

KNOWLEDGE PROGRESSION YEAR GROUP OVERVIEW – Science (Physics)

Science: Physics							
<p>At Key Stage 1 the knowledge progression takes full account of the National Curriculum’s Physics strands of:</p> <ul style="list-style-type: none"> ○ Seasonal change <p>At Key Stage 2 the knowledge progression takes full account of the National Curriculum’s Physics strands of:</p> <ul style="list-style-type: none"> ○ Forces ○ Light ○ Electricity ○ Sound ○ Earth and space 							
Skills are dependent on specific knowledge. A skill is the capacity to perform and in order to perform a deep body of knowledge needs to be acquired and retained.							
Knowledge statements should be what pupils retain for ever. In other words, this knowledge is within their long-term memory and will be retained.							
When considering pupils’ improvement in subject specific vocabulary, pupils could be provided with a knowledge organiser which contains all words used for geography for their age group.							
	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	
<p>Seasonal Change EYFS</p> <p>Understand some important processes and changes in the natural world around them, including the seasons and changing states of matter.</p>	<ul style="list-style-type: none"> • Name the seasons and know about the type of weather in each season 						
<p>Forces</p>			<ul style="list-style-type: none"> • Know about and describe how objects move on different surfaces • Know how a simple pulley works and use to on to lift an object • Know how some forces require contact and some do not, giving examples • Know about and explain how magnets attract and repel Sp3.5: Predict whether magnets will attract or repel and give a reason 			<ul style="list-style-type: none"> • Know what gravity is and its impact on our lives • Identify and know the effect of air and water resistance • Identify and know the effect of friction • Explain how levers, pulleys and gears allow a smaller force to have a greater effect 	
<p>Light</p>			<ul style="list-style-type: none"> • Know that dark is the absence of light • Know that light is needed in order to see and is reflected from a surface 			<ul style="list-style-type: none"> • Know how light travels • Know and demonstrate how we see objects • Know why shadows have the same shape as the object that casts them 	

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			<ul style="list-style-type: none"> • Know and demonstrate how a shadow is formed and explain how a shadow changes shape • Know about the danger of direct sunlight and describe how to keep protected 			<ul style="list-style-type: none"> • Know how simple optical instruments work e.g. periscope, telescope, binoculars, mirror, magnifying glass etc.
Electricity				<ul style="list-style-type: none"> • Identify and name appliances that require electricity to function • Construct a series circuit • Identify and name the components in a series circuit (including cells, wires, bulbs, switches and buzzers) • Predict and test whether a lamp will light within a circuit • Know the function of a switch • Know the difference between a conductor and an insulator; giving examples of each 		<ul style="list-style-type: none"> • Compare and give reasons for why components work and do not work in a circuit • Draw circuit diagrams using correct symbols • Know how the number and voltage of cells in a circuit links to the brightness of a lamp or the volume of a buzzer
Sound				<ul style="list-style-type: none"> • Know how sound is made, associating some of them with vibrating • Know how sound travels from a source to our ears • Know the correlation between pitch and the object producing a sound • Know the correlation between the volume of a sound and the strength of the vibrations that produced it • Know what happens to a sound as it travels away from its source 		
Earth and Space					<ul style="list-style-type: none"> • Know about and explain the movement of the Earth and other planets relative to the Sun • Know about and explain the movement of the Moon relative to the Earth • Know and demonstrate how night and day are created • Describe the Sun, Earth and Moon (using the term spherical) 	

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