



Department
for Education

Consultation Response Form

Consultation closing date: 24 September 2015

Your comments must reach us by that date

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: Andy Spreckley	
Please tick if you are responding on behalf of your organisation.	<input checked="" type="checkbox"/>
Name of Organisation (if applicable): AQA	
Devas Street, Manchester, M15 6EX	

1 a) Astronomy

Yes No Not Sure

AQA is not intending to develop an astronomy qualification. We are not therefore commenting on the consultation content for this subject.

1 b) Business

Yes No Not Sure

The revised GCSE content for business is appropriate. It covers business activity and the influences upon this as well as the key business functional areas and their interdependence and interaction with each other. Students will gain a good understanding of how businesses operate by introducing them to business concepts, ideas, theories and issues and the content proposed for the GCSE will provide them with a sound basis for further study at A-level or in a vocational context. The proposed content is more challenging than that of the current GCSE Business Studies which will allow the most able students to be stretched while still allowing accessibility to those of lower ability. The skills outlined in the consultation documentation would appear to be entirely appropriate for students studying at GCSE level and will provide students with a firm foundation upon which to build as they progress to study in the post-16 arena. The quantitative skills, both for calculation and interpretation also appear relevant to the study of business at Level 2 and are entirely relevant within a business context.

1 c) Economics

<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	<input type="checkbox"/> Not Sure
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The proposed content for GCSE Economics is not at an appropriate level of challenge for students at Level 2 and is in fact difficult to distinguish from that of either the current or reformed AS specifications. Whilst it would more than prepare students for further study of the subject, there is a real danger that those progressing to AS and/or A-level will find much of the first year of study to be a repeat of what they studied at GCSE. This could result in students becoming disengaged during their first year of A-level study.

As part of the development of the subject content, the exam boards engaged with a number of key stakeholders who were already concerned that the current GCSE Economics was unattractive to students because of the level of challenge compared to other GCSEs and by the fact that it already closely resembled an AS qualification. The redevelopment of the content has done nothing to realign economics with other GCSE subjects. Whilst the level of demand and challenge of other subject content may have been increased, there has been a corresponding (and possibly greater) increase in the level of challenge in the economics content. For example, we feel that the inclusion of oligopoly is totally inappropriate and is not covered in the reformed AS, but is left until the second year of A-level study. While having a stated aim of the qualification to be for students to be able 'to read and comprehend articles written by leading economists' is simply not a realistic in relation to a Level 2 qualification which will, in the main, be studied by students aged 14-16.

AQA feels that, at GCSE, students' understanding of economics should be conceptual to allow them to understand and explain the economic impact and consequences of national and global events. The content as it is currently presented is more theoretical than conceptual and runs the risk of hindering the engagement of students of this age group with the subject content.

There is a significant danger that the proposed content will prevent exam boards from developing specifications that are accessible across the full range of student ability resulting in a return to the pre-2010 situation when the majority of schools teaching economics at GCSE were in the independent sector.

Whilst we would in no way advocate the 'dumbing down' of economics to appeal to a wider GCSE market, the proposed content is too complex for students at GCSE. Given that study of economics at GCSE is not a prerequisite to study at A-level, the content as presented is unlikely to encourage uptake of the GCSE.

AQA looks forwards to the opportunity to further discuss these concerns with DfE after the consultation has concluded. Moreover, we would be happy to propose alternative content, working with DfE, other awarding organisations and key subject stakeholders, if

that were felt to be appropriate.

1 d) Geology

Yes

No

Not Sure

AQA is not intending to develop a geology qualification. We are not therefore commenting on the consultation content for this subject.

1 e) Engineering

Yes

No

Not Sure

Whether there is a suitable level of challenge

AQA recognises the requirement for an increased level of demand in reformed GCSEs. We believe that the proposed GCSE Engineering subject content significantly increases the breadth and depth of the content. Further, we note that the assessment objectives have been revised in order to better reflect those higher order skills alongside the need to demonstrate essential practical skills.

However, we do have concerns that in some aspects the level of demand exceeds that which would ordinarily be expected of a GCSE qualification. This has led to comments from some stakeholders that the level is, in part, significantly greater than GCSE and, in some cases, closer to degree level. This is certainly the view of current senior associates for GCSE Engineering as well as the majority of teachers who responded as part of the stakeholder engagement.

For example, a head of department from Nelson Tomlinson school does not believe they can deliver the content in the time available and that much of the content, such as the maths and science, “seems pitched too high, I covered some of the proposed

science whilst completing my HNC in engineering”. He concludes by saying “this would be an interesting ‘A’ level but I think that somewhere along the line someone has forgotten that it is aimed at 14 to 16 year olds. The GCSE should surely be an introduction to engineering?”.

This view is shared by teachers at Ashby School, one the country’s leading technology schools. The Head of Technology stated that “this would prepare students better for HE or KS5 studies, and would suit the more academic student rather than lower ability”.

Consequently, we are concerned about the likely impact on interest in this subject at this level, the experience of students that choose to follow this qualification and the potential adverse effect on our ability to set assessments that enable proper use of the full mark range. If marks are significantly skewed towards the lower end of the mark range, we may experience difficulties setting grade boundaries that are sufficiently far apart.

Areas where we would have concern include:

Engineering materials

- . . . matrix in which the reinforcement is placed, amount of reinforcement used, size and shape of reinforcement (too complex as it requires specialist knowledge and experience which would not be available or accessible to students at this level. It would be more appropriate in a Level 3 qualification)
- the calculation of costs to manufacture/produce items based on available stock sizes/supply, using economies of scale and subsequent waste produced as a cost to inform the development of an engineered solution in industry (difficult to see how schools would manage this given the problems in obtaining data).

Application of practical engineering skills

- design a range of tests to assess the fitness for purpose and performance of a completed product, taking into account how areas for improvement/modification could be identified and alternative solutions clearly shown. (We believe it is unrealistic to expect students at this level to design tests. This could be included within a more general requirement to use a range of tests).

Mathematical content

We note the requirement to include a mathematical appendix and that much of the content is appropriate for a GCSE in engineering. However, we do have a concern that some of the higher level mathematical principles, for example Pythagoras and trigonometry, may prove to be restrictive for some students looking to access the

higher end of this qualification.

- **whether the content reflects what students need to know in order to progress to further academic and vocational education**

AQA believes the subject content does reflect what students need to know in order to progress to further academic education. In fact, as previously stated, some of the content is deemed to be inappropriate for students at this level and is more appropriate for studies at Level 3. We believe that the breadth and depth of the subject content mean that students should be well prepared to progress to Level 3 qualifications, in particular GCE D&T Product Design, GCE D&T Engineering or any of the Level 3 Technical Levels in engineering. In addition, if supplemented with maths and science subjects, it would be an excellent grounding to progress to study in these areas.

We are aware of teacher concerns regarding the reduction in the practical focus of this qualification and that it may not serve well those students looking to progress down a more vocational route. There is a concern that only the more academic students and centres would be attracted to this qualification and this could perhaps be to the detriment of subsequent vocational study.

- **whether the amount of content in the qualification is appropriate and, if not, whether you have any suggestions for removing or adding content**

There has been a significant increase in the amount of content compared to that which forms the existing qualification. The comments made above concerning level of demand, give some indication as to what parts of the content it may be worthwhile reviewing in order to establish whether or not it should form part of a GCSE.

1 f) Psychology

<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> Not Sure
<p>The level of challenge within the revised content for GCSE psychology is appropriate. In comparison to previously reformed GCSE Subjects, the content is at a commensurate level of demand.</p>		
<p>There is an appropriate breadth of knowledge for the subject at Key Stage 4 that allows for topic areas to be studied at sufficient depth.</p>		
<p>In relation to previous content, the revised content includes higher order skills (such as those made explicit in Research Methods) and more conceptually demanding topic areas that include the requirement to have knowledge and understanding of related theories and studies. The inter-relationship between the topic areas introduces a suitably challenging synoptic element to learning.</p>		
<p>Explicit mathematical skills have also been added to the content of GCSE Psychology. This contributes to an increase in demand and facilitates progression to the reformed AS/A-Level in Psychology, which also has a minimum mathematical requirement. The revised content will allow for greater differentiation between students, providing accessibility to all and stretch and challenge for the most able.</p>		
<p>The GCSE Psychology content provides a solid foundation and appropriate progression to AS/A-level Psychology and further vocational education. The core areas of psychology (biological, cognitive, social, developmental, individual differences) and research methods, which appear in the reformed AS/A-level, are reflected in the new GCSE at an appropriate level. However, given the broad and unspecified content headings at AS/A-level in relation to the significant volume of detailed content specified for GCSE, some repetition may occur between GCSE and AS/A-level.</p>		
<p>The volume of content in the revised GCSE is appropriate and in line with the necessary increase in demand. It reflects an appropriate amount of knowledge, understanding and skills to be gained over the course of a two year GCSE.</p>		

1 g) Sociology

<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> Not Sure
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Whether there is a suitable level of challenge:

In general terms the revised content for GCSE Sociology provides an appropriate level of challenge. The increase in both breadth and depth of study ensures comparability with the level of demand for other reformed GCSEs. Key elements of the existing criteria and associated specifications have been retained but further depth has been added, including the demand for students to understand a variety of theoretical approaches. Sociological research methods have been detailed ensuring that this important area of sociological study is prominent during a student's study of sociology. However, the knowledge, understanding and skills related to research methods clearly presents challenges for students, even at A level. Therefore the greater prominence given to this element at GCSE has contributed to an increase in demand for the students.

Progression to further academic and vocational education:

In addition to increasing demand, the increase of breadth and depth of study aligns GCSE Sociology to progression to AS and A level Sociology and further vocational education. In particular, the introduction of sociological theories and the higher order skills prepare students for further study of Sociology at AS and/or A level.

However, the GCSE content is specified at considerable level of detail in comparison to the A level. In particular, theories have been linked to some named theorists. The concern is that these theorists and their theories may become, if not already, outdated. Care is needed that it is not expected that notional 16 year olds will undertake the sort of literature review that might be expected as part of further academic study.

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 under the relevant headings:

2 a) Design and Technology

<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> Not Sure
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The content is appropriate and generally supports progression into undergraduate study. We particularly welcome the re-focusing of the Textiles content on Fashion design and development and feel that this will better facilitate progression into related HE courses. It is more relevant to the skills and knowledge required for both further study and related employment in this area.

We welcome the fact that endorsed routes are available and feel that this will allow students to study to appropriate levels of depth to allow for progression. Linked to this, we are also pleased that the structure of the subject content is broken down into core technical knowledge and understanding, core designing and making principles and additional specialist knowledge. This will allow students to study the core skills and knowledge applicable across all areas, before studying specialist knowledge in more depth.

2 b) Environmental Science

<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> Not Sure
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The content for Environmental Science is appropriate for progression to undergraduate study. It provides an excellent overview of key contemporary environmental issues while at the same time developing those skills that are most highly prized by higher education.

The new Environmental Science content has been developed in line with the other newly reformed science A-levels ensuring that the level of demand has been increased. The content clarifies the need for students to use qualitative and quantitative data in both theoretical and practical contexts and rewards their ability to apply knowledge to make judgements and plan further scientific investigations. The content also encourages the development of high-order analytical skill by challenging students to evaluate the role of the scientific community and consider its role in decision making. The level of detail within each topic area is sufficient to ensure that the emphasis and approach in each area is clear and to ensure that this is a discrete body of knowledge and understanding which does not overlap with other domains.

The practical and mathematical skills are now exemplified in the context of environmental science and are comparable to those used by the other A-level sciences. The response of the environmental science stakeholders involved with the drafting of this content was that they were confident that these requirements met the needs of universities.

Evidence from *The report on the consultation on revised A level subject content* regarding the changes made to the A-level Science criteria for phase one, concluded that they have the potential to better meet the needs of higher education. Based on this evidence and guided by stakeholder feedback and discussion AQA recommended that similar changes to the A-level Environmental Science subject criteria were appropriate to the subject and would meet the need of students progressing to undergraduate study. It is pleasing to see that these recommendations have been accepted.

2 c) History of Art

<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> Not Sure
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The revised AS and A-level content is appropriate. Students will gain a good understanding of key historical movements, periods and types including the contribution of specific artists to movements, periods and styles.

Students will gain good understanding of changes in art over time including the influence of key factors on the development of movements/periods and types and on specific artists. They will know and understand how significant developments in materials, techniques and processes contribute to changes in art and the way art has been used and interpreted now and in the past.

At A-level students will also gain knowledge and understanding of critical texts, the influence of exhibition/gallery curatorship on the reception of works of art and how different movements/periods have been influenced by other movements/periods.

All students will gain knowledge and understanding of visual language i.e. how artists use formal characteristics to achieve intentions.

The number of artists, periods, texts, movements and works specified will allow awarding organisations to develop specifications of appropriate breadth and depth.

2 d) Music Technology

<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> Not Sure
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AQA is not intending to develop a music technology qualification. We are not therefore commenting on the consultation content for this subject.

2 e) Philosophy

<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> Not Sure
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The revised content is appropriate for AS and A level Philosophy. Although the content does not, and cannot feasibly, cover the wide range of topics represented across the discipline, it will ensure that the study of Philosophy in schools and colleges requires students to develop the skills, knowledge and understanding that will prepare them for further undergraduate study of philosophy.

Equalities Impact

3. In accordance with the Equality Act 2010, public bodies must have “due regard”, when making decisions, to the need to eliminate discrimination, harassment, victimisation; advance equality of opportunity; and foster good relations, in relation to relevant protected characteristics. It would therefore be very helpful to

understand if, in your view, there is any potential for the subject content to have a disproportionate impact upon any student with relevant protected characteristics under the Equality Act 2010. It would be particularly helpful to understand if any respondents have evidence to support concerns they may have about such impacts.

3 a) 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 type="checkbox"/> No	<input checked="" type="checkbox"/> Not Sure
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With regards to GCSE Engineering, we are aware of some concerns that the subject content may lend itself to be a more traditionally 'boys' subject, something which the engineering community is keen to move away from. The subject already has a predominantly male entry and there is a concern that the draft content will not reverse this trend.

This issue could be addressed in part by making the content more inspiring, with some suggestions made in part 3b below. In addition to these suggestions, the Royal Academy of Engineering (RAoE) and Dr Hugh Shercliff from the University of Cambridge, both believe that there is room for extending problem solving for global challenges. The RAoE stated that "it could be a really interesting meshing subject between sciences/maths and geography", a view shared by Dr Shercliff. Since these comments were received, the 'global context' section has been significantly reduced and renamed "the impact of modern technologies", which is likely to provoke further concern amongst these stakeholders.

3 b) 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.

<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> Not Sure
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With regards to GCSE Engineering:

As mentioned in our response to question 3a, there is evidence from some of the stakeholders that the content could be made more engaging and inspiring by including more modern areas of engineering, such as (bio)medical engineering, entertainment, sports engineering etc.

There is also a feeling that an opportunity has been missed in the 'global context' section. It could be presented as a whole new way of thinking about engineering as problem solving for global challenges.

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 24 September 2015

By post:

Bethany Caines, Floor 2, Sanctuary Buildings, Great Smith St, London SW1P 3BT

By e-mail: 2017GCSEsandAlevels.consultation@education.gsi.gov.uk