| Outcomes and experiences<br><br>S3 Physics | G | O | R | How do I know I can do this or what can you do to improve your learning in this outcome? |
|---|---|---|---|---|
| I can define absolute zero as the temperature at which no particles have kinetic energy | | | | |
| I can convert temperatures from Kelvins to degrees Celsius and vice versa where 0 K = -273 $^0$C<br><br>e.g. 27 $^0$C = 300 K | | | | |
| I can describe the kinetic model of an ideal gas | | | | |
| I can make statements about the relationships between the following<br><br>• Pressure – Volume (Boyle's Law)<br>• Pressure – Temperature (Gay-Lussac's Law)<br>• Volume – Temperature (Charles' Law) | | | | |
| I can use the kinetic model to explain the relationship between the following<br><br>• Pressure – Volume (Boyle's Law)<br>• Pressure – Temperature (Gay-Lussac's Law)<br>• Volume – Temperature (Charles' Law) | | | | |

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|---|---|---|---|---|
| I can identify the quantities, and units, represented by the symbols in the formula<br>$p_1V_1 = p_2V_2$<br>$\frac{p_1}{T_1} = \frac{p_2}{T_2}$<br>$\frac{V_1}{T_1} = \frac{V_2}{T_2}$<br>$\frac{pV}{T} = \text{constant}$ | | | | |
| I can carry out calculations using the formula<br>$p_1V_1 = p_2V_2$<br>$\frac{p_1}{T_1} = \frac{p_2}{T_2}$<br>$\frac{V_1}{T_1} = \frac{V_2}{T_2}$<br>$\frac{pV}{T} = \text{constant}$ | | | | |
| I can recognise and sketch graphs to represent Boyle's Law, Charles' Law and Gay-Lussac's Law | | | | |
| I can describe experiments that can verify Boyle's Law, Charles' Law and Gay-Lussac's Law | | | | |