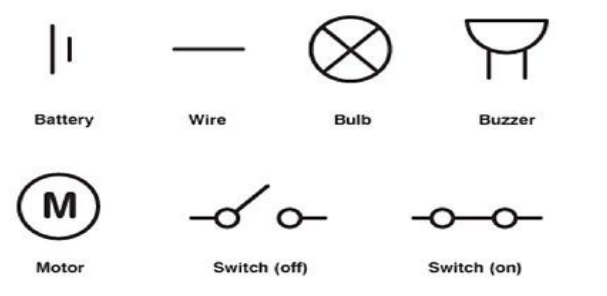
Key Question: **Can we bring a buzz to board games?**

Explore incorporating circuits made of more sustainable materials into board games.

Vocabulary	
Saw	Cut wood or other hard material using a saw.
Measure	Discover the exact size or amount of something.
Solder / Soldering	Join using a low metal alloy.
Glue	A sticky substance that makes the two things stay together when it dries.
Glue gun	A piece of equipment that heats glue.
Electrical circuit	A complete path around which electricity can flow.

In this topic, **we are learning to**:

Explore: begin to use research and develop design criteria to inform the design of innovative, functional, appealing products that are fit for purpose.
Generate: generate, develop, model and communicate ideas through discussion, sketches and diagrams.
Decide: decide on and draw up a specification for a chosen design that link with Mathematics and Science.
Create: apply a range of techniques (from art and design) to measure and mark out a design and use tools and equipment safely and accurately to ensure a good-quality finished product.
Evaluate: evaluate product during and after creation and seek feedback from others to ensure we are always developing.



Skills required:

- Measure
- Cut
- Saw
- Join
- Decorate

Key Question: Can we bring a buzz to board games?

What is an electric circuit? What board games include an electrical circuit?
What materials are best for designing and creating an electrical board game?
How can an electrical board game become sustainable?

Assessment Focus
Explore Begin to use research and develop design criteria to inform the design of innovative, functional, appealing products that are fit for purpose. Use results of investigations, information sources, including ICT when developing design ideas. Start to understand how much products cost to make, how sustainable and innovative they are and the impact products have beyond their intended purpose. Start to evaluate a product against the original design specification and by carrying out tests. Evaluate the key designs of individuals in design and technology has helped shape the world.
Generate: Start to generate, develop, model and communicate their ideas through discussion, annotated sketches, cross-sectional and exploded diagrams, prototypes, pattern pieces. With growing confidence select appropriate materials, tools and techniques. Select appropriate materials, tools and techniques e.g. 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. Know how more complex electrical circuits and components can be used to create functional products and how to program a computer to monitor changes in the environment and control our products. Understand that electrical systems have an input, process and output.
Decide: Select a design based on various key elements. Draw up a specification for our design. Make links with Mathematics and Science.
Create: With growing confidence apply a range of finishing techniques, including those from art and design. Begin to measure and mark out more accurately. Demonstrate how to use skills in using different tools and equipment safely and accurately with growing confidence cut and join with accuracy to ensure a good-quality finish to the product. Use finishing techniques to strengthen and improve the appearance of our product using a range of equipment including ICT.
Evaluate: Evaluate our work both during and at the end of the assignment. Begin to evaluate it personally and seek evaluation from others. Evaluate our final product to look for future improvements.