

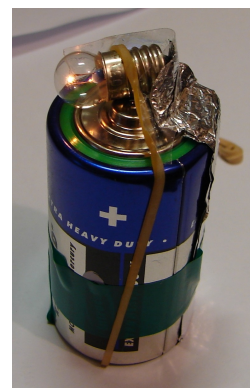
## 6.2 Making a Simple Torch

### Aim

To construct a single D Cell battery torch with a switch.

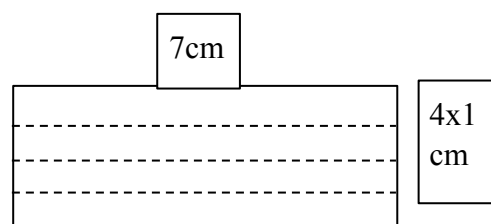
### Equipment

D Cell battery, 2 volt torch bulb, tape, large rubber band, alfoil 4 cm by 7 cm.



### Method

- Fold the alfoil into a 1cm wide 7cm long strip. This will act as your wire and your switch.



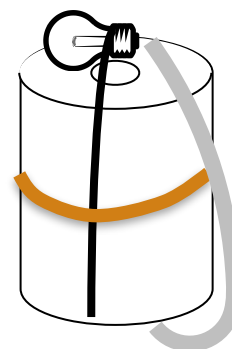
1. Stretch the rubber band over the ends of the battery and tape it on around the side.
2. The light bulb lies on its side on top of the batteries positive end under the rubber band. make sure the metal side of the bulb touches the battery.
3. Now put the alfoil strip under the rubber band on the bottom of the battery and around the side up to the top to touch the bottom of the bulb. What happened?



Explain:

Why did you put the alfoil that way?

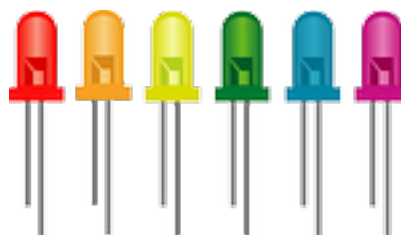
Draw a simple circuit (with wires going around in a circle) to show how the battery is joined to the light bulb.



Does the light bulb still work if you stand it up on the knob on the positive and touch the side with the negative instead?

Extra:

Replace a light bulb with an LED (light emitting diode), cheap coloured globes from an electrical store (e.g. Jaycar)



Explain:

How did you get these to work with a battery?

Do they work both ways?