

P2 Topic 2 Revision tracker

PHYSICS

Learning objectives I can:	I can do this very well	I can do this quite well	I need to do more work on this
2.1 Describe how an ammeter is placed in series with a component to measure the current, in amps, in the component			
2.2 Explain how current is conserved at a junction			
2.3 Explain how the current in a circuit depends on the potential difference of the source			
2.4 Describe how a voltmeter is placed in parallel with a component to measure the potential difference (voltage), in volts, across it			
H 2.5 Demonstrate an understanding that potential difference (voltage) is the energy transferred per unit charge passed and hence that the volt is a joule per coulomb			
HSW 3 Describe how phenomena are explained using scientific models			
2.6 Investigate the relationship between potential difference (voltage), current and resistance			
2.7 Explain how changing the resistance in a circuit changes the current and how this can be achieved using a variable resistor			
2.8 Use the equation: potential difference = current × resistance (volt, V) (ampere, A) (ohm, Ω) $V = I \times R$			
2.9 Demonstrate an understanding of how current varies with potential difference for the following devices: a filament lamps			
b diodes			
c fixed resistors			
2.10 Demonstrate an understanding of how the resistance of a light-dependent resistor (LDR) changes with light intensity			
2.11 Demonstrate an understanding of how the resistance of a thermistor changes with change of temperature (negative temperature coefficient thermistors only)			
HSW 11 Present information using scientific conventions and symbols			
2.12 Explain why, when there is an electric current in a resistor, there is an energy transfer which heats the resistor			
H 2.13 Explain the energy transfer (in 2.12 above) as the result of collisions between electrons and the ions in the lattice			
2.14 Distinguish between the advantages and disadvantages of the heating effect of an electric current			
2.15 Use the equation: electrical power = current × potential difference (watt, W) (ampere, A) (volt, V) $P = I \times V$			
2.16 Use the equation: = current × time energy transferred (joule, J) (ampere, A) (second, s) $E = I \times V \times t$			
HSW 12 Describe the benefits, drawbacks and risks of using new scientific and technological developments			

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