



# Design and Technology

## Year 6 Spring 1 – Revolution



**Design and make a light box that can be used to depict a scene from the Victorian era.**

**Mechanisms and Structures** - Designers need to consider how to ensure their structure is strong enough for its purpose (What does it do?) and which type of mechanism is most appropriate to use.

### What we know so far

- In year 4, we learnt about electricity and how to create simple circuits with lights, switches and buzzers. (Science)
- In year 5, we created fairground rides with electrical components. We thought about how we can include a circuit within our design.

### Key Vocabulary

**Circuit**- An electrical circuit is a path in which electrons from a voltage or current source flow.

**Bulb**- a component which gives light when electricity passes through it.

**Buzzer**- a component which gives makes a buzzing noise when electricity passes through it.

**Battery**-a container consisting of one or more cells, in which chemical energy is converted into electricity and used as a source of power.

**Switch**- a component which opens and closes to turn the circuit on or off.

### New Knowledge



Light boxes can either be used to display information or for decoration.



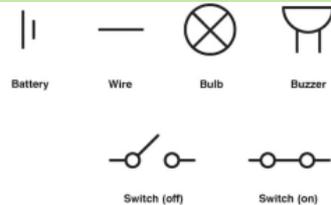
Incandescent



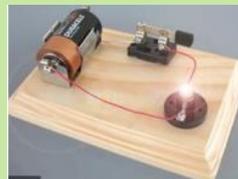
LED

Light Bulbs There are two different types of bulb, incandescent and LED (Light Emitting Diode) bulbs.

The disadvantages of incandescent light bulbs are they are dimmer and have a shorter lifespan than LED light bulbs



When drawing a circuit symbols are used because they are easier to draw, clearly show how equipment links together and everyone can identify the components used.



This is an example of a circuit for a steady hand game.