

# Revision for Physics: Paper 1

For knowledge organisers – see JSTC website: <https://www.jstc.org.uk/science>

Topic title	Brief content overview	Required practical	External Links
<b>P1 Conservation and dissipation of energy</b>	<ul style="list-style-type: none"> <li>• Energy stores</li> <li>• Conservation of energy</li> <li>• Energy and work</li> <li>• Kinetic energy, Gravitational energy and Elastic energy stores</li> <li>• Energy dissipation</li> <li>• Energy and efficiency</li> <li>• Energy and power</li> </ul>		<p>FreeSciencelessons on YouTube :  <a href="https://www.youtube.com/watch?v=PY80j_iNT9Y">https://www.youtube.com/watch?v=PY80j_iNT9Y</a>  <a href="https://www.youtube.com/playlist?list=PL9IouNCPbCxWNjJvmqwZ4vKy4VfcAhsCj">https://www.youtube.com/playlist?list=PL9IouNCPbCxWNjJvmqwZ4vKy4VfcAhsCj</a>                      videos 1-3, 5-9</p> <p>BBC Bitesize  <a href="https://www.bbc.co.uk/bitesize/topics/z89ddxs">https://www.bbc.co.uk/bitesize/topics/z89ddxs</a></p>
<b>P2 Energy transfer by heating</b>	<ul style="list-style-type: none"> <li>• Energy transfer by conduction</li> <li>• Specific heat capacity</li> <li>• Heating and insulating buildings</li> </ul>	P14 Specific heat capacity	<p>FreeSciencelessons on YouTube:  <a href="https://www.youtube.com/watch?v=HAPmwu7byGM">https://www.youtube.com/watch?v=HAPmwu7byGM</a>  <a href="https://www.youtube.com/playlist?list=PL9IouNCPbCxWNjJvmqwZ4vKy4VfcAhsCj">https://www.youtube.com/playlist?list=PL9IouNCPbCxWNjJvmqwZ4vKy4VfcAhsCj</a>                      videos 4, 10, 11</p> <p>Malmesbury education  <a href="https://www.youtube.com/watch?v=loeRLKNeUsc">https://www.youtube.com/watch?v=loeRLKNeUsc</a>  <a href="https://www.youtube.com/watch?v=MUy1o4ogCvw">https://www.youtube.com/watch?v=MUy1o4ogCvw</a></p> <p>BBC Bitesize  <a href="https://www.bbc.co.uk/bitesize/guides/zy8g3k7/revision/1">https://www.bbc.co.uk/bitesize/guides/zy8g3k7/revision/1</a>  <a href="https://www.bbc.co.uk/bitesize/guides/z2gjt4/revision/6">https://www.bbc.co.uk/bitesize/guides/z2gjt4/revision/6</a>  <a href="https://www.bbc.co.uk/bitesize/guides/z2gjt4/revision/3">https://www.bbc.co.uk/bitesize/guides/z2gjt4/revision/3</a></p>
<b>P3 Energy resources</b>	<ul style="list-style-type: none"> <li>• Energy demands</li> <li>• Renewable energy</li> <li>• Big energy Issues</li> </ul>		<p>FreeSciencelessons on YouTube:  <a href="https://www.youtube.com/playlist?list=PL9IouNCPbCxWNjJvmqwZ4vKy4VfcAhsCj">https://www.youtube.com/playlist?list=PL9IouNCPbCxWNjJvmqwZ4vKy4VfcAhsCj</a>                      videos 13-16</p> <p>BBC Bitesize  <a href="https://www.bbc.co.uk/bitesize/guides/z8k9v9q/revision/1">https://www.bbc.co.uk/bitesize/guides/z8k9v9q/revision/1</a></p>

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<p><b>P4 electric circuits</b></p>	<ul style="list-style-type: none"> <li>• Current and charge</li> <li>• Potential difference and resistance</li> <li>• Component characteristics</li> <li>• Series and parallel circuits</li> </ul>	<p>P15 Resistance in a wire</p> <p>P16 IV characteristics of diode, thermistor and wire</p>	<p>FreeSciencelessons on YouTube:  <a href="https://www.youtube.com/watch?v=A1SyKvdHoqY">https://www.youtube.com/watch?v=A1SyKvdHoqY</a>  <a href="https://www.youtube.com/playlist?list=PL9IouNCPbCxXc2NQoIZN7-3jIKN7vW-Sg">https://www.youtube.com/playlist?list=PL9IouNCPbCxXc2NQoIZN7-3jIKN7vW-Sg</a>            videos 1-16</p> <p>Malmesbury  <a href="https://www.youtube.com/watch?v=ksPzUjMbBk">https://www.youtube.com/watch?v=ksPzUjMbBk</a>  <a href="https://www.youtube.com/watch?v=m_3JrA-sDEg">https://www.youtube.com/watch?v=m_3JrA-sDEg</a></p> <p>BBC Bitesize  <a href="https://www.bbc.co.uk/bitesize/guides/zpdtv9q/revision/5">https://www.bbc.co.uk/bitesize/guides/zpdtv9q/revision/5</a>  <a href="https://www.bbc.co.uk/bitesize/guides/zpdtv9q/revision/4">https://www.bbc.co.uk/bitesize/guides/zpdtv9q/revision/4</a></p>
<p><b>P5 electricity in the home</b></p>	<ul style="list-style-type: none"> <li>• Alternating current</li> <li>• Cables and plugs</li> <li>• Electrical power and potential difference</li> <li>• Electrical currents and energy transfer</li> <li>• Appliances and efficiency</li> </ul>		<p>FreeSciencelessons on YouTube:  <a href="https://www.youtube.com/playlist?list=PL9IouNCPbCxXc2NQoIZN7-3jIKN7vW-Sg">https://www.youtube.com/playlist?list=PL9IouNCPbCxXc2NQoIZN7-3jIKN7vW-Sg</a>            videos 17-22</p> <p>BBC Bitesize  <a href="https://www.bbc.co.uk/bitesize/guides/z6r37nb/revision/1">https://www.bbc.co.uk/bitesize/guides/z6r37nb/revision/1</a></p>
<p><b>P6 Molecules of matter</b></p>	<ul style="list-style-type: none"> <li>• Density</li> <li>• States of matter</li> <li>• Changes of state</li> <li>• Internal energy</li> <li>• Specific latent heat</li> <li>• Gas pressure and temperature</li> </ul>	<p>P17 Calculating density</p>	<p>FreeSciencelessons on YouTube:  <a href="https://www.youtube.com/watch?v=ScXOp8Zph28">https://www.youtube.com/watch?v=ScXOp8Zph28</a>  <a href="https://www.youtube.com/playlist?list=PL9IouNCPbCxWdHszkb6n6503ommOpg_t7">https://www.youtube.com/playlist?list=PL9IouNCPbCxWdHszkb6n6503ommOpg_t7</a>            videos 1-7</p> <p>malmsebury  <a href="https://www.youtube.com/watch?v=lvqu6JAbaKc">https://www.youtube.com/watch?v=lvqu6JAbaKc</a></p> <p>BBC Bitesize  <a href="https://www.bbc.co.uk/bitesize/guides/z242srd/revision/3">https://www.bbc.co.uk/bitesize/guides/z242srd/revision/3</a></p>

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<b>P7 Radioactivity</b>	<ul style="list-style-type: none"><li>• Atoms and radiation</li><li>• The discovery of the nucleus</li><li>• Changes in the nucleus</li><li>• Activity and half-life</li><li>• Alpha, beta and gamma</li></ul>	FreeSciencelessons on YouTube: <a href="https://www.youtube.com/playlist?list=PL9IouNCPbCxXTU7zSX4lvJDLrtCEmqEMU">https://www.youtube.com/playlist?list=PL9IouNCPbCxXTU7zSX4lvJDLrtCEmqEMU</a> videos 1-8  BBC Bitesize <a href="https://www.bbc.co.uk/bitesize/guides/zxbnh39/revision/1">https://www.bbc.co.uk/bitesize/guides/zxbnh39/revision/1</a>
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