Unit 7, Dartmouth Buildings, Fort Fareham Industrial Estate,
Newgate Lane, Fareham, PO14 1AH
Tel: 01329 285415 E: info@ezyeducation.co.uk

AQA GCSE Physics – Course outline

Experiment = EX Lecture = L Assessment = A

Section 1 – Energy

Code	Name	Activity
Module 1 - Energy and Energy Transfers		
1.1	Principles of Energy	L
1.1a	Principles of Energy	A
1.2	Kinetic Energy	L
1.2a	Kinetic Energy	A
1.3	Elastic Potential Energy	L
1.3a	Elastic Potential Energy	A
1.4	Gravitational Potential Energy	L
1.4a	Gravitational Potential Energy	A
1.5	Power	L
1.5a	Power	A
1.6	Thermal Energy	L
1.6a	Thermal Energy	A
1.7	Finding the Specific Heat Capacity	Ex
1.7a	Finding the Specific Heat Capacity	A
1.7b	Finding the Specific Heat Capacity	A
Module 2 - Energy Dissipation, Efficiency and Resources		
2.1.1	Energy Dissipation	L
2.1.2	Efficiency	L
2.1a	Energy Dissipation and Efficiency	A
2.2	Thermal Insulators	Ex
2.2a	Thermal Insulators	A
2.2b	Thermal Insulators	A
2.3.1	Non-Renewable Energy Resources	L
2.3.2	Renewable Energy Resources	L
2.3a	Energy Resources	A

Unit 7, Dartmouth Buildings, Fort Fareham Industrial Estate,
Newgate Lane, Fareham, PO14 1AH
Tel: 01329 285415 E: info@ezyeducation.co.uk

Section 2 – Electricity

Module 1 - Electrical Quantities

1.1.1	Standard Circuit Diagram Symbols	L
1.1.2	Electrical Charge and Current	L
1.1.3	Energy, Charge and Potential Difference	L
1.1.4	Current, Resistance and Potential Difference	L
1.1.5	Applications of Thermistors and LDRs	L
1.1a	Circuit Quantities	A
1.2.1	Finding Resistance (General Principles)	Ex
1.2.2	Finding Resistance (Resistance vs Length)	Ex
1.2.3	Finding Resistance (Combinations)	Ex
1.2a	Finding Resistance	A
1.2b	Finding Resistance	A

Module 2 - Circuits

2.1.1	V-I Characteristic (Resistor)	Ex
2.1.2	V-I Characteristic (Filament Lamp)	Ex
2.1.3	V-I Characteristic (Diode)	Ex
2.1a	V-I Characteristics	A
2.1b	V-I Characteristics	A
2.2.1	Series Circuits	L
2.2.2	Parallel Circuits	L
2.2a	Series and Parallel Circuits	A

Module 3 - Domestic Uses, Safety and Static Electricity

3.1.1	Direct and Alternating PD	L
3.1.2	Mains Electricity	L
3.1a	Domestic Circuits	A
3.2.1	Electric Power	L
3.2.2	Electrical Energy Transfers	L
3.2.3	The National Grid	L
3.2a	Electrical Energy and Power	A
3.3.1	Static Electricity	L
3.3.2	Electric Fields	L
3.3a	Static Electricity and Electric Fields	A

Unit 7, Dartmouth Buildings, Fort Fareham Industrial Estate,
Newgate Lane, Fareham, PO14 1AH
Tel: 01329 285415 E: info@ezyeducation.co.uk

Section 3 – Particle Model of Matter

Module 1 - The Particle Model

1.1.1	Calculating Density	L
1.1.2	The Particle Model and Density	L
1.1.3	Changes of State	L
1.1a	Density and State	A
1.2	Determining Density	Ex
1.2a	Determining Density	A
1.2b	Determining Density	A
1.3.1	Internal Energy	L
1.3.2	Thermal Energy and Specific Heat Capacity	L
1.3.3	Specific Latent Heat	L
1.3a	Energy of Particles	A

Module 2 - Pressure in Gases

2.1	Particle Motion in Gases	L
2.1a	Particle Motion in Gases	A
2.2.1	Pressure in Gases	L
2.2.2	pV = Constant	L
2.2a	pV = Constant	A
2.3	Increasing the Pressure of a Gas	L
2.3a	Increasing the Pressure of a Gas	A

Section 4 – Atomic Structure

Module 1 - Atoms and Radioactivity

1.1.1	Atomic Structure	L
1.1.2	Mass Number, Atomic Number and Isotopes	L
1.1.3	The Development of the Model of the Atom	L
1.1a	The Atom	A
1.2.1	Radioactive Decay and Activity	L
1.2.2	Natures and Properties of Nuclear Radiations	L
1.2.3	Nuclear Equations	L
1.2.4	Half-lives	L
1.2a	Radioactive Decay	A

Module 2 - Hazards and Uses of Radioactive Emissions

2.1	Radioactive Contamination	L
2.1a	Radioactive Contamination	A
2.2.1	Background Radiation	L
2.2.2	Uses of Radioactivity	L

Registered Office: The Cedars, Manor Road, Durley, Hampshire SO32 2AF
Company registered in England number: 8446269

Unit 7, Dartmouth Buildings, Fort Fareham Industrial Estate,
Newgate Lane, Fareham, PO14 1AH
Tel: 01329 285415 E: info@ezyeducation.co.uk

2.2.3	Hazards of Radioactivity	L
2.2a	Hazards and Uses of Radioactivity	A
2.3.1	Nuclear Fission	L
2.3.2	Nuclear Fusion	L
2.3a	Nuclear Fission and Fusion	A

Section 5 – Forces

Module 1 - Forces and Their Interactions

1.1	Scalar and Vector Quantities	L
1.1a	Scalar and Vector Quantities	A
1.2	Introduction to Forces	L
1.2a	Introduction to Forces	A
1.3	Gravity	L
1.3a	Gravity	A
1.4	Resultant Forces (Co-linear)	L
1.4a	Resultant Forces (Co-linear)	A
1.4b	Resultant Forces (Co-linear)	A
1.5	Resultant Forces (Non Co-Linear)	L
1.5a	Resultant Forces (Non Co-Linear)	A
1.5b	Resultant Forces (Non Co-Linear)	A
1.6	Resolution of Forces	L
1.6a	Resolution of Forces	A

Module 2 - Work Done and Energy Transfer

2.1	Work Done and Energy Transfer	L
2.1a	Work Done and Energy Transfer	A
2.1b	Work Done and Energy Transfer	A

Module 3 - Forces and Elasticity

3.1	Stretching and Bending	L
3.1a	Stretching and Bending	A
3.2	F = ke Theory	L
3.2a	F = ke Theory	A
3.3.1	F = ke Experiement (Doing the Experiment)	Ex
3.3.2	F = ke Experiement (Analysing the Results)	Ex
3.3a	F = ke Experiement	A
3.3b	F = ke Experiement	A
3.4	Work Done in Stretching a Spring	L
3.4a	Work Done in Stretching a Spring	A

Unit 7, Dartmouth Buildings, Fort Fareham Industrial Estate,
Newgate Lane, Fareham, PO14 1AH
Tel: 01329 285415 E: info@ezyeducation.co.uk

Module 4 - Moments, Levers and Gears (Physics only)

4.1	Calculating Moments and the Principle of Moments	L
4.1a	Calculating Moments and the Principle of Moments	A
4.2	Levers and Gears	L
4.2a	Levers and Gears	A

Module 5 - Pressure and Pressure Differences in Fluids

5.1	P = F/A	L
5.1a	P = F/A	A
5.2	P = hρg	L
5.2a	P = hρg	A
5.3	Atmospheric Pressure	L
5.3a	Atmospheric Pressure	A

Module 6 - Motion

6.1	Distance, Displacement, Speed and Velocity	L
6.1a	Distance, Displacement, Speed and Velocity	A
6.2	Calculating Speed	L
6.2a	Calculating Speed	A
6.3	Distance-Time Graphs	L
6.3a	Distance-Time Graphs	A
6.4	D-T Graphs with Accelerated Motion	L
6.4a	D-T Graphs with Accelerated Motion	A

Module 7 - Velocity and Acceleration

7.1	Acceleration	L
7.1a	Acceleration	A
7.2	Velocity-Time Graphs	L
7.2a	Velocity-Time Graphs	A
7.3	Measuring Distance Using V-T Graphs	L
7.3a	Measuring Distance Using V-T Graphs	A
7.4	$v^2 - u^2 = 2as$	L
7.4a	$v^2 - u^2 = 2as$	A

Module 8 - Newton's Laws of Motion

8.1	Newton's 1st Law	L
8.1a	Newton's 1st Law	A
8.2	Newton's 2nd Law (Theory)	L
8.2a	Newton's 2nd Law (Theory)	A
8.3.1	Measuring Force and Acceleration	Ex
8.3.2	Force and Acceleration Experiment	Ex
8.3.3	Mass and Acceleration Experiment	Ex

Registered Office: The Cedars, Manor Road, Durley, Hampshire SO32 2AF
Company registered in England number: 8446269

Unit 7, Dartmouth Buildings, Fort Fareham Industrial Estate,
Newgate Lane, Fareham, PO14 1AH
Tel: 01329 285415 E: info@ezyeducation.co.uk

8.3a	Newton's 2nd Law (Experiment)	A
8.3b	Newton's 2nd Law (Experiment)	A
8.4	Inertia	L
8.4a	Inertia	A
8.5	Newton's 3rd Law	L
8.5a	Newton's 3rd Law	A
8.6	Falling Objects and Terminal Velocity	L
8.6a	Falling Objects and Terminal Velocity	A
8.7	Explaining Terminal Velocity Using V-T Graphs	L
8.7a	Explaining Terminal Velocity Using V-T Graphs	A

Module 9 - Braking

9.1	Reaction Time and Thinking Distance	L
9.1a	Reaction Time and Thinking Distance	A
9.2	Braking Distance	L
9.2a	Braking Distance	A
9.3	Stopping Distance	L
9.3a	Stopping Distance	A
9.4	Interpreting Stopping Distance Graphs (Physics Only)	L
9.4a	Interpreting Stopping Distance Graphs (Physics Only)	A

Module 10 - Momentum

10.1	Momentum	L
10.1a	Momentum	A
10.2	Conservation of Momentum	L
10.2a	Conservation of Momentum	A
10.3	Advanced Momentum Calculations	L
10.3a	Advanced Momentum Calculations	A
10.4	Changes in Momentum	L
10.4a	Changes in Momentum	A
10.5	Momentum and Safety	L
10.5a	Momentum and Safety	A

Section 6 – Waves

Module 1 - Properties of Waves

1.1.1	Transverse and Longitudinal Waves	L
1.1.2	Wavelength and Amplitude	L
1.1.3	Period and Frequency	L
1.1.4	$v = f\lambda$	L
1.1a	Waves	A

Registered Office: The Cedars, Manor Road, Durley, Hampshire SO32 2AF
Company registered in England number: 8446269

Unit 7, Dartmouth Buildings, Fort Fareham Industrial Estate,
Newgate Lane, Fareham, PO14 1AH
Tel: 01329 285415 E: info@ezyeducation.co.uk

1.2	Change of Medium	L
1.2a	Change of Medium	A
1.3	Measuring the Speed of Waves	L
1.3a	Measuring the Speed of Waves	A
1.4.1	Measuring v, f and λ for a Wave on a Wire	Ex
1.4.2	Measuring v, f and λ for a Wave on Water	Ex
1.4a	Measuring Frequency, Speed and Wavelength	A
1.4b	Measuring Frequency, Speed and Wavelength	A
1.5.1	Waves at a Boundary	L
1.5.2	Reflection (Ray Diagrams)	L
1.5a	Waves at a Boundary	A
1.6	Investigating Reflection and Refraction	Ex
1.6a	Investigating Reflection and Refraction	A
1.6b	Investigating Reflection and Refraction	A

Module 2 - Mechanical and EM Waves

2.1.1	Propagation and Detection of Sound Waves	L
2.1.2	Properties and Uses of Ultrasound	L
2.1.3	Seismic Waves	L
2.1.4	Echo Sounding	L
2.1a	Mechanical Waves	A
2.2.1	The Electromagnetic Spectrum	L
2.2.2	The Uses and Applications of E.M. Waves	L
2.2a	The Electromagnetic Spectrum	A
2.3.1	Investigating the Emission of IR	Ex
2.3.2	Investigating the Absorption of IR	Ex
2.3a	Investigating the Absorption and Emission of IR	A
2.3b	Investigating the Absorption and Emission of IR	A
2.4	The Emission of IR and Temperature	L
2.4a	The Emission of IR and Temperature	A
2.5	Thermal Equilibrium and IR	L
2.5a	Thermal Equilibrium and IR	A
2.6.1	Effects of Wavelength and Speed on EM Waves	L
2.6.2	Radio Waves	L
2.6a	Effects of Wavelength and Speed on EM Waves and Radio waves	A
2.7.1	Waves from Atoms and Nuclei	L
2.7.2	The Hazards of E.M. Radiation	L
2.7a	The Hazards of E.M. Radiation	A

Module 3 - Lenses and Light

3.1.1	Convex Lenses	L
3.1.2	Concave Lenses	L

Registered Office: The Cedars, Manor Road, Durley, Hampshire SO32 2AF
Company registered in England number: 8446269

3.1.3	Magnification	L
3.1a	Lenses	A
3.2.1	Wavelength and Colour	L
3.2.2	Specular and Diffuse Reflection	L
3.2.3	The Colours of Opaque Objects	L
3.2.4	Filters	L
3.2a	Visible Light	A

Section 7 – Magnetism and Electromagnetism

Module 1 - Magnetic Forces and Fields

1.1.1	Permanent and Induced Magnetism	L
1.1.2	Magnetic Fields	L
1.1a	Magnetic Fields	A
1.2.1	The Magnetic Fields Around Wires	L
1.2.2	The Magnetic Fields Around Solenoids	L
1.2.3	Electromagnetic Devices	L
1.2a	Electromagnetism	A
1.3.1	Fleming's Left Hand Rule	L
1.3.2	F = BIL	L
1.3.3	The Electric Motor	L
1.3a	The Electric Motor	A

Module 2 - Induced Potential and Transformers

2.1.1	The Size of an Induced Potential	L
2.1.2	The Direction of an Induced Potential	L
2.1.3	Uses of the Generator Effect: Alternators	L
2.1.4	Uses of the Generator Effect: Dynamos	L
2.1.5	Microphones	L
2.1.6	Loudspeakers	L
2.1a	Induced Potential and the Generator Effect	A
2.2.1	Structure and Action of a Transformer	L
2.2.2	Turns Ratio Equation	L
2.2a	Transformers and the Turns Ratio Equation	A
2.3.1	Step-up and Step-down Transformers	L
2.3.2	Input and Output Currents	L
2.3a	Transformers	A

Unit 7, Dartmouth Buildings, Fort Fareham Industrial Estate,
Newgate Lane, Fareham, PO14 1AH
Tel: 01329 285415 E: info@ezyeducation.co.uk

Section 8 – Space Physics

Module 1 - Space Physics

1.1.1	The Structure and Location of the Solar System	L
1.1.2	Natural and Artificial Satellites	L
1.1.3	The Life Cycle of a Star	L
1.1a	Solar System, Stars and Satellites	A
1.2.1	Red-shift	L
1.2.2	The Big Bang Theory	L
1.2.3	New Ideas	L
1.2a	Red-Shift and the Big Bang	A