



EDEXCEL COMBINED SCIENCE GCSE

PHYSICS

LEARNING JOURNEY

YEAR 10

START

1

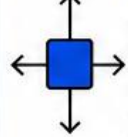
KEY CONCEPTS OF PHYSICS

- Physical quantities
- Units and measurements
- Scalars and vectors
- Density

Key Skills: Mathematical skills, using formulae

Exam Focus: Multi-step calculations, interpreting diagrams

2

FORCES AND MOTION

- Contact and non-contact forces
- Resultant forces
- Pressure
- Moments
- Speed and velocity
- Acceleration
- Distance-time graphs
- Forces and motion

Key Skills: Mathematical skills, using formulae

Exam Focus: Multi-step calculations, interpreting diagrams

3

ENERGY

- Energy stores and transfers
- Conservation of energy
- Efficiency
- Energy resources

Key Skills: Interpreting data, using equations, calculations

Exam Focus: Structure-function links, calculations

4

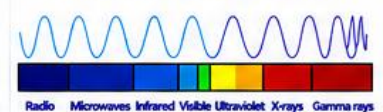
WAVES

- Wave properties
- Sound
- Light
- Electromagnetic spectrum

Key Skills: Interpreting graphs, using equations, applying concepts

Exam Focus: Calculations, extended responses, application

5

ELECTROMAGNETIC SPECTRUM

Key Skills: Interpreting data, using equations, applying concepts

Exam Focus: Calculations, extended responses, application

YEAR 10/11

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RADIOACTIVITY

- Alpha, beta and gamma radiation
- Half-life
- Uses and risks
- Nuclear fission and fusion

Key Skills: Interpreting data, understanding processes, using equations

Exam Focus: Calculations, data analysis, application of knowledge

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MOTION

- Speed and velocity
- Acceleration
- Distance-time graphs
- Forces and motion

Key Skills: Interpreting data, explaining processes

Exam Focus: Evaluating impacts, extended writing

8

ELECTRICITY

- Circuits and components
- Current, voltage and resistance
- Series and parallel circuits

Key Skills: Practical investigations, interpreting data, using formulae

Exam Focus: Calculations, data analysis, extended writing

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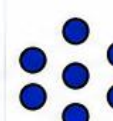
MAGNETISM

- Magnetism
- Electromagnets
- Motors and generators
- Magnetic effects of electric current

Key Skills: Interpreting data, writing explanations, drawing diagrams

Exam Focus: Control and regulation, extended responses

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PARTICLE MODEL

- Particles
- Density
- Specific latent heat
- Specific heat capacity

Key Skills: Interpreting data, drawing diagrams, explaining processes

Exam Focus: Extended responses, application of knowledge

YEAR 11

11

EXAM PREPARATION

- Command words
- Extended responses
- Data analysis
- Past paper practice

Key Skills: Exam technique, timing, structured responses

Exam Focus: All topics, applying knowledge to unfamiliar contexts

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REVISION AND CONSOLIDATION

- Review key concepts
- Strengthen problem-solving
- Apply knowledge
- Build confidence

Key Skills: Independent study, retrieval practice, self-assessment

Exam Focus: Mastery of content and skills, exam success

READY FOR EXAMS!

**KEY PHYSICS SKILLS DEVELOPED THROUGHOUT GCSE**

Practical Investigation



Mathematical Skills



Data Analysis



Scientific Communication



Problem Solving



Critical Thinking



Working Scientifically

LOOKING AHEAD

By the end of GCSE Physics, students will have developed the knowledge and skills required to progress to A Level Physics, Applied Science and a wide range of STEM careers including engineering, astrophysics, medicine, renewable energy, robotics, computing and many more.

