



MATCHED PAIR GAMES

LEVEL OF DIFFICULTY (C) (C)



OUTLINE OF ACTIVITY

The activity enables club members to build a familiar board game. Club members need to create matching pairs e.g. questions and answers or shapes and words. The pairs could be matching words and colours, names and pictures, maths questions and answers, etc. The idea is that two matching pairs will form a complete circuit and a bulb will light up.

The board is made of correx, which is easy to cut, colourful and easy to push split pins through. Start by showing the group a half constructed game. You will need to add a matching pair put two pictures on the correx at random, then push two split pins through the correx underneath each picture. Cut a length of insulated wire so that it is just longer than the distance between the two split pins. Bare the ends, and then wrap the exposed wire around each split pin on the back of the correx. Next, flatten the split pins against the correx, so that they will hold the wire firmly in place. Each pair of pins is now linked by a hidden wire, and so can form part of an electrical circuit. Pins that are not paired are not linked, and so will not form a circuit.

EQUIPMENT

Quantities are based on a **make** and **take** approach to produce 20 matched pair games.

- correx
- card cutters •
- batteries x 40
- bulbs x 20 •
- battery holders x 20
- bulb holders x 20

- crocodile leads x 60
- glue
- insulated wire •
- split pins
- buzzer x 20
- wire strippers

SCIENCE CONTEXT

Electrical circuits, including a battery or power supply and a range of switches, to make electrical devices work.



LEADERS' NOTES

EXTENSION

Representing series circuits with drawings and conventional symbols and constructing series circuits on the basis of drawings and diagrams using conventional symbols.

SCIENTIFIC EXPLANATION

In this activity members will learn that in order to make a bulb, motor or buzzer work a complete circuit is needed. Electricity flows all the way around a circuit and is carried by electrons which flow from a negative electrode to a positive electrode. Remember that electrons are negatively charged. If there is a gap in the circuit therefore (i.e. if there is no connection between two wires or if the wrong wires are connected) this is not a complete circuit and the bulb will not work.

The correct symbols to use in drawings are shown below.



