WHOLE SCHOOL KNOWLEDGE PROGRESSION DOCUMENT – PHYSICS

	There are contact and non-contact forces; these affect the motion of objects	Day, night, month, seasonal change & year are caused by the position and movement of the Earth	Light & sound can be reflected & absorbed and enable us to see & hear	Electricity can make circuits work and can be controlled to perform useful functions
ELG	**Children know about similarities and differences in relation to places, objects, materials and living things.**			
YEAR 1 & 2		Observe changes across the four seasons		
		Observe and describe weather associated with the seasons and how day length varies		
YEAR 3 & 4	Compare how things move on different surfaces		Recognise that they need light in order to see things and that dark is the absence of light	Identify common appliances that run on electricity
	Notice that some forces need contact between two objects, but magnetic forces can act at a distance		Notice that light is reflected from surfaces	Construct a simple series electrical circuit, identifying and naming its basic parts, including cells, wires, bulbs, switches and buzzers
	Observe how magnets attract or repel each other and attract some materials and not others		Recognise that light from the sun can be dangerous and that there are ways to protect their eyes	Recognise some common conductors and insulators, and associate metals with being good conductors
	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		Recognise that shadows are formed when the light from a light source is blocked by a solid object	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
	Describe magnets as having two poles		Find patterns in the way that the size of shadows change	Recognise that a switch opens and closes a circuit and associate this with whether or not a lamp lights in a simple series circuit
	Predict whether two magnets will attract or repel each other, depending on which poles are facing		Identify how sounds are made, associating some of them with something vibrating	
			Recognise that vibrations from sounds travel through a medium to the ear	
			Recognise that sounds get fainter as the distance from the sound source increases	
			Find patterns between the pitch of a sound and features of the object that produced it	
			Find patterns between the volume of a sound and the strength of the vibrations that produced it	
YEAR 5 & 6	Explain that unsupported objects fall towards the Earth because of the force of gravity acting between the Earth and the falling object	Describe the movement of the Earth, and other planets, relative to the Sun in the solar system	Recognise that light appears to travel in straight lines	Associate the brightness of a lamp or the volume of a buzzer with the number and voltage of cells used in a circuit
	Identify the effects of air resistance, water resistance and friction, that act between moving surfaces	Describe the movement of the Moon relative to the Earth	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	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
	Recognise that some mechanisms, including levers, pulleys and gears, allow a smaller force to have a greater effect	Describe the Sun, Earth and Moon as approximately spherical bodies	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	Use recognised symbols when representing a simple circuit in a diagram
		Use the idea of the Earth's rotation to explain day and night and the apparent movement of the sun across the sky	Use the idea that light travels in straight lines to explain why shadows have the same shape as the objects that cast them	