

## Physics - Year 9 by the end of term 1

Expectations	Classwork, homework and assessments shows student has knowledge of:
	<p><b>Particle model &amp; density:</b> Particle model inc. kinetic theory for solids, liquids and gases. Density definition and calculation including handling of length and mass data that may need conversion. Method for determining the density of a regular solid, irregular solid and liquid. Archimedes' principle and the Eureka can.</p>
	<p>Definitions of specific heat capacity, latent heat of fusion and latent heat of vaporisation. Calculations involving <math>E=mc\Delta\theta</math> and <math>E=mL</math> including questions that make use of transformations. Interpretation of cooling and heating curves in terms of particle/kinetic theory. Definitions of melting/freezing, evaporation as distinct from boiling/condensation and sublimation.</p>
Developing	Student may need significant prompting and guidance to tackle most problems. Knowledge is often extant but may be unstructured and links between concepts are not yet fully developed.
Secure	Student is not yet a master of the component knowledge of the course so far but with guidance and prompts, can tackle most problems with relative ease. Knowledge is clearly demonstrated through questioning, but free recall is not always guaranteed.
Complex	Student is a master in the component knowledge of the course so far. This means they are able to access and demonstrate mastery of the above content with little to no prompting or assistance from a teacher, parent or guardian.