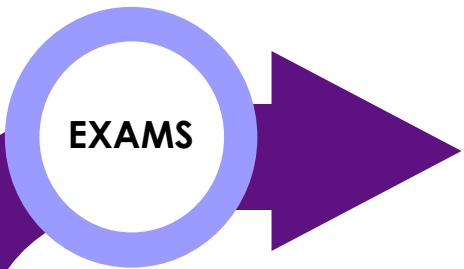
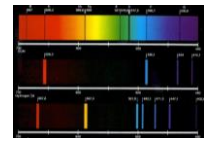


A-LEVEL PHYSICS LEARNING JOURNEY



The Big Bang

Evolution of the Universe



Energy Levels and Spectra

Life Cycle of Stars

Carbon Dating

Exponential Decay

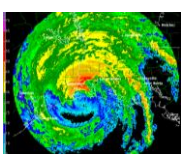
Nuclear fusion

Einstein's mass-energy equation



Nuclear decay

Nuclear Physics

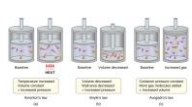


ASTROPHYSICS

NUCLEAR PHYSICS

Cosmology

Astronomical Distances



Doppler Effect



HR Diagram

Analysing Stars

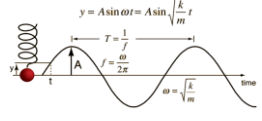
Half-life

Nuclear fission

Binding Energy

Damping

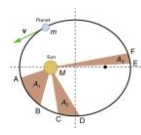
Resonance



Gravitational Fields

$$F = G \frac{M_1 M_2}{r^2}$$

Kepler's Laws



Coulomb's Law

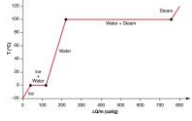
Electric Potential

Charged Particles in a Magnetic Field

Radio-activity

Transformers

Kinetic Theory of Gases

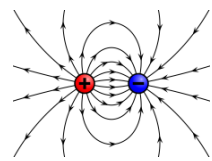


THERMAL PHYSICS

FIELDS

Specific Latent Heat

Circular and SHM



Electric Fields

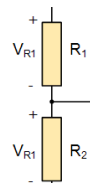
Gravitational Potential

Newton's Law of Gravitation

Charged Particles in an E-Field

Magnetic Fields

EM Induction



$$V_{out} = V_{in} \left(\frac{R_2}{R_1 + R_2} \right)$$

Specific Heat Capacity

Thermal Physics

Resistivity

Analysing Circuits

Kirchhoff's First Law

Combining Resistors

Resistance

Year 13

ELECTRICITY

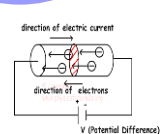
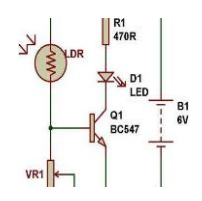
Momentum

Can you find the value of x, y, z?			
+	+	=	2
+	+	=	4
+	+	=	7
-	-	=	1

Using excel and spreadsheets to analyse data

Hooke's Law and Young's Modulus

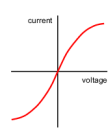
Density and Pressure



Electrical Energy

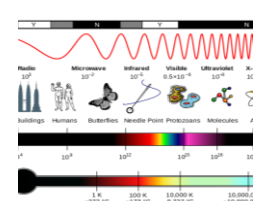
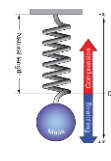
Potential Divider

IV Characteristics

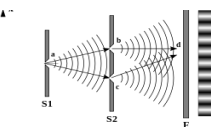


Pd and EMF

Electrical Current



Superposition of waves



Stationary waves

Conservation of Energy



Power

WAVES

FORCES & MATERIALS

Diffraction and polarisation

Total Internal Reflection

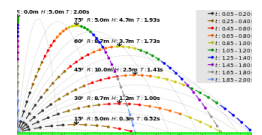
Young's Double Slit Experiment

Kinematics and the motion of bodies

Newton's Laws of Motion

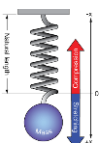
Archimedes' Principle

Deforming Materials

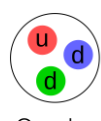


Reflection and refraction

Waves



Quantum Physics



Quarks

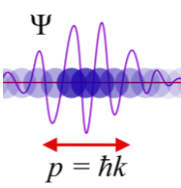
The nucleus

Scalars & Vectors



Induction tasks

Wave-Particle Duality

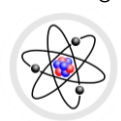


The Photon Model

The Photoelectric Effect

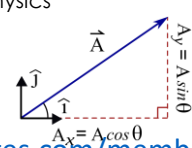
Anti-particles, hadrons and leptons

Alpha Particle Scattering



Particle Physics

Foundations of Physics



Year 12

