St Mary's C of E Primary School **Curriculum Progression – Design and Technology ELECTRONICS**

Pupils are assessed on their knowledge and historical enquiry skills through their study of the Big Ideas across historical periods and events. In this progression grid, expected knowledge and skills in each year group are colour-coded. The skills are based on the National Curriculum. What we want the children to know, understand and remember is based on our curriculum maps.

SKILLS **KNOWLEDGE & UNDERSTANDING**

Year	**Vocabulary**	**Assessment Opportunities**	***Big Idea 1*** **Skills and expertise** I learn and apply practical and technical skills.	***Big Idea 2*** **Design** I use my creativity ad experimentation to design new products and solve problems in the real world.	***Big Idea 3*** **Evaluate** I evaluate my designs and products in order to improve them.
3	Attract Component constructive0criticism Design criteria Evaluation Feedback Motion repel	Research Design Make Evaluate	Investigate and analyse existing products and those he/she has made, considering a wide range of factors.	Create designs using annotated sketches and cross-sectional diagrams. Use knowledge of existing products to design his/her own functional product.	Investigate and analyse existing products and those he/she has made, considering a wide range of factors.
4	Battery Bulb Cell Component Conductor Design criteria Electrical item & electricity Function Insulator Series circuit Switch Test wire	Research Design Make Evaluate	Understand and use electrical systems in products.	Use knowledge of existing products to design a functional and appealing product for a particular purpose and audience. Create designs using exploded diagrams.	Apply techniques he/she has learnt to strengthen structures and explore his/her own ideas.
5	Battery Buzzer Circuit Component Conductor Design criteria Function Insulator LED Modify Parallel circuit Series circuit	Research Design Make Evaluate	Understand how to use more complex mechanical and electrical systems.	Build more complex 3D structures and apply his/her knowledge of strengthening techniques to make them stronger or more stable.	Make detailed evaluations about existing products and his/her own considering the views of others to improve his/her work.

	switch				
6	Assemble Battery Battery pack Bulb Bulb holder Buzzer Circuit Circuit symbol Component Conductor Design criteria Evaluation Function Insulator LED Perspective drawing Series circuit Side view switch	Research Design Make Evaluate	Use technical knowledge accurate skills to problem solve during the making process. Use a wide range of methods to strength, stiffen and reinforce complex structures and can use them accurately and appropriately.	Generate, develop, model and communicate his/her ideas through discussion, annotated sketches, cross-sectional diagrams.	Apply his/her knowledge of materials and techniques to refine and rework his/her product to improve its functional properties and aesthetic qualities.