



Department
for Education

Consultation Response Form

Consultation closing date: 5 November 2015
Your comments must reach us by that date

**Additional Reformed GCSE and A level
subject content consultation**

If you would prefer to respond online to this consultation please use the following link: <https://www.education.gov.uk/consultations>

Information provided in response to this consultation, including personal information, may be subject to publication or disclosure in accordance with the access to information regimes, primarily the Freedom of Information Act 2000 and the Data Protection Act 1998.

If you want all, or any part, of your response to be treated as confidential, please explain why you consider it to be confidential.

If a request for disclosure of the information you have provided is received, your explanation about why you consider it to be confidential will be taken into account, but no assurance can be given that confidentiality can be maintained. An automatic confidentiality disclaimer generated by your IT system will not, of itself, be regarded as binding on the Department.

The Department will process your personal data (name and address and any other identifying material) in accordance with the Data Protection Act 1998, and in the majority of circumstances, this will mean that your personal data will not be disclosed to third parties.

Please tick if you want us to keep your response confidential.	<input type="checkbox"/>
Reason for confidentiality:	

Name: Mark Anderson	
Please tick if you are responding on behalf of your organisation.	<input checked="" type="checkbox"/>
Name of Organisation (if applicable): Pearson	
Address: One 90 High Holborn London WC1V 7BH	

If your enquiry is related to the DfE e-consultation website or the consultation process in general, you can contact the Ministerial and Public Communications Division by e-mail: consultation.unit@education.gsi.gov.uk or by telephone: 0370 000 2288 or via the Department's ['Contact Us'](#) page.

Please insert an 'x' into one of the following boxes which best describes you as a respondent.

<input type="checkbox"/> school	<input type="checkbox"/> academy	<input type="checkbox"/> college or further education institution
<input type="checkbox"/> teacher	<input type="checkbox"/> organisations representing school teachers or lecturers	<input type="checkbox"/> subject associations
<input type="checkbox"/> parent	<input type="checkbox"/> young person	<input type="checkbox"/> higher education establishment
<input type="checkbox"/> employer/business sector	<input type="checkbox"/> local authorities	<input checked="" type="checkbox"/> awarding associations
<input type="checkbox"/> other		

Comments:

Pearson has worked collaboratively with the other awarding organisations throughout the process of the development of the proposed subject content for GCSE Statistics.

Our comments below under Question 1f) are offered to further clarify the intention of the subject content.

1. Is the revised GCSE content in each of these subjects appropriate? Please consider:

- whether there is a suitable level of challenge
- whether the content reflects what students need to know in order to progress to further academic and vocational education
- whether the amount of content in the qualification is appropriate and, if not, whether you have any suggestions for removing or adding content

Please provide evidence to support your response:

1a) Ancient History

<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> Not Sure
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Comments:

1b) Classical civilisation

Yes No Not Sure

Comments:

1c) Electronics

Yes No Not Sure

Comments:

1d) Film studies

Yes No Not Sure

Comments:

1e) Media studies

Yes No Not Sure

Comments:

1 f) Statistics

<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> Not Sure
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Comments:

Use of technology

Subject content heading C reads as follows:

“Generate data visualisation through the use of technology and by manual construction and understand the mathematics required to derive these visualisations.”

Students will not be able to generate data visualisations though the use of technology in examination unless they have access to a graphical calculator. The cost of purchasing graphical calculators would be an impediment to some students and/or schools and thus has the potential to have disproportionate impact on some groups of students. It is for this reason that we believe the first occurrence of the word “and” in subject content heading C should be changed to “or” to read:

“Generate data visualisation through the use of technology or by manual construction and understand the mathematics required to derive these visualisations.”

Variance and standard deviation

Subject content D3 requires students to calculate variance and standard deviation. The content statement D3 makes no reference to a distinction between population variance and standard deviation on the one hand and sample variance and standard deviation on the other.

The formulae list in appendix 3 on the other hand supplies separate formulae for population variance and standard deviation on the one hand and sample variance and standard deviation on the other.

We are of the view that it is not appropriate for GCSE students to be expected to know about the distinction between population and sample versions of variance and standard deviation or to be required to calculate more than one version of each of variance and standard deviation. Currently the use of both population and sample formulae is not met until unit S3 in A Level Mathematics. Furthermore, in our research, teachers have expressed the view that the distinction is conceptually too difficult for students at GCSE level to grasp. We believe it is not appropriate for this distinction to be required at GCSE

level.

Thus the content statement should hold sway over the list of formulae and the following changes should be made to Appendix 3 – formulae:

For both the Foundation tier and Higher tier formulae, the complex GCSE statistics formulae to be given in the assessment should be amended as follows:

The two lines with specification reference D3 should be merged into one line, with one formula supplied for variance and one formula supplied for standard deviation.

Distribution probability calculations

Subject content statements D8 and D9 provide that, in calculating the probability and expected frequency of outcomes in binomial and normal distributions, students are permitted to find the values using calculator functions.

We feel the intention of the subject content will be better met by replacing the word “permissible” to “expected” to read:

“Values found by using calculator functions will be expected.”

The alternative to students calculating these values by calculator function would be by use of statistical tables. The use of statistical tables would be counter to the intention of the subject content to ensure that awarding organisations develop modern GCSE Statistics qualification that reflect the changes that the widespread use of technology in the field have brought about.

Appendix 3 – statistical enquiry cycle

There is a typographical error in line 4 up on page 16. The word “and” should be replaced by “an” to read:

Specifications must require students to present and interpret statistical information that shows an understanding of: ...

2. Is the revised AS and A level content in each of these subjects appropriate? Please consider:

- whether the content reflects what students need to know in order to progress to undergraduate study

Please provide evidence to support your response.

2a) Accounting

Yes

No

Not Sure

Comments:

2b) Ancient History

Yes

No

Not Sure

Comments:

2c) Archaeology

Yes

No

Not Sure

Comments:

2d) Classical civilisation

Yes

No

Not Sure

Comments:

2e) Electronics

Yes

No

Not Sure

Comments:

2f) Film studies

Yes No Not Sure

Comments:

2g) Law

Yes No Not Sure

Comments:

2h) Media studies

Yes

No

Not Sure

Comments:

2i) Statistics

Yes

No

Not Sure

Comments:

3. Do you think that any of the proposals have the potential to have a disproportionate impact, positive or negative, on specific students, in particular those with 'relevant protected characteristics'? (The relevant protected characteristics are disability, gender reassignment, pregnancy and maternity, race, religion or belief, sex and sexual orientation.)

Please provide evidence to support your response.

<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	<input type="checkbox"/> Not Sure
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Comments:

4. How could any adverse impact be reduced and how could the subject content of GCSEs and/or A levels be altered to better advance equality of opportunity between persons who share a protected characteristic and those who do not share it?

Please provide evidence to support your response.

Comments:

Thank you for taking the time to let us have your views. We do not intend to acknowledge individual responses unless you place an 'X' in the box below.

Please acknowledge this reply.	
E-mail address for acknowledgement:	

Here at the Department for Education we carry out our research on many different topics and consultations. As your views are valuable to us, please confirm below if you would be willing to be contacted again from time to time either for research or to send through consultation documents?

<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
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All DfE public consultations are required to meet the Cabinet Office [Principles on Consultation](#)

The key Consultation Principles are:

- departments will follow a range of timescales rather than defaulting to a 12-week period, particularly where extensive engagement has occurred before
- departments will need to give more thought to how they engage with and use real discussion with affected parties and experts as well as the expertise of civil service learning to make well informed decisions
- departments should explain what responses they have received and how these have been used in formulating policy
- consultation should be 'digital by default', but other forms should be used where these are needed to reach the groups affected by a policy
- the principles of the Compact between government and the voluntary and community sector will continue to be respected.

If you have any comments on how DfE consultations are conducted, please email: consultation.unit@education.gsi.gov.uk

Thank you for taking time to respond to this consultation.

Completed responses should be sent to the address shown below by 5 November 2015

Send by post to: Send by post to: Bethany Caines, Floor 2, Sanctuary Buildings, Great Smith St, Westminster, London SW1P 3BT

Send by email to: 2017qualsreform.CONULTATION@education.gsi.gov.uk