"The most important thing is to never stop questioning"
Albert Einstein

Science - Physics
LEARNING JOURNEY

Paper 1:	Paper 2:
P1 – Energy	P5 – Forces
P2 – Electricity	P6 – Waves
P3 – Particle model	P7 – Magnetism
P4 – Atomic structure	P8 – Space (Separate only)

AQA GCSE Combined/Separate science physics paper 1 and paper 2 revision and mastery

GCSE Combined Science Exams GCSE Separate Science exams

Revision & mastery: Physics exam technique practice and PPE question breakdown

Physics paper 2 Targeted feedback and revision guidance

Physics paper 2

Physics paper 1 Targeted feedback and revision guidance

Physics paper 1

Evidence for the expansion of the universe

Lifecycle of a star

P8 Space (Separate)

The structure of our solar system

Amplitude, wavelength and frequency, waves speed calculations

Reflection and refraction of waves

Solenoids and electro-magnets

Motor effect and generators

Transformers and the National Grid

Cars, stopping distance and road safety

YEAR 11

P6 Waves

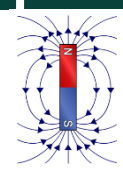
P7 Magnetism

Momentum

Newton's laws of motion

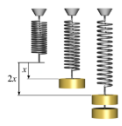
Transverse and Longitudinal

Electromagnetic waves – types, hazards and uses



Exploring the magnetic fields of permanent and induced magnets, and the Earth's magnetic field, using a compass

Weight and mass



Motion graphs

Hooke's law

Calculating work done

Half life calculations and uses.

The changing model of the atom, how atoms and isotopes are structured

Speed and acceleration

P5-Forces

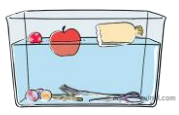
P4-Atomic Structure

YEAR 10

Explore the link between temperature and pressure

P3-Particle model

Pressure in solids and fluids. Linked to the Earths atmosphere and to how objects float



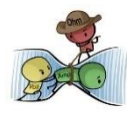
Resultant forces

Vectors and scalars

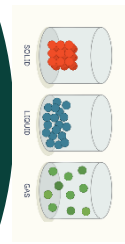
Nuclear decay equations

Uses for radiation

Types of radiation and ionization



Specific heat capacity and specific latent heat



Describing energy transfers, calculating the value of these transfers, defining power and looking at energy sources

Efficiency

Renewable vs non renewable

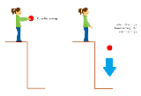
Measuring Current and PD

Charge, resistance and power calculations

Mains electricity and safety

Changes of state

Kinetic energy



P1-Energy

P2-Electricity

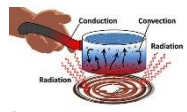
Arrangement of molecules to explain density

YEAR 9

Gravitational potential energy

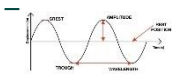
Power calculations

Building circuits and exploring current, resistance and voltage relationships for different circuit elements, including their graphical representations



Heat transfer by conduction, convection and radiation

Uses for waves – ultrasound



Waves – medium for transferring energy

Investigating insulation – how it works and what is the best insulator

Properties of waves

Work done

Building electro magnets

Explaining how rainbows are made using ideas of refraction

Labelling wave diagrams – transvers and longitudinal

Looking at ray diagrams for reflection and refraction of light.

Cooling curves

Work done calculations

Practical applications of magnets

Permanent vs induced magnets

Explaining what items are the most expensive to run by using the cost of energy calculations

Studying waves but looking at the structure of sound and light waves, how they travel, how we detect them and how they pass through different materials

Contact vs Non-contact forces

Explain motion caused by resultant force

Sound and Light

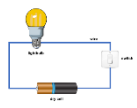
YEAR 8

Forces and Pressure

Energy transfers

Explaining sound in different mediums

How the eye works



Explaining how pressure is caused and what affects it can have.

Pressure in solids, liquids and gases

Investigating floating vs sinking

Renewable vs non-renewable resources

Naming energy stores

What is potential difference

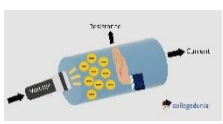
What is current

Static Electricity

Circuit symbols

Gravity and weight

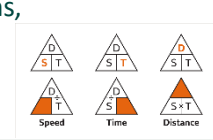
Describing the stores and transfers of energy in different situations



What is resistance

Drawing circuits with correct symbols and practical applications with building circuits.

Describing motion - Speed calculations, investigation and graphing



Names of forces and force diagrams

Electricity

Speed and gravity

YEAR 7