Spring Term 2023-24

Spring Inventions	Engages with debate	Vocabulary	Technical Knowledge	Research	Design	Make	Evaluate
KS1 **Electricity**	**How can electricity be used to help us?**	Circuit Electricity Faults Batteries Design Wire Component	Know what a series circuit is. Know that the cell or battery provides the power. How to find faults in circuits and battery operated devices	Invent a battery powered product to help people in everyday life	Design a functional product based on a design criteria. Sustainability Technological change Equality	Make a product, selecting and using a range of materials and components.	Evaluate their product against a design criteria.
LKS2 **Electricity**	**How do toys use electricity to entertain children?**	Switches Buzzers Bulbs Motors Circuits Series circuit Parallel circuit Wires System Electrical Disassemble	The difference between a series and parallel circuit. How to use electrical systems in their products [such as switches, bulbs, buzzers and motors] How to test if a circuit will work or not.	Research existing products with circuits by disassembling and investigating how they work. Sustainability Technological change	Design their own product and circuit.	Make a product including a circuit. Sustainability Technological change Equality Legacy	Refine work and techniques as work progresses, continually evaluating the product design. Sustainability Technological change Equality Legacy
UKS2 **Electricity**	**Why are torches all different shapes and sizes?**	*Series circuit* *Parallel circuit* Symbols *Circuits* Components Exploded diagram Prototypes Continual refinements Electronic kits	Know how series and parallel circuits work. Draw circuits in designs using the correct symbols. Know to draw an exploded diagram.	Research a variety of torches and understand why they are constructed differently	Design with the user in mind, a functional product that is fit for purpose I.e. a reading light that is compact or a general torch that is bright	Make a product through stages of prototypes, making continual refinements. Sustainability Technological change Equality Legacy	Evaluate the design of products, to improve the user experience