St Leo's and Southmead Catholic Nursery and Primary School

Year SIX

D.T. Knowledge Organiser

Autumn Term

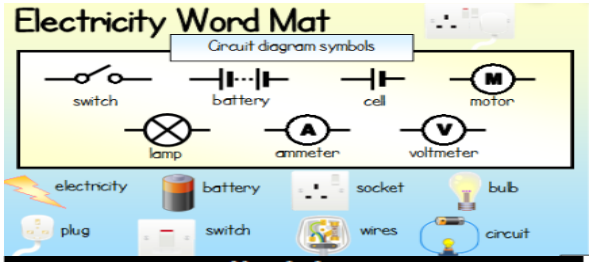
Amazing Activity

Design and create own light using a circuit.

What sort of light will work for you?

Key Concepts

Looking at different lights.	Investigate a range of lights. How do they work? What are they used for? Evaluate a range of lights.
Investigating torches.	Investigate the workings of a range of torches. Create a labelled diagram of both the inside and out-side of the torch.
Investigating Switches.	Follow a set of instructions to make a range of switches.
Write a specification.	Create a light specification for their chosen light.
Designing and making the light.	Design and make their own light using the specifi-cation as a guide.
Evaluating the final product.	Answer a variety of ques-tions to evaluate their own design, identifying positives and negatives of their design.



Vocabulary	
insulate	Protect (something) by interposing material that prevents the loss of heat
conductor	A substance that allows heat or electricity to go through it: Metal is a good conductor of heat.
battery	A container consisting of one or more cells, in which chemical energy is converted into electricity and used as a source of power.
buzzer	An electrical device that makes a buzzing noise and is used for signalling.
bulb	Light bulb.
wire	Metal drawn out into the form of a thin flexible thread or rod.
appliances	A device or piece of equipment (tool or gadget, etc.) designed to perform a specific task.
circuit	In electronics, a circuit is a path between two or more points along which an electrical current can be carried.
cell	battery
switch	A device for making and breaking the connection in an electric circuit.

Skills

Design

- use research and develop design criteria to inform the design of innovative, functional, appealing products that are fit for purpose, aimed at particular individuals or groups
- generate, develop, model and communicate their ideas through discussion, annotated sketches, cross-sectional and exploded diagrams, prototypes, pattern pieces and computer-aided design

Make

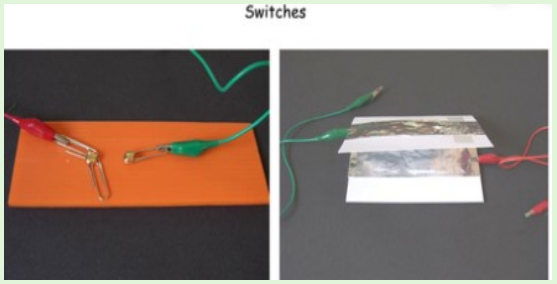
- select from and use a wider range of tools and equipment to perform practical tasks [for example, cutting, shaping, joining and finishing], accurately
- select from and use a wider range of materials and components, including construction materials, textiles and ingredients, according to their functional properties and aesthetic qualities

Evaluate

- investigate and analyse a range of existing products
- evaluate their ideas and products against their own design criteria and consider the views of others to improve their work
- understand how key events and individuals in design and technology have helped shape the world

Technical knowledge

- understand and use electrical systems in their products [for example, series circuits incorporating switches, bulbs, buzzers and motors]



Curriculum Links

Science—Investigate and create a range of circuits.

"Nurture, Inspire, Succeed"