

## Physics - Year 8 by the end of term 1

Expectations	Classwork, homework and assessments shows student has knowledge of:
	<p><b>Magnetism and electromagnets:</b> Magnetic poles, magnetic fields for single bar magnets and fields during repulsion and attraction. Methods for testing the strength of an electromagnet. Interpreting provided data. Electromagnet design and usage inc: speakers, door locks, reed switches etc. Analysis of unfamiliar electromagnet design.</p>
	<p><b>Properties of waves and the EM spectrum:</b> Definitions of longitudinal and transverse waves. Identification and definition of pitch, frequency, amplitude, volume and wavelength. Uses of sound waves inc ultrasound. Calculation of speed from <math>v=s \div t</math> (for speed of sound). The regions of the electromagnetic spectrum. Refraction and reflection.</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.