

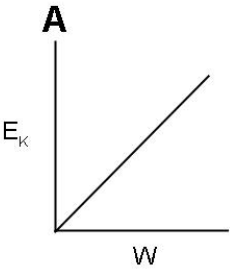
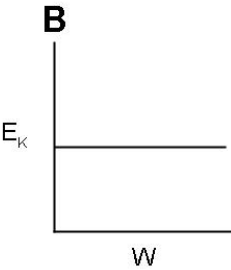
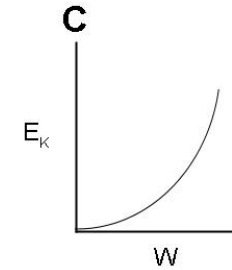
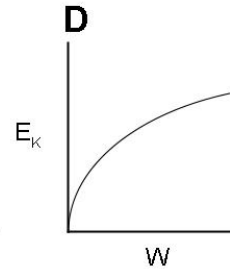
UNIT 1&2 STUDENT BOOK	
<p>U1&2 SB P 10 Fixed in PDF 26 May 2022. Not fixed online version as of 10 Dec 2022</p>	<p>Second dot point from the bottom.</p> <p>Change:</p> <ul style="list-style-type: none"> Write numbers in exponential notation with just one numeral before the decimal point. For example, the Earth–Moon distance of 382 million kilometres could be expressed as 382×10^6 km or in scientific notation as 3.82×10^8 km. <p>To:</p> <ul style="list-style-type: none"> Write numbers in exponential notation with just one numeral before the decimal point. For example, the Earth–Moon distance of 382 million metres could be expressed as 382×10^6 m or in scientific notation as 3.82×10^8 m.
<p>U1&2 SB p 21 Not fixed in PDF or online version as of 10 Dec 2022</p>	<p>Worked example 0.5A</p> <div style="background-color: #e1f5fe; padding: 10px;"> <p>Absolute uncertainty of the mean:</p> $\delta = \pm \frac{(x_{\max} - x_{\min})}{2}$ $= \pm \frac{17.68 - 17.53}{2}$ $= \pm \frac{0.15}{2}$ $= \pm 0.075 \text{ s (0.07 s)}$ </div> <p>You would report this as:</p> <p>Time (for 10 oscillations) = 17.61 ± 0.07 s Time (for 1 oscillation) = 1.761 ± 0.007 s (Note that the uncertainty is also divided by 10.)</p>
<p>U1&2 SB p 24 Not fixed in PDF or online version as of 10 Dec 2022</p>	<p>Worked example 0.5E</p> <p>Change: $E_a = O - A$ to $E_a = x_o - x_A$</p>
<p>U1&2 SB p 21 Not fixed in PDF or online version as of 10 Dec 2022</p>	<p>Last paragraph on page</p> <p>When using standard deviation, the SD (σ) is 0.050 s for the average of 10 swings for the eight trials, or 0.005 s for the one swing. This would be reported as 1.76 ± 0.005 s (or 1.76 ± 0.01 s to two decimal places).]</p>
<p>U1&2 SB p 61 Not fixed in PDF or online version as of 10 Dec 2022</p>	<p>Chapter 1.2 page 61. Last paragraph (under the heading <i>Solids</i>). Change second sentence as shown below:</p> <p>Change:</p> <p>Particles in solids are held very closely together by strong bonding forces. This gives them potential energy.</p> <p>To:</p> <p>Particles in solids are held very closely together by strong bonding forces. Microscopic potential energy comes from separation against these attractive forces. In a solid the particles have very little separation, so the microscopic potential energy is low.</p>
<p>U1&2 SB p 62 Not fixed as at 22 Nov 2022</p>	<p>Chapter 1.2, page 62. 2nd paragraph. Please alter the sentence as shown:</p> <p>Change:</p> <p>Particles in liquids are quite close, but the bonding forces between the particles are not as strong as in solids so they can slide past one another. Thus, they still have a fair amount of microscopic potential energy.</p> <p>To:</p> <p>Particles in liquids are quite close, but the bonding forces between the particles are not as strong as in solids so they can slide past one another. The energy that was used to overcome the strong bonds of the solid phase means they have more microscopic potential energy than solids.</p>
<p>U1&2 SB p 62 Not fixed as at 22 Nov 2022</p>	<p>Chapter 1.2, page 62. ‘Gases’ paragraph. Please alter the sentence as shown:</p> <p>Change:</p>

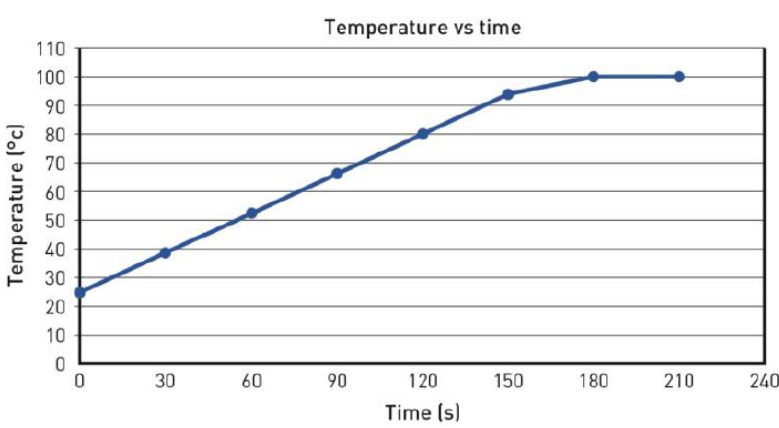
	<p>Particles in gases move around very quickly with a lot of space between them. The particles bounce off each. The intermolecular forces are quite weak, so the particles have little extra potential energy.</p> <p>To:</p> <p>Particles in gases move around very quickly with a lot of space between them. The particles bounce off each. The intermolecular forces are quite weak, and the energy used to overcome the bonds of the liquid phase means they have more microscopic potential energy than liquids.</p>																					
<p>U1&2 SB P170 Not fixed in PDF or online version as of 10 Dec 2022</p>	<p>Replace the second arrow with a plus sign:</p> <p>Change ${}^{60}_{27}\text{Co} \rightarrow {}^{60}_{28}\text{Ni}^* + {}^0_{-1}\text{e} \rightarrow \gamma (1.17 \text{ MeV})$ to ${}^{60}_{27}\text{Co} \rightarrow {}^{60}_{28}\text{Ni}^* + {}^0_{-1}\text{e} + \gamma (1.17 \text{ MeV})$</p>																					
<p>U1&2 SB P170 Not fixed in PDF or online version as of 10 Dec 2022</p>	<p>CYL 6.2 p 195 Q5a Product in equation should be ${}^{84}_{36}\text{Kr}$ not ${}^{32}_{36}\text{Kr}$</p>																					
<p>U1&2 SB p194 Not fixed in PDF or online version as of 10 Dec 2022</p>	<p>WORKED EXAMPLE 6.2B. Part (a). Formatting needs improvement. Should look like this:</p> <p><i>1. Calculate the sum of the masses of all of the reactants (m_r) and the sum of the masses of all the products (m_p)</i></p> <table style="margin-left: 40px;"> <tr> <td>• Mass of reactants, m_r</td> <td>U-235</td> <td>235.043 930 u</td> </tr> <tr> <td></td> <td>neutron</td> <td>+ 1.008 665 u</td> </tr> <tr> <td></td> <td>total m_r</td> <td>= 236.052 595 u</td> </tr> <tr> <td>• Mass of products, m_p</td> <td>Sr-94</td> <td>93.915356 u</td> </tr> <tr> <td></td> <td>Xe-139</td> <td>+ 138.918792 u</td> </tr> <tr> <td></td> <td>3 neutrons</td> <td>+ (3 × 1.008 665) u</td> </tr> <tr> <td></td> <td>total m_p</td> <td>= 235.860 143 u</td> </tr> </table>	• Mass of reactants, m_r	U-235	235.043 930 u		neutron	+ 1.008 665 u		total m_r	= 236.052 595 u	• Mass of products, m_p	Sr-94	93.915356 u		Xe-139	+ 138.918792 u		3 neutrons	+ (3 × 1.008 665) u		total m_p	= 235.860 143 u
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<p>U1&2 SB P218 Not fixed in PDF or online version as of 10 Dec 2022</p>	<p>Figure 3. Change start of caption to read “You can get electrical energy from a circuit...”</p>																					
<p>U1&2 SB P219 Not fixed in PDF or online version as of 10 Dec 2022</p>	<p>Chapter 7.3 Figure 5 The battery needs to be reversed. All else is okay. Change to this:</p>																					
<p>U1&2 SB P238 Added 14 May 2022</p>	<p>Chapter 8 CYL 8.2 Q9 Swap headings (data underneath is correct):</p> <table style="margin-left: 40px; border-collapse: collapse;"> <tr> <td style="text-align: center;">TABLE 3</td> <td style="text-align: center; color: blue;">Current (A)</td> <td style="text-align: center; color: blue;">Voltage (V)</td> </tr> <tr style="background-color: #f08080;"> <td style="background-color: #f08080;"></td> <td style="background-color: #f08080; color: blue; text-align: center;">Voltage (V)</td> <td style="background-color: #f08080; color: blue; text-align: center;">Current (A)</td> </tr> </table>	TABLE 3	Current (A)	Voltage (V)		Voltage (V)	Current (A)															
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<p>U1&2 SB P268 Not fixed in PDF or online version as of 10 Dec 2022</p>	<p>Unit 1 Practice exam questions, page 268. Q7. Change “have the same circular cross section” to “have a circular cross section”</p>																					

<p>U1&2 SB p293</p> <p>Not fixed as of 10 Dec 2022</p>	<p>CYL 10.5 page 293. Question 5. Change ‘hare’ to ‘tortoise in parts (a) and (b).</p> <p>a Sketch a displacement–time graph to show how the hare tortoise won.</p> <p>b Sketch a velocity–time graph to show how the hare tortoise won.</p>																																																															
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<p>U1&2 obook</p> <p>Not fixed as of 10 Dec 2022</p>	<p>Flashcard glossary Chapter 1 Heat and temperature.</p> <p>Definition of ‘energy’ card should read ‘the capacity to do mechanical work (symbol: E; SI unit: joule; unit symbol: J)’</p>																																																															
<p>U1&2 obook</p> <p>Not fixed as at 10 Dec 2022.</p>	<p>Chapter 1 CYL 1.3. Q1a. Change answer from “Thermal energy” to “Microscopic energy”</p>																																																															
<p>U1&2 obook</p> <p>Not fixed as at 10 Dec 2022.</p>	<p>Chapter 2 Revision Q12.</p> <p>The last line should read 0.0111 kg (11.1 g)</p>																																																															
<p>U1&2 obook</p> <p>Not fixed as at 10 Dec 2022.</p>	<p>Chapter 2 Revision Q 36.</p> <p>Corrected answer is (after the paragraph that finishes with “...because the formula says - Q_L”:</p> $-m_{\text{steam}} c_{\text{steam}} \Delta T_{\text{steam}} + m_{\text{steam}} L_v - m_w c_w \Delta T_s = m_i L_f$ $-m_{\text{steam}} c_{\text{steam}} (T_f - T_i)_s + m_{\text{steam}} L_v - m_w c_w (T_f - T_i)_w = m_{\text{ice}} L_f$ $m (-c_{\text{steam}} (T_f - T_i)_s + L_v - c_w (T_f - T_i)_w) = m_{\text{ice}} L_f$ $m (-2050 \times (100 - 110) + 2.26 \times 10^6 - 4180 (0 - 100)) = 0.020 \times 3.34 \times 10^5$ $m (20500 + 2.26 \times 10^6 + 418000) = 6680$ $m \times 2698500 = 6680$ $m = 6680/2698500 = 0.0025 \text{ kg}$ $m = 0.0025 \text{ kg} \times 1000 = 2.5 \text{ g}$ $m_{\text{total}} = 55.0 + 2.5 = 57.5 \text{ g}$																																																															
<p>U1&2 obook</p> <p>Not fixed as at 10 Dec 2022.</p>	<p>Practical worksheet 5.1 ANSWERS. Shielding effects. Table should look like this. Note that the 5th column has been amended.</p> <table border="1" data-bbox="352 1547 1422 2018"> <thead> <tr> <th>Layers</th> <th>d (mm)</th> <th>cpm</th> <th>Activity (Bq)</th> <th>BGC A</th> <th>ln BGCA</th> <th>$\delta = \sqrt{A}$</th> </tr> </thead> <tbody> <tr> <td>0</td> <td>0.00</td> <td>3291</td> <td>54.9</td> <td>54.3</td> <td>3.99</td> <td>7.37</td> </tr> <tr> <td>1</td> <td>0.03</td> <td>2840</td> <td>47.3</td> <td>46.8</td> <td>3.85</td> <td>6.84</td> </tr> <tr> <td>2</td> <td>0.06</td> <td>2476</td> <td>41.3</td> <td>40.7</td> <td>3.71</td> <td>6.38</td> </tr> <tr> <td>3</td> <td>0.09</td> <td>2117</td> <td>35.3</td> <td>34.7</td> <td>3.55</td> <td>5.89</td> </tr> <tr> <td>4</td> <td>0.12</td> <td>1828</td> <td>30.5</td> <td>29.9</td> <td>3.40</td> <td>5.47</td> </tr> <tr> <td>5</td> <td>0.15</td> <td>1580</td> <td>26.3</td> <td>25.8</td> <td>3.25</td> <td>5.08</td> </tr> <tr> <td>6</td> <td>0.18</td> <td>1353</td> <td>22.5</td> <td>22.0</td> <td>3.09</td> <td>4.69</td> </tr> <tr> <td>7</td> <td>0.21</td> <td>1204</td> <td>20.1</td> <td>19.5</td> <td>2.97</td> <td>4.42</td> </tr> </tbody> </table>	Layers	d (mm)	cpm	Activity (Bq)	BGC A	ln BGCA	$\delta = \sqrt{A}$	0	0.00	3291	54.9	54.3	3.99	7.37	1	0.03	2840	47.3	46.8	3.85	6.84	2	0.06	2476	41.3	40.7	3.71	6.38	3	0.09	2117	35.3	34.7	3.55	5.89	4	0.12	1828	30.5	29.9	3.40	5.47	5	0.15	1580	26.3	25.8	3.25	5.08	6	0.18	1353	22.5	22.0	3.09	4.69	7	0.21	1204	20.1	19.5	2.97	4.42
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	<p>Acceleration at 10 s $= \text{gradient}$ $= \frac{20}{20}$ $= 1.0 \text{ m s}^{-2}$</p> <p>Acceleration at 30 s $= \frac{-20 - +20}{20}$ $= \frac{-40}{20}$ $= -2.0 \text{ m s}^{-2}$</p> <p>Acceleration at 45 s $= \frac{0 - -20}{10}$ $= \frac{+20}{10}$ $= +2.0 \text{ m s}^{-2}$</p> <p>iii Sketch an acceleration–time graph.</p>
U1&2 obook Not fixed as of 10 Dec 2022	<p>Answers to CYL 10.5, Question 5. Change ‘hare’ to ‘tortoise in parts (a) and (b).</p> <p>a Sketch a displacement–time graph to show how the hare tortoise won.</p> <p>b Sketch a velocity–time graph to show how the hare tortoise won.</p>
U1&2 obook Not fixed as at 10 Dec 2022.	<p>U1&2 Challenge Ch 10.1 answers. Last paragraph is incomplete. Please add: Direction: D is at an elevation of 26.6° to the horizontal. If you mark a point directly under D, it will be 26.6° to the E of N. The distance between A and D is 12.2 m. Thus, the displacement BD is 12.2 m N 26.6° E at an elevation of 26.6°.</p>
U1&2 obook Not fixed as at 10 Dec 2022.	<p>U1&2 Challenge Ch 10.6 Army Troop Ride. Second last line is wrong: Please change: $3 + x + y = 3 + 25 + 1.5$ to $3 + x + y = 3 + 2.5 + 1.5$ $= 7 \text{ km}$ $= 7 \text{ km}$</p>
U1&2 obook Not fixed as at 10 Dec 2022.	<p>U1&2 CYL 10.4 Q3 Answer should read:</p> $\text{Gradient} = \frac{\Delta y}{\Delta x} = \frac{20 - 0}{2.5 - 1.0} = \frac{20}{1.5}$ $= 13.3 \text{ m s}^{-1}$
U1&2 obook Not fixed as at 10 Dec 2022.	<p>CYL 10.5 Q4b. Answer: Instantaneous speed $= \text{the speed value (y-axis) at that time}$ $= 5 \text{ m s}^{-1}$ Note: read the question carefully. The question has <u>not</u> asked for instantaneous acceleration at 5 s which would be the gradient to the tangent to the line at 5 s, or 1 m s^{-2}.</p>
U1&2 obook Not fixed as at 10 Dec 2022.	<p>Chapter 10 Review Q7 (a). Please fix the answer</p> <p>a the average speed</p>

	$t = 2 + \frac{7}{60} + \frac{51}{3600}$ $s = 42.2 \text{ km}, v = ?, \quad = 2.13 \text{ hours}$ $v = \frac{s}{t} = \frac{42.5}{2.13} = 19.95 \text{ km h}^{-1}$
U1&2 obook Not fixed as at 10 Dec 2022.	<p>Chapter 10. Revision question 8c. Answer should read:</p> $v_{\text{av}} = \frac{s}{t}$ $= \frac{76}{(9+18)}$ $= 2.8 \text{ m s}^{-1} \text{ north}$
U1&2 obook Not fixed as at 10 Dec 2022.	<p>Chapter 10. Revision Q9a. Change acceleration $a = 57 \text{ m s}^{-2}$ to $a = 17 \text{ m s}^{-2}$</p>
U1&2 obook Not fixed as at 10 Dec 2022.	<p>Chapter 11 Revision Q20</p> $F_{\text{total}} = F_{\text{w}} + F_{\text{additional}}$ $3 \times 10^4 = 2.5 \times 10^3 \times 9.8 + 2.5 \times 10^3 a$ $3 \times 10^4 = 2.45 \times 10^4 + 2.5 \times 10^3 a$ $5500 = 2.5 \times 10^3 a$ $a = 2.2 \text{ m s}^{-2} \text{ upwards}$ $s = \frac{1}{2} at^2$ $t = \sqrt{\frac{2s}{a}} \quad]$ $= \sqrt{\frac{2 \times 500}{2.2}}$ $= 21.3 \text{ s}$
U1&2 obook Not fixed as at 10 Dec 2022.	<p>CYL12.2 Q7. Answer:</p> $m_1 u_1 = m_1 v_1 + m_2 v_2 \text{ (let the forward direction be + direction)}$ $6000 \times 355 = 5940 v_1 + 60 \times 750$ $2\,130\,000 = 5940 v_1 + 45\,000$ $2\,085\,000 = 5940 v_1$ $v_1 = +351 \text{ m s}^{-1} \text{ (in the forward direction)}$
U1&2 Obook Not fixed as at 10 Dec 2022.	<p>CYL 12.2 Q9 Answer. Fix spelling in line 2 from 'boast' to 'boat'</p>
U1&2 obook Not fixed as at 10 Dec 2022.	<p>CYL12.2 Q10(a). Answer: REPLACE</p> $m_1 u_1 + m_2 u_2 = (m_1 + m_2) v_1$ $(0.41 \times 10^{-3}) \times u_1 + (0.170 + 0.350) \times 0 = (0.041 + 0.170 + 0.350) \times 0.178$ $(0.41 \times 10^{-3}) u_1 + 0 = 0.10$ $u_1 = \frac{0.100}{0.41 \times 10^{-3}}$ $u_1 = +244 \text{ m s}^{-1}$

	<p>WITH</p> $m_1u_1 + m_2u_2 = (m_1 + m_2)v_1$ $(0.41 \times 10^{-3}) \times u_1 + (0.170 + 0.350) \times 0 = ((0.41 \times 10^{-3}) + 0.170 + 0.350) \times 0.178$ $(0.41 \times 10^{-3})u_1 + 0 = 0.0926$ $u_1 = \frac{0.0926}{0.41 \times 10^{-3}}$ $u_1 = +226 \text{ m s}^{-1}$
U1&2 obook Not fixed as at 10 Dec 2022.	CYL 12.2 Q10(b). Fix spelling of “mas” to “mass”
U1&2 obook Not fixed as at 10 Dec 2022.	<p>CYL 13.2 Question 5c. Answer for the second part has been left out. It should be:</p> <p>Work = total area of A + B + C + D + E (see diagram below)</p> $= \frac{1}{2} \times 20 \times 2 + 20 \times 2 + \frac{1}{2} \times 20 \times 4 + 80 \times 2 + \frac{1}{2} \times 40 \times 1$ $= 20 + 40 + 40 + 160 + 20$ $= 280 \text{ J}$
U1&2 obook Still not fixed in the obook SB answers and SB questions as at 12 Dec 2022.	<p>Chapter 13 Revision Q2. The following graphs should be included:</p> <div style="display: flex; justify-content: space-around; align-items: flex-end;"> <div style="text-align: center;"> <p>A</p>  </div> <div style="text-align: center;"> <p>B</p>  </div> <div style="text-align: center;"> <p>C</p>  </div> <div style="text-align: center;"> <p>D</p>  </div> </div> <p>Note that they have been corrected in the obook of the SB and the PDF but not in the SB questions worksheet or the SB answers worksheet.</p>
U1&2 obook Not fixed as at 10 Dec 2022.	CYL 15.2 Q4. The first sentence should be expanded to include words in red below: L is length of the pipe in metres; n is the mode of vibration of the string and ranges from 1 upwards in whole numbers; λ_n is the wavelength of the progressive wave in the air in metres; f is the frequency of the sound wave in air in hertz (Hz, or s^{-1}); and v is the velocity of the sound wave in air in metres per second (m s^{-1}).
U1&2 obook Not fixed as at 10 Dec 2022.	CYL 15.2 Q5. Last line should read: $= 0.7565 \text{ m}$ (75.65 cm)
U1&2 obook Not fixed as at 10 Dec 2022.	<p>CYL 16.3 Q 3b answer</p> <p>Please correct as shown below:</p> $\frac{I_1}{I_2} = \frac{r_2^2}{r_1^2}$ $\frac{0.0015}{0.00075} = \frac{r^2}{100^2}$ $r = \sqrt{10000}$ $r_2 = 141 \text{ m}$
U1&2 obook Not fixed as at 10 Dec 2022.	<p>Filename: NCPQ_Unit_1&2_Practice_exam.docx. Both question and answer files.</p> <p>MC Question 6. Note that there is no 4 in front of the A1, and the 23 should be 24. It is not ²³₁₃4A1 but ²⁴₁₃A1</p>

	B ${}_{13}^{24}\text{Al} \rightarrow {}_{12}^{24}\text{Mg} + {}_{+1}^0e + \nu_e$
U1&2 obook Not fixed as at 10 Dec 2022.	U1&2 Practice exam. MC Question 14. Answer is (A)
U1&2 obook Not fixed as at 10 Dec 2022.	U1&2 Practice exam. MC Question 22. Add: $n_{\text{water}} = 1.33$
U1&2 obook Not fixed as at 10 Dec 2022.	U1&2 Practice exam. Short answer Q1b(i). Second line in solution: $-m_w c_w \Delta T_w = -m_{\text{ice}} c_{\text{icewater}} \Delta T_{\text{icewater}} + mL_f$ Should read: $-m_w c_w \Delta T_w = m_{\text{ice}} c_{\text{icewater}} \Delta T_{\text{icewater}} + mL_f$
U1&2 obook Not fixed as at 10 Dec 2022.	U1&2 Practice exam. Short answer Q2b. Second line in solution: $-m_w c_w \times T_w = m_{\text{ice}} \times C_{\text{ice}} \times T_{\text{ice}} + m \times L_f + m_{\text{icewater}} \times C_{\text{icewater}} \times T_{\text{icewater}}$ Should read: $-m_w c_w \times \Delta T_w = m_{\text{ice}} \times c_{\text{ice}} \times \Delta T_{\text{ice}} + m \times L_f + m_{\text{icewater}} \times c_{\text{icewater}} \times \Delta T_{\text{icewater}}$
U1&2 obook Not fixed as at 10 Dec 2022.	U1&2 Practice exam. MC Question 9. Calculate how many electrons are required to produce a charge of $-10 \mu\text{C}$.
U1&2 obook Not fixed as at 10 Dec 2022.	Unit 1&2 Practice exam. Short Answer Question 10. Replace 1715 Hz in the Q with 1372Hz, viz: A particular tube of a pipe organ can most easily produce frequencies of 686 Hz, 1029 Hz and 1372 Hz. The speed of sound in the organ is 340 m s^{-1} .
U1&2 obook Not fixed as at 10 Dec 2022.	Unit 1&2 Practice exam. Extended Answer Question 11a (iii). The final line of the answer after the calculation of A and B, should read: Difference: $40.5 \text{ m} - 28.5 \text{ m} = 12.0 \text{ m}$.
U1&2 obook Not fixed as at 10 Dec 2022.	Unit 1&2 Practice exam. Extended Answer Question Change: c Determine the maximum angle i that To: c Determine the maximum angle α that
U1&2 obook Advised March 2020. Not done as at 22 Dec 2022. (3 years)	Unit 1 Data Test. Dataset 2 Figure 3. Please change to this: 
U1&2 obook Not fixed as at 10 Dec 2022.	Unit 1 Data Test. Dataset 3 Q9. Answers. Please add the following at the end. The absolute uncertainty in the y-intercept is: $\delta = \frac{ x_{\text{max}} - x_{\text{min}} }{2}$ $= \frac{ 2.5 - (-4.0) }{2}$ $= 3.25 \Omega$

	Hence, the equation for the line is: $R = (29.7 \pm 6.5)L - 1.40 \pm 3.25\Omega$
U1&2 obook Advised March 2020. Not done as at 22 Dec 2022.	<p>Unit 1 Data Test. Dataset 3 Q10. Answers. Corrections are in red.</p> <p>The percentage uncertainty in the resistivity is 21.0 % (from the $\delta\%$ uncertainty in the gradient).</p> <p>The absolute uncertainty in the resistivity is: $1.20 \times 10^{-6} \Omega \text{ m} \pm 21.0 \%$, or $1.20 \times 10^{-6} \pm 0.3 \times 10^{-6}$</p> <p>So the range is from $0.9 \times 10^{-6} \Omega \text{ m}$ to $1.5 \times 10^{-6} \Omega \text{ m}$.</p> <p>Absolute error:</p> $E_a = O - A $ $= 1.20 \times 10^{-6} - 1.15 \times 10^{-6} \text{ W m}^{-1}$ $= 0.05 \times 10^{-6} \text{ W m}^{-1}$ $E\% = \frac{E_a}{A} \times 100$ $= \frac{0.05 \times 10^{-6}}{1.15 \times 10^{-6}} \times 100$ $= 4.35\%$ <p>The accepted value of resistivity of $1.15 \times 10^{-6} \Omega \text{ m}$ is within the experimental range of $0.9 \times 10^{-6} \Omega \text{ m}$ to $1.5 \times 10^{-6} \Omega \text{ m}$. The experiment has confirmed the resistivity of nichrome wire within the experimental limitations of the equipment.</p>
U1&2 obook Advised March 2020. Not done as at 22 Dec 2022.	Cumulative Test, Unit 2, Short answer Q5. Delete lined spaces before first part.,
U1&2 obook Advised March 2020. Not done as at 22 Dec 2022.	Cumulative Test, Unit 2, Short answer Q6. The question is missing. It should read: "Consider a freely falling ball that has a speed of 6.0 m s^{-1} at a certain height. Use conservation of mechanical energy to calculate the speed of the ball after falling additional 14.4 m."
U1&2 ASSESS QUIZZES	
U1&2 obook Not done as at 22 Nov 2022.	Assess quiz. Chapter 2 Consolidate. Q1. Add the words in red: Determine which of the following determines the direction of transfer .."
U1&2 obook Not done as at 22 Nov 2022.	Assess quiz. Chapter 2 Consolidate. Q4. Add degree symbol after the 20
U1&2 obook Not done as at 22 Nov 2022.	Assess quiz. Chapter 2 Extend. Q2. "A 40 g piece of iron at a temperature of 120° C is placed in a container of 600 g of water..."
U1&2 obook Advised May 2020. Not done as at 22 Nov 2022.	Assess quiz. Chapter 4 Consolidate. Q5 $1.68 \times 10^{-11} \text{ J}$ (correct answer) $1.86 \times 10^{-28} \text{ J}$ (incorrect answer) $5.58 \times 10^{-20} \text{ J}$ (incorrect answer) $1.01 \times 10^{16} \text{ J}$ (incorrect answer)
U1&2 obook Advised May 2020. Was fixed , now wrong again. Not done as at 22 Nov 2022.	Quizzes Chapter 9 Extend Q 3 [correct answer] a =c, b [incorrect answer] b, a = c [incorrect answer] c, a, b [incorrect answer] a, b, c
U1&2 obook	Quizzes Chapter 10 Extend Q2 [correct answer] 1.5 s

<p>Not done as at 22 Nov 2022.</p>	<p>[incorrect answer] 1.0 s [incorrect answer] 2.5 s [incorrect answer] 5.4 s</p>										
<p>U1&2 obook Not done as at 22 Nov 2022.</p>	<table border="1"> <tr> <td colspan="2" data-bbox="352 221 1278 253"> Assess Quizzes U1&2 Chapter 13 – support – Q2 </td> </tr> <tr> <td data-bbox="352 253 603 284">Correct answer</td> <td data-bbox="603 253 1278 284">The force on the ball is at right angles to the ball’s motion.</td> </tr> <tr> <td data-bbox="352 284 603 315">Incorrect answer</td> <td data-bbox="603 284 1278 315">No net force acts on the ball.</td> </tr> <tr> <td data-bbox="352 315 603 347">Incorrect answer</td> <td data-bbox="603 315 1278 347">No potential energy is being converted to kinetic energy.</td> </tr> <tr> <td data-bbox="352 347 603 378">Incorrect answer</td> <td data-bbox="603 347 1278 378">No distance is covered by the ball.</td> </tr> </table>	Assess Quizzes U1&2 Chapter 13 – support – Q2		Correct answer	The force on the ball is at right angles to the ball’s motion.	Incorrect answer	No net force acts on the ball.	Incorrect answer	No potential energy is being converted to kinetic energy.	Incorrect answer	No distance is covered by the ball.
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<p>U1&2 obook Advised 18 Sept 2020. Not done as at 22 Nov 2022.</p>	<p>Assess quiz. Chapter 15 Extend. Q2.</p> <p>2</p> <p>Calculate the wavelength of the sound in air from a piano string that has a frequency of 440 Hz, on a 25°C day. The speed of sound is related to temperature by the formula: v (sound) = $331 + 0.6T$, where T = temperature in °C.</p>										