

Pearson Edexcel
**International GCSE
Science**

Revision Support for
International GCSE Physics
Modular





Aims and Objectives

- Review key features of the modular specification and assessments
- Examine assessment objectives, command words and mathematical skills assessment and consider how these might inform preparation for modular exams.
- Review free resources and past training content which could inform approaches to revision and exam preparation.
- Consider lessons from recent linear exam series that can inform preparation for the first modular exams
- Share revision guidance and strategies

IG Physics – the modular route

IG Science Modular Key Changes

Modular route

Unit assessments can be taken over multiple exam series (no tier)

Grades are calculated on raw marks which are then converted to a UMS (Uniform Mark Scale).

Students can re-sit individual units in any exam series.

Once a student has all their unit results, they can 'cash in' these results for their grade.



A modular route is only offered by Pearson Edexcel at International GCSE

Linear route

Assessments for all units are taken together in one exam series (no tier).

Grades are calculated on raw marks only.

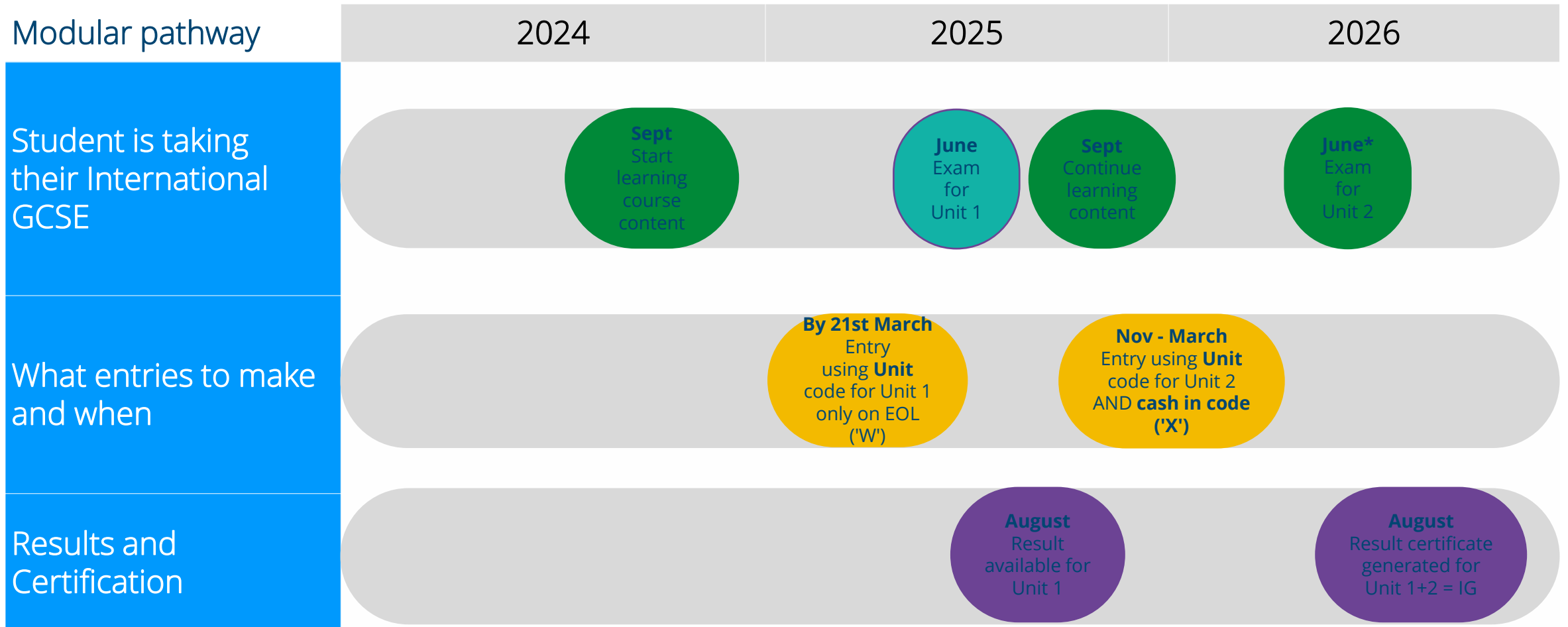
Students can re-sit assessments for all units together in one exam series.

The grade students receive are calculated at the end of the exam series in which they sat their assessments.



Everything else remains the same, including content and level of demand in assessments

A student's IG Science modular journey



*re-sit opportunity 5

The benefits of a modular approach

Students



- ✓ Reduces students' **mental load** and **stress** by allowing them to focus on one year of curriculum at a time and spreads out their exams over 2 years.
- ✓ Provides more **opportunities** to demonstrate their skills and abilities and optimise feedback to improve their performance.
- ✓ Allows them to take exams when they're ready, like they do with other tests, and take advantage of multiple **re-sit** opportunities.

Educators & Parents



- ✓ Provides teachers with rich mid-cycle data on learner **performance** via post-exam analysis support tools such as Results Plus.
- ✓ **Eases the pressures** faced by exam officers as it allows international schools to spread the exam admin burden.
- ✓ Where parents pay exam fees, it helps with **budgeting** by enabling families to spread their child's exam fees over two years.

IG Science Modular Overview

Teaching and Learning

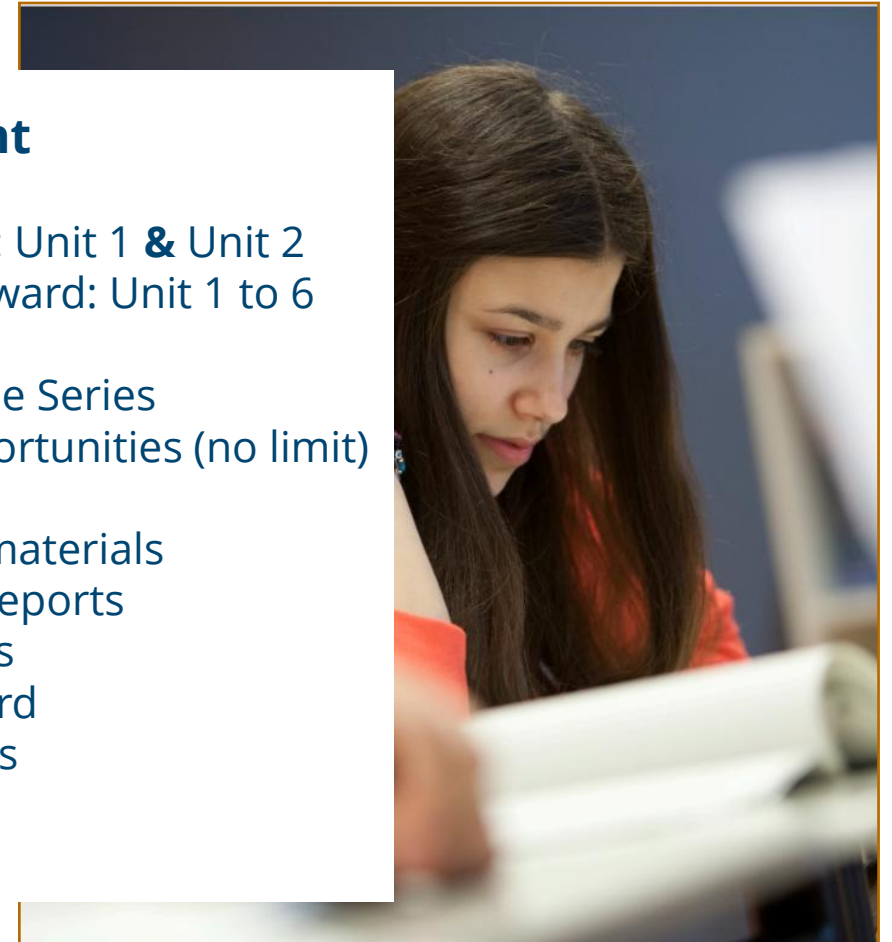
120 GLH for Biology, Chemistry and Physics.
240 GLH for Science (Double Award)

- Specification
 - Getting Started Guides
 - Teacher Course planners
 - Scheme of Work
 - Lesson Plans suggested activities
- + Student Books
+ Student lab books
+ Teaching Hubs (separate only)

Assessment

Separate: Unit 1 & Unit 2
Double Award: Unit 1 to 6

- Nov & June Series
 - Resit opportunities (no limit)
- + Exemplar materials
+ Examiner reports
+ Past papers
+ Exam Wizard
+ Results Plus



Teaching considerations & supporting student progress

- ❑ Same considerations that you would have with a linear course e.g. sequencing, threshold concepts, development of disciplinary and substantive knowledge, interleaving etc.
- ❑ June & November series - First assessment June 2025
- ❑ Multiple combinations of papers e.g.

Example 1

- Unit 1 end of Y10 (June)
- Unit 2 end of Y11 (June)

Example 2

- Unit 1 Y10 (June)
- Unit 1 re-sit Y11 (Nov)
- Unit 2 end of Y11 (June)

Example 3

- Unit 1 & Unit 2 Y11 (Nov)
- Unit 2 re-sit Y11 (June)

How is the Physics content split?

Unit 1 (Unit 5 for Double Award)	Unit 2 (Unit 6 for Double Award)
<p><u>1. Forces and motion</u></p> <ul style="list-style-type: none">a. Unitsb. Movement and positionc. Forces, movement, shape and momentum <p><u>2. Electricity</u></p> <ul style="list-style-type: none">a. Unitsb. Mains electricityc. Energy and voltage circuitsd. Electrical charge* <p><u>3. Energy resources and energy transfer</u></p> <ul style="list-style-type: none">a. Unitsb. Energy transfersc. Work and powerd. Energy resources and electrical generation* <p><u>4. Solids, liquids and gases: Part 1</u></p> <ul style="list-style-type: none">a. Unitsb. Density and pressurec. Change of state* <p>*= separate Physics content only ** = assessed in Unit 1 and Unit 2</p>	<p><u>5. Waves</u></p> <ul style="list-style-type: none">a. Unitsb. Properties of wavesc. The electromagnetic spectrumd. Light and sound <p><u>6. Solids, liquids and gases: Part 2</u></p> <ul style="list-style-type: none"><i>a. Units**</i>d. Ideal gas molecules <p><u>7. Magnetism and electromagnetism</u></p> <ul style="list-style-type: none">a. Unitsb. Magnetismc. Electromagnetismd. Electromagnetism induction <p><u>8. Radioactivity and particles</u></p> <ul style="list-style-type: none">a. Unitsb. Radioactivityc. Fission and fusion <p><u>9. Astrophysics</u></p> <ul style="list-style-type: none">a. Unitsb. Motion in the universec. Stellar evolutiond. Cosmology*

Assessment objectives and command words

Assessment Objective 1

To meet this AO students will be expected to:

- *recall scientific facts (maximum of 14 marks) and demonstrate understanding of scientific techniques and procedures*
- Students will not be expected to design, improve or evaluate practical methods
- Recall questions tend to carry few marks and include a limited range of command words.

AO1

Knowledge and understanding of
Physics

38-42%

Assessment Objective 2

To meet this AO students will be expected to:

- *apply knowledge and understanding of scientific ideas*

It also builds on expectations given in AO1 by expecting students to

- *apply their knowledge and understanding of scientific enquiry, techniques and procedures*

AO2

Application of knowledge and understanding, analysis and evaluation of Physics

38-42%

Assessment Objective 3

To meet the criteria for AO3 students are expected to:

- *Interpret and evaluate*
- *Make judgements and draw conclusions*
- *Develop and improve experimental procedures*

AO3

Experimental skills, analysis and
evaluation of data and methods in
Biology

19-21%



Command words – guidance in Appendix 4 of the specification

Add/Label

Calculate

Comment on

Complete

Deduce

Describe

Design

Determine

Discuss

Draw

Estimate

Evaluate

Explain

Give/State/Name

Identify

Justify

Plot

Predict

Show that

Sketch

State what is meant by

Suggest

Mathematical skills
which can be assessed
in both units



Arithmetic and numerical computation (physics)

Recognise and use numbers in decimal form

Recognise and use numbers in standard form

Use ratios, fractions, percentages, powers and roots

Make estimates of the results of simple calculations, without using a calculator

Use calculators to handle $\sin x$ and $\sin^{-1} x$, where x is expressed in degrees



Handling data (physics)

Use an appropriate number of significant figures

Understand and find the arithmetic mean (average)

Construct and interpret bar charts

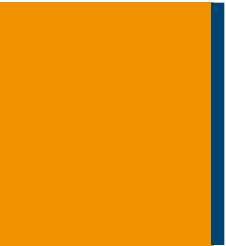
Construct and interpret frequency tables, diagrams and histograms

Understand simple probability

Understand the terms mode and median

Use a scatter diagram to identify a pattern or trend between two variables

Make order of magnitude calculations



Graphs (physics)

Understand that $y = mx + c$ represents a linear relationship

Translate information between graphical and numerical form

Plot two variables (discrete and continuous) from experimental or other data

Determine the slope and intercept of a linear graph

Understand, draw and use the slope of a tangent to a curve as a measure of rate of change

Understand the physical significance of area between a curve and the x-axis, and measure it by counting squares as appropriate



Algebra and geometry (physics)

Understand and use the symbols $<$, $>$, α , \sim

Change the subject of an equation

Substitute numerical values into algebraic equations using appropriate units for physical quantities

Solve simple algebraic equations

Use angular measures in degrees




Visualise and represent 2D and 3D objects, including 2D representations of 3D objects


Calculate areas of triangles and rectangles, surface areas and volumes of cubes




Free resources
available




Teaching and Learning Materials online

UK   


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- Course planner
- Guide
- Mapping document
- Maths and practical support
- Past training content **NEW**
- Scheme of work
- Topic support

Specification



Teaching from: 2024
External assessment from: 2025
Certification from: 2025

Our new modular assessment route breaks the journey into units with an exam at the end of each unit, when the student feels prepared and ready. Whichever route you choose, the exams take the same amount of time, teachers spend the same amount of time teaching, and everyone has the best chance of success at international GCSE.

This modular assessment route is only available to schools outside of the UK.

DOWNLOAD

PDF | 1.2 MB


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(Teaching Services team | Mon - Fri, 8am - 5pm GMT)

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Course materials

- [Specification and sample assessments \(2\)](#)
- [Teaching and learning materials \(16\)](#)



Teaching support and training

- [Training sessions](#)
- [Results support](#)
- [New 9-1 grading scale explained](#)










Published resources

To support effective classroom delivery, we've developed a range of published resources for the new Pearson Edexcel International GCSE (9-1), with progression, relevance and support at their core.

[Learn more](#)

Maths and practical support: free worksheets available to download

These can be found in the 'teaching and learning materials' section of the qualification web page.

Maths and practical support	
	International GCSE - Maths in Science Decimals PDF 142.9 KB 17 December 2024
	International GCSE - Maths in Science Sampling PDF 343.9 KB 17 December 2024
	International GCSE - Maths in Science Significant Figures PDF 119.9 KB 17 December 2024
	International GCSE - Maths in Science Standard Form PDF 151.2 KB 17 December 2024
	International GCSE - Maths in Science Tables, Charts and Graphs PDF 559.5 KB 17 December 2024
	Core Practical Guide For modular Biology, Chemistry and Physics PDF 9.6 MB 21 August 2024
	International GCSE Guide – Maths for scientists PDF 6.1 MB 13 August 2024

examWizard

Our free past paper search and 'build a paper' tool now has the option to search linear International GCSE past paper questions by modular International GCSE unit.

Questions assessing mathematical skills can be selected in the 'skill' filter.

Skill

☒ 1 selected

☐ **Select all**

☒ **Maths**

☐ Recall

Qualification

GCE

GCE AS and A level from 2015

GCSE

GCSE (9-1)

iLowerSecondary

International Advanced Level

International Advanced Level from 2018

International GCSE (9-1)

International GCSE (Modular 9-1)

International GCSE / Edexcel Certificates

iPrimary

examWizard

Questions can be searched by sub-topic to create practice assessments or sets of past paper questions for students to answer as part of their revision.

Select a topic

☒ Select all

▼ Expand all

☒ 2 topics selected

Available topics for selected search options

+ 4WBI1 (1B)

+ 4WBI2 (1B)

+ 4WCH1 (1C)

+ 4WCH2 (1C)

- 4WPH1 (1P)

☒ Physics

+ ☐ Topic 1: Forces and motion

- ☒ Topic 2: Electricity

☐ Understand ways to protect electric devices or their user

☐ Understand why a current in a resistor results in heating and how this is used in domestic contexts

☒ Know and use the relationship: $\text{power} = \text{current} \times \text{voltage}$

☒ Use the relationship: $\text{energy transferred} = \text{current} \times \text{voltage} \times \text{time}$

☐ Know the difference between alternating current (a.c.) and direct current (d.c.)

☐ Understand how the current in a series circuit depends on applied voltage and the components used

☐ Describe experiments to investigate how current varies with voltage for a range of components

☐ Describe the qualitative effect of changing resistance on the current in a circuit

☐ Know that lamps and LEDs can be used to indicate the presence of a current in a circuit


☐ Know and use the relationship: $\text{voltage} = \text{current} \times \text{resistance}$


Cancel


✓ Done

Additional guidance and support for challenging topics

These include 'energy stores and transfers' from Unit 1.

Topic support **NEW** 

 **International GCSE Physics - Astrophysics** **NEW**
| PDF 1.7 MB | 26 February 2025

 **International GCSE Physics - Energy Stores and Transfers** **NEW**
| PDF 186.0 KB | 26 February 2025

Accessing past training content

Past training content in 'teaching and learning materials'

Download presentations and delegate booklets.

Links to recordings of Exam Insights sessions will also be posted here and will not appear on public channels until the papers are unlocked 12 months after the series.

Past training content



Getting Ready to Teach International GCSE Physics Modular

| ZIP 20.5 MB | 12 February 2025



Planning Considerations for the New Modular International GCSE Physics course

| ZIP 2.8 MB | 03 July 2024

New YouTube channel for public training videos



+ Create



Pearson Edexcel
**International GCSE
Science**

Getting Ready to Teach
International GCSE Physics
Modular



International GCSE and International A Level ...

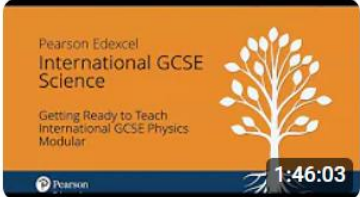
 by Pearson UK & International Schools


Playlist • 11 videos • 76 views


This playlist contains past training events for International GCSE and International A Level Physics Specification ...more


 Play all



- 

Getting Ready to Teach International GCSE Physics Modular
Pearson UK & International Schools • 36 views • 1 month ago
- 

Using ResultsPlus and Exam Wizard to improve student outcomes
Pearson UK & International Schools • 307 views • 3 months ago
- 

Getting Ready to Teach Pearson Edexcel International Advanced Level Physics (Module 1)- October 2024
Pearson UK & International Schools • 85 views • 5 months ago
- 

Getting Ready to Teach Pearson Edexcel International GCSE Physics (Module 2) - October 2024
Pearson UK & International Schools • 57 views • 5 months ago

Exam Insights from Linear Physics (9-1)

Key messages from past examines' reports

Application of knowledge to new contexts (both theoretical and practical) is a key skill – practising this by attempting past paper questions which assess AO2 is worthwhile.

Questions which require an **evaluation** response are challenging and worth practising. For the longer, discussion and evaluate style questions, candidates should be careful to explore all aspects of data thoroughly and use their own knowledge to add explanations.

'**Describe**' and '**explain**' are confused by some candidates – it is important that they understand the meaning of command words.

it is important that candidates have a thorough knowledge of all the **core practicals** listed in the specification.

Mathematical skills are a key part of the assessment – candidates should show all their working as they will gain credit for this even if their final answer is incorrect.

It is important to always **use scientific terminology** accurately.



Further advice from examiners to candidates 1

- Ensure that you read the question carefully and include sufficient points to gain full credit.
- Include as many points as there are marks available in the question.
- Make sure you have practised calculations, given in the appendix of the specification, and that you understand and know how to apply formulae and always include all your working.
- Take care when drawing diagrams to add labels and draw standard apparatus accurately.
- Write in detail and use correct and precise biological terminology.
- Revise practical work to help in questions about unfamiliar or novel practical procedures.



Further advice from examiners to candidates 2

- Make sure you know and understand all of the terms in the specification.
- Always be able to identify the variables in experiments.
- Ensure in experiment design questions to give the independent variable and the range you are going to use, the dependent variable, how you are going to measure it and the control variables and explain how these will be controlled.
- Always read through your responses and ensure that what you have written makes sense and answers the question fully.
- Learn units and use them accurately, for example for resistance.

Challenging questions from June 2024 papers

State what is meant by the term voltage (1)

the difference in energy transfer between two points ~~at~~ on a circuit or across a component

The potential difference across a circuit. Energy per unit charge.

Would these answers gain the mark?

State what is meant by the term voltage (1)

Question 7 (c)(i)

Less than a quarter of all candidates knew the correct definition of the term *voltage*.

energy (transferred) per unit charge (passed);	allow $V = E/Q$ only if all terms defined allow work done for energy transferred allow coulomb for unit charge
--	--



Q5c (iii)

Explain how the magnitude of the acceleration of the object changes, from the instant the object is released until the first time the object returns to its initial resting position.

You should refer to the forces acting on the object in your answer.

(3)

Q5c (iii)

Explain how the magnitude of the acceleration of the object changes, from the instant the object is released until the first time the object returns to its initial resting position.

You should refer to the forces acting on the object in your answer.

(3)

acceleration decreases (to zero);

with any two from:

- spring extension decreases;
- force from spring / elastic force / upwards force decreases;
- weight (of object) stays the same;
- resultant force decreases (to zero);

ignore decelerates

allow spring becomes less stretched
ignore other irrelevant forces e.g. upthrust, air resistance etc.

allow forces are balanced if clear that this only applies when the mass is at its initial resting position

3

Q5c (iii)

Explain how the magnitude of the acceleration of the object changes, from the instant the object is released until the first time the object returns to its initial resting position.

You should refer to the forces acting on the object in your answer.

(3)

The magnitude will change as ^{from the instant the} ~~at its original~~ object ^{rest is released it has equal} ~~elastic~~ ^{kinetic energy being transferred} ~~gravitational~~ ^{elastically} ~~potential~~ then once it returns to its resting point it loses some kinetic energy and gains gravitational potential through an ~~elastic~~ elastic store.

Q5c (iii)

Explain how the magnitude of the acceleration of the object changes, from the instant the object is released until the first time the object returns to its initial resting position.

You should refer to the forces acting on the object in your answer.

(3)

Magnitude decreases as energy ~~is~~ ^{has} decreases due to air resistance so the spring has less elastic potential energy and the weight stays the same so the upward resultant force of magnitude decreases.

Q5c (iii)

Explain how the magnitude of the acceleration of the object changes, from the instant the object is released until the first time the object returns to its initial resting position.

You should refer to the forces acting on the object in your answer.

(3)

~~The elastic potential when the object is pulled~~
~~turns into kinetic energy.~~ When the object returns
to its initial resting position the acceleration
will decrease until the forces acting on it
balance out.



Support

Support for Exam preparation and post results



- Free online results analysis tool for teachers.
- Provides a detailed breakdown of student performance in Pearson Edexcel exams.
- Identify topics and questions where the student could benefit from further learning and inform teaching strategies and approaches.
- Benchmark your school's performance against other Pearson Edexcel schools in your country.
- Not just a post-results tool: Mock exam results can also be fed into the system to produce analysis.
- Find student results analysis from their previous Pearson Edexcel school.
- ResultsPlus Direct gives your students access to their final grades and performance breakdown, wherever they are.
- Schools can sign up for free ResultsPlus account in just a few quick and easy steps:
<https://qualifications.pearson.com/en/support/Services/ResultsPlus.html>

ResultsPlus



1.
Student
takes exam
on paper



2.
Exam papers
scanned



3.
Examiners
mark papers
online



4.
Performance
reports
shared



- A free tool for teachers which helps you make quick homework assignments, topic tests and mock exams.
- Questions tagged against unit, topic and assessment objective or simply choose a whole past paper.
- Use existing mark schemes for accurate marking.
- Use examiner report for insight.
- Most recent exam content available sooner.
- Use the results to understand where students need more support, informing teaching strategies.

Access to Script (ATS) Online Portal

Access to Scripts (ATS) is a free online portal which allows teachers to immediately access electronically marked exam papers

Provides enhanced transparency and

- Offers transparent approach to marking process
- Provides better understanding of marking before requests for enquiries about results are made
- Provides excellent aid for teaching and preparing other cohorts for examinations by helping you to evaluate a student's performance on particular questions in relation to what they have been taught.

Available instantly from results day for all our examination series, for a defined window, you can view and download scripts which have been marked online free of charge from our Self-Service Portal.

For more information on ATS, and the post results windows, visit our post-results pages.



Additional Paid Resource

Resource	Planning, teaching and learning	Exam preparation and assessment	Results support
Curriculum-matched Student Books with ActiveBooks	✓	✓	
Teaching Hubs	✓	✓	

Pearson published resources

Student Book

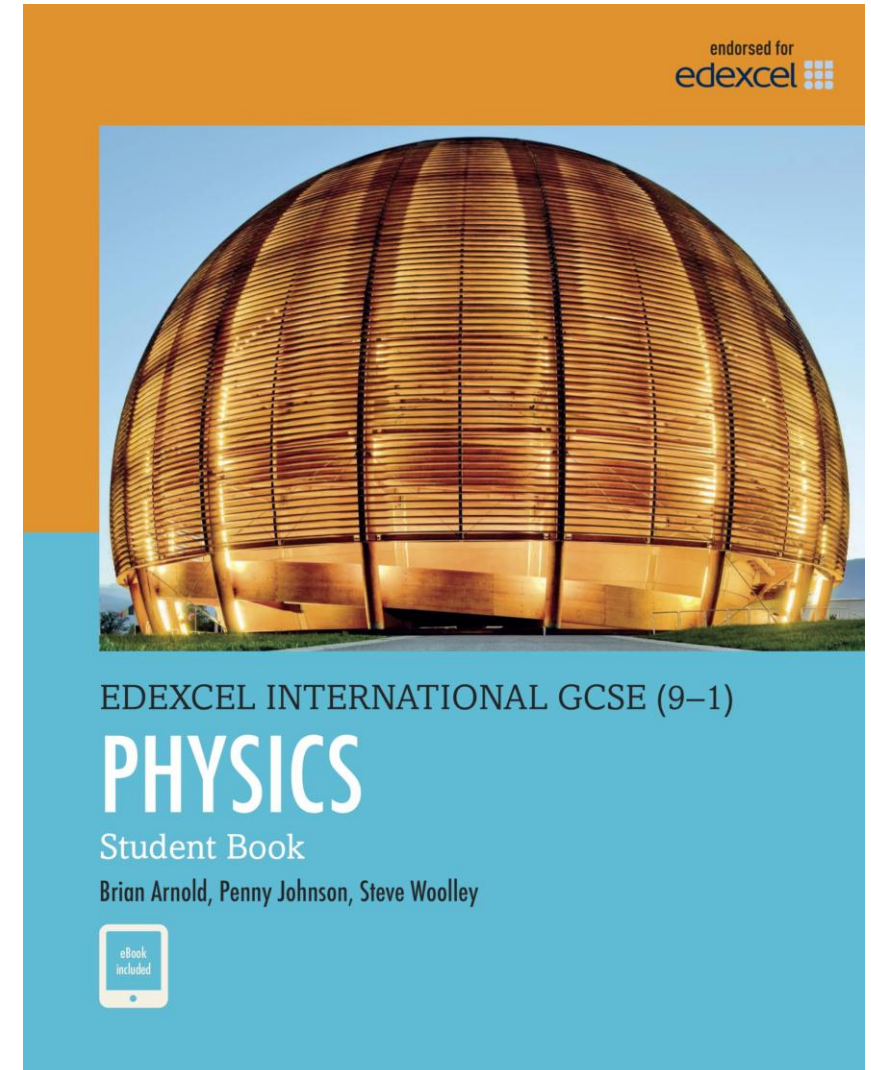
Edexcel International GCSE (9-1): Physics

Student Book

ISBN: 978-0435185275

For more information and access
to samples visit:

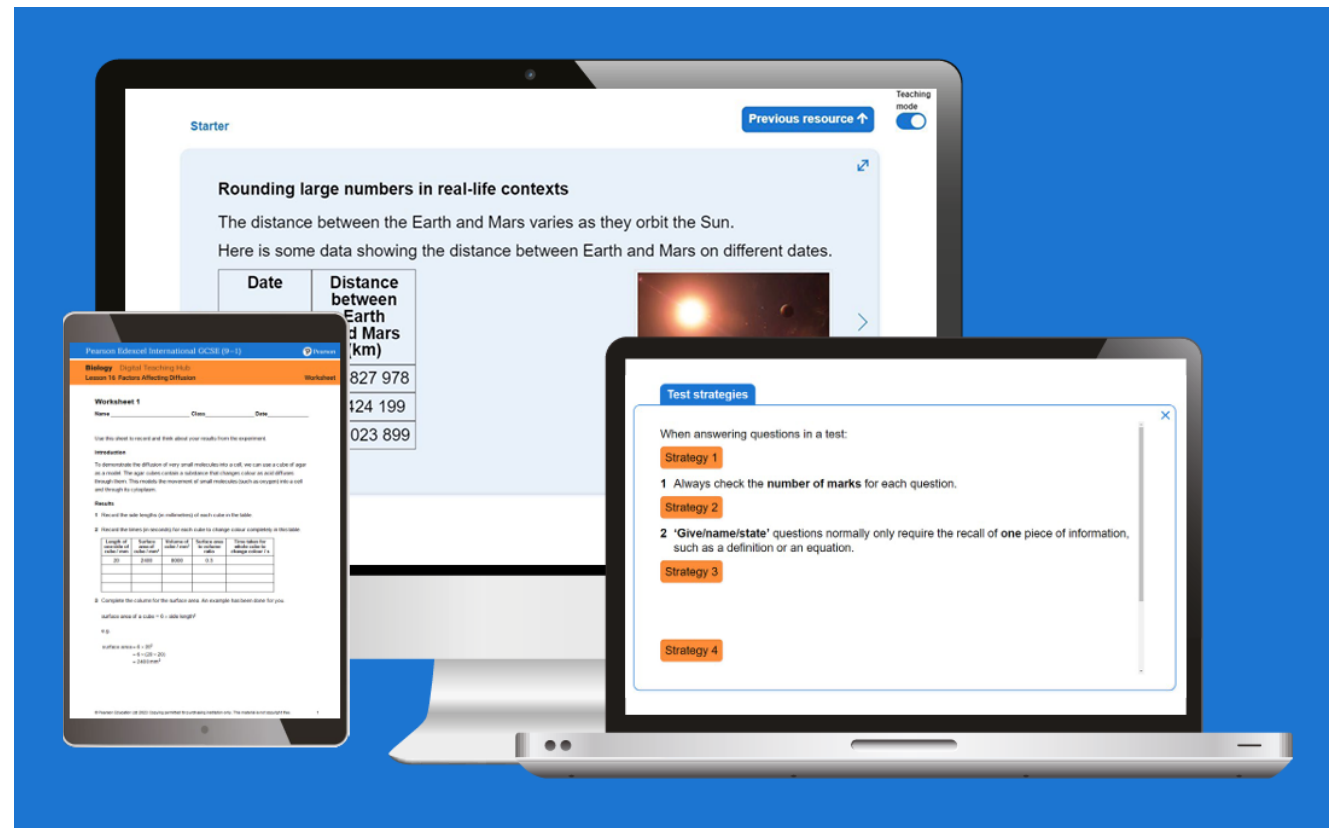
www.pearson.com/international-schools



International GCSE (9–1)

TeachingHubs

The new Teaching Hubs provide fully comprehensive planning and front-of-class guidance, along with exam-preparation resources and CPD support, to help you deliver your International GCSE lessons to a high standard – whether you are a specialist or non-specialist teacher.



Connect with other Edexcel International Science teachers on our new Facebook group

Pearson Edexcel
International Science teacher group

For International GCSE and International
A level Science teachers

Run by your Subject Advisor, Tim Lawrence

 @PearsonEdexcel




 Edit

Contact your dedicated Subject Advisor

Tim Lawrence

Email: teachingscience@pearson.com

Phone: +44 (0) 344 463 2535

Your Subject Advisor should be your first line of contact for any subject specific query and will use their wealth of knowledge and experience to help you with your queries.





Questions and ideas
worth sharing



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