keys, tables, scatter graphs, bar and line graphs. Use test results to make predictions to set up further comparative and fair tests. Report and present findings from enquiries, including conclusions, causal relationships and explanations of and degree of trust in results, in oral and written forms such as displays and other presentations. Identify scientific evidence that has been used to support or refute ideas or arguments.</p>					
English links	To suggest ways to plan an experiment to find out which surface has the most friction when an object is moved across it.		To describe what the Sun, Earth and Moon are using appropriate vocabulary.		To follow instructions to grow a new plant from cuttings.	To name the different stages in the human life cycle and put them in order.

<p>Maths links</p>	<p>To create a lever, recording different masses, transferring data to a line graph</p>	<p>Record results in a table</p>	<p>Understanding the concept of distances between planets. To carry out an investigation into Moon craters measuring width and depth</p>	<p>Line graphs</p>	<p>Measuring time taken for metamorphosis</p>	<p>To create a bar chart to show the gestation period of a range of animals and use this to answer questions. To compare gestation periods in animals with the female animal's weight and use this to draw conclusions.</p>
<p>Stem links</p>	<p>To create simple pulleys</p>	<p>To inflate a balloon using a mix of vinegar and baking soda</p>	<p>Create a model of the solar system</p>	<p>To filter water through designing an investigation</p>	<p>To explain the contribution of some famous naturalists to our understanding of nature and the importance of humans looking after the environment.</p>	

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6	<i>Animals including humans</i>	<i>Living things</i>	<i>Light</i>	<i>Electricity</i>	<i>Evolution</i>
Scientific enquiry 	 Observation over time	 Identifying and classifying	 Comparative and fair testing	 Pattern seeking	 Research
Working Scientifically skills ks2	<p>Plan different types of scientific enquiries to answer questions, including recognising and controlling variables where necessary.</p> <p>Take measurements, using a range of scientific equipment, with increasing accuracy and precision, taking repeat readings when appropriate. Record data and results of increasing complexity using scientific diagrams and labels, classification keys, tables, scatter graphs, bar and line graphs. Use test results to make predictions to set up further comparative and fair tests. Report and present findings from enquiries, including conclusions, causal relationships and explanations of and degree of trust in results, in oral and written forms such as displays and other presentations. Identify scientific evidence that has been used to support or refute ideas or arguments.</p>				
English links	Journey of a red blood cell	Information about Carl Linnaeus and John Snow	Explain how a rainbow is formed. Explain how a periscope works Explanation text about light and how it travels		Information text - The Peppered Moth
Maths links	Time heart rates and compare before and after exercise. To be able to record pulse	Classification keys	Use timers, tables and measuring equipment to record results Using tables and graphs to show brightness of bulbs	To plan, set up and carry out a fair test to see how changing the wire in a circuit affects the	

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	<i>accurately: Calculate bpm (beats per minute) - take pulse for 15 seconds multiply by four by 2.</i>			<i>brightness of a bulb.</i>	
<i>Stem links</i>	<i>Design a species adapted to a particular habitat or of the future</i>	<i>To reproduce mushrooms using spores</i>	<i>Make a periscope Make shadow puppets</i>	<i>To create a steady hand game</i>	<i>Battle of the Beaks investigation</i>