

DT

Light Up Signs

Year 4

What I should already know

- Have some understanding of how to construct a simple series electrical circuit.
- Describe some techniques to make a firm and stable structure.
- Choosing the correct materials based on their properties.
- Key questions and metacognition strategies will continue to be used to encourage pupils to recognise the factors that influence their own performance and the different approaches they can use for their learning. These will include setting goals, formative planning, monitoring and controlling learning and assessing the results and strategies used.



Sticky Knowledge

Know the features of commercially available lights which make them suitable for a specific purpose or user.

Know the correct materials to use to create a series circuit and why (conductors and insulators).

How to create a series circuit involving a bulb and a switch.

Know how to work safely with electricity.

Describe the process needed to make their product.

Know the correct techniques to make a firm and stable structure.

Technical Knowledge and skills

- Research and evaluate a range of different light up signs, their designers and their intended purpose.
- Conduct a survey to determine the particular needs and wants of a group or individual.
- Use a range of appropriate tools, materials and techniques to create a light up sign.
- Evaluate their light up sign against a set design criteria.

Vocabulary

Structure	The arrangement of the parts of something complex.
Switch	A device for making and breaking the connection in an electric circuit.
Component	A part or element of a larger whole.
Circuit	A system of electrical conductors and components forming an electrical circuit.
Conductor	Transmit (a form of energy such as heat or electricity).
Battery	A container consisting of one or more cells, in which chemical energy is converted into electricity and used as a source of power.
Freestanding	Not attached to or supported by another structure.
Stable	Not likely to give way or over-turn.
Frame	A rigid structure that surrounds something.