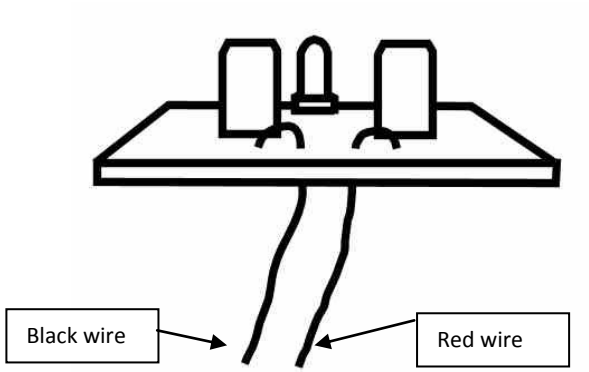
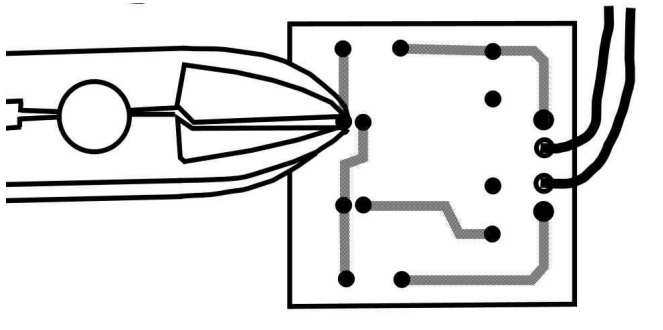
Fit and solder the Battery connector wires. Note the wires are looped through the PCB board as show in the diagram. Connect the red wire int the hole next to the **+** sign and connect the black wire into the hole next to the **—** sign.

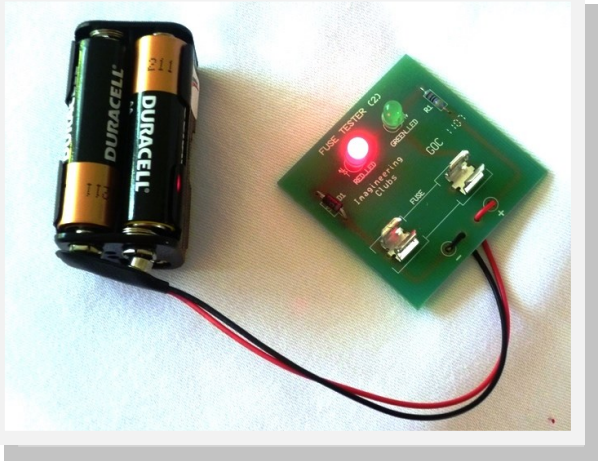


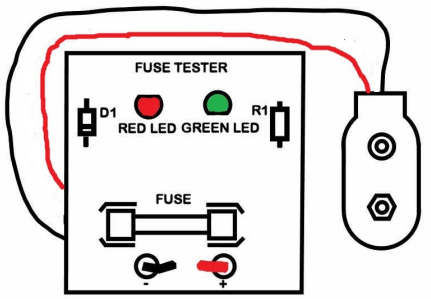
Cut off the excess length of the component wires close to the solder joints with wire cutters.



FUSE TESTER MkII

INSTRUCTIONS





The Finished Fuse Tester should look like this.

The Tester is designed to check domestic fuses and will require a 6v battery case with snap terminals, using 4 off 1.5 volt AA batteries. It could be a very useful present for your parents.

Tools Required

Resistor Colour Chart	Wire Cutters
Soldering Iron	Solder

Safety

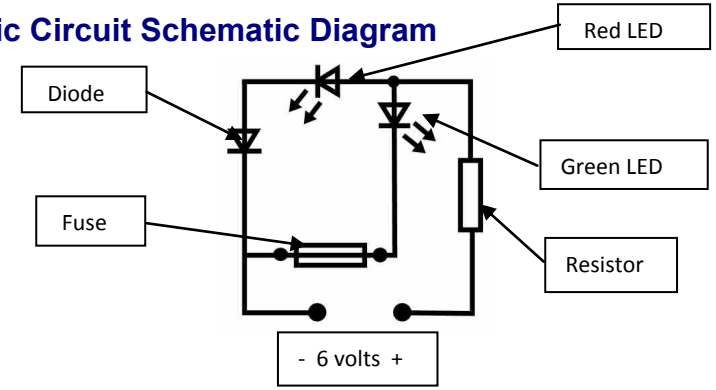
Fit an RCD between mains electrical supply and the soldering iron.
Observe all rules for soldering and use of hand tools.

Topics learned

- Electrical circuits
- The use of printed circuit boards
- Terminology and signs for electrical components

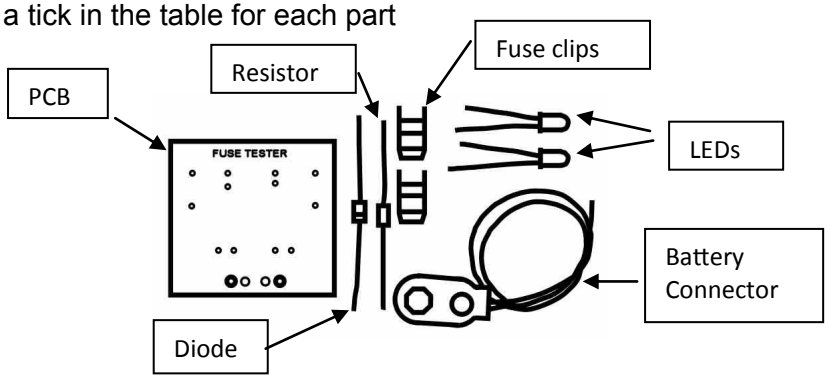
This is an Education Kit – not a Toy.
It requires adult supervision during construction.
The Kit contains small parts and is NOT suitable for children under 8yrs of age.

Electronic Circuit Schematic Diagram



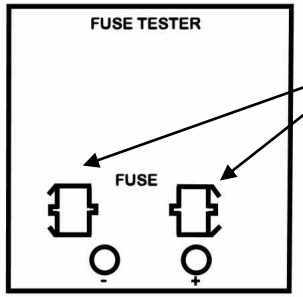
1. Check that you have all the parts

Put a tick in the table for each part



	Description	Number	Check
1	**Printed Circuit Board (PCB)**	1	
2	**Fuse clip**	2	
3	**Resistor (R1) 2000 ohms Red, black red**	1	
4	**Diode (D1)**	1	
5	**Red LED**	1	
6	**Green LED**	1	
7	**Battery Connector**	1	
8	**Battery Case for 4 x 1.5 volt AA batteries**	1	

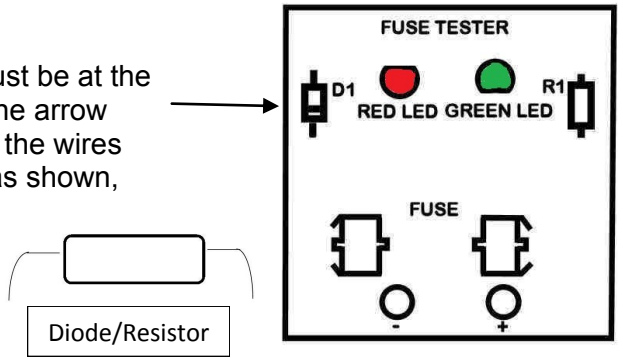
3. Assembly and Soldering



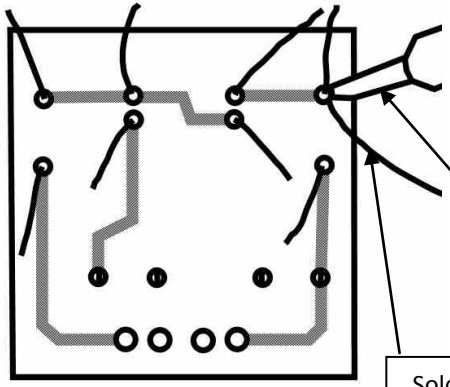
Fit the fuse clips to the PCB by inserting the legs into the larger holes. Fit them with the fuse **'stops'** outwards as shown. These prevent the fuse from slipping out of the clips.

Fit the components into the holes in the PCB.
The LEDs must be inserted the correct way round with the 'flats' on their base arranged as shown on the PCB. The 'flats' are on the same side as the shorter of the two wires.

The diode's silver band must be at the same end as the point of the arrow marked on the PCB. Bend the wires on the diode and resistor as shown, before inserting them into the PCB.



After fitting, bend all wires out a little to prevent the components falling out of the PCB.



The back of the PCB should look like this. When all the components are fitted, solder the wires to the PCB. Take care not to 'bridge' the LED connections when soldering.