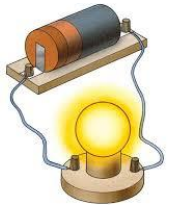
MEDIUM TERM PLANNING | UNIT OBJECTIVES

Year Group: 4

Nunthorpe Primary Academy

Electricity



Science Intent	
Through science, children are taught to be curious about the world around them. Our curriculum is stimulating, engaging and challenging and ensures full coverage of the National Curriculum. It fosters a sense of wonder about natural phenomena. Children develop and use a range of scientific skills including questioning, fair-testing and drawing conclusions. Scientific vocabulary is taught and built upon as topics are revisited progressively in different year groups and across key stages.	
English – National Curriculum/Skills	Overview
Genres: • Debate • Formal persuasive writing • Instructions -Children to develop understanding of debate and how to present an argument accordingly. -Children to write a formal persuasive argument around an issue relating to electricity on either a national or international scale. Following this, children will write a persuasive letter to summarise their views of a chosen topic -Children build an understanding of positive and negative implications around the subject -Children express their viewpoint and opinion through writing -Children organise paragraphs around a theme within their writing -Children continue to extend the range of sentences with more than one clause and to consistently edit their work to improve their writing -Children use simple organisational devices (headings and sub-headings). -Children continue assessing the effectiveness of their own and other's writing and suggest improvements through peer marking	Children participate in two debates (at the start and end of term) and explore the rules of debate. They will determine positive and negative points for the given topic justify their reasoning using point, evidence, and explain. Following the debate, children write a balanced argument to highlight the positive and negative points addressed and extend their reasoning using suitable sentence types and choice of language. Children justify their own opinion and write in a formal, persuasive manner. Children include scientific factors for the argument and the strengths/implications they hold for the chosen topic.

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-Children will write a set of instructions for a board game, including safety features, linking to electricity topic.	Children design and create their own board game, using electric components. From this, children write a set of instructions for the game.

Design Tech – National Curriculum/Skills	Overview
Design and create an electric board game. -Children will construct a simple series electrical circuit, using bulbs, batteries, switches and buzzers. -Children will cut and join a variety of construction materials, such as wood, card, plastic, reclaimed materials and glue. -Children will gather information about users' needs and wants, and develop design criteria to inform the design of products that are fit for purpose. -Children will generate, develop, model and communicate realistic ideas through discussion and, as appropriate, annotated sketches, cross-sectional and exploded diagrams. -Children will select and use tools and equipment to cut, shape, join and finish with some accuracy. -Children will connect simple electrical components and a battery in a series circuit to achieve a functional outcome. -Children will be able to program a standalone control box, microcontroller or interface box to enhance the way the product works. -Children will investigate and analyse a range of existing battery-powered products, including pre-programmed and programmable products. -Children to evaluate their ideas and products against their own design criteria and identify the strengths and areas for improvement in their work. -Children will understand and use computing to program and control products containing electrical systems, such as series circuits incorporating switches, bulbs and buzzers. -Children to use technical vocabulary relevant to the project.	In small groups, children will create an electric board game in collaboration with their science topic. Children will effectively research past/current games and will create their own, reflecting on their own research and data collection. Children will discuss materials and design with their group and will showcase their game to their peers.

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British Values	Debate & Discussion Opportunities	Trips and Experiences	Possible Linked Texts
Democracy -Respect all views made by peers during debate. -Participate willingly -Express views confidently during classroom debate.	"How sustainable is electrical energy?" "Should school use alternative energy supplies?" The Energy Debate – "Which resource is best?"	Y4 Residential to Whitby	