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Closed consultation

Proposed changes to the assessment of mathematics, physics and combined science GCSEs in 2023

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Applies to England

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Proposals at a glance

Ofqual invites your views on proposed adaptations to the assessment of GCSEs in mathematics, physics and combined science for students in England taking exams in 2023.

The Department for Education (DfE) [has confirmed](#) that in view of the disruption caused by the coronavirus (COVID-19) pandemic, it is not necessary for students to memorise formulae for GCSE mathematics and equations for GCSE physics and combined science, as they must in a normal year. Therefore, we propose carrying forward from summer 2022 the provision of support materials, in the form of formulae and revised equation sheets, in the exams for GCSE mathematics, physics and combined science.

Audience

This consultation is likely to be of interest to:

- students, including private candidates, who are expecting to take GCSE exams in 2023 and their parents and carers
- teachers of these qualifications
- school and college leaders and heads of other types of exam centre
- unions
- exams officers
- the exam boards that will provide the exams
- those who use qualifications to make selection decisions: further and higher education institutions and employers

Consultation arrangements

Duration

The consultation will be open for 3 weeks starting on 29 September 2022 and ending on 20 October 2022 at 11:45pm. We have set the length of this consultation so that decisions can be announced as early as possible in this academic year, giving students, teachers and exam boards time to plan for exams taking place next summer.

Respond

Please respond to this consultation by completing the [online response form](#).

For information on how we will use and manage your data, please see Annex A.

Introduction

This is an Ofqual consultation on assessment arrangements for GCSEs in mathematics, physics and combined science in England in 2023.

DfE decided as a matter of policy, and in view of the disruption caused by the coronavirus (COVID-19) pandemic, that it was not necessary for students taking exams in summer 2022 to memorise formulae for GCSE mathematics and equations for GCSE physics and combined science, as they must in a normal year. In light of that policy decision, Ofqual amended the Conditions and Requirements to require exam boards to provide a formulae sheet in the exams for GCSE mathematics and a revised equation sheet in the exams for GCSE physics and combined science. Exam boards provided copies of the formulae and equation sheets for use in teaching and to ensure that students were familiar with them prior to the exams. Clean copies of the formulae and equation sheets were provided in the exams.

Our proposal to introduce these support materials for the exams in 2022 received [strong support from all stakeholder groups](#). The feedback we have gathered before and following the 2022 exams suggests that these assessment arrangements had a positive impact on student confidence when preparing for their exams. Our review of last year's assessments indicates that there is no evidence that the functioning of the assessment was compromised.

[DfE has confirmed](#) they wish these arrangements to continue for a further year, for 2023 only. We are inviting views specifically on that proposal.

We welcome your views on the continuation of these arrangements in GCSE mathematics, physics and combined science. We will consider responses carefully and are aiming to announce our decisions as early as possible this academic year. We are consulting on this proposal for students entering the qualifications in 2023 only.

Consultation details

We are seeking views on whether the use of formulae sheets and revised equation sheets as used in summer 2022 in GCSE mathematics, physics and combined science should be continued for students taking these exams in 2023.

Whilst our proposals are made in response to the request from the DfE, we have considered the feedback received in response to our student and teacher surveys carried out before and after the exams in summer 2022, and in response to a survey of subject associations. We have also discussed ideas with school and college leaders and with the exam boards, taking into account the different context that applies to the 2023 cohort.

Our proposals to change exam and assessment requirements

We have considered the possibility of running exams as normal next year. However, in light of:

- DfE's confirmation that they wish to make different arrangements this year as described above
- the fact that we have not identified any significant assessment issues relating to the introduction of these arrangements in 2022
- feedback received that formulae and revised equation sheets have been valuable to students

we propose that students should be given these support materials in the exam room.

We are consulting on this proposal for grades awarded in 2023 only.

Support materials

For GCSE mathematics, the DfE's subject content lists formulae that must be studied as part of the qualification. Some of the formulae, such as those relating to the surface area and volume of cones and spheres and kinematics, are included within exam questions or, where appropriate, in a formulae list at the start of the question paper. However, others are ones that students would normally be expected to memorise and recall in the exam. We propose that for exams in 2023 students should not have to memorise these and should be provided with a formulae sheet in the exam room for this subject.

Students sitting GCSE physics and combined science papers normally have access to an equation sheet giving more complex equations and must recall a further 18 to 23 equations depending on the subject, specification, and tier. The exams test recall of these equations. We propose providing additional support to students by permitting the equation sheet to include all equations and would welcome views on this.

Questions:

To what extent do you agree or disagree that a formulae sheet should be provided in the exam room for GCSE mathematics in 2023?

Do you have any comments on the proposal to provide a formulae sheet in the exam room for GCSE mathematics in 2023?

To what extent do you agree or disagree that a revised equation sheet covering all equations should be provided in the exam room for GCSE physics and combined science in 2023?

Do you have any comments on the proposal to provide a revised equation sheet covering all equations in the exam room for GCSE physics and combined science in 2023?

Equality impact assessment

As a public body, Ofqual is subject to the public sector equality duty. We have considered whether these proposals might impact (positively or negatively) on students who share particular protected characteristics.

Those students whose education might have been and might continue to be most badly disrupted include:

- students with caring responsibilities
- students whose homes are not conducive to study
- students without access to the internet or a computer
- students with SEND who have not been able to access their normal learning support
- students from Gypsy Roma and Traveller communities

The government's planned measures to support education recovery will target some such students. While we can bring about some adjustments to the way students are assessed and examined, as proposed in this consultation, it will always be the case that students who have been better prepared for the exams and assessments will be likely to perform better than others. In proposing changes to the exams and assessments for 2023, we have sought to guard against proposing changes that would further advantage students whose education has been less disrupted than that of others.

In proposing changes to the exam arrangements we have taken care to consider how any changes might have an impact on disabled students, some of whom will have reasonable adjustments when taking their exams and assessments. We have not identified any aspects of our proposed changes to the way GCSEs in mathematics, physics and combined science are assessed in 2023 that would have a negative impact on students who share particular protected characteristics.

Questions:

Are there other potential equality impacts that we have not identified? [Yes or no]

If yes, what are they?

Do you have any suggestions for how any potential negative impacts on particular groups of students could be mitigated?

Regulatory impact assessment

Our aim in proposing changes to the exam arrangements for students taking GCSEs in mathematics, physics and combined science exams in 2023 is to make the exams more accessible to students, while ensuring the qualifications remain valid and meaningful. We have developed these proposals with input from the exam boards, with the aim of putting in place arrangements that are both appropriate and manageable. We anticipate that schools and colleges will experience limited or no burden from these proposals. Indeed, the changes, as outlined above, are intended to reduce burden on centres, to enable more time for teaching.

Exam boards will incur costs to implement the changes to the exam arrangements, although these proposals would not require them to undertake major changes. They are familiar with the proposed arrangements which reflect those put in place for the exams in 2022 for the production of the formulae and revised equation sheets.

Questions:

Are there additional activities associated with providing students with formulae and revised equation sheets in their GCSE mathematics, physics and combined science exams that we have not identified above? [Yes or no]

If yes, what are they?

What, if any, additional costs do you expect you would incur if students are provided with formulae and revised equation sheets in their GCSE mathematics, physics and combined science exams for 2023?

Do you have any suggestions for alternative approaches that could reduce burden and costs?

Annex A: Consultation responses and your data

Why we collect your personal data

As part of our consultation process, you are not required to provide your name or any personal information that will identify you. However, we are aware that some respondents would like to provide contact information. If you or your organisation are happy to provide personal data, with regard to this consultation, please complete the details below. We would like to hear as many views as possible and ensure that we are reaching as many people as possible. In order for us to monitor this, understand views of different groups and take steps to reach specific groups, we may ask for sensitive data such as ethnicity and disability to understand the reach of this consultation and views of specific groups. You do not have to provide this information and it is entirely optional.

If there is any part of your response that you wish to remain confidential, please indicate at the appropriate point in the survey.

Where you have requested that your response or any part remains confidential, we will not include your details in any published list of respondents. However, we may quote from the response anonymously in order to illustrate the kind of feedback we have received.

Your data

Your personal data:

- will not be sent outside of the UK unless there are appropriate safeguards in place to protect your personal data
- will not be used for any automated decision making
- will be kept secure

We implement appropriate technical and organisational measures in order to protect your personal data against accidental or unlawful destruction, accidental loss or alteration, unauthorised disclosure or access and any other unlawful forms of processing.

Your rights: access, rectification and erasure

As a data subject, you have the legal right to:

- access personal data relating to you
- object to the processing of your personal data
- have all or some of your data deleted or corrected
- prevent your personal data being processed in some circumstances
- ask us to stop using your data, but keep it on record

If you would like to exercise your rights, please contact us using the details below. You can also find out [more about Ofqual's privacy information](#).

Freedom of Information Act and your response

Please note that information in response to this consultation may be subject to release to the public or other parties in accordance with access to information law, primarily the Freedom of Information Act 2000 (FOIA). We have obligations to disclose information to particular recipients including members of the public in certain circumstances. Your explanation of your reasons for requesting confidentiality for all or part of your response would help us balance requests for disclosure against any obligation of confidentiality. If we receive a request for the information that you have provided in your response to this consultation, we will take full account of your reasons for requesting confidentiality of your response and assess this in accordance with applicable data protection rules.

Members of the public are entitled to ask for information we hold under the Freedom of Information Act 2000. On such occasions, we will usually anonymise responses, or ask for consent from those who have responded, but please be aware that we cannot guarantee confidentiality.

If you choose 'no' in response to the question asking if you would like anything in your response to be kept confidential, we will be able to release the content of your response to the public, but we won't make your personal name and private contact details publicly available.

How we will use your response

We will use your response to help us shape our policies and regulatory activity. If you provide your personal details, we may contact you in relation to your response. We will analyse all responses and produce reports of consultation responses. In the

course of analysis, we will where possible avoid using your name and contact details. We will only process the body of your response, but we are aware that in some cases, this may contain information that could identify you.

Sharing your response

We may share your response, in full, with The Department for Education (DfE) and The Institute for Apprenticeships & Technical Education (IFATE) where the consultation is part of work involving those organisations. We may need to share responses with them to ensure that our approach aligns with the wider process. Where possible, if we share a response, we will not include any personal data (if you have provided any). Where we have received a response to the consultation from an organisation, we will provide the DfE and IFATE with the name of the organisation that has provided the response, although we will consider requests for confidentiality.

Where we share data, we ensure that adequate safeguards are in place to ensure that your rights and freedoms are not affected.

We use Citizen Space, which is part of Delib Limited, to collect consultation responses and they act as our data processor. You can view [Citizen Space's privacy notice](#).

Your response will also be shared internally within Ofqual in order to analyse the responses and shape our policies and regulatory activity. We use third party software to produce analysis reports, which may require hosting of data outside the UK, specifically the US. Please note that limited personal information is shared. All personal contact information is removed during this process. Where we transfer any personal data outside the UK, we make sure that appropriate safeguards are in place to ensure that the personal data is protected and kept secure.

Following the end of the consultation, we will publish an analysis of responses on [our website](#). We will not include personal details in the responses that we publish.

We may also publish an annex to the analysis listing all organisations that responded but will not include personal names or other contact details.

How long will we keep your personal data?

Unless otherwise stated, Ofqual will keep your personal data (if provided) for a period of 2 years after the consultation closing date.

Our legal basis for processing your personal data

Where you provide personal data for this consultation, we are relying upon the public task basis as set out in Article 6(1)(e) of UK GDPR to process personal data which allows processing of personal data when this is necessary for the performance of our public tasks. We will consult where there is a statutory duty to consult or where there is a legitimate expectation that a process of consultation will take place. Where you provide special category data, we process sensitive personal data such as ethnicity and disability, we rely on Article 9(2)(g) of UK GDPR as processing is necessary for reasons of substantial public interest.

The identity of the data controller and contact details of our Data Protection Officer

This privacy notice is provided by The Office of Qualifications and Examinations Regulation (Ofqual). The relevant data protection regime that applies to our processing is the UK GDPR [\[footnote 1\]](#) and Data Protection Act 2018 ('Data Protection Laws'). We ask that you read this privacy notice carefully as it contains important information about our processing of consultation responses and your rights.

How to contact us

If you have any questions about this privacy notice, how we handle your personal data, or want to exercise any of your rights, please contact our data protection officer at dp.requests@ofqual.gov.uk

We will respond to any rights that you exercise within a month of receiving your request, unless the request is particularly complex, in which case we will respond within 3 months.

Please note that exceptions apply to some of these rights which we will apply in accordance with the law.

You also have the right to lodge a complaint with [the Information Commissioner](#) (ICO) if you think we are not handling your data fairly or in accordance with the law. You can contact the ICO at:

ICO,
Wycliffe House,
Water Lane,
Wilmslow,
Cheshire,
SK9 5AF

Tel: 0303 123 1113

Annex B: Ofqual's role, objectives and duties

The Apprenticeship, Skills, Children and Learning Act 2009

Ofqual has five statutory objectives, set out in the Apprenticeship, Skills, Children and Learning Act 2009:

1.) **The qualification standards objective**, which is to secure that the qualifications we regulate:

a) give a reliable indication of knowledge, skills and understanding; and b) indicate:

i) a consistent level of attainment (including over time) between comparable regulated qualifications; and

ii) a consistent level of attainment (but not over time) between qualifications we regulate and comparable qualifications (including those awarded outside

of the UK) that we do not regulate

2.) **The assessment standards objective**, which is to promote the development and implementation of regulated assessment arrangements which:

- a) give a reliable indication of achievement, and
- b) indicate a consistent level of attainment (including over time) between comparable assessments

3.) **The public confidence objective**, which is to promote public confidence in regulated qualifications and regulated assessment arrangements

4.) **The awareness objective**, which is to promote awareness and understanding of:

- a) the range of regulated qualifications available,
- b) the benefits of regulated qualifications to Students, employers and institutions within the higher education sector, and
- c) the benefits of recognition to bodies awarding or authenticating qualifications

5.) **The efficiency objective**, which is to secure that regulated qualifications are provided efficiently, and that any relevant sums payable to a body awarding or authenticating a qualification represent value for money.

We must therefore regulate so that qualifications properly differentiate between Students who have demonstrated that they have the knowledge, skills and understanding required to attain the qualification and those who have not.

We also have a duty under the Apprenticeship, Skills, Children and Learning Act 2009 to have regard to the reasonable requirements of relevant Students, including those with special educational needs and disabilities, of employers and of the higher education sector, and to aspects of government policy when so directed by the Secretary of State.

The Equality Act 2010

As a public body, we are subject to the public sector equality duty. This duty requires us to have due regard to the need to:

- a) eliminate discrimination, harassment, victimisation and any other conduct that is prohibited under the Equality Act 2010
- b) advance equality of opportunity between persons who share a relevant protected characteristic and persons who do not share it
- c) foster good relations between persons who share a relevant protected characteristic and persons who do not share it

The awarding organisations that design, deliver and award qualifications are required by the Equality Act, among other things, to make reasonable adjustments for disabled people taking their qualifications, except where we have specified that such adjustments should not be made.

When we decide whether such adjustments should not be made, we must have regard to:

- a) the need to minimise the extent to which disabled persons are disadvantaged in attaining the qualification because of their disabilities
- b) the need to secure that the qualification gives a reliable indication of the knowledge, skills and understanding of a person upon whom it is conferred
- c) the need to maintain public confidence in the qualification

We are subject to a number of duties and we must aim to achieve a number of

objectives. These different duties and objectives can sometimes conflict with each other. For example, if we regulate to secure that a qualification gives a reliable indication of a Student's knowledge, skills and understanding, a Student who has not been able to demonstrate the required knowledge, skills and/or understanding will not be awarded the qualification.

A person may find it more difficult, or impossible, to demonstrate the required knowledge, skills and/or understanding because they have a protected characteristic. This could put them at a disadvantage relative to others who have been awarded the qualification.

It is not always possible for us to regulate so that qualifications give a reliable indication of knowledge, skills and understanding and advance equality between people who share a protected characteristic and those who do not. We must review all the available evidence and actively consider all the available options before coming to a final, justifiable decision.

Qualifications cannot mitigate inequalities or unfairness in the education system or in society more widely that might affect, for example, Students' preparedness to take the qualification and the assessments within it. While a wide range of factors can have an impact on a Student's ability to achieve a particular assessment, our influence is limited to the qualification design and assessment.

We require awarding bodies to design qualifications that give a reliable indication of the knowledge, skills and understanding of the Students that take them. We also require awarding organisations to avoid, where possible, features of a qualification that could, without justification, make a qualification more difficult for a Student to achieve because they have a particular protected characteristic. We require awarding organisations to monitor whether any features of their qualifications have this effect.

In setting our proposed requirements, we want to understand the possible impacts of the proposals on Students who share a protected characteristic. The protected characteristics under the Equality Act 2010 are:

- age
- disability
- gender reassignment
- marriage and civil partnerships
- pregnancy and maternity
- race
- religion or belief
- sex
- sexual orientation

With respect to the public sector equality duty under section 149 of the Equality Act, we are not required to have due regard to impacts on those who are married or in a civil partnership.

1. Please note that as of 1st January 2021, data protection laws in the UK have changed. The General Data Protection Regulation (EU) 2016/679(GDPR) no longer applies to the UK. However, the UK has incorporated GDPR into domestic law subject to minor technical changes. The Data Protection, Privacy and Electronic Communications (Amendment etc.) EU exit Regulations (DPPEC) came into force in the UK on 1st January 2021. This consolidates and amends the GDPR and UK Data Protection Act 2018 to create the new UK GDPR. [↪](#)

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