



The Project Title

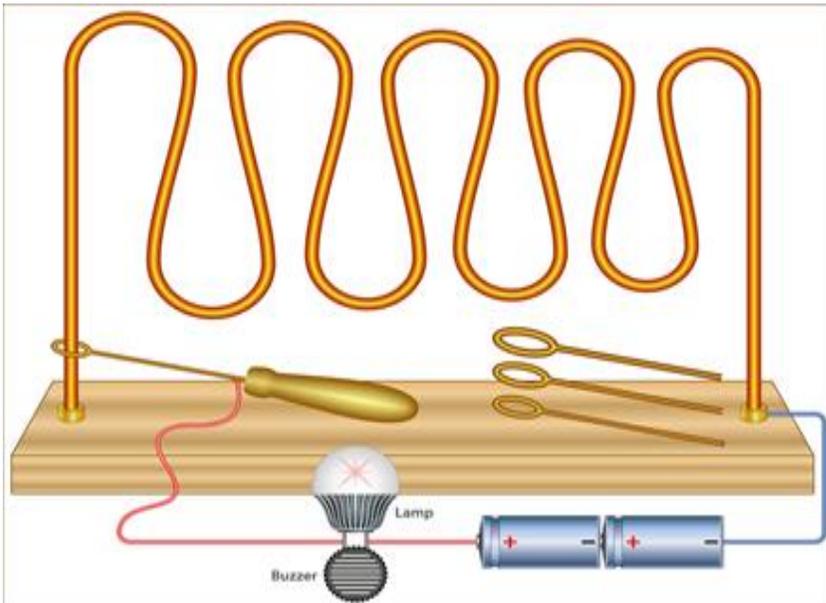
Design, make and evaluate an electrical board game.

### What should I already know?

- Understanding of the essential characteristics of a series circuit and experience of creating a battery powered, functional, electrical product.

### Useful Diagrams

An example of a game that uses a buzzer and light:



### Powerful Knowledge

- Measuring, marking out, cutting and joining skills.
- Practise methods of making secure connections
- Draw on Science knowledge by exploring a range of electrical systems with lights and buzzers
- Avoid making short circuits
- Explore ideas through annotated sketches, pictorial representations or circuit diagrams and explain how the circuit works
- Produce detailed step by step plans and list of tools equipment and materials needed
- Critically evaluate the final product and test them on the user.

### Vocabulary

|                      |   |
|----------------------|---|
| <b>conductor</b>     | materials that allow electric charges to move through them  |
| <b>insulator</b>     | material which does not easily allow heat and/or electricity to pass through it   |
| <b>prototype</b>     | the original model, a sample on which to base future designs  |
| <b>system</b>        | a set of related parts or components that together achieve a desired outcome  |
| <b>short circuit</b> | A short circuit happens when the current going through wires does not travel the correct path of the electrical current |