

Subject area : Separate Physics		
	Needs to	How
1	Define electric current as the rate of flow of electrical charge around a closed circuit : recall and use the equation  $Q = I \times t$	Free Science Lessons - <a href="https://www.youtube.com/watch?v=R3hdaLpq2AA">https://www.youtube.com/watch?v=R3hdaLpq2AA</a> <a href="https://www.youtube.com/watch?v=ts7WumFAaSg">https://www.youtube.com/watch?v=ts7WumFAaSg</a>  Cognito - <a href="https://www.youtube.com/watch?v=TIHW5hEoaAw">https://www.youtube.com/watch?v=TIHW5hEoaAw</a>
2	Explain the resistance of components such as lamps, diodes, thermistors and LDRs and sketch/interpret IV graphs of their characteristic electrical behaviour	fixed resistor – <a href="https://www.youtube.com/watch?v=2CA1mcYw3IQ">https://www.youtube.com/watch?v=2CA1mcYw3IQ</a> filament lamp - <a href="https://www.youtube.com/watch?v=WzSh6ykqn9I">https://www.youtube.com/watch?v=WzSh6ykqn9I</a> diodes and LEDs - <a href="https://www.youtube.com/watch?v=Tk_OltwtxZE">https://www.youtube.com/watch?v=Tk_OltwtxZE</a> Thermistors - <a href="https://www.youtube.com/watch?v=bjt4CrRL8yM">https://www.youtube.com/watch?v=bjt4CrRL8yM</a> and LDRs – <a href="https://www.youtube.com/watch?v=bb7sRiLKCvg">https://www.youtube.com/watch?v=bb7sRiLKCvg</a>
3	Explain how LDRs and thermistors are used in sensing circuits	<a href="https://www.youtube.com/watch?v=ZtJEPKuQrGc">https://www.youtube.com/watch?v=ZtJEPKuQrGc</a>
4	Apply the rules for pd, current and resistance in series and in parallel circuits to circuit problems.	Free Science Lessons - <a href="https://www.youtube.com/watch?v=ZQurBlu35Fo">https://www.youtube.com/watch?v=ZQurBlu35Fo</a> <a href="https://www.youtube.com/watch?v=jNFXtjt5mul">https://www.youtube.com/watch?v=jNFXtjt5mul</a>  GCSE Pod - <a href="https://members.gcsepod.com/shared/podcasts/title/10472/64251">https://members.gcsepod.com/shared/podcasts/title/10472/64251</a>

		Oak National Academy - <a href="https://classroom.thenational.academy/lessons/series-and-parallel-circuits-69jk8c">https://classroom.thenational.academy/lessons/series-and-parallel-circuits-69jk8c</a>
5	Recall how to carry out required practical to investigate factors affecting resistance	Free Science Lessons - <a href="https://www.youtube.com/watch?v=YsZeZotYVag">https://www.youtube.com/watch?v=YsZeZotYVag</a> GCSEPod - <a href="https://members.gcsepod.com/shared/podcasts/title/12488/77184">https://members.gcsepod.com/shared/podcasts/title/12488/77184</a>
6	Recall how to carry out the practical to investigate the I-V characteristics of components	Free Science Lessons - <a href="https://www.youtube.com/watch?v=A1SyKvdHoqY">https://www.youtube.com/watch?v=A1SyKvdHoqY</a> GCSEPod - <a href="https://members.gcsepod.com/shared/podcasts/title/12488/76788">https://members.gcsepod.com/shared/podcasts/title/12488/76788</a>
7	Recall the features of mains electricity – ideas of AC vs DC, the three pin plug, 230V and 50Hz	Free Science Lessons - <a href="https://www.youtube.com/watch?v=EY_EphcrpDI">https://www.youtube.com/watch?v=EY_EphcrpDI</a> <a href="https://www.youtube.com/watch?v=2g8SusMrX_o">https://www.youtube.com/watch?v=2g8SusMrX_o</a> <a href="https://www.youtube.com/watch?v=S8IB2kxT1n0">https://www.youtube.com/watch?v=S8IB2kxT1n0</a> <a href="https://www.youtube.com/watch?v=fbu3o9wavHk">https://www.youtube.com/watch?v=fbu3o9wavHk</a> <a href="https://www.youtube.com/watch?v=MEvO2rQFIWk">https://www.youtube.com/watch?v=MEvO2rQFIWk</a> GCSEPod - <a href="https://members.gcsepod.com/shared/podcasts/title/10473/64257">https://members.gcsepod.com/shared/podcasts/title/10473/64257</a>
8	Describe waves as either transverse or longitudinal, defining these waves in terms of the direction of their oscillation and energy transfer and giving examples of each; define waves as transfers of energy from one place to another	Free science lessons - <a href="https://www.youtube.com/watch?v=0f5iYCNCnow">https://www.youtube.com/watch?v=0f5iYCNCnow</a> Cognito - <a href="https://www.youtube.com/watch?v=aCu4VRKMstA">https://www.youtube.com/watch?v=aCu4VRKMstA</a> GCSEPod - <a href="https://members.gcsepod.com/shared/podcasts/title/10489/64316">https://members.gcsepod.com/shared/podcasts/title/10489/64316</a>
9	Define amplitude, wavelength, frequency, period and wave speed	Free science lessons - <a href="https://www.youtube.com/watch?v=ITe6snlZBp8">https://www.youtube.com/watch?v=ITe6snlZBp8</a> Cognito - <a href="https://www.youtube.com/watch?v=aCu4VRKMstA">https://www.youtube.com/watch?v=aCu4VRKMstA</a>

	and Identify them where appropriate on diagrams;	Oak National Academy - <a href="https://classroom.thenational.academy/lessons/wave-properties-60vk0d">https://classroom.thenational.academy/lessons/wave-properties-60vk0d</a>
10	Calculate wave speed, frequency or wavelength by applying, but not recalling, the equation: [ $v = f \lambda$ ] and calculate wave period by recalling and applying the equation: [ $T = 1/f$ ]	Free science lessons - <a href="https://www.youtube.com/watch?v=Aucu7YshyQ0">https://www.youtube.com/watch?v=Aucu7YshyQ0</a> GCSEPod - <a href="https://members.gcsepod.com/shared/podcasts/title/10489/64313">https://members.gcsepod.com/shared/podcasts/title/10489/64313</a>  Oak National Academy - <a href="https://classroom.thenational.academy/lessons/calculations-with-waves-6xh66e">https://classroom.thenational.academy/lessons/calculations-with-waves-6xh66e</a>
11	Describe a method to measure the speed of sound waves in solid	Free science lessons - <a href="https://www.youtube.com/watch?v=ZXAmiRC0GBo">https://www.youtube.com/watch?v=ZXAmiRC0GBo</a>  Oak National Academy - <a href="https://classroom.thenational.academy/lessons/measuring-the-speed-of-waves-in-solids-c9gk6t">https://classroom.thenational.academy/lessons/measuring-the-speed-of-waves-in-solids-c9gk6t</a>
12	Describe a method to measure the speed of ripples on a water surface	Free science lessons - <a href="https://www.youtube.com/watch?v=UNmv6H-f180">https://www.youtube.com/watch?v=UNmv6H-f180</a>
13	Carry out multi step calculations	Oak National Academy <a href="https://classroom.thenational.academy/lessons/multi-step-calculations-6cwkgd">https://classroom.thenational.academy/lessons/multi-step-calculations-6cwkgd</a>
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Each subject area to identify: a) in the first column, 10 likely

PLCs/topics for revision; b) in the second column, sources of help / means of revision (GCSE pods, Oaks Academy

Lessons, VLE, YouTube tutorials, weekly enrichment sessions, websites, subscription sites that pupils can access free of charge, anything else you consider useful).