



Design and Technology Topic: Design, make and evaluate a light-up picture.

Year: 3 Term: Summer 2

Key Knowledge/Content:

- To know that an electrical circuit must be complete for electricity to flow.
- To know that a switch can be used to complete and break an electrical circuit.
- To know facts from the history and invention of the electric light bulb(s) - by Sir Joseph Swan and Thomas Edison.

Links to:

Prior learning:

The children designed, made and evaluated a moving flipbook. The children explored mechanisms.

Future learning:

The children are going to design, make and evaluate a light up picture.

Key vocabulary with definition:

Prior vocabulary:

- Mechanism- A device used to create movement.
- Linkage – A device used in a product to create movement.
- Rotation – Spinning around an axis or centre.

New vocabulary:

- Circuit – A circular path that electricity flows through.
- Electricity – A form of energy.
- Component – A part or an element of a larger whole.
- Energy – The current that flows through the wires.
- Battery- Stores the energy and converts it into electrical energy.
- Wire – Carries electricity.
- Bulb – Produces the light from electricity.

By the end of this unit

All children can: **design** a product with a target audience and **create** a success criteria focusing on features of individual design ideas.

Most children can: **demonstrate** how to use equipment to cut and attach materials and **evaluate** electrical products.

Some children can: **demonstrate** and **explain** how to make adjustments whilst making the product and **explain** the steps to take in order to test a product.

Background understanding for teachers and parents:

The children are going to research, design, make and evaluate a light-up picture. The children will look at the components needed alongside the functions for a simple electrical system.

Curriculum Driver (one):

Communication

Evidence outcome:

The children are going to be discussing their designs and comparing their product with others.