

Electric circuits - Year 6: Scientific Enquiry Overview

| Lesson: | Objectives: | Scientific Enquiry: | Equipment: |
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| Lesson 1 How do electrical appliances work? | <ul style="list-style-type: none"> Recall what an electric circuit is. Identify the main parts of a circuit. Describe the role of the components | Identifying, Classifying, and Grouping. This lesson involves examining and sorting components of electrical gadgets. | Flashlight, toy car, hairdryer, moving doll, alarm clock, plastic figures |
| Lesson 2. Why do batteries have voltage? | <ul style="list-style-type: none"> Define voltage. Compare batteries of different sizes and their typical voltage. Explain how adding batteries together increases total voltage. | Comparative test. The investigation involves comparing the brightness of a bulb with varying numbers of batteries. Fair test if exact voltage and number of lux used. | bulb, batteries, wires, light meter or app |
| Lesson 3. What are the parts of a circuit? | <ul style="list-style-type: none"> Identify common electrical components. Explain how each component uses electricity to serve its function. Draw a circuit diagram with various components. | Comparative test. The investigation involves comparing the brightness of a bulb with varying numbers of batteries. Fair test if exact voltage and number of decibels used. | buzzer, batteries, wires, switch, sound meter or app |
| Lesson 4. What are circuit diagrams? | <ul style="list-style-type: none"> Identify common circuit symbols. Construct simple circuit diagrams. Explain the advantages of using circuit diagrams. | Researching Using Secondary Sources. This lesson involves using pre-existing information about circuit symbols and diagrams. | pencil, various components |
| Lesson 5. How can we use electricity safely? | <ul style="list-style-type: none"> Identify electrical hazards. Describe risks. Suggest ways to reduce electrical risks. | Researching Using Secondary Sources. The activity focuses on gathering and using information about electrical safety, which is a form of secondary research. | Risk assessment template |
| Lesson 6. What is the history of electricity? | <ul style="list-style-type: none"> Read about early experiments. Recall important scientists and inventors. Describe some major developments. | Researching Using Secondary Sources. Exploring the history of electricity involves learning from historical information, which are secondary sources. | Timeline of electrical development graphic organiser |