

<u>Forces, Magnets Sound and Electricity</u>	Nursery	Reception	Year 1	Year 2	Year 3 Forces and Magnets Su2 Roald Dahl	Year 4 Sounds Su1 Ancient Greece	Year 4 Electricity Su2 Transition
<p><b>Curriculum objectives</b> Taken from Long Term Plans and NC</p> <p>Forces and Magnets as well as Electricity as not taught in EYFS and KS1. However, they are taught inexplicitly through CIP, the use of technology and general discussions. Magnets are taught in Early Years through CIP time and the investigation boxes are accessible for children to use.</p> <p><b><u>Understanding the World: 3-4 years</u></b> Explore and talk about different forces they can feel.</p> <p><b><u>Understanding the World: 4-5 years</u></b> Describe what they see, hear and feel whilst outside</p>					<p>Compare how things move on different surfaces. Notice that some forces need contact between two objects, but magnetic forces can act at a distance. Observe how magnets attract or repel each other and attract some materials and not others. Compare and group together a variety of everyday materials based on whether they are attracted to a magnet, and identify some magnetic materials. Describe magnets as having two poles Predict whether two magnets will attract or repel each other, depending on which poles are facing.</p>	<p>Identify how sounds are made, associating some of them with something vibrating. Recognise that vibrations from sounds travel through a medium to the ear. 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. Recognise that sounds get fainter as the distance from the sound source increases.</p>	<p>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 lamp lights in a simple series circuit. Recognise some common conductors and insulators, and associate metals with being good conductors.</p>
<b>Key Vocabulary</b>	Battery, electricity, switch, push, pull, attract, repel, magnet, battery, loud, volume, speaker, plug, on, off, press, button, move, charge, magnetic, metal				Force, push, pull, speed up, slow down, change shape, change direction, movement, direction, friction, magnets, magnetic, surface, magnetism, north pole, south pole, repel, attract,	Volume, Vibration, Wave, Pitch, Tone, Speaker  Sound, vibrations, medium, insulation, travel, instrument	Cells, Wires, Bulbs, Switches, Buzzers, Battery, Circuit, Series, Conductors, Insulators  crocodile clips, , symbols, , plastic, metal, appliance, component

<p><b>Enquiry and Investigation</b></p>	<p>Use of magnetic toys during CIP as well as an investigation box of magnets which children are able to freely use.</p> <p>The children will also use various electronic and man-made toys which require electricity and forces i.e. light box, iPads and computers, battery powered cars, metal cars for pushing and pulling, magnetic wooden train tracks etc.</p>			<p><b>Friction Investigation-</b> Measuring the force needed to pull a weight across different surfaces e.g. carpet, grass.</p> <p><b>Investigation into magnetic materials-</b> Answering questions: What materials are magnetic? Are all metals magnetic? Build on previous learning about magnets from KS1</p> <p>WS- Uses appropriate equipment and measures with reasonable accuracy With help decides how to set up a fair test and control variables Makes careful observations Records data</p>	<p>Sound investigation - Investigation into the effect of distance on human hearing.</p> <p>WS - Setting up enquires and choosing equipment; Carefully observing and accurately measuring</p>	<p>Investigate a variety of objects to see what makes a good insulator and a good conductor.</p> <p>WS - Setting up fair tests; Choosing how to record information</p>

WS working scientifically