

DT—Year 6—Electronic Board Games

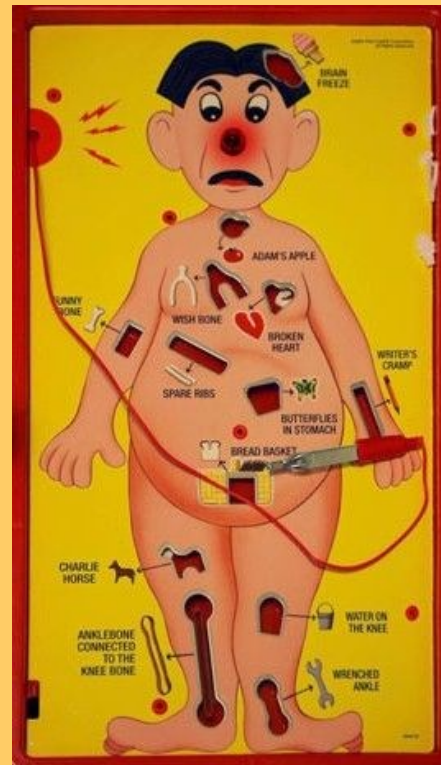
Design Brief

To make an electronic board game suitable for children to play.



Vocabulary

board games	design
Ancient Egyptians	products
electronic board games	accurately
circuit	hand drill
series circuit	design process
parallel circuit	components
	electrical system



Design Skills

- Undertake research to inform design process. This may include surveys and interviews.
- Use prototypes, cross sectional diagrams, exploded diagrams and CAD software to represent diagrams.
- Consider the views of others when evaluating their own work.
- Ensure products have a high quality finish, using art skills where appropriate.
- Justify their decisions about materials and methods of construction.
- Make suggestions on how their design/products can be improved.
- Use knowledge of inventors, designers, engineers, chefs and manufactures who have developed ground breaking products to create their own innovative designs.

Mechanical Systems Skills

Year 5

- Build frameworks to support mechanisms.
- Stiffen and reinforce complex structures.
- Use a glue gun with supervision.
- Join materials using appropriate methods.
- Understand and use mechanical systems such as cams, pulleys and gears.

Year 6

- Create circuits that employ a number of components e.g. LED's, motors and buzzers.
- Create series and parallel circuits.
- Cut wood accurately to 1mm.
- Use a hand drill to drill tight and loose fit holes.
- Cut materials with precision and refine the finish with appropriate tools (such as sanding wood).
- Build frameworks using a range of materials e.g. wood and card.
- Show an understanding of the qualities of materials to choose appropriate tools to cut and shape.

Design Process

Research

Look at a product to see how it has been made.

Skills

Practise and learn new skills to make the final product.

Design

Design the product using knowledge from research and skills learned.

Prototype

Make the prototype and identify any changes needed for the final design.

Make

Make the final product using skills learned.

Evaluate

Evaluate the final product.