

**Solar Cells Equipment List:** Exploring series and parallel circuits in relation to solar energy.

## Solar Cells, Circuits and Absorption – Sourcing Equipment

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- 0.5 V monocrystalline silicon solar panels – we found these on eBay. Try searching for 'educational solar panels'
- Acrylic sheet (glue the panels to this to protect the connections) – B&Q
- LEDs, battery packs, buzzers, motors etc – [www.mindsetonline.co.uk](http://www.mindsetonline.co.uk)
- Crocodile clip leads – [www.mindsetonline.co.uk](http://www.mindsetonline.co.uk)
- You can also find most of these things at [www.rapidonline.com](http://www.rapidonline.com)
- Multimeters – Maplin
- Acetate sheets for filters (clear, red, blue, green) – e.g. [www.artifolk.co.uk](http://www.artifolk.co.uk)
- Small torches

Also try:

- Flexible PV cell (thin-film amorphous silicon) – [www.solar-active.com](http://www.solar-active.com)
- 'Faraday film' (conducting plastic) – [www.mindsetonline.com](http://www.mindsetonline.com)
- Electrotiles kit – [www.mindsetonline.com](http://www.mindsetonline.com)
- Solar torch – Maplin

**NOTE:** LED torches are not suitable for this activity. Unlike incandescent lights, LED lights utilise a very narrow part of the solar spectrum and as a result the optical power output is actually very low. Even 'white' LED lights are tuned to be pleasing to the human eye. Most LEDs do not produce enough irradiation to power the panels. This can be a useful demonstration of how LED lights work and the differences between them and incandescent lights, and also reinforce the fact that the solar spectrum covers a relatively large range of wavelengths!



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