

PHYSICS (Foundation Trilogy) – YEAR 11 – WAVES & MAGNETISM

A WAVE PROPERTIES

1	Transverse	Oscillate perpendicular to travel
2	Longitudinal	Oscillate parallel to travel
3	All waves transfer	Energy
4	Amplitude	Maximum displacement from undisturbed position
5	Wavelength	Peak to peak distance
6	Frequency	Waves passing point per second
7	Time Period	Time taken for wave to pass certain point
8	Wave speed =	frequency x wavelength


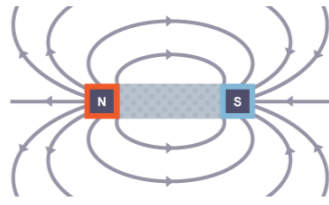
B ELECTROMAGNETIC SPECTRUM

1	Radio Waves	TV and Radio – Longest wavelength
2	Microwaves	Satellites and Cooking Food
3	Infrared	Infrared Cameras, Cooking Food
4	Visible	Fibre Optics
5	Ultra Violet	Energy efficient lamps, sun beds
6	X-ray, Gamma	Medical Imaging and Treatment Gamma are shortest wavelength
7	Hazardous	Ultraviolet, X-ray, Gamma

C MAGNETISM

1	Magnetic Pole	Place where magnetic field is strongest
2	Unlike Poles	Attract
3	:Like Poles	Repel
4	Permanent Magnet	Produces own magnetic field Can attract or repel
5	Induced Magnet	Becomes magnetic in a magnetic field Can only attract

D MAGNETIC FIELD

1	Magnetic Field	Region where magnets exert a force
2	Magnetic Field diagram Rules	Stronger field lines closer together Arrows point north to south Lines do not cross
3	Magnetic compass	Small bar magnet that points in the direction of magnetic field
4		

E ELECTROMAGNETISM

1	Electromagnetism	Magnetic field around a current carrying wire
2	Increasing field strength	More current, Closer to wire, Form a solenoid, Iron core in solenoid
3	Solenoid	Coil of wire Magnetic field same as bar magnet