

Science - Year 6

Electricity – Block 6E

Electric Celebrations

Session 6

Resource pack

Sample copy

John Lewis Durawise Outdoor Battery Operated Line Lights, x96, Cool White £20

Product information

These cool white LED Durawise multi function lights are perfect if you would like to brighten up your garden or driveway.

With 96 LED bulbs, this set is battery operated and will add some sparkle to your celebrations.



This light set features a timer function that, with one press, will keep your lights on for six hours, automatically turning off after that. It will then come on again automatically at exactly the same time each day, again for six hours. LED lights use 75% less energy than standard bulbs and emit a brighter light.

Light colour: White

Light Suitability: Indoor & Outdoor

Power Supply: 3 x AA batteries

<http://www.johnlewis.com/john-lewis-durawise-outdoor-battery-operated-line-lights-x96-cool-white/p231577147>

Clear Festoon LED Light Chain

£49.95

Product information

Create a fun party atmosphere with this string of 20 clear Festoon Lights.

Please note the design has changed slightly as the bulb casing is now plastic and a slightly different shape.

These beautiful clear festoon lights are perfect for your Christmas tree or even brightening up small corners in your living room.



These festoon lights can be used both indoors and outdoors. Making it a product you could use all year round at events and parties and festivals to create the ideal atmospheric display.

Dress up a simple gazebo or attach them to your fence to enhance any party and make it a night to remember.

Suitable for indoor and outdoor use

Please read the care information below to ensure safe and satisfactory use of these lights

Made from: plastic

1 bulb = 3V/20MA/0.06 W. IP 44.

Dimensions: *the chain is 6 metres long and holds 20 LED bulbs with clear surrounds*

<http://www.notonthehighstreet.com/houseinteriorsandgifts/product/clear-festoon-led-light-chain>

Battery Neon Maroq String Lights

£16.95

Product information

A stunning battery light garland. This gorgeous garland of Moroccan-style lamps is a fantastic addition to our collection.

With twenty four neon lattice-cut metal spheres this garland brings exotic evening light wherever you are. Perfect for parties or just to have in your bedroom.



A total of 20 LED bulbs each with a metal sphere. To be used only indoors and battery powered so you can place them anywhere you like.

Attractively presented in a box.

These string lights require 3 x AA batteries.

Made from: metal with low voltage warm LED bulbs

Dimensions: L2.9m (1.9m illuminated)

<http://www.notonthehighstreet.com/allthingsbrightonbeautiful/product/battery-neon-maroc-string-lights>

Neon Garland multi-coloured neon metal ball 20 LED battery fairy lights £20

Product information

The Neon Garland multi-coloured metal ball LED battery fairy lights have 20 long-lasting, low energy bulbs and emit a bright glow. These lights are perfect for decorating a mirror or mantelpiece all year round and draping around the tree at Christmas.



Bulb included.

Supplied bulb: 20 x LED

Electrical class: 3.

Battery operated.

Requires 3 x AA batteries (not supplied).

On/off switch on battery box.

Size

Total length: 290cm.

Illuminated length: 190cm.

Construction

Metal and plastic.

<http://www.habitat.co.uk/holographic-341866>

Photo examples of same product



Dragon prompt questions

- 1. Can you explain the correct voltage required for the bulbs, buzzer and motor to operate safely?*
- 2. Why do the bulbs all remain at the same level of brightness as each other whatever the voltage or number of batteries?*
- 3. Do you have to use a certain number of batteries or is it the voltage that is important?*
- 4. What will happen if we put too great an amount of power through the circuit?*
- 5. Can you explain how the bulbs work? Why do they light up?*
- 6. Can you explain how the buzzer works? Why does it make a noise?*
- 7. Can you explain how the motor works? Why does it move?*
- 8. Can you explain how the switch works?*
- 9. How could customers create other effects (beyond those the product is designed for) in terms of brightness, volume and speed of the components?*
- 10. Can we have the light decoration turned on indefinitely, like if we plugged it into the mains?*