



Changes to the 2022 examination due to COVID-19

Please note – the formula sheets provided in the examinations will contain all formulae and a name for each symbol on the course but will not contain the unit for each quantity.

Due to the disruption to learning caused by the COVID-19 pandemic, the following changes are applicable both to the march assessments and the 2022 GCSE examinations;

Paper 1

Paper 1 – Double Higher

For this paper, the following list shows the major focus of the content of the exam:

- 6.1.1 Energy changes in a system, and the ways energy is stored before and after

such changes

- 6.2.4 Energy transfers
- 6.3.1 Changes of state and the particle model
- 6.3.3 Particle model and pressure
- 6.4.1 Atoms and isotopes
- 6.4.2 Atoms and nuclear radiation

Required practical activities that **will be assessed**:

- Required practical activity 14: an investigation to determine the specific heat capacity of one or more materials. The investigation will involve linking the decrease of one energy store (or work done) to the increase in temperature and subsequent increase in thermal energy stored.
- Required practical activity 16: use circuit diagrams to construct appropriate circuits to investigate the I–V characteristics of a variety of circuit elements, including a filament lamp, a diode and a resistor at constant temperature.

Topics **not assessed** in this paper:

- 6.2.2 Series and parallel circuits
- 6.2.3 Domestic uses and safety
- 6.3.2 Internal energy and energy transfers



Paper 2

Paper 2 – Double Higher

For this paper, the following list shows the major focus of the content of the exam:

- 6.5.1 Forces and their interactions
- 6.5.4.1 Describing motion along a line
- 6.5.4.2 Forces, accelerations and Newton's Laws of motion
- 6.5.5 Momentum
- 6.6.2 Electromagnetic waves
- 6.7.2 The motor effect

Required practical activity that **will be assessed**:

- Required practical activity 21: investigate how the amount of infrared radiation absorbed or radiated by a surface depends on the nature of that surface.

Topics **not assessed** in this paper:

- 6.5.3 Forces and elasticity
- 6.5.4.3 Forces and braking
- 6.7.1 Permanent and induced magnetism, magnetic forces and fields



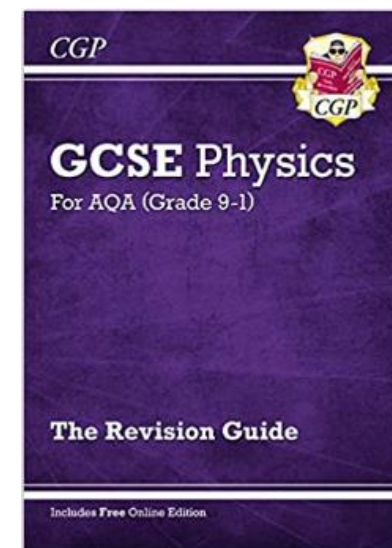
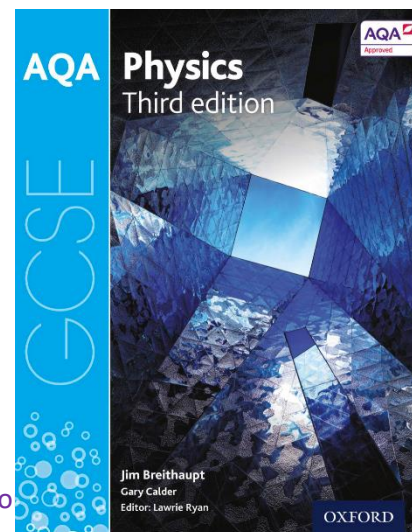
Physics Revision plan

Reminders:

- **Exam board = AQA Physics**
- **Useful textbooks for revision** →
- **You can watch videos of all the topics and required practical's here:**
Physics Paper 1 [Freesciencelessons - YouTube](#)
Physics Paper 2 [Freesciencelessons - YouTube](#)
- **Doing revision little and often is better than doing lots in one go.**

- **Make sure you do lots of exam practice questions as well as revising the content.**

There will be Two Physics Papers – 1 hour 45 minutes for triple award papers and 1 hour 15 minutes for



Paper 1 contains;

- Energy (topic 1)
- Electricity (topic 2)
- Particle nature of matter (topic 3)
- Atomic Structure (topic 4)

Paper 2 contains

- Forces (topic 5)
- Waves (topic 6)
- Magnetism and Electromagnetism (topic 7)
- Space Physics (topic 8 – Triple award only)

IMPORTANT NOTE – CHANGES TO THE 2022 PAPER AND 2022 SECOND ASSESSMENT WEEK

Please see the bottom of the document for a full list of the topics that will be assessed in the 2022 examinations.

To help with revision, all topics that will not be on the GCSE exam (and therefore will be removed from the march assessments) are highlighted in red.



Topic	Topic to be covered with a list of key ideas you should know for each topic	Revision activities to choose from															
1	Energy <ul style="list-style-type: none"> - Energy stores - Conservation of energy - Work and Power - GPE, KE, EE stores - Energy dissipation - Efficiency - Electrical appliances - Energy transfer by conduction and radiation - Specific Heat Capacity - Heating and Insulating - Energy demands - Energy from wind, water, Sun and Earth - Energy and the environment 	<ul style="list-style-type: none"> • Do some revision questions from past papers - AQA GCSE (9-1) Physics Revision - PMT (physicsandmathstutor.com) • Using Oak National Academy to watch the videos: Energy - Oak National Academy (thenational.academy) • Using BBC Bitesize: Energy - GCSE Physics Revision - AQA - BBC Bitesize • Using the Notre Dame revision videos and knowledge builders <table border="1" data-bbox="712 603 2056 970"> <tr> <td data-bbox="712 603 869 676">Topic 1: Energy</td> <td data-bbox="869 603 1323 676">Lesson 1 – Energy Basics</td> <td data-bbox="1323 603 2056 676">https://web.microsoftstream.com/video/34dd2840-d346-4117-b46e-6fdf807c949e</td> </tr> <tr> <td data-bbox="712 676 869 750"></td> <td data-bbox="869 676 1323 750">Lesson 2 – Energy Conservation</td> <td data-bbox="1323 676 2056 750">https://web.microsoftstream.com/video/8f2d89b7-2e47-4e9f-bf55-a2f44d804660</td> </tr> <tr> <td data-bbox="712 750 869 823"></td> <td data-bbox="869 750 1323 823">Lesson 3 – Energy Formulae</td> <td data-bbox="1323 750 2056 823">https://web.microsoftstream.com/video/76ecb48e-f0f3-4243-8f59-f23d5d246307</td> </tr> <tr> <td data-bbox="712 823 869 896"></td> <td data-bbox="869 823 1323 896">Lesson 4 – Required Practical's</td> <td data-bbox="1323 823 2056 896">https://web.microsoftstream.com/video/ec25a32b-b396-4e8d-a6ab-aa34476015a4</td> </tr> <tr> <td data-bbox="712 896 869 970"></td> <td data-bbox="869 896 1323 970">Lesson 5 – Power Stations</td> <td data-bbox="1323 896 2056 970">https://web.microsoftstream.com/video/07e38419-9b2e-4182-b6b2-85f71b62c559</td> </tr> </table> <ul style="list-style-type: none"> • Answer and self-assess the exam questions in the files section in teams under Energy 	Topic 1: Energy	Lesson 1 – Energy Basics	https://web.microsoftstream.com/video/34dd2840-d346-4117-b46e-6fdf807c949e		Lesson 2 – Energy Conservation	https://web.microsoftstream.com/video/8f2d89b7-2e47-4e9f-bf55-a2f44d804660		Lesson 3 – Energy Formulae	https://web.microsoftstream.com/video/76ecb48e-f0f3-4243-8f59-f23d5d246307		Lesson 4 – Required Practical's	https://web.microsoftstream.com/video/ec25a32b-b396-4e8d-a6ab-aa34476015a4		Lesson 5 – Power Stations	https://web.microsoftstream.com/video/07e38419-9b2e-4182-b6b2-85f71b62c559
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	Lesson 5 – Power Stations	https://web.microsoftstream.com/video/07e38419-9b2e-4182-b6b2-85f71b62c559															
2	Electricity <ul style="list-style-type: none"> - Electrical charges and fields - Current and charge - Potential difference - Resistance - IV graphs - Series and Parallel circuits - Ac/dc - Cables and plugs - Electrical Power and efficiency - Domestic Uses and Safety 	<ul style="list-style-type: none"> • Do some revision questions from past papers - AQA GCSE (9-1) Physics Revision - PMT (physicsandmathstutor.com) • Using national oak academy to watch the videos: Electricity - Oak National Academy (thenational.academy) • Using BBC Bitesize: Electricity - GCSE Physics Revision - AQA - BBC Bitesize • Using the Notre Dame revision videos and knowledge builders <table border="1" data-bbox="712 1305 2056 1449"> <tr> <td data-bbox="712 1305 958 1378">Topic 2: Electricity</td> <td data-bbox="958 1305 1323 1378">Lesson 1 – Electricity Basics</td> <td data-bbox="1323 1305 2056 1378">https://web.microsoftstream.com/video/4ecf3ec1-5f19-48a3-b582-e21efdaa7c98</td> </tr> <tr> <td data-bbox="712 1378 958 1449"></td> <td data-bbox="958 1378 1323 1449">Lesson 2 – Resistors and V vs I graphs</td> <td data-bbox="1323 1378 2056 1449">https://web.microsoftstream.com/video/241d1a4e-3491-4251-9dde-73fa1fa3c7a3</td> </tr> </table>	Topic 2: Electricity	Lesson 1 – Electricity Basics	https://web.microsoftstream.com/video/4ecf3ec1-5f19-48a3-b582-e21efdaa7c98		Lesson 2 – Resistors and V vs I graphs	https://web.microsoftstream.com/video/241d1a4e-3491-4251-9dde-73fa1fa3c7a3									
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		Lesson 3 – Static Electricity	https://web.microsoftstream.com/video/75de25cf-8404-4d23-ad48-6d7d4fc413b1								
		Lesson 4 – Circuit Laws	https://web.microsoftstream.com/video/12a8dced-e77c-42f2-953d-2f72cc322170								
		Lesson 5 – Electricity in the home	https://web.microsoftstream.com/video/9199a112-8fc6-4033-a7a5-5448c55e3bc7								
3	Particle Nature of Matter <ul style="list-style-type: none"> - Density of Materials - Temperature changes and energy - Particles in gasses (Higher only) 	<ul style="list-style-type: none"> • Answer and self-assess the exam questions in the files section in teams under Electricity • Do some revision questions from past papers - AQA GCSE (9-1) Physics Revision - PMT (physicsandmathstutor.com) • Using national oak academy to watch the videos: <ul style="list-style-type: none"> • Unit - Oak National Academy (thenational.academy) • Using BBC Bitesize: <ul style="list-style-type: none"> • Particle model of matter - GCSE Physics (Single Science) Revision - AQA - BBC Bitesize • Using the Notre Dame revision videos and knowledge builders 	<table border="1"> <tr> <td>Lesson 1 - Density</td> <td>https://web.microsoftstream.com/video/548a780d-dd23-486b-b43f-66ba2c986ed7</td> </tr> <tr> <td>Supplementary Lesson – Pressure (HT only)</td> <td>https://web.microsoftstream.com/video/01e43025-8c4e-4acf-8238-862ff3fb21ce</td> </tr> <tr> <td>Lesson 2 – Pressure, Volume and Temperature</td> <td>https://web.microsoftstream.com/video/11a70068-d700-4312-be4f-66fba8aca42e</td> </tr> <tr> <td>Lesson 3 – Specific Latent Heat</td> <td>https://web.microsoftstream.com/video/c898d413-a1d6-4f84-979a-cef6009bdd2f</td> </tr> </table>	Lesson 1 - Density	https://web.microsoftstream.com/video/548a780d-dd23-486b-b43f-66ba2c986ed7	Supplementary Lesson – Pressure (HT only)	https://web.microsoftstream.com/video/01e43025-8c4e-4acf-8238-862ff3fb21ce	Lesson 2 – Pressure, Volume and Temperature	https://web.microsoftstream.com/video/11a70068-d700-4312-be4f-66fba8aca42e	Lesson 3 – Specific Latent Heat	https://web.microsoftstream.com/video/c898d413-a1d6-4f84-979a-cef6009bdd2f
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4	Atomics <ul style="list-style-type: none"> - Atoms - Discovery of nucleus - Alpha, beta, gamma radiation - Half-life - Radiation in medicine - Fission and Fusion - Nuclear issues 	<ul style="list-style-type: none"> • Answer and self-assess the exam questions in the files section in teams under Particle Nature of Matter • Do some revision questions from past papers - AQA GCSE (9-1) Physics Revision - PMT (physicsandmathstutor.com) • Using national oak academy to watch the videos: <ul style="list-style-type: none"> • Atomic Structure - Oak National Academy (thenational.academy) • Using BBC Bitesize: <ul style="list-style-type: none"> • Atomic structure - GCSE Physics Revision - AQA - BBC Bitesize • Using the Notre Dame revision videos and knowledge builders 	<table border="1"> <tr> <td>Topic 4: Atomics</td> <td>Lesson 1 – Atomic Structure</td> <td>https://web.microsoftstream.com/video/3dfc8438-09db-41b7-85bd-604022cddb9f</td> </tr> </table>	Topic 4: Atomics	Lesson 1 – Atomic Structure	https://web.microsoftstream.com/video/3dfc8438-09db-41b7-85bd-604022cddb9f					
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	Lesson 2 – Radiation and it's uses	https://web.microsoftstream.com/video/421d7f1b-4799-42ee-95b8-520cff5f0619
	Lesson 3 – Half Life and Radioactive Dating	https://web.microsoftstream.com/video/2526710d-c9dd-4e35-a9a8-a352bbbdcbcd
	Lesson 4 – Radiation Exposure	https://web.microsoftstream.com/video/3a921940-0f35-4127-bca3-eb06aef06e5f
	Lesson 5 (Triple Only) – Fusion and Fission	https://web.microsoftstream.com/video/5fbda3aa-62fb-4667-b5c0-00f49eb7ee20

- Answer and self-assess the exam questions in the files section in teams under Atomics
- Do some revision questions from past papers - [AQA GCSE \(9-1\) Physics Revision - PMT \(physicsandmathstutor.com\)](#)
- Using Oak National Academy to watch the videos: [Forces - Oak National Academy \(thenational.academy\)](#) (exclude L9, 10, 11)
- Using BBC Bitesize: [Forces - GCSE Physics Revision - AQA - BBC Bitesize](#) (exclude pressure in fluids)
- Using the Notre Dame revision videos and knowledge builders

Topic 5: Forces	Lesson 1 – Forces and Motion	https://web.microsoftstream.com/video/1a1b8564-e2cf-4002-a104-c59f2385c446
	Lesson 2 – Vectors and Scalars	https://web.microsoftstream.com/video/844a366c-65e1-47c6-bb1b-722668bc59c2
	Lesson 3 – Newton's Laws	https://web.microsoftstream.com/video/363f6e70-420a-4ab9-b698-e239bfe2e5f1
	Lesson 4 – Stopping distance	https://web.microsoftstream.com/video/f5f1f3ea-a92a-402c-80c7-5937590f54f0
	Lesson 5 – Hooke's Law and Formulae Practice	https://web.microsoftstream.com/video/c720b68c-bda9-4d87-a68e-353c6f8d53fc
	Lesson 6 – Motion Graphs	https://web.microsoftstream.com/video/6ab5c367-e3c3-4a39-99c1-93de5cbe3647
	Lesson 7 – Motion Equations	https://web.microsoftstream.com/video/41c77a50-a64b-43c4-8959-673a661ccdcd
	Lesson 8 - Momentum	https://web.microsoftstream.com/video/915486b5-b3b2-437d-8014-9565044d98d4

5

Forces

- Vectors and Scalars
- Forces between objects
- Resultant forces
- **Forces and elasticity**
- Moments, levers and gears, equilibrium
- Centre of mass
- Resolving forces
- Speed, velocity, acceleration
- Motion Graphs
- Force and acceleration
- Weight and terminal velocity
- **Forces and braking**
- Momentum, conservation, impact forces, safety



- Answer and self-assess the exam questions in the files section in teams under Forces.

6

Waves

- Types of waves and their properties
- Wave equation
- Reflection and refraction
- Sound waves
- Uses of ultrasound
- Seismic waves
- Electromagnetic spectrum
- Light, infrared, microwaves and radio waves
- Communications
- UV, X-ray and gamma
- X-rays in medicine
- Reflection and refraction of light
- Light and colour
- Lenses

- Do some revision questions from past papers - [AQA GCSE \(9-1\) Physics Revision - PMT \(physicsandmathstutor.com\)](#)
- Using national oak academy to watch the videos: [Waves - Oak National Academy \(thenational.academy\)](#)
- Using BBC Bitesize: [Waves - GCSE Physics Revision - AQA - BBC Bitesize](#)
- Using the Notre Dame revision videos and knowledge builders

Topic 6: Waves	Lesson 1: Wave Behaviour and the Wave Equation	https://web.microsoftstream.com/video/f6c7c81e-6e20-41d9-81e3-26f3a7fe6f0c
	Lesson 2 – The Electromagnetic Spectrum	https://web.microsoftstream.com/video/41f373f2-b346-4c1a-8f4b-2b1647e9bd51
	Lesson 3 – Waves for detection and exploration	https://web.microsoftstream.com/video/01ecc23e-ef10-4580-a8c7-be5c16870735
	Lesson 4 – Wave Behaviour	https://web.microsoftstream.com/video/78d019f9-d77b-4568-afd1-cc6150f8cbbf
	Lesson 5 - Lenses	https://web.microsoftstream.com/video/d9023508-0362-439c-97b5-cb947756cd5b
	Lesson 6 – Black Body Radiation	https://web.microsoftstream.com/video/0e549dd3-7e8e-4aaa-b5a4-829e77df0aa2

- Answer and self-assess the exam questions in the files section in teams under Waves

7

Magnetism

- **Magnetic fields around magnets and currents**
- **Electromagnets**
- Motor effect
- Generator effect, ac generators
- Transformers

- Do some revision questions from past papers - [AQA GCSE \(9-1\) Physics Revision - PMT \(physicsandmathstutor.com\)](#)
- Using national oak academy to watch the videos: [Magnetism - Oak National Academy \(thenational.academy\)](#)
- Using BBC Bitesize: [Magnetism and electromagnetism - GCSE Physics Revision - AQA - BBC Bitesize](#)
- Using the Notre Dame revision videos and knowledge builders

Topic 7: Magnetism and Electromagnetism	Lesson 1 – Magnetism and Electromagnetism	https://web.microsoftstream.com/video/14375ff3-6b6e-4793-8521-dbeb6b2b02b9
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			Lesson 2 – The Motor Effect	https://web.microsoftstream.com/video/6ff7ef90-b56a-499c-affb-d8f5415a6b00
			Lesson 3 – Electromagnetic Induction	https://web.microsoftstream.com/video/0d7998b1-5b67-4d2f-9664-113c31c6eb7e
			Lesson 4 – Alternators, Dynamos and Other Devices	https://web.microsoftstream.com/video/c70d1324-7cbe-45e9-9be8-a88b232bcb04
			Lesson 5 - Transformers	https://web.microsoftstream.com/video/224fcf1a-092f-42f5-a83a-b93851f0ff2d
		<ul style="list-style-type: none"> • Answer and self-assess the exam questions in the files section in teams under Magnetism 		
	Practical Skills <ul style="list-style-type: none"> - Practical Skills to carry out an investigation 	BBC Bitesize on Practical skills: Practical skills - GCSE Physics Revision - AQA - BBC Bitesize		

Other support

- Mr Pinder and Mr Day are running revision lessons right up until the exams start.
 - **Thursday after school in Lab 9 with Mr Pinder (triple award)**
 - **Thursday after school in Lab 8 with Mr Day (double award)**
 - **Friday lunchtime in Lab 9 with Mr Pinder**
- If you want physical copies of the physics knowledge builders, ask Mr Pinder in Lab 9

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