

# Summer Term – Remotely Learning Plan

## Year 9 – Physics (Separate Science)

Week:	Instructions to Parents/Students
28B – 20 <sup>th</sup> April	Efficiency – define efficiency, learn the equation and research ways of increasing efficiency. Watch <a href="https://www.youtube.com/watch?v=Ni5jaeBrigQ">https://www.youtube.com/watch?v=Ni5jaeBrigQ</a> to help. Use BBC bitesize for practice questions.
29A – 27 <sup>th</sup> May	Power – define power, learn the equations for power and the units of power. Watch <a href="https://www.youtube.com/watch?v=EDT0DPhaaMY">https://www.youtube.com/watch?v=EDT0DPhaaMY</a> to help. Look at <a href="https://exampapersplus.co.uk/gcse-physics-energy-questions-and-answers/">https://exampapersplus.co.uk/gcse-physics-energy-questions-and-answers/</a> for example questions.
30B – 4 <sup>th</sup> May	Energy resources – 2 weeks of work. Use <a href="http://www.darvill.clara.net/altenerg/index.htm">http://www.darvill.clara.net/altenerg/index.htm</a> and research renewable and non-renewable energy resources. Watch <a href="https://www.youtube.com/watch?v=pqzvUur7QRw">https://www.youtube.com/watch?v=pqzvUur7QRw</a> and <a href="https://www.youtube.com/watch?v=1dJKvxhGEgA">https://www.youtube.com/watch?v=1dJKvxhGEgA</a> to help. Define renewable and non-renewable. (continued below)
31A – 11 <sup>th</sup> May	List all renewable and non-renewable energy resources (solar, wind, geothermal, coal, etc) – explain BASICALLY how they work, giving advantages and disadvantages of each.
32B – 18 <sup>th</sup> May	Waves – Longitudinal and transverse waves. Watch <a href="https://www.youtube.com/watch?v=0f5iYCNcnow&amp;list=PL9IouNCPbCxX1-0Nr5_bMDJnN-9RqMuA6">https://www.youtube.com/watch?v=0f5iYCNcnow&amp;list=PL9IouNCPbCxX1-0Nr5_bMDJnN-9RqMuA6</a> and describe the difference between longitudinal and transverse waves. Give examples of each.
33A – 1 <sup>st</sup> June	Properties of waves – watch <a href="https://www.youtube.com/watch?v=ITe6snlZBp8&amp;list=PL9IouNCPbCxX1-0Nr5_bMDJnN-9RqMuA6&amp;index=2">https://www.youtube.com/watch?v=ITe6snlZBp8&amp;list=PL9IouNCPbCxX1-0Nr5_bMDJnN-9RqMuA6&amp;index=2</a> define amplitude, wavelength, frequency and time period of a wave. Label amplitude and wavelength on a transverse and longitudinal wave. Learn the frequency and time period equations.
34B – 8 <sup>th</sup> June	The wave equation – watch <a href="https://www.youtube.com/watch?v=0f5iYCNcnow&amp;list=PL9IouNCPbCxX1-0Nr5_bMDJnN-9RqMuA6">https://www.youtube.com/watch?v=0f5iYCNcnow&amp;list=PL9IouNCPbCxX1-0Nr5_bMDJnN-9RqMuA6</a> and learn the wave equation. Practice some questions from BBC Bitesize.
35A – 15 <sup>th</sup> June	Waves Required Practical 1 – Water waves. Watch <a href="https://www.youtube.com/watch?v=UNmv6H-f180&amp;list=PL9IouNCPbCxX1-0Nr5_bMDJnN-9RqMuA6&amp;index=4">https://www.youtube.com/watch?v=UNmv6H-f180&amp;list=PL9IouNCPbCxX1-0Nr5_bMDJnN-9RqMuA6&amp;index=4</a> and write out a comprehensive method detailing how you can find the wavelength, frequency and speed of a wave in a ripple tank.
36B – 22 <sup>nd</sup> June	Waves Required Practical 2 – Waves on a string. Watch <a href="https://www.youtube.com/watch?v=ZXAmiRC0GBo&amp;list=PL9IouNCPbCxX1-0Nr5_bMDJnN-9RqMuA6&amp;index=5">https://www.youtube.com/watch?v=ZXAmiRC0GBo&amp;list=PL9IouNCPbCxX1-0Nr5_bMDJnN-9RqMuA6&amp;index=5</a> and write out a comprehensive method detailing how you can find the wavelength, frequency and speed of a wave on a string – include a diagram.
37A – 29 <sup>th</sup> June	Reflection of waves – watch <a href="https://www.youtube.com/watch?v=8K6gOST8pZk&amp;list=PL9IouNCPbCxX1-0Nr5_bMDJnN-9RqMuA6&amp;index=6">https://www.youtube.com/watch?v=8K6gOST8pZk&amp;list=PL9IouNCPbCxX1-0Nr5_bMDJnN-9RqMuA6&amp;index=6</a> and describe the reflection, absorption and transmission of waves at the boundary of 2 different materials. Use ray diagrams to illustrate the reflection of a wave – include reflection of light on a mirror.
38B – 6 <sup>th</sup> July	Required practical - Reflection and refraction. Watch <a href="https://www.youtube.com/watch?v=2fN_jvf4fw8&amp;list=PL9IouNCPbCxX1-0Nr5_bMDJnN-9RqMuA6&amp;index=7">https://www.youtube.com/watch?v=2fN_jvf4fw8&amp;list=PL9IouNCPbCxX1-0Nr5_bMDJnN-9RqMuA6&amp;index=7</a> Write a comprehensive method, with diagrams, on the reflection and refraction of light. Include all equipment used.

39A – 13 <sup>th</sup> July	Sound waves and ultrasound – Watch <a href="https://www.youtube.com/watch?v=N_07EkzEhVQ&amp;list=PL9IouNCPbCxX1-0Nr5_bMDJnN-9RqMuA6&amp;index=8">https://www.youtube.com/watch?v=N_07EkzEhVQ&amp;list=PL9IouNCPbCxX1-0Nr5_bMDJnN-9RqMuA6&amp;index=8</a> and <a href="https://www.youtube.com/watch?v=l1F6h9skFXU&amp;list=PL9IouNCPbCxX1-0Nr5_bMDJnN-9RqMuA6&amp;index=9">https://www.youtube.com/watch?v=l1F6h9skFXU&amp;list=PL9IouNCPbCxX1-0Nr5_bMDJnN-9RqMuA6&amp;index=9</a> . Describe how sound waves are transmitted, the range of human hearing and how frequency and amplitude affect how you hear a sound. For ultrasound, describe what ultrasound is including its frequency), explain how we use ultrasound and calculate distances using the examples in the video.
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Useful resources:

[exampapersplus.co.uk](http://exampapersplus.co.uk)

BBC Bitesize

[Physicsandmathstutor.com](http://Physicsandmathstutor.com)

[Darvillclara.net](http://Darvillclara.net)

AQA GCSE Physics (for past papers and markschemes)