National 5 Assignment  
Ohm’s Law–Ohmic conductor: Guide A

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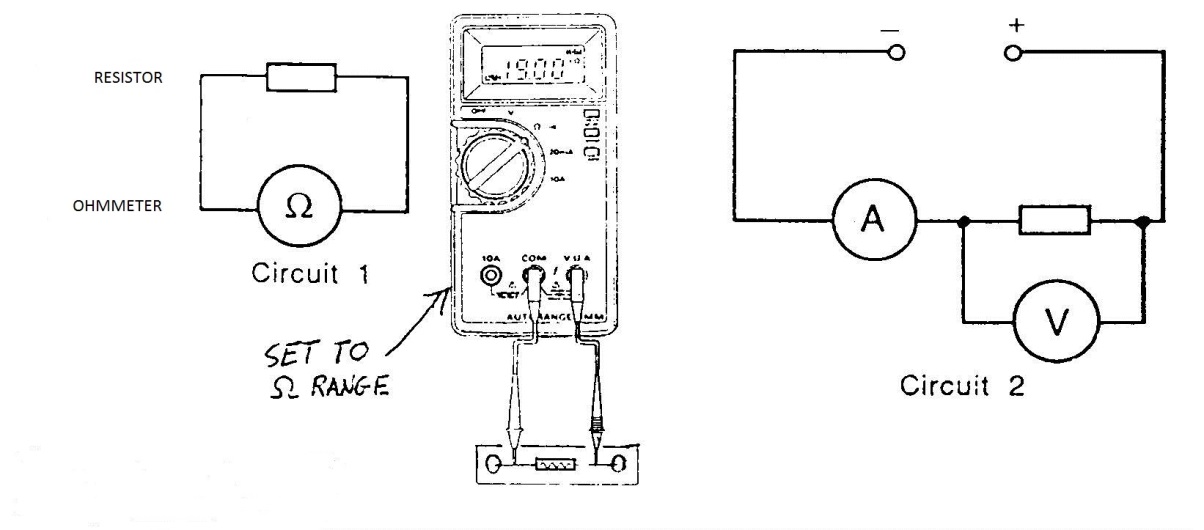
A close up of a toy

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**Variation of current with voltage (resistor)**

**Equpment:** Multimeters with settings for resistance, current and voltage, or ohmmeter, voltmeter, ammeter, resistor (between 3 and 100 Ω) leads, power supply.

**Instructions:**



1. Measure the resistance of the resistor with an ohmmeter.
2. Connect the resistor to the power supply and connect an ammeter in series and voltmeter in parallel with the resistor.
3. Set the power supply to 1 V and read the current and voltage readings from the ammeter and voltmeter respectively.
4. Change the power supply voltage taking current and voltage readings from the ammeter and voltmeter.

**Risk Assessment**

* Check all the wires and ensure that the wires are not frayed
* The resistor could get hot, so avoid contact with this.
* Switch off the equipment when it is not in use.
* Do not plug the ohmmeter into a circuit with a power supply
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