

Nova's Electricity Experiment Record

Learning objective: To identify and name the basic components of a simple series circuit and predict whether a bulb will light.

Nova the Owl is setting up a laboratory in the barn. Use this record sheet to document your circuit investigation. Draw your circuit diagram clearly, label the components, and explain why your bulb did or did not light up.

Word bank: cell · battery · wire · bulb · switch · circuit · conductor · insulator · complete · current

1. Component List: List all the parts you have used in your circuit and explain what each one does. (3 marks)

2. The Prediction: Before you connect your components, look at your design. Do you think the bulb will light? Explain why using the word 'circuit'. (2 marks)

3. The Observation: Did the bulb light up? If it did not, what might be the reason? (Think about breaks in the wires or battery orientation). (3 marks)

4. Adding a Switch: How would adding a switch change the way your circuit works? (2 marks)

5. Safety Check: Why is it important that we never play with mains electricity found in our homes? (2 marks)

Extension challenge: If you had a budget of £10.00 to buy components, and a bulb costs £1.50, a battery costs £2.00, and a switch costs £1.25, calculate the total cost of building two identical circuits.