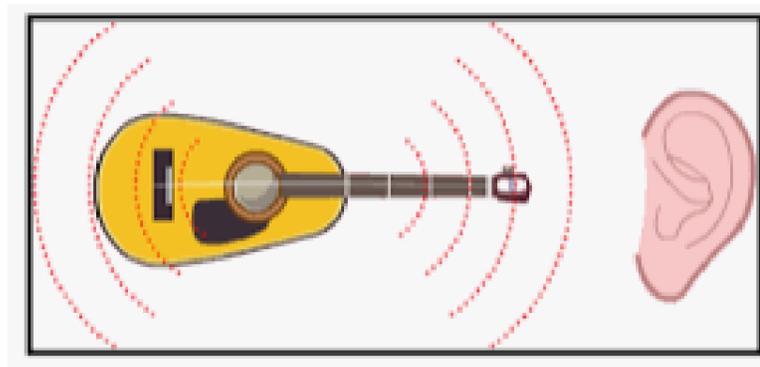
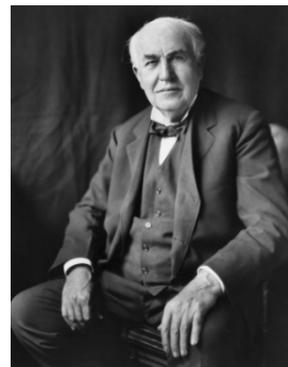
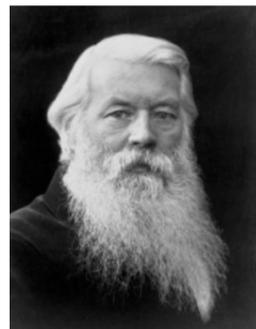


Turn It Up - Sound & Electricity

Year 4 Spring 1

	Prior Knowledge	New Knowledge	Future Knowledge
Science	Identify and compare the suitability of a variety of everyday materials, including wood, metal, plastic, glass, brick, rock, paper and cardboard for particular uses. Find out how the shapes of solid objects made from some materials can be changed by squashing, bending, twisting and stretching. (Y2 - materials) Recognise that they need light in order to see things and that dark is the absence of light. Notice that light is reflected from surfaces. Recognise that light from the sun can be dangerous and that there are ways to protect their eyes. Recognise that shadows are formed when the light from a light source is blocked by an opaque object. Find patterns in the way that the size of shadows changes. (Y3 - Light)	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	Recognise that light appears to travel in straight lines. 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. 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 the idea that light travels in straight lines to explain why shadows have the same shape as the objects that cast them. (Y6)
Design & Technology	Make structures more stable by giving them a wide base. Prototype frame structures. Measure and mark accordingly to 1cm. Cut slots. Cut internal shapes (if necessary). (Y3)	Think ahead about the order of their work and decide upon tools and materials. Develop more than one design or adaptation of an initial design. Propose realistic suggestions as to how they can achieve their design ideas. Incorporate a circuit with a bulb or buzzer into a model. Create shell or frame structures, strengthen frames with diagonal struts.	Associate the brightness of a lamp or the volume of a buzzer with the number and voltage of cells used in the circuit. 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. Use recognised symbols when representing a simple circuit in a diagram. (Y6)

Key Questions	Key Individuals	Key Vocabulary
How are sounds made? How do vibrations change with the volume and pitch? Does sound travel in a similar way to light? How can you build an electrical circuit? What are common conductors and insulators?	Thomas Edison (1847-1931) the first person to invent a light bulb in 1879. However, his invention was not very effective. Lewis Howard Latimer (1848-1928) improved the original invention of the lightbulb in 1881. Joseph Swan (1828-1914) an English inventor. He is known as an inventor of a different type of light bulb, in 1881.	Vibration - quickly moving back and forth (or up and down) about a point of equilibrium. Volume - the measure of loudness. Pitch - how high or low the sound is. Circuit - a complete path around which electricity can flow. Conductor - substances that electricity can pass through without difficulty. Insulator - a material that is a poor conductor of electricity, heat, or sound.



Electrical Circuit Components



Curriculum Leaflet

Year 4 Spring 1

Year 4 will be exploring the topic: 'Turn it Up - Sound and Electricity'. This unit of work will have a specific focus on developing the children's knowledge, skills and understanding in Sound and Electricity. Children will learn to identify how sounds are made and how to construct a simple series electrical circuit.

Maths	English	Home
<p>Maths Unit</p> <p><u>Number - Multiplication and Division</u></p> <ul style="list-style-type: none"> Using factor pairs Multiplying and dividing by 10 and 100 Multiplication and division related facts Informal written methods for multiplication Multiplying a 2-digit number by a 1-digit number Multiplying a 3-digit number by a 1-digit number Dividing a 2-digit number by a 1-digit number Dividing a 3-digit number by a 1-digit number Correspondence problems and efficient multiplication <p><u>Measurement - Length and Perimeter</u></p> <ul style="list-style-type: none"> Measuring in kilometres and metres Using equivalent lengths Calculating perimeter on a grid Calculating perimeter of rectilinear shapes Calculating perimeter of regular and irregular polygons 	<p>We will be studying:</p> <p>'Coming to England' by Floella Benjamin</p> <p>'Windrush Child' by John Agard</p> <p><u>Genre</u></p> <p><u>Poetry</u></p> <ul style="list-style-type: none"> To write a free verse, personal narrative poem based on the structure of 'Windrush Child', describing what it feels like to leave and go to a new place. Use increasingly effective similes to create imagery Use language with increasing effect: choice of nouns, adjectives, adverbs and verbs, alliteration. Learn and perform their own poem to an audience. <p><u>Letter</u></p> <ul style="list-style-type: none"> Writing as a child on Empire Windrush that has recently arrived in the UK. Use of fronted adverbials, expanded noun phrases and coordinating and subordinating conjunctions. 	<p>Families can support learning in the following ways:</p> <ul style="list-style-type: none"> Visit BBC Bitesize to learn more about what the Windrush generation is. Visit the Science museum or take a virtual tour to learn more about sound and electricity. Look around your home to discover how things work and how they are powered. Experiment with making different sounds and how we experience them. Accessing weekly home learning tasks via Google Classroom Supporting the development of times tables skills via regular practice on Times Tables Rock Stars Reading daily at home Accessing MyMaths for weekly maths homework (KS2)