



Linked learning theme: Incredible Inventions

Spring term 1, Year 4

DT – Electric quiz games

Prior knowledge

Children have used electricity in their seaside nightlight product in Year 2. In Year 3 and KS1, children have had lots of experience of designing and making a product for a purpose.

Core knowledge

- Some games use electrical circuits within them to allow a bulb to light and/or a buzzer to sound.
- The wires used in the game must form a complete circuit when the bulb lights/buzzer sounds, although much of this circuit is likely to be hidden within the construction of the game.

Key skills

- Evaluate existing games that use electrical systems.
- Record ideas and plan using annotated sketches.
- Select materials and components according to their functional qualities.
- Use electrical circuits with a bulb or a buzzer in their product.
- Use tools to wire electrical components accurately.
- Perform practical tasks accurately.
- Discuss how well the finished product works and meets the design criteria.
- Consider and explain how the finished product could be improved.

Vocabulary

design criteria	wiring	circuit	measure
annotated drawing	wire cutters/	bulb	cut and join
evaluate	wire strippers	buzzer	

Learning outcomes

- I can evaluate existing products to inform the design process.
- I can identify the needs of the user.
- I can record ideas and plan using annotated sketches.
- I can select from a range of materials and components according to their functional and aesthetic qualities.
- I can use tools with increasing accuracy.
- I can perform practical tasks accurately.
- I can discuss how well the finished product meets the design criteria.
- I can use electrical systems in my products (series circuits, bulbs and buzzers).