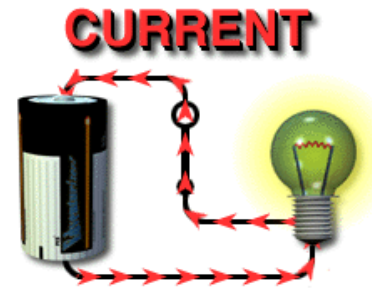


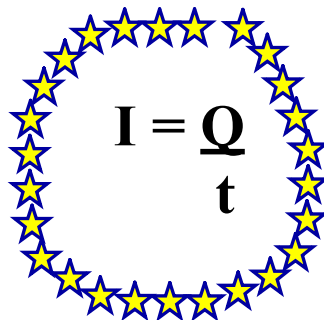
## Current...



Current is the flow of charged particles along a closed path.

Current (I) is measured in AMPS (A) and refers to the total amount of charge passing a certain point each second.

$$1 A = 1 C/s$$


$$I = \frac{Q}{t}$$

*Current is measured with an ammeter.*

Effect	Current (mA)	
	DC	AC (60Hz)
Slight sensation	1	0.4
Shock - painful - muscular control lost	50	9
Shock - painful - "let go threshold"	70	20
Shock - possible ventricular fibrillation - probably fatal	500	100

Ex.1 (A) If a current of 2.0 A is drawn through the filament of a light bulb for 10.0s, how many coulombs of charge moved through the filament in this time?

(B) How many electrons is this?

Ex.2 In a lightning bolt, 3.0 C of charge were transmitted between cloud and ground in 1.0ms. What was the current in the flash?



In 3204 we are using electron current - the flow of electrons.

Theory also includes conventional current - the flow of positive charges. This was the understanding about 100 years before the electron was discovered.

<http://www.mi.mun.ca/users/cchaulk/eltk1100/ivse/ivse.htm>



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