



Department
for Education

Secondary accountability measures

**Guide for maintained secondary schools,
academies and free schools**

February 2023

Contents

Summary	6
Expiry or review date	7
Who is this publication for?	7
Main points	7
Introduction	8
How will the 2021/22 KS4 performance data be used?	8
Ofsted	9
Regional Directors	9
Changes to the Compare School and College (CSCP) website for the 2021/22 academic year	9
Secondary school performance measures	11
Calculating KS4 performance measures in the 2021/22 academic year	11
Early entries achieved between January 2020 to August 2021	11
Discounting and early entries from qualifications achieved between January 2020 and August 2021 and re-entries in the 2021/22 academic year	12
Technical Awards and unit grades achieved in 2019/20 and 2020/21 academic years	12
Progress 8	13
Gaps in the Progress 8 baseline	13
Pupils with extremely negative progress scores	14
Attainment 8	14
EBacc entry and attainment measures	15
EBacc entry and attainment measures – example	15
Percentage of pupils staying in education or going into employment after Key Stage 4 (pupil destinations)	16
Attainment in English and maths measures	16
Attainment in English and maths measures – example	16
Publication of KS4 secondary accountability measures	18
Calculating Attainment 8 and Progress 8	19
Qualifications included in the measures	19
Maths qualifications	19
English qualifications	20

Qualifications in the English Baccalaureate (EBacc) subjects	20
Science and computer science qualifications	20
Qualifications in the 'open' element	21
Level 3 qualifications	21
Point Scores	22
Interpreting Progress 8 scores	23
Pupils reaching their estimated grades	23
Impact of the number of qualifications taken on a pupil's Progress 8 score	23
Confidence intervals	24
Using performance data to predict individual pupils' scores and sharing pupils' progress data	24
Measurement of Prior Attainment	26
Changes to the KS2 baseline for calculating Progress 8	26
Pupils with test results in both English reading and maths	26
Pupils working below the level of the test	27
Pupils missing one result	29
Pupils who have no KS2 assessment	29
Information available to secondary schools about their year 7 pupils	30
KS4 multi-academy trust (MAT) measures	31
Eligibility for inclusion in the MAT measures	31
Calculating KS4 measures at MAT level	32
Disadvantaged pupils and MAT measures	33
Annex A: worked examples of methodology for calculating Progress 8 and Attainment 8	34
Progress 8/Attainment 8 – 2021/22 methodology	34
Progress 8/Attainment 8 – 2018/19 methodology	36
Calculating a pupil's Progress 8 score - 2021/22 methodology continued	37
Calculating a school's Progress 8 score	37
Worked Example A	37
Calculating a school (adjusted) Progress 8 score	38
Annex B – Prior Attainment Group thresholds for pupils with extremely negative progress scores	39

Adjusting extremely negative progress scores, number of standard deviations and prior attainment group thresholds	39
Annex C: worked example of 2021/22 methodology for calculating EBacc measures	42
Annex D: Understanding Destination measures	44
Data sources	44
Cohort	44
Schools with destinations reported	44
Information included in the table	45
Destination categories reported	45
Suppression of destination data	47
Annex E: worked example of 2021/22 methodology for calculating Attainment in English and maths measures	48
Annex F – English in the headline performance measures	49
Progress 8 and Attainment 8	49
EBacc average point score (EBacc APS)	49
Attainment in English and maths at grade 5 or above	49
Annex G: worked examples of science pathways in 2021/22 academic year performance measures	50
Science pathways example 1	50
Science pathways example 2	52
Annex H – Point score scales for 2022 and future years	54
Illustrative examples of how to use these tables – points for all qualifications can be calculated following this method	57
Example A - Calculating the points for a level 2 qualification with four passing grades	57
Example B - Calculating the points for a BTEC First Award	57
Example C - Calculating the points for an OCR Cambridge National Certificate	58
Annex I – Confidence Intervals	59
Worked example A – continued	60
Standard deviation of all Progress 8 scores and Progress 8 element scores nationally	60
Annex J: Worked examples of MAT measures	62
MAT level Progress 8	62
MAT level EBacc entry	63

MAT level achieving EBacc at grade 5 or above	64
MAT level achieving grade 5 or above in English and Maths	65
MAT level Attainment 8	66
MAT level EBacc APS	68
Annex K – Revised 2022 Attainment 8 averages	69
Annex L – Other additional measures	73
The proportion of pupils achieving a grade 4 or above in English and maths	73
The proportion of pupils achieving the EBacc at grade 5 or above and grade 4 and above.	73
Average number of EBacc slots filled in Attainment 8 at school level	73
Average number of open slots filled in Attainment 8 at school level	73
Pupils achieving 5 or more GCSEs at grade 4 or above including English and maths	74
Annex M – Pupils and Institutions included in KS4 Performance Measures	75
Pupils at the end of KS4	75
Institutions	75
Included in KS4 National statistics	75
Included at school level on the Find School and College Performance Data website	75
Annex N – Timeline of changes since 2016	76

Summary

This document explains how Key Stage 4 (KS4) performance measures have been calculated based on pupils at the end of KS4¹ in the academic year 2021/22.

KS4 measures for the 2021/22 academic year have been affected by our commitment not to include results from qualifications achieved between January 2020 and August 2021 in future performance measures. We have made adjustments to the methodology designed to minimise the impact of gaps in data for schools and colleges.

Progress 8 also has changes to its baseline, as Key Stage 2 (KS2) outcomes are now reported as scaled scores instead of national curriculum levels.

The 2021/22 academic year KS4 performance measures have been published at school and college level for first time since the 2018/19 measures, due to the impact of the COVID-19 pandemic. The headline measures which appear on the performance measures website are:

- **Progress 8** - progress across 8 qualifications
- **EBacc entry** - percentage of pupils entering the English Baccalaureate
- **Pupil destinations** - percentage of students staying in education or going into employment after Key Stage 4
- **Attainment in English and maths** - percentage of pupils achieving a grade 5 or above in English and maths.
- **Attainment 8** - attainment across the same 8 qualifications as Progress 8
- **EBacc APS** - English Baccalaureate Average Point Score

A range of additional performance measures and contextual information is also published alongside the headline measures.

The KS4 measures are designed to encourage schools to offer a broad and balanced curriculum with a focus on an academic core.

¹ Pupils are identified as being at the end of KS4 if they were on roll at the school and in year 11 at the time of the January school census. Age is calculated as of 31 August at the start of the academic year, and the majority of pupils at the end of KS4 were age 15 at this point. Some pupils may complete this key stage in an earlier or later year group.

Expiry or review date

This guidance will be reviewed before the end of October 2023.

Who is this publication for?

This guidance is for:

- senior leaders working in secondary schools and trusts, including maintained schools, academies, alternative provision, free schools and special schools;
- independent schools or colleges with 14-16 provision seeking information on secondary accountability measures;
- governors and trustees;
- local authorities

Main points

This update includes further information about KS4 accountability arrangements and the use of 2021/22 KS4 school performance data. It also sets out further detail on the methodological changes we have made due to our commitment to not use results from qualifications achieved between January 2020 and August 2021 in future performance measures and the changes to the Progress 8 baseline.

This update also includes information about how we will calculate KS4 MAT measures for the academic year 2021/22.

As in previous versions, the tables and diagrams in the guidance have been updated to reflect the revised 2022 data.

Introduction

Most exams and assessments did not take place in the 2019/20, or 2020/21 academic years, due to COVID-19. We did not publish school or college level results data for these years and have been clear that this data will not be used to hold schools and colleges to account. We also stated that we will not use results from qualifications achieved between January 2020 and August 2021 in future performance measures.

As GCSE, AS and A level exams returned in academic year 2021/22, it is important we move back to publicly available data about exam results in a school or college, for transparency and as a starting point to support parents and students when choosing schools or post-16 institutions.

How will the 2021/22 KS4 performance data be used?

We have always been clear that all users of educational school performance data need to consider this data alongside a range of other information about the school and its individual circumstances, for example by speaking to the school directly, and that conclusions should not be drawn based on a single piece of data alone. This will be particularly important in relation to the data for the 2021/22 academic year, as a school's performance may be affected by the uneven impact of the pandemic on pupils and schools, and so data will need to be used more cautiously.

While school level data for the academic year 2021/22 will provide information about how a school has performed, in relation to local and national averages, it will not provide the broader context around a school's outcomes. In short, as in any year, school level data will tell you 'what' but not 'why'. This is particularly important to bear in mind in relation to the 2021/22 academic year data, due to the uneven impact of the pandemic on pupils and schools, and the changes in the approach to grading and methodological changes to the way we calculate KS4 measures. That is why we have ensured that clear messages are placed alongside any data shared, to advise caution in its interpretation.

We strongly discourage users of the data from drawing conclusions based on direct comparisons with performance data from earlier years. We also advise caution when comparing a school's performance with national or local authority averages, advising users to talk to the school to understand the context for their results. We also strongly advise against direct comparisons between the performance data for one school and another school, without taking this broader context into account.

These messages have been published alongside the data on the performance measures website and shared with officials across the department, including regional teams, as well as local authorities, schools, academy trusts and governors and trustees.

As set out in DfE guidance², school and trust leaders should not make pay progression for teachers dependent on the assessment data for a single group of pupils. Performance management targets relating to pupil performance should not be used in isolation and other factors, including the uneven impact of the pandemic on pupils and schools and the considerable caution needed when using the 2021/22 performance data, should also be taken into account.

Ofsted

Ofsted inspectors will be clear that 2021/22 academic year data is not comparable with earlier years and aware of the caveats on the data due to the uneven impact of the pandemic on pupils and schools, and sensitive in their use of it. Inspectors will use caution when considering school performance data in the IDSR. HMCI, Amanda Spielman, has committed that the 2021/22 academic year data will be used only to inform discussion with schools about pupil outcomes. No judgements will be made on the basis of the 2021/22 academic year data alone³.

Regional Directors

As set out in [guidance on how Regional Directors will use data in decision making](#), regional directors will have 2021/22 assessment, test, and exam results data to refer to. This data will be treated with caution due to the uneven impact of the pandemic on schools. This means that while the data will inform discussions with schools, trusts and LAs, it will not be used to compare directly between two or more providers. For example, it will not be used to choose one school or trust over another simply because one has higher or lower performance data. The 2021/22 academic year data will also not be compared directly to 2018/19 academic year data or earlier. The current and historic data however, may, with caution, be compared to national or LA averages from the same year.

Changes to the [Compare School and College \(CSCP\) website](#) for the 2021/22 academic year

To support the appropriate use of data we have made changes to the performance measures website. Changes include:

- removing the “all schools and colleges in England” and local authority comparison tables (we continue to show local authority and national averages for each

² [School teachers' pay and conditions: guidance - GOV.UK \(www.gov.uk\)](#)

³ [School inspection handbook - GOV.UK \(www.gov.uk\)](#)

performance measure on the individual school or college pages; and data on all schools/colleges and local authorities is still available to download from the website);

- changing the name of the website to **Find School and College Performance Data** to reduce the emphasis on comparison between institutions; and
- changing the way we present progress measures, by removing the coloured “bandings” to discourage simplistic conclusions being drawn about a school or college’s overall performance.

Secondary school performance measures

Calculating KS4 performance measures in the 2021/22 academic year

When calculating KS4 performance measures for 2021/22, we have only included results from qualifications taken in academic year 2021/22. We have, however, excluded GCSE and AS qualifications taken as part of the extraordinary autumn 2021 examination series⁴. Results from qualifications routinely offered in autumn that count towards KS4 performance measures, such as technical awards and GCSE English and GCSE maths qualifications, have been included in the 2021/22 KS4 performance measures. The first entry rule⁵ continues to apply to these qualifications.

[We confirmed in July 2021](#) that qualification results achieved in the 2021/22 academic year will count towards school and college performance measures in future years. This means that if a student takes a qualification early in year 10 in 2021/22, it will count in 2022/23 when that student reaches the end of KS4. We plan to revert to the usual methodology as far as that is possible for KS4 measures for academic year 2022/23 and will confirm further details in due course.

Early entries achieved between January 2020 to August 2021

We have made clear that results from qualifications achieved between January 2020 and August 2021 will not be used in school and college level performance measures in future years⁶. In light of this, we have adjusted the methodology for calculating KS4 performance measures for the 2021/22 academic year. This is to take account of pupils entered early⁷ for qualifications between January 2020 and August 2021, who have reached the end of KS4 in the 2021/22 academic year⁸.

It is important to note that these changes to methodology minimise, but cannot eliminate completely, the impact of gaps in data. The approach is the best option available, given our commitment not to use qualification results achieved between January 2020 and

⁴ The extraordinary autumn 2021 exams were provided solely in response to the cancellation of the summer 2021 exam series, and entry was restricted to students who received a teacher-assessed grade in summer 2021 and to students who, in the opinion of the exam board, would have entered summer 2021 exams had they not been cancelled.

⁵ The first entry rule is where a pupil's first entry in a particular subject counts towards the school's performance measures. Further information can be found in the [Discounting and Early Entry guidance](#).

⁶ We will include results from qualifications taken in autumn 2019, as these were pre-pandemic. We will not include results from qualifications taken in autumn 2020.

⁷ Most commonly when pupils were in year 10 but also in year 9.

⁸ We intend to take a similar approach for the smaller number of pupils entered early in academic year 2020/21 who will reach the end of Key Stage 4 in academic year 2022/23.

August 2021. We have ensured messages are placed on Find School and College Performance Data to highlight the change in methodology and potential impact on a school's performance measures.

When calculating KS4 performance measures for 2021/22, we have counted entries from qualifications taken between January 2020 and August 2021 but will only include results from the 2021/22⁹ academic year. This means that, for example, where a pupil has taken GCSE English literature in summer 2021, and GCSE English language in summer 2022, we will count the summer 2021 entry in English literature for the purposes of triggering the double weighting for English in Progress 8 and Attainment 8. However, only the summer 2022 result in English language will count towards the Progress 8 and Attainment 8 scores, regardless of which grade is higher.

Discounting and early entries from qualifications achieved between January 2020 and August 2021 and re-entries in the 2021/22 academic year

Discounting ensures that, where a pupil has taken two or more qualifications with a significant overlap in content, the performance measures only give credit once for teaching a single course of study.

Where a pupil has been entered early in a subject between January 2020 and August 2021 and is then re-entered for the same subject in the 2021/22 academic year, the first entry rule will apply and the result achieved in the re-entry in 2021/22 academic year will not count towards any KS4 performance measures for 2021/22. More information can be found in the [discounting and early entries guidance](#).

Technical Awards and unit grades achieved in 2019/20 and 2020/21 academic years

We will include qualification grades in Technical Awards achieved in 2021/22 academic year in KS4 performance measures for academic year 2021/22 and in future KS4 performance measures, even if some of the constituent units of that qualification were given a grade in the 2019/20 or 2020/21 academic years via Centre Assessment Grades, Teacher Assessed Grades or another process, such as remote invigilation or special consideration.

⁹ We also count the results of qualifications achieved in autumn 2019 for pupils reaching the end of KS4 in the 2021/22 academic year, and first entry rules will apply.

Progress 8

Progress 8 aims to capture the progress that pupils in a school make from the end of primary school to the end of KS4. It is a type of value-added measure, which means that pupils' results are compared to other pupils nationally with similar prior attainment. Every increase in grade a pupil achieves in their Attainment 8 subjects counts towards a school's Progress 8 score.

Progress 8 is calculated for individual pupils solely in order to calculate average Progress 8 scores including school Progress 8 scores. Schools should not share individual pupil progress scores with pupils or parents.

A Progress 8 score is calculated for each pupil by comparing their Attainment 8 score with the average Attainment 8 scores of all pupils nationally who had a similar starting point, using assessment results from the end of primary school. In 2016, changes were introduced to KS2 outcomes in English reading and maths. They are now reported as scaled scores instead of national curriculum levels (more information is available in the [measurement of prior attainment](#) section).

The greater the Progress 8 score, the greater the progress made by the pupil compared to the average for pupils with similar prior attainment.

A school's Progress 8 score is calculated as the average of its pupils' Progress 8 scores. It gives an indication of whether, as a group, pupils in the school made above or below average progress compared to similar pupils in other schools.

- a score of zero means pupils in this school on average did as well at KS4 as other pupils across England who got similar results at the end of KS2
- a score above zero means pupils made more progress, on average, than pupils across England who got similar results at the end of KS2
- a score below zero means pupils made less progress, on average, than pupils across England who got similar results at the end of KS2

A negative progress score does not mean pupils made no progress, or the school has failed, rather it means pupils in the school made less progress than other pupils across England with similar results at the end of KS2.

Worked examples on how Attainment 8 and Progress 8 measures are calculated using the methodology for academic year 2021/22 are shown in annex A.

Gaps in the Progress 8 baseline

As primary tests and assessments were cancelled in academic years 2019/20 and 2020/21 due to COVID-19 disruption, there will be no KS2 prior attainment data available to use to calculate Progress 8 when the relevant cohorts reach the end of KS4 in academic years 2024/25 and 2025/26. We will explore whether there are any alternative

options for producing a progress measure in the affected years, and will announce our approach nearer the time. This will not necessarily follow the [approach we are taking for 16-18 value added measures in 2021/22](#).

Pupils with extremely negative progress scores

We limit how negative¹⁰ a pupil's progress score can be when calculating the school average. These pupils still have large negative scores (to reflect that the pupils have made much less progress than other pupils in the same prior attainment group as them), but the disproportionate effect they have on their school's score has been reduced.

We do this by setting a minimum progress score that can be assigned to pupils within the prior attainment groups where extremely negative scores exist. Prior attainment groups from 1 to 14 (inclusive), will not have a minimum progress score threshold set as the average Attainment 8 scores at KS4 for these groups are not high enough to allow for extremely negative progress scores.

Further information on the calculation and minimum thresholds for each prior attainment group is available in annex B.

Progress figures published on the Find School and College Performance Data website are calculated using the methodology outlined above, and in annex B. We also publish figures in download data that do not place limits on pupil progress scores for transparency.

Attainment 8

Attainment 8 measures pupils' attainment across 8 qualifications including:

- maths (double weighted) and English (double weighted, if both English language and English literature are sat)
- 3 qualifications that count in the English Baccalaureate (EBacc) measures – ([see EBacc entry and attainment section](#))
- 3 further qualifications that can be GCSE qualifications (including EBacc subjects) or technical awards from the DfE approved list [Performance tables: technical and vocational qualifications](#)

¹⁰ We are not setting a maximum limit on how positive a pupil's progress score can be as there are much smaller numbers of extremely positive progress scores that have a disproportionate impact than extremely negative ones.

When calculating Attainment 8 for academic year 2021/22, we will not include results achieved from qualifications taken between January 2020 and August 2021. Attainment 8 and Progress 8 calculations are described in more detail in the [calculating Attainment 8 and Progress 8 section](#), with worked examples in annex A.

EBacc entry and attainment measures

The EBacc entry measure reports the percentage of pupils entered for the EBacc. To enter the EBacc, pupils must take up to eight GCSEs across five subject ‘pillars’¹¹. The structure of the EBacc is set out on page 7 of the Government’s response to its consultation on [implementing the EBacc](#).

EBacc APS measures pupils’ point scores across the five pillars of the EBacc. This ensures the attainment of all pupils is recognised, not just those at particular grade boundaries, encouraging schools to enter pupils of all abilities, and support them to achieve their full potential. For English results to be included in the EBacc APS calculation, pupils must have entries for both English language and English literature. The better grade counts towards EBacc APS (providing it was not achieved between January 2020 and August 2021).

When calculating EBacc entry and attainment measures for 2021/22 academic year, we will count entries from qualifications taken between January 2020 and August 2021, but will only include results from 2021/22.

This means that the EBacc entry measure will reflect early entries made when pupils were in year 10 or year 9, as well as entries in year 11, as the measure usually does.

EBacc attainment measures including EBacc Average Point Score (APS), EBacc threshold attainment measures (9-5, 9-4, 9-1) and EBacc value added measures at school level may be impacted by our commitment not to use results from qualifications achieved between January 2020 and August 2021, as we will only include results from 2021/22.

EBacc entry and attainment measures – example

If a pupil was entered for GCSE Spanish in summer 2021 and received a teacher assessed grade (TAG) and is entered for the other subjects required for EBacc entry in summer 2022, then the GCSE Spanish entry from summer 2021 would count towards the EBacc entry measure.

¹¹ Some AS level qualifications in the same subject pillars can also count towards the EBacc.

Given our previous commitment not to include qualification results achieved from January 2020 to August 2021 in performance measures, the grade achieved in GCSE Spanish in summer 2021 would not count towards any of the EBacc attainment measures for 2021/22 academic year. This would mean that the pupil would not be counted as having achieved a grade 5 or above in all EBacc subjects (even if the summer 2021 result is a grade 5 or above), and their EBacc APS score would be affected as they would not receive a score for the languages pillar. A worked example is included in annex C.

Percentage of pupils staying in education or going into employment after Key Stage 4 (pupil destinations)

The headline pupil destination measure shows the percentage of pupils continuing to a sustained education, employment, or training destination in the year after completing KS4 study (after year 11). The data published is for pupils who finished year 11 in 2020. Pupils are counted in a sustained destination if they have a recorded activity throughout the first two terms of the 2020/21 academic year (or any consecutive 6 months in the year for apprenticeships).

Additional breakdowns show whether pupils were in education, apprenticeships, or employment, did not stay in education or employment for at least two terms, or whether activity was not captured in the data. Education destinations including further education (FE) colleges and other FE providers, sixth-form colleges, school sixth forms and other education destinations are also shown. Further information on the KS4 destination measures can be found in [annex D](#).

We recognise that destination measures may have been affected by the broader impacts of COVID-19, including school and college closures during 2020 and 2021 and alternative grading arrangements. Guidance will be provided alongside the data, to encourage users to approach the data with this in mind.

Attainment in English and maths measures

These measures show the proportion of pupils achieving a grade 5 and above (a headline measure) and the proportion of pupils achieving a grade 4 and above in GCSE English and maths. A pupil has to achieve the relevant threshold grade in either English literature or English language; there is no requirement to sit both.

When calculating attainment in English and maths measures for 2021/22, we will only include results from the 2021/22 academic year.

Attainment in English and maths measures – example

If a pupil was entered for GCSE English literature in summer 2021 and received a TAG and entered for GCSE English language and GCSE maths in the 2021/22 academic

year, then we will count the results from GCSE English language and GCSE maths in 2021/22.

In the event that the pupil achieved a grade 5 in GCSE English literature in summer 2021 and a grade 4 in GCSE English language in 2021/22 academic year, this means that their result in 2021/22 would count towards the attainment in English and maths at grade 4 and above, but not towards attainment in English and maths at grade 5 and above (because we would not count the result achieved in GCSE English literature in summer 2021).

If a pupil was entered for GCSE maths in summer 2021 and GCSE English language and/or GCSE English literature in 2021/22, they would count as “entered in both subject areas” but their GCSE maths grade from summer 2021 would not count towards the attainment in English and maths measure at grade 4 and above, or at grade 5 and above in 2021/22 academic year.

A worked example is included in annex E.

Publication of KS4 secondary accountability measures

Headline secondary accountability measures are published as a statistical publication at national and local authority level on [Explore Education Statistics](#) and at school level on the [Find School and College Performance Data](#) website¹². The statistical publication includes student characteristic breakdowns including gender and disadvantaged status.

Progress 8 and its constituent elements, and pupil destinations, are not published for independent schools and independent special schools¹³. Pupil destinations are also only published for schools which had pupils completing the key stage two years previously.

As usual, suppression is applied at school level, so we do not disclose the results of small numbers of pupils. Figures are suppressed if the school has five or fewer pupils included in the cohort. This applies to sub-groups of pupils as well as the whole cohort; for example, if there were 5 boys and 3 girls in a school, we would not publish attainment for boys or girls separately but would publish attainment for all pupils (as this is based on 8 pupils). The same rules are applied across pupils included in each headline measure. We apply extra suppression, where appropriate, to destination measures because it contains employment data and to protect confidentiality. The Progress 8 score is suppressed if fewer than 50% of pupils at the end of KS4 are included in the measure (for example because they do not have KS2 prior attainment recorded).

Schools, colleges and local authorities also have access to school and pupil level performance data via Analyse School Performance (ASP) and pupil level performance data via Get Information About Pupils (GIAP).

¹² On the school performance measures website, school level data for state-funded schools are published in the provisional October publication. Results data for independent schools and FE colleges are published alongside state-funded schools with the revised February publication.

¹³ We do not publish KS2 data for independent schools because they don't have to follow the national curriculum or enter pupils for KS2 tests. This means that independent schools are not included in the calculation of Progress 8. They are still included in other attainment measures at KS4.

Calculating Attainment 8 and Progress 8

Qualifications included in the measures

Progress 8 and Attainment 8 are based on a calculation of pupils' performance across 8 qualifications. These qualifications are:

1. a double weighted **maths** element that will contain the point score of the pupil's English Baccalaureate (EBacc) maths qualification
2. an English element based on the higher point score of a pupils EBacc **English language** or **English literature** qualification. This will be double weighted provided a pupil has taken both qualifications
3. an element which can include the three highest point scores from any of the **EBacc** qualifications in science subjects, computer science, history, geography, and languages. For more information see the [list of qualifications that count in the EBacc](#). The qualifications can count in any combination and there is no requirement to take qualifications in each of the 'pillars' of the EBacc
4. the open element contains the three highest point scores in any three **other** subjects, including English language or literature (if not counted in the English slot), further GCSE qualifications (including EBacc subjects) or any other technical awards from the DfE approved list: [Performance measures: technical and vocational qualifications](#). For more information, see the list of qualifications included in the KS4 performance measures: [Key Stage 4 qualifications discount codes and point-scores](#)

If a pupil has not taken the maximum number of qualifications that count in each group then they will receive a point score of zero where a slot is empty.

Maths qualifications

This element of Progress 8 is double weighted. Only maths qualifications which also count towards the EBacc can count in the maths element of Progress 8.

Where a pupil has taken more than one EBacc maths qualification, qualifications which are not used in the maths element cannot count elsewhere in Progress 8¹⁴.

¹⁴ First entry and discounting rules as set out in the [discounting and early entry section](#) still apply.

Approved mathematical type qualifications that do not count towards the EBacc, for example GCSE statistics, can be counted in a slot in the 'open' element of Progress 8 regardless of whether or not a pupil has also taken an EBacc maths qualification.

For more information on Free Standing Maths Qualifications see [Level 3 qualifications section](#).

English qualifications

If a student sits both English language and English literature, the higher grade is double weighted in the English element. The lower grade can count in the 'open' element of subjects (not in the EBacc element).

If only one of GCSE English literature or English language is taken then this qualification will count in the English element but will not be double-weighted.

An explanation of how English counts towards other headline performance measures is provided in annex F.

Qualifications in the English Baccalaureate (EBacc) subjects

Only qualifications that count towards the EBacc measure can be included in the Progress 8 element reserved for EBacc qualifications.

Maths cannot be included in the EBacc element. English literature and English language cannot be included in the EBacc element - the better of these qualifications will count in the 'English' element, and the other can count in the 'open' element if the grade is higher than other eligible subjects.

There are no other stipulations about the types of EBacc subjects which can count in the three slots of the EBacc element. Any combination of EBacc subjects can be used to fill these slots, including for example:

- biology, chemistry, French
- or Spanish, French, German
- or history, geography, Spanish

Science and computer science qualifications

All students have to study science up to the age of 16. The KS4 science and computing curricula are compulsory in state-funded maintained schools, and academies are required to provide a broad and balanced curriculum, including English, maths and science, up to the age of 16.

There is the combined science GCSE (double award), the single science GCSEs (biology, chemistry and physics) and computer science GCSE.

Separate GCSEs in biology, chemistry, physics and computer science each take up one slot, and can count in Progress 8 in any combination. The combined science GCSE can take up two slots in either the EBacc or open elements of Progress 8 where this represents the highest relevant grades achieved. One grade from this qualification can fill one slot if higher grades are achieved in other qualifications.

The points awarded to combined science are averaged, which means for example, that a combined science grade of a grade 6 and a grade 5 would be averaged to two 5.5 points to fill either one or two slots as appropriate (a maximum of 11 points across two slots). This is shown in more detail in Table 19.

Any other science subject may count in the open element of Progress 8.

Details of the combined science, single science and computer science qualification pathways and how they may count in the headline measures can be found in the Discounting and Early Entry Guidance at: [Key Stage 4 qualifications discount codes and point-scores](#) and an example of the science pathways is found in annex G.

Qualifications in the ‘open’ element

Up to 3 GCSE qualifications (including EBacc subjects not used to fill the slots in the EBacc element) and/or technical awards that are included in the approved list for the year in which the student will reach the end of KS4 can count towards the three slots in the ‘open’ element in the Progress 8 measure. For example if a student takes a technical award early in Year 10 in 2021/22 the technical award must be on the approved list for 2022/23 to count in performance measures as this is when the student will reach the end of KS4.

Technical awards are approved level 1 and 2 qualifications that equip 14- to 16-year-olds with applied knowledge and practical skills not usually acquired through general education¹⁵.

The Department introduced a revised approval process for KS4 technical qualifications for inclusion in 2024 performance measures. Only those technical qualifications that meet stretching requirements, have been approved by the Department to be included in the 2024 KS4 performance measures alongside academic qualifications.

Level 3 qualifications

AS levels can count in the appropriate element of the Progress 8 measure for their subject (for example, maths AS-levels count in the maths slot, a French AS-level in the

¹⁵ See the technical guidance for further information: [14 to 19 technical and applied qualifications technical guidance](#).

'EBacc group', and an Art AS-level in the 'open' element). If a GCSE in the same subject has been taken the AS-level will always count in Progress 8 and the GCSE will not count, even if the AS has a lower point score than the GCSE. AS-levels at grade A score higher points in Progress 8 than a grade 9 GCSE.

Level 3 qualifications not included in the EBacc list can only count in an 'open' slot. This includes Free Standing Maths qualifications (FSMQ).

FSMQ will only count in an 'open' slot if a pupil has not taken an EBacc maths qualification. FSMQ do not discount EBacc maths qualifications therefore early entry rules are not applicable across these qualifications. For example, even if a pupil sat an FSMQ in year 10 and an EBacc maths qualification in year 11, the 'open' slot would not be filled by the FSMQ as the pupil would have an EBacc maths qualification which counts¹⁶.

One graded music qualification can count in the 'open' element of Progress 8 and can count alongside GCSE music.

Point Scores

The point scores for different types of qualifications for performance measures for academic year 2021/22 and in future performance measures can be found in annex H.

¹⁶If the EBacc maths qualification was taken between January 2020 and August 2021 and therefore was impacted by COVID-19 the result for the EBacc maths qualification would not count but the Free Standing Maths Qualification could count in the 'open' element.

Interpreting Progress 8 scores

A school's Progress 8 score is calculated as the average of its pupils' Progress 8 scores. For all mainstream pupils nationally, the average Progress 8 score will be zero. When including pupils at special schools the national average will be slightly less than zero as Progress 8 scores for special schools are calculated using Attainment 8 averages based upon mainstream pupils. School scores should be interpreted alongside their associated confidence intervals (see annex [1](#) for more information).

The minimum grades each pupil requires to achieve a positive Progress 8 score will not be known in advance. This is because each pupil's results are compared to other pupils with similar prior attainment within the same national cohort.

It is highly advisable that care should be taken when using a previous year's attainment averages as a guide to potential future Progress 8 results. This is because changes to national subject entry patterns and performance, as well as changes to the methodology and grading as a result of COVID-19 this year will cause these averages to change in future years. Schools may change their curriculum offer in response to the Progress 8 measure and to the Government's EBacc ambition, so any modelling based on current national results could be misleading.

Pupils reaching their estimated grades

A pupil's estimated grade is what they are anticipated to achieve based on the national average for their prior attainment group. Progress 8 does not give particular credit to a school for helping a pupil reach his or her estimated grade. Schools get credit for each increase in grade a pupil achieves, regardless of how this grade relates to their estimated grade. For example, the Progress 8 score can improve equally if a pupil working well below their estimated grade moves up one grade, or if another pupil moves up one grade to achieve their estimated grade.

Impact of the number of qualifications taken on a pupil's Progress 8 score

The number of qualifications each pupil should enter remains a professional judgement for schools led by what best meets the needs of an individual.

The Progress 8 score for each pupil will always be determined by dividing the points total for their eight qualifications included in Attainment 8 by 10 (the eight qualifications with English and maths both double-weighted), regardless of how many qualifications the pupil sits.

This approach supports the policy aim to encourage schools to offer a broad and balanced curriculum with an academic core.

It may benefit some less able pupils to work towards good grades (and hence score more points) in fewer subjects, with the emphasis on doing well in English and maths, rather than to take more subjects but achieve lower grades overall.

Confidence intervals

Progress 8 results are calculated for a school based on a specific cohort of pupils. A school may have been just as effective but have performed differently with a different set of pupils. Similarly, some pupils may be more likely to achieve high or low grades independently of which school they attend. To account for this natural uncertainty 95% confidence intervals around Progress 8 scores are provided as a proxy for the range of scores within which each school's underlying performance measure can be confidently said to lie. The results of schools with a small cohort tend to have wider confidence intervals; this reflects the fact that the performance of a small number of pupils taking their KS4 exams can have a disproportionate effect on the school's overall results. Both the Progress 8 score and the confidence interval for a school should be taken into account if cautiously comparing with national or local authority averages. We strongly discourage comparing data from previous years or between the performance data for one school and another school.

See annex I for further details on interpreting school scores and their associated confidence intervals.

Using performance data to predict individual pupils' scores and sharing pupils' progress data

The Government response to the Workload Advisory Group report 'Making Data Work'¹⁷ provides advice to schools about proportionate use of setting predictions or targets for individual pupils to aid teaching. It makes clear that predicting pupils' attainment can sometimes be appropriate, but that pupils or their parents need not be routinely told the levels that they 'should' or 'are likely to' achieve at the end of KS4. The Group also stated that 'flight paths', where pupils are told the levels they will achieve based on the performance data of pupils with similar starting points in previous years, are not valid as a prediction, as they understate the variation in pupil trajectories of development. Schools are not held to account by the Department for pupil targets and predictions, and local authorities or multi-academy trusts should not routinely request such information.

Similarly, schools should not share individual pupil progress scores with pupils or parents. Schools should not try to predict pupil or school level progress scores in

¹⁷ [The teacher workload advisory group report and government response.](#)

advance of official provisional data being available in the autumn. The Progress 8 score is an in-year relative measure.

Measurement of Prior Attainment

Changes to the KS2 baseline for calculating Progress 8

In 2016, changes were introduced to KS2 national curriculum tests, with pupil outcomes expressed as KS2 scaled scores for English reading and maths instead of national curriculum levels. Further information on the new tests can be found [here](#).

Most pupils who took national curriculum tests in summer 2016 reached the end of KS4 in 2020/21 academic year. We did not publish Progress 8 in 2020/21, so many of these changes will come into effect in performance measures for the 2021/22 academic year. The way we define low, middle and high prior attainment at KS4 using KS2 scaled scores was reflected in KS4 attainment statistics and accompanying data files published in November 2021.

When reporting on prior attainment, we define low, middle and high prior attainment at KS4 using KS2 scaled scores as follows:

Table 1: low, middle and high prior attainment definitions

Prior Attainment Group	Average scaled score in English reading and maths
Low prior attainers	Below 100
Middle prior attainers	Greater than or equal to 100 but less than 110
High prior attainers	Greater than or equal to 110

Using these definitions changes the percentage of pupils in each group, compared to when prior attainment was defined using national curriculum levels. This is discussed in the [KS4 attainment statistics publication](#) (on Explore Education Statistics) published in November 2021. We have ensured messages are placed on Find School and College Performance Data to highlight the change.

Pupils working below the standard of the test at KS2 are assigned nominal point scores for the purposes of including them in prior attainment measures. The process used from 2021 to define low, middle and high prior attainment is described in guidance accompanying the 2022 [KS4 attainment statistics publication](#).

Pupils with test results in both English reading and maths

Most pupils will have been awarded a scaled score for English reading and maths. For these pupils, their prior attainment has been calculated as the average of their English reading and maths scaled scores.

Average scaled scores are calculated to one decimal place meaning, for example, a pupil getting an English reading scaled score of 110 and a maths scaled score of 105 would be

allocated an average scaled score of 107.5.

KS2 scaled scores, when used for the purpose of the Progress 8 baseline, do not have special consideration applied¹⁸.

Pupils working below the level of the test

Pupils working below the level of the test will have KS2 teacher assessed outcomes instead of test results. For the purposes of including these pupils in KS4 progress measures, their teacher assessed outcomes have been assigned nominal scaled scores, with the calculation of average scaled scores then proceeding as described above (i.e., a pupil's average scaled score is the average of their English reading and maths nominal scaled scores or, in the case of pupils with one teacher assessed outcome and one test result, the average of their test result and nominal scaled score).

As we have done in previous years, we have allocated a nominal point score for pupils without a pre-key stage teacher assessment who were entered for the test but gained too few marks to achieve a scaled score. These pupils will have been allocated a code N¹⁹. In 2022, the points assigned to code N are 79.

Pupils with a pre-key stage teacher assessed outcome are converted into nominal scaled scores using the KS2 methodology from the year the pupil completed their KS2 studies. Most pupils reaching the end of KS4 in academic year 2021/22 will have completed their KS2 assessments in 2017, while a minority will have completed KS2 in 2016 (taking one year longer between Key Stages 2 and 4) or 2018 (taking one year less between Key Stages 2 and 4). The methodology used to convert KS2 teacher assessed outcomes to nominal scaled scores in 2016, 2017 and 2018 is described below.

In 2016, pupils were allocated one of four nominal scaled scores, depending on whether they were assessed as being below the interim pre-key stage standards, meeting the foundations for the expected standard, showing early development of the expected standard or showing evidence for growing development of the expected standard.

For 2017 and 2018, changes were made to the nominal scores allocated to pupils assessed as being below the interim pre-key stage standards, with nominal scores between 59 and 71 being allocated depending on the pupil's P scale teacher assessment

¹⁸. The DfE add 3 points to a pupil's scaled score for each subject where special consideration is applied. The score is capped at the maximum score available for a test. A flag has been added to the CSV download option in Get Information About Pupils (GIAP) to show where special consideration has been applied to a pupil's KS2 scores. More information on special consideration can be found in the [KS2 tests: special consideration guidance](#).

¹⁹ Code N was introduced from 2017 onwards.

outcome.

The nominal scaled scores allocated to pupils with KS2 teacher assessed outcomes obtained from 2016 to 2018 are shown in the tables 2 and 3.

Table 2: Points allocated to each Key Stage 2 teacher assessment category

Teacher assessment for pupils below the level of the test at Key Stage 2	Points (below the scaled score range)		
	2016	2017	2018
Below the standard of the interim pre-key stage standards - assessment based on P-scales	See table 3		
Pupils below the interim pre-key stage standard but not on P-scales	70	71	71
Foundations for the expected standard	73	73	73
Early development of the expected standard	76	76	76
Growing development of the expected standard	79	79	79
M – Missing	Disregard		
A - Absent	Disregard		
F, L, P, Q, S, T, U, W, X	Disregard		

Table 3: Points scores for pupils working below the interim pre-key stage standards

P-scale teacher assessment for pupils below the level of the test and below interim pre-key stage standards at Key Stage 2	Points (below the scaled score range)		
	2016 ²⁰	2017	2018
P1i to P3ii	70	59	59
P4	70	61	61
P5	70	63	63
P6	70	65	65
P7	70	67	67
P8	70	69	69

Pupils missing one result

Some pupils might not have test results or teacher assessed outcomes in both English reading and maths. Where pupils have one result (either a test result or a teacher assessed outcome) their average scaled score is equal to their one result. These pupils are then treated in the same way as pupils with results in both English reading and maths for the purposes of placing them into prior attainment groups and calculating their Progress 8 scores.

Pupils who have no KS2 assessment

There will be some pupils who have no KS2 results to use as the baseline for the Progress 8 measure, for example, those arriving at secondary school from the independent sector or abroad or where test results have been annulled due to KS2 maladministration. These pupils' scores will not be included in the Progress 8 measure (and the pupils will not be included in the denominator when calculating the average of the progress scores for the school).

²⁰ In 2016, all pupils on P-scales at Key Stage 2 got the same nominal point (70).

However, these pupils will be included in the attainment measures for the school, unless they have arrived from a non-English speaking country in year 10 or year 11 and the school requests for their results to be removed. We also expect the school to be able to discuss with Ofsted, parents and others the progress these pupils have made through secondary school.

Information available to secondary schools about their year 7 pupils

Secondary schools receive information via common transfer files on the teacher assessment and test score (the scaled score) awarded to each pupil.

Question Level Analysis data is available to secondary schools via the Analyse School Performance (ASP) service. This will help secondary schools identify strengths and weaknesses of incoming year 7 pupils in each test subject.

Get information about pupils (GIAP) provides access to pupil level census and attainment data as well as providing pupil level pupil premium allocation details. The service can be accessed via the DfE Sign.

Secondary schools should continue to view KS2 test results as just one piece of data available to them and continue to supplement this data with their own ongoing assessments of what pupils know and can do.

KS4 multi-academy trust (MAT) measures

We intend to produce and publish KS4 MAT measures in February 2023 for the 2021/22 academic year based on revised data. As in previous years, we will produce the following KS4 measures at MAT level:

- Progress 8
- percentage entering EBacc
- EBacc Average Point Score (APS)
- percentage achieving EBacc at grade 5 and above/grade 4 and above²¹

This year, for the first time, we will also produce the following KS4 measures at MAT level:

- Attainment 8
- percentage of pupils achieving grade 5 or above in English and maths GCSE

Introducing these measures at MAT level, now and in future years, will ensure greater consistency between the school-level KS4 measures and MAT-level KS4 measures. We will also produce breakdowns of these measures for disadvantaged pupils.

As MAT- level measures are an aggregate of school-level measures, the methodological changes for academic year 2021/22 set out in guidance above will apply to MAT-level measures.

Eligibility for inclusion in the MAT measures

We include data at MAT level for MATs that are sufficiently well established to have had time to a) have an impact on the performance of schools within the MAT and b) so that aggregate data tells you more than the individual institution data would.

For the 2021/22 academic year, we will produce measures for MATs:

- that have at least three schools with results at KS4, and

²¹ More information on what counts in EBacc can be found in the [‘English Baccalaureate: eligible qualifications’](#) guidance.

- where those schools have been with the MAT for at least three academic years (defined as having joined that MAT before 14 September 2019²²).

This means that we do not produce measures for all MATs. It also means that, where we do produce measures for a MAT, the measures may be based on the results from only some of their schools (i.e., if they have at least 3 schools, that have been part of the MAT for 3 or more years that have results at KS4, but also have schools with results at KS4 that have been with the MAT for less than 3 years).

The measures cover state-funded mainstream schools within MATs only. Special schools, pupil referral units, alternative provision academies and alternative provision free schools are not included.

We last produced MAT measures for the 2018/19 academic year, since then, we know that the number of MATs that have at least 3 academies, that have been part of the MAT for at least 3 years has increased – as the MAT sector has continued to mature. This means that we expect that for the 2021/22 academic year we will be producing measures for significantly more MATs than we did for the 2018/19 academic year, and some MATs will have MAT measures produced for the first time.

Previously, we have calculated and reported at sponsor level, for the very small number of MATs this affects. We will no longer be reporting at this level and will be reporting at trust level only.

Calculating KS4 measures at MAT level

For each of the measures we publish at MAT level, the score or percentage for each MAT is based on the weighted average of its individual schools' respective progress/attainment scores. This is to ensure that a school's contribution to the overall MAT level score is proportional to its size when calculating the average.

For Progress 8, Attainment 8, EBacc entry and attainment measures, and attainment in English and maths, the score is weighted for:

- the number of pupils at the end of the key stage;
- the length of time the school has been with that MAT (those that have been with the MAT for three years are given a weight of three, those with the MAT for four years are given a weight of four and those with the MAT for five or more years are

²² Where an academy has joined a trust since 14 September 2019 but immediately prior to that date the academy was part of a trust that was sponsored by their current trust since at least 14 September 2019, we will include the academy in the measures for their trust.

given a weight of five; as the usual combined duration of KS3 and KS4 is five years).

Disadvantaged pupils and MAT measures

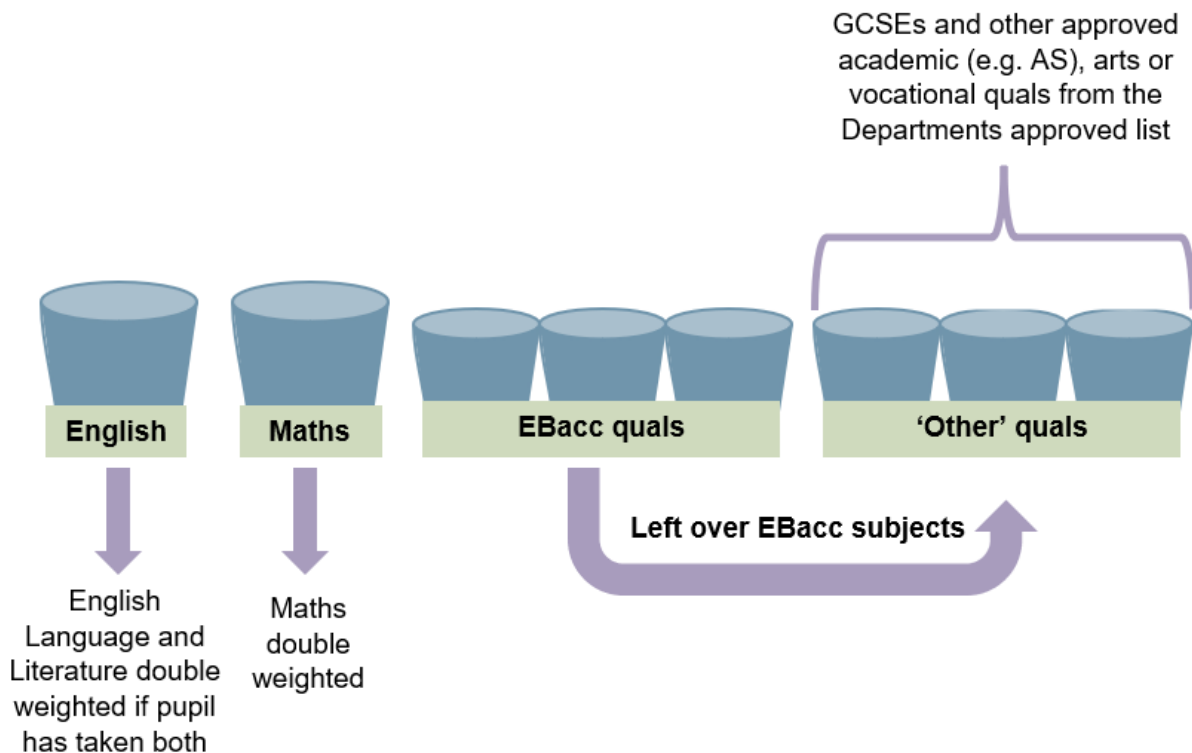
We calculate breakdowns of all KS4 MAT level measures for disadvantaged pupils. Evidence shows that overall performance of disadvantaged pupils is lower than that of other pupils. This data indicates how well a MAT improves the performance of disadvantaged pupils. Disadvantaged pupils are those who were eligible for free school meals at any time during the last six years and children looked after (in the care of the local authority for a day or more or who have been adopted from care).

Worked examples of KS4 MAT measures are included in annex J.

Annex A: worked examples of methodology for calculating Progress 8 and Attainment 8

Progress 8/Attainment 8 – 2021/22 methodology

Figure 1: Progress 8 and Attainment 8 buckets



Poppy has entered GCSE English literature early in year 10 in the academic year 2020/21, gaining a grade 7, and GCSE English language in year 11 in 2021/22 academic year, gaining a grade 6. The 2020/21 entry in English literature is used to trigger the double weighting for English. In line with the Department's commitment not to use qualification results achieved between January 2020 and August 2021 in future measures, only the grade 6 (double weighted) in English language gained in the 2021/22 academic year would count towards her school's performance measures.

Poppy would be assigned 12 performance measure points for English in Attainment 8/Progress 8 for the 2021/22 academic year. The English literature grade from the 2020/21 academic year would not be included.

Step 1: English & Maths

Table 4: Step 1 in Progress 8 worked example 2021/22 methodology

Subject	Year Taken	Grade	Points Used in P8/A8
English Literature	2021	7	No
English Language	2022	6	12
Maths	2022	7	14

Poppy has entered both English Literature and English language, and so triggers double weighting. However, because her English Literature entry was in 2021, we cannot use the grade. Instead, we double weight her English Language grade in the final calculation.

Step 2: EBacc qualifications

Table 5: Step 2 in Progress 8 worked example 2021/22 methodology

Subject	Year Taken	Grade	Points Used in P8/A8
Chemistry	2022	8	8
Biology	2022	6	6
Physics	2022	5	5
History	2022	5	No
German	2022	4	No

Poppy's three highest scoring EBacc qualifications count towards the EBacc bucket. The remaining qualifications can count in the 'Other' bucket.

Step 3: Other qualifications

Table 6: Step 3 in Progress 8 worked example 2021/22 methodology

Subject	Year Taken	Grade	Points Used in P8/A8
History	2022	5	5
German	2022	4	No
Music	2022	6	6
Art	2022	8	8

The three best results of the remaining qualifications are counted from the 'Other' bucket.

Poppy's final Attainment 8 score = 12 + 14 + 8 + 6 + 5 + 5 + 6 + 8 = 64

Progress 8/Attainment 8 – 2018/19 methodology

In previous years, the calculation would have been slightly different. If in the 2018/19 academic year, Poppy enters GCSE English literature early in year 10, gaining a grade 7, and GCSE English language in year 11, gaining a grade 6. The higher of the two grades is double weighted for the English bucket – so Poppy gets 14 performance measure points for English that will count towards her Attainment 8/Progress 8 score. If the English language grade 6 is one of her highest grades, it can count in one of the open buckets, as a leftover subject.

Step 1: English & Maths

Table 7: Step 1 in Progress 8 worked example 2018/19 methodology

Subject	Year Taken	Grade	Points Used in P8/A8
English Literature	2021	7	14
English Language	2022	6	No
Maths	2022	7	14

Poppy has entered both English Literature and English language, so we take the higher of the two grades and double weight it in the final calculation, along with her maths grade. English language can now count in the 'Other' bucket.

Step 2: EBacc qualifications

Table 8: Step 2 in Progress 8 worked example 2018/19 methodology

Subject	Year Taken	Grade	Points Used in P8/A8
Chemistry	2022	8	8
Biology	2022	6	6
Physics	2022	5	5
History	2022	5	No
German	2022	4	No

Poppy's three highest scoring EBacc qualifications count towards the EBacc bucket. The remaining qualifications can count in the 'Other' bucket.

Step 3: Other qualifications

Table 9: Step 3 in Progress 8 worked example 2018/19 methodology

Subject	Year Taken	Grade	Points Used in P8/A8
English Language	2022	6	6
History	2022	5	No
German	2022	4	No
Music	2022	6	6
Art	2022	8	8

The three best results of the remaining qualifications are counted from the 'Other' bucket.

Poppy's final Attainment 8 score = 14 + 14 + 8 + 6 + 5 + 6 + 6 + 8 = 67

Calculating a pupil's Progress 8 score - 2021/22 methodology continued

Poppy has an Attainment 8 score of 67. Her KS2 scaled score was 110. The national average revised Attainment 8 score for pupils with Poppy's KS2 result is 61.57 in 2022. Revised 2022 attainment averages are shown in annex K. Poppy's Progress 8 score is the difference between her actual Attainment 8 score and the estimated Attainment 8 score, divided by 10 - that is $67 - 61.57 = 5.43 / 10 = 0.54$ (to 2d.p.).

Table 10: worked example of pupil Progress 8 score

Poppy's Prior Attainment Group - includes those with scaled score of	Average Attainment 8 score of all pupils in this Prior Attainment Group	Poppy's estimated Attainment 8 score	Poppy's actual Attainment 8 score	Poppy's Progress 8 score (actual - estimate)
109.5 to 110	→	61.57	67	$67 - 61.57 / 10 = 0.54$

Calculating a school's Progress 8 score

The school's Progress 8 score is the mean average of its pupils' Progress 8 scores.

Worked Example A

Poppy is one of 142 pupils in her school's KS4 cohort, who gain a range of Progress 8 scores:

Table 11: Worked example of unadjusted school Progress 8 score

Pupil Number	Pupil name	P8 score
1	Poppy	+0.54
2	Sarah	-0.20
...		...
142	Ollie	+1.10
Sum		+36.94

So the school's unadjusted Progress 8 score is calculated as $36.94 / 142 = 0.26$

Calculating a school (adjusted) Progress 8 score

At Poppy's school there is a pupil called Stuart, who is the only person in the school with an extremely negative Progress 8 score, Stuart's KS2 prior attainment was higher than most pupils nationally and has a KS2 scaled score of 116. He achieved no Attainment 8 points by the end of KS4. As a result, his (unadjusted) Progress 8 score is -7.57.

In this hypothetical example, the minimum progress for pupils in Stuart's prior attainment group is -3.57 therefore this extremely negative pupil progress score will be adjusted from -7.57 to -3.57.

Table 12: worked example of school adjusted Progress 8 score

Pupil Number	Pupil name	P8 score
1	Poppy	+0.56
2	Sarah	-0.20
3	Stuart	-3.57
...		...
142	Ollie	+1.10
	Sum	+40.94

So the school's adjusted Progress 8 score is calculated as $40.94/142 = 0.29$. Note that the unadjusted score was 0.26.

The impact is larger on smaller schools, for example, if there 50 pupils in this school at the end of KS4 then this would raise the school's adjusted Progress 8 score to 0.82.

Annex B – Prior Attainment Group thresholds for pupils with extremely negative progress scores

Minimum thresholds are set using provisional data, for mainstream provision²³. Where a minimum score is set for a prior attainment group, this is based on the variation in pupil progress scores within that prior attainment group (as measured by the standard deviation). The minimum scores are fixed at a set number of standard deviations below the mean for that prior attainment group so that approximately 1% of pupils are identified nationally²⁴ (in most cases, this is no more than 1 or 2 pupils per school). By design, these minimum scores will change each year. As such, predicting which pupils will, and will not, have their score affected by this methodology change, in advance of progress scores being made available, will not be possible.

Adjusting extremely negative progress scores, number of standard deviations and prior attainment group thresholds

The threshold score applied to the pupil's progress score is dependent on the prior attainment group that the pupil is in²⁵. To work these thresholds out:

The **first step** is to calculate the mean and standard deviation of Progress 8 scores within each prior attainment group.

The **second step** to ascertain the number of standard deviations each pupil's Progress 8 score is from their prior attainment group average.

The **third step** is to order the numbers of standard deviations from step two from low to high and select the number of standard deviations such that about 1% of pupils nationally²⁶ are below this value. In 2022 this number is -2.873836, to 6 decimal places.

The **fourth step** is to multiply the standard deviations found in the **first step** with the results from the third step to give the threshold for each prior attainment group – the minimum score for that prior attainment group.

The **fifth step**: a pupil's progress score will be replaced by the minimum, only if their original score falls below this minimum.

²³ Data from special schools are not included when setting minimum thresholds. Students in special schools who have extremely negative progress scores are not capped.

²⁴ Due to natural fluctuation of performance year-on-year, it may not be possible to use the same standard deviation value each year to calculate the minimum scores.

²⁵ Set at the provisional data stage, based on mainstream provision.

²⁶ Of pupils who are included in Progress 8.

Finally, the school's progress score is calculated by averaging the adjusted progress score.

Table 13: Minimum scores in 2022

Prior Attainment Group	Key Stage 2 average scaled score range	Minimum threshold for adjusted Progress 8
1-14	59 to 100	N/A
15	100.5 to 101	-4.188
16	101.5 to 102	-4.238
17	102.5 to 103	-4.239
18	103.5 to 104	-4.311
19	104.5 to 105	-4.338
20	105.5 to 106	-4.365
21	106.5 to 107	-4.404
22	107.5 to 108	-4.380
23	108.5 to 109	-4.365
24	109.5 to 110	-4.299
25	110.5 to 111	-4.226
26	111.5 to 112	-4.136
27	112.5 to 113	-4.003
28	113.5 to 114	-3.933
29	114.5 to 115	-3.721
30	115.5 to 116	-3.557
31	116.5 to 117	-3.380
32	117.5 to 118	-3.207
33	118.5 to 119	-3.113
34	119.5 to 120	-2.627

Schools can use table 13 above to see which prior attainment group a pupil will have been allocated to depending on their KS2 average scaled score, and what the lowest score they can be allocated in 2022 is.

Not all prior attainment groups have extremely negative scores. This is because the average Attainment 8 score for pupils in the lowest prior attainment groups will be relatively low, for example in prior attainment group 1 (scaled scores between 59 and 82), the average Attainment 8 score was 18.54, whereas for prior attainment group 34 (scaled scores between 119.5 and 120), the average Attainment 8 score was 83.00. So, a pupil doing very badly in group 34 can get an extremely negative score (e.g., -8.29), whereas the lowest score a pupil in group 1 can get is -1.85. In short, it is pupils in the middle to higher prior attainment groups that can gain a Progress 8 score that is so far below those for others with similar prior attainment that it has a disproportionate impact on the school's score. There is, in effect, already a minimum possible score for the lower

As set out in the table 13, the lowest prior attainment groups (1-14) have minimum scores that are above the threshold for that prior attainment group, due to no pupils having scores extreme enough to be below the threshold. The middle to higher prior attainment groups (15-34) have pupils with extreme progress scores below the threshold. These are the only prior attainment groups where pupils' scores have been changed by this methodology.

Annex C: worked example of 2021/22 methodology for calculating EBacc measures

Table 14 below sets out how the EBacc APS would be calculated in 2022 for Luke, based on his attainment in EBacc subjects taken in 2021 and 2022 exam years.

Table 14: EBacc average point score (EBacc APS)

Exam Number	Qualification	Grade	Points	Exam year	Exam season	Element	Points used toward EBacc APS
E1	GCSE English language	7	7	2022	Summer	English	7
E2	GCSE English literature	8	0	2021	Summer	English	No
E3	GCSE maths	7	7	2021	Winter	Maths	7
E4	GCSE combined science	55	10	2022	Summer	Science	10
E5	GCSE geography	6	6	2022	Summer	Humanities	6
E6	GCSE physical education	7	7	2022	Summer	None - does not count towards EBacc	No
E7	GCSE Spanish	9	0	2021	Winter	Languages	No
E8	GCSE French	8	8	2022	Summer	Languages	8
E9	GCSE history	7	0	2021	Summer	Humanities	No
E10	BTEC travel and tourism	Distinction	7	2022	Summer	None - does not count towards EBacc	No

Total EBacc point score = E1 + E3 + E4 + E5 + E8

= 7 + 7 + 10 + 6 + 8

= 38

EBacc average point score (EBacc APS) =

$38 \div 6 = 6.33$

Note that any exam from summer of 2021 has its points set to 0.

Therefore, despite Luke achieving a higher grade in GCSE English literature than GCSE English language, the GCSE English language score is the one used in the calculation.

The GCSE maths exam is a 2021 Autumn resit, taken in the winter season, but not classed as an extraordinary resit, so therefore the grade will be counted.

The GCSE Spanish exam is a 2021 Autumn resit, taken in the winter season, but falls into the extraordinary exam series, so the grade will not count.

Note that GCSE French and GCSE Spanish do not discount each other, so the GCSE French result in 2022 can be counted.

Annex D: Understanding Destination measures

Data sources

Data from the national pupil database (NPD) are used to calculate education destinations. The national pupil database links pupil and student characteristics (for example age, gender, and ethnicity) to school and college learning aims and attainment information for children in schools in England. Five administrative data sources used in compiling the national pupil database have been used to determine pupils' education destinations:

- Individualised learner record (ILR) covering English further education providers and specialist post-16 institutions
- school census covering English schools
- awarding body data
- alternative provision census
- Higher Education Statistics Authority (HESA) data covering UK universities

Employment data and out-of-work benefit data have been linked to the national pupil database to form the longitudinal education outcomes (LEO) dataset. Along with local authority data, LEO data is used to calculate employment destinations. Three administrative datasets are used as follows

- employment data from His Majesty's Revenue and Customs (HMRC)
- out-of-work benefit data from the Department for Work and Pensions (DWP) local authority data from the National Client Caseload Information System (NCCIS)

Cohort

The KS4 cohort is from state-funded mainstream schools and maintained and non-maintained special schools.

The national and local authority totals on the Find School and College Performance Data website include both state-funded mainstream and special schools.

Destinations are not reported for independent schools (including independent special schools).

Schools with destinations reported

The 2022 KS4 performance measures include information on schools which were open during the 2021/22 academic year, and which had pupils at the end of KS4 in this academic year.

Because destinations measures are calculated for pupils who completed KS4 at the school two years previously (in the 2019/20 academic year) not all schools with attainment results have destination measures reported.

The reference date for open schools is at the start of each academic year, so changes to school types, openings and closures between 12 September 2019 and 12 September 2021 affect reporting.

Information included in the table

Destination categories reported

Pupils staying in education or employment for at least two terms after KS4

Any sustained education, apprenticeship, or employment destination.

Total number of pupils included in destination measures (cohort)

This is the total number of pupils in the 2019/20 academic year cohort and is used to create the denominator for the measure.

Pupils staying in education for at least two terms after KS4

Students finishing KS4 who stayed in education from October to March the following year, including at school sixth forms, sixth-form colleges, further education colleges and other settings in England.

Further education college or other further education provider

Sustained participation in one or more FE institutions identified from the ILR. General and specialist FE colleges (other than sixth-form colleges) are reported here as well as other FE providers.

Any provider in the ILR not identified as a sixth form college or FE college is designated as an 'other FE provider'. It also includes pupils studying further education in a higher education institution. Pupils may be identified within the higher education statistics agency (HESA) data as being registered for FE level study at an HE institution.

School sixth form

State-funded mainstream school sixth forms are identified from the school census data. The measure reports the proportion of the cohort participating at these institutions.

Sixth-form college

Sixth-form colleges are identified separately from the ILR data. The measure reports the proportion of the cohort participating at these institutions.

Other education

All remaining education destinations are grouped under this heading and include:

- **independent schools:** These destinations were identified from awarding body data that has been used to provide an indication of participation. For example, if a student sat an A level exam in Summer 2022, it has been assumed the student completed a two-year course of study and fulfilled the full six months participation from October 2020 to March 2021.
- **alternative provision:** Data on pupils in alternative provision includes those who have their primary registration at a Pupil Referral Unit, an AP academy, an AP free school or a hospital school. These destinations include other alternative provision of education funded by the local authority outside of state place funded schools, including independent schools, non-maintained special schools, and providers who do not meet the criteria for registration as a school.

Attendance via alternative provision for a period of time in the first five months of the academic year is used as a proxy for sustained participation.

- **special schools:** Pupils recorded on the school census as attending maintained or non-maintained special schools.
- **specialist post-16 institutions:** This includes data on pupils attending specialist post-16 institutions, obtained from the ILR data.
- **UK higher education institutions:** Pupils who have gone to any HE institution in the UK, for higher level study (level 4 and above), as recorded in HESA data.
- **education combinations:** A number of students were identified as attending more than one type of institution over the 6 months. For example, a student may have attended an FE college for 3 months and a school sixth form for 3 months. Providing they fulfilled the sustained participation criteria across the institution types, they were counted in the measure.

Apprenticeships

Pupils who started an apprenticeship at any point in the year and continued it for at least 6 months (2020/21 academic year). Since October 2018, apprenticeship destinations have been reported separately from education and employment.

Pupils staying in employment for at least two terms after KS4

Pupils finishing KS4 who were in employment in the UK from October to March the following year.

Employment destinations are calculated from HMRC data in the LEO dataset and NCCIS data recorded by local authorities. To count as a sustained destination a pupil must be recorded as in employment in 5 out of the 6 months between October and March. A one-month pause is permitted to allow for those pupils taking separate periods of temporary

employment. Should the one month pause occur in March then the student is required to be in employment in April for the destination to be counted as sustained.

Pupils with training participation recorded in NCCIS are also included in this category as are those completing the required 6 months participation through a combination of employment and education.

This category also includes pupils who have been identified as being self-employed because they completed a self-assessed tax return in the destination year (covering the financial year from April 2020 to April 2021). This is provided that they did not claim benefits for more than one month in the period from October to March.

Pupils who have sustained participation in education throughout the period are reported as being in a sustained education destination and not in employment, even if they were in employment alongside their study.

Pupils not staying in education or employment for at least two terms after KS4

Students finishing KS4 study who did not stay in education or employment for at least two terms. They may have been enrolled on a course or in employment for part of this time, but not sustained this activity, or have been recorded by their local authority as 'NEET' or claimed out-of-work benefits in the year.

Destination unknown

Students finishing KS4 who had no participation in education or employment found from October to March the following year and were not recorded by their local authority as NEET, nor recorded as receiving out-of-work benefits at any point in the year. Possible reasons for this could be that the young person was:

- not in education, employment, or training
- living, working, or studying overseas
- attending a Scottish, Welsh, or Northern Irish school or college
- undertaking activity other than paid employment or study in the UK
- not successfully matched to a record in our data sources

Suppression of destination data

The Code of Practice for Statistics requires us to take reasonable steps to ensure that our published or disseminated statistics protect confidentiality. Where appropriate we apply disclosure control to protect confidentiality.

Annex E: worked example of 2021/22 methodology for calculating Attainment in English and maths measures

Table 15: Attainment in English and maths

Exam Number	Qualification	Grade	Exam year	Exam Season	Points	Discounted	Achieved 9-5
E1	GCSE English language	6	2021	Winter	6	No	Yes
E2	GCSE English literature	4	2022	Summer	4	No	No
E3	GCSE maths	7	2021	Summer	0	No	No
E4	GCSE maths	8	2022	Summer	0	Yes	No

Sumita has taken the above exams relating to English and maths GCSEs.

The GCSE English language exam is a 2021 Autumn resit, taken in the winter season, but not classed as an extraordinary resit, so therefore the grade will count.

Sumita has also re-entered for GCSE maths in 2022, after receiving a TAG in 2021.

The 2021 TAG result cannot be used in 2022 calculations. However, because there is already an entry to GCSE maths in 2021, the 2022 re-entry is still discounted because of the first entry rule.

So Sumita will receive a score of 0 for her maths element of this measure – and therefore not achieve the 9-5 English and maths measure overall.

Annex F – English in the headline performance measures

Progress 8 and Attainment 8

If a pupil sits both English language and English literature, the higher grade is double-weighted. The lower grade can count in the 'open' element of these measures. If only GCSE English literature or English language is taken then this qualification will count but will not be double-weighted.

EBacc average point score (EBacc APS)

For English results to be included in the EBacc APS calculation, pupils must sit both English language and English literature. The better grade counts towards EBacc APS.

Attainment in English and maths at grade 5 or above

A pupil would have to achieve a grade 5 or above in either English literature or English language. There is no requirement to sit both.

The department also publishes as an additional measure the percentage of pupils achieving a grade 4 or above in English and maths. The same English requirements apply to this measure as for English and maths at grade 5 or above.

Annex G: worked examples of science pathways in 2021/22 academic year performance measures

Science pathways example 1

Table 16 below sets out how the science pathways would work when calculating EBacc APS in 2022 for Liam, based on his attainment in EBacc subjects in 2021 and 2022 exam years.

Table 16: Science pathways 1

Exam Number	Qualification	Grade	Points	Exam year	Exam Season	Element	Points used toward EBacc APS
E1	GCSE English language	6	6	2022	Summer	English	No
E2	GCSE English literature	8	8	2022	Summer	English	8
E3	GCSE maths	7	7	2022	Summer	Maths	7
E4	GCSE biology	7	0	2021	Summer	Science	No
E5	GCSE chemistry	6	0	2021	Summer	Science	No
E6	GCSE computer science	5	5	2022	Summer	Science	5
E7	GCSE history	7	7	2022	Summer	Humanities	7
E8	GCSE music	6	6	2022	Summer	None - does not count towards EBacc	No
E9	GCSE religious studies	7	6	2022	Summer	None - does not count towards EBacc	No
E10	GCSE German	6	6	2022	Summer	Languages	6

Total EBacc point score = E2 + E3 + (E4 + E6) + E7 + E10

$$= 8 + 7 + (0+5) + 7 + 6$$

$$= 33$$

EBacc average point score (EBacc APS) =

$$33 \div 6 = 5.5$$

Note how the Science results are treated.

Liam is on the Individual Science pathway because he entered GCSE biology and chemistry in summer 2021.

We are able to count his entries from summer 2021 but the results for those qualifications are allocated 0 points.

Therefore, in the calculation (taking the two best grades in the individual sciences), we use the grade 5 from Computer Science, but it is coupled with a 0 from Biology.

The calculation is still divided by 6, despite two qualification results not counting in the Science pillar.

Science pathways example 2

Table 17 below sets out how the science pathways would work when calculating EBacc APS in 2022 for Noah, based on his attainment in EBacc subjects in 2021 and 2022 exam years.

Table 17: Science pathways 2

Exam Number	Qualification	Grade	Points	Exam year	Exam Season	Element	Points used toward EBacc APS
E1	GCSE English language	6	6	2022	Summer	English	None
E2	GCSE English literature	8	8	2022	Summer	English	8
E3	GCSE maths	7	7	2022	Summer	Maths	7
E4	GCSE physics	6	0	2021	Summer	Science	None
E5	GCSE combined science	7:7	0	2022	Summer	Science	None
E6	GCSE geography	4	4	2022	Summer	Humanities	4
E7	GCSE French	6	6	2022	Summer	Languages	6
E8	GCSE art	6	6	2022	Summer	None - not part of the EBacc	None
E9	GCSE drama	5	5	2022	Summer	None - not part of the EBacc	None
E10	GCSE physical education	7	7	2022	Summer	None - not part of the EBacc	None

$$\begin{aligned} \text{Total EBacc point score} &= E2 + E3 + E6 + E7 \\ &= 8 + 7 + 0 + 4 + 6 \\ &= 25 \end{aligned}$$

$$\begin{aligned} \text{EBacc average point score (EBacc APS)} &= \\ &25 \div 6 = 4.17 \end{aligned}$$

This example highlights how a pupil is allocated to a science pathway.

Noah starts on the Individual Science pathway in 2021, because he is entered for GCSE physics. Noah then enters GCSE combined science in 2022. Noah is considered to be on the Individual Science pathway, and therefore his GCSE combined science results are discounted.

Note that Noah has also not met EBacc requirements for individual sciences. If a pupil is on the individual science pathway, three out of four single sciences must be chosen, and the two best grades will count towards EBacc APS.

Annex H – Point score scales for 2022 and future years

This annex explains the point score scales that are used in 2022 and future performance measures.

The tables on the following pages contain the 2022 and future years performance measure points for level and grade structure combinations. A list of all qualifications which count at KS4, and their corresponding performance points is available here: [Key Stage 4 qualifications discount codes and point-scores.](#)

Table 18: Point score scales for combined science qualifications in Attainment 8 and Progress 8

Combined science qualification grade	Points
Grade 9-9 (Double Award)	9
Grade 9-8 (Double Award)	8.5
Grade 8-8 (Double Award)	8
Grade 8-7 (Double Award)	7.5
Grade 7-7 (Double Award)	7
Grade 7-6 (Double Award)	6.5
Grade 6-6 (Double Award)	6
Grade 6-5 (Double Award)	5.5
Grade 5-5 (Double Award)	5
Grade 5-4 (Double Award)	4.5
Grade 4-4 (Double Award)	4
Grade 4-3 (Double Award)	3.5
Grade 3-3 (Double Award)	3
Grade 3-2 (Double Award)	2.5
Grade 2-2 (Double Award)	2
Grade 2-1 (Double Award)	1.5
Grade 1-1 (Double Award)	1

Table 19: Point score scales for level 1 qualifications

Level 1 grade structure	Example grade	Points
4 grade scheme	Distinction*	3.00
	Distinction	2.00
	Merit	1.50
	Pass	1.00
3 grade scheme	Distinction	3.00
	Merit	2.00
	Pass	1.25
2 grade scheme	Advanced Credit	2.5
	Credit	1.25
Pass only	Pass	1.75

Table 20: Point score scales for level 2 qualifications

Level 2 grade structure	Example grade	Points
4 grade scheme	Distinction*	8.50
	Distinction	7.00
	Merit	5.50
	Pass	4.00
3 grade scheme	Distinction	7.75
	Merit	6.25
	Pass	4.00
Pass only	Pass	5.50

Table 21: Point score scales for AS level

AS level grade	Points
A	10.75
B	8.88
C	7.00
D	5.13
E	3.50

Table 22: Point score scales for graded music examinations

Graded music level	Grade	Points
Grade 8	Distinction	8.50
	Merit	8.50
	Pass	8.50
Grade 7	Distinction	8.50
	Merit	8.50
	Pass	7.00
Grade 6	Distinction	8.50
	Merit	8.50
	Pass	7.00

Table 23: Point score scales for free standing maths qualifications

Free standing maths qualification grade	Points
A	5.13
B	4.00
C	3.25
D	2.50
E	1.88

Illustrative examples of how to use these tables – points for all qualifications can be calculated following this method

Example A - Calculating the points for a level 2 qualification with four passing grades

These qualifications are at level 2, so table 20 should be used.

There are four possible passing grades (Distinction*, Distinction, Merit, Pass), so the level 2 four grade scheme should be used.

Table 24 below shows the 2022 points for a level 2 qualification with 4 passing grades:

Table 24: Point score scales for level 2 qualification with four passing grades

Level 2 qualification with four passing grades	Points
Distinction*	8.50
Distinction	7.00
Merit	5.50
Pass	4.00

The Performance Points a Practical Guide document provides a step by step guidance on points: [Performance points: a practical guide to Key Stage 4 and 5 points](#)

Example B - Calculating the points for a BTEC First Award

BTEC First Awards can be both level 1 and level 2 qualifications.

At level 1, there is a pass only grade structure, and table 19 gives the points of 1.75.

At level 2 in a BTEC First Award there are four possible outcomes Distinction*/Distinction/Merit/Pass which makes for a 4-grade structure, and table 20 gives the points of between 4.00 and 8.50.

The table below shows the point score scales for the BTEC First Award:

Table 35: Point score scales for BTEC First Award

BTEC First Award grade	Points
Level 2 Distinction*	8.50
Level 2 Distinction	7.00
Level 2 Merit	5.50
Level 2 Pass	4.00
Level 1 Pass	1.75

Example C - Calculating the points for an OCR Cambridge National Certificate

OCR Cambridge National Certificates can be both level 1 and level 2 qualifications.

Grades level 1 distinction/ level 1 merit/ level 1 pass are at level 1, which makes for a 3-grade structure, and table 19 gives the points of between 1.25 and 3.

Grades level 2 distinction*/ level 2 distinction/ level 2 merit/ level 2 pass are at level 2, which makes for a 4-grade structure, and table 20 gives the points of between 4 and 8.5.

Table 26 below shows the point scores for the OCR Cambridge National Certificate:

Table 26: Point score scales for OCR Cambridge National Certificate

OCR Cambridge National Certificate grade	Points
Level 2 Distinction*	8.50
Level 2 Distinction	7.00
Level 2 Merit	5.50
Level 2 Pass	4.00
Level 1 Distinction	3.00
Level 1 Merit	2.00
Level 1 Pass	1.25

Point scores for other qualifications can be calculated using a similar method as in examples A, B and C above.

Annex I – Confidence Intervals

A 95% confidence interval is calculated around each school's Progress 8 score, providing a proxy for the range of values within which we are statistically confident that the true value of the Progress 8 score for the school lies.

The confidence interval, denoted $[LowCI_s, UppCI_s]$, is given by the formula:

$$[LowCI_s, UppCI_s] = [P8_s - CI_s, P8_s + CI_s] ,$$

where:

$LowCI_s$	is the lower confidence limit for the school's Progress 8 score
$UppCI_s$	is the upper confidence limit for the school's Progress 8 score
$P8_s$	is the school's Progress 8 score
CI_s	is the size of the confidence interval for the school's Progress 8 score

$$CI_s = 1.96 \times \sigma_N / \sqrt{(n_s)}$$

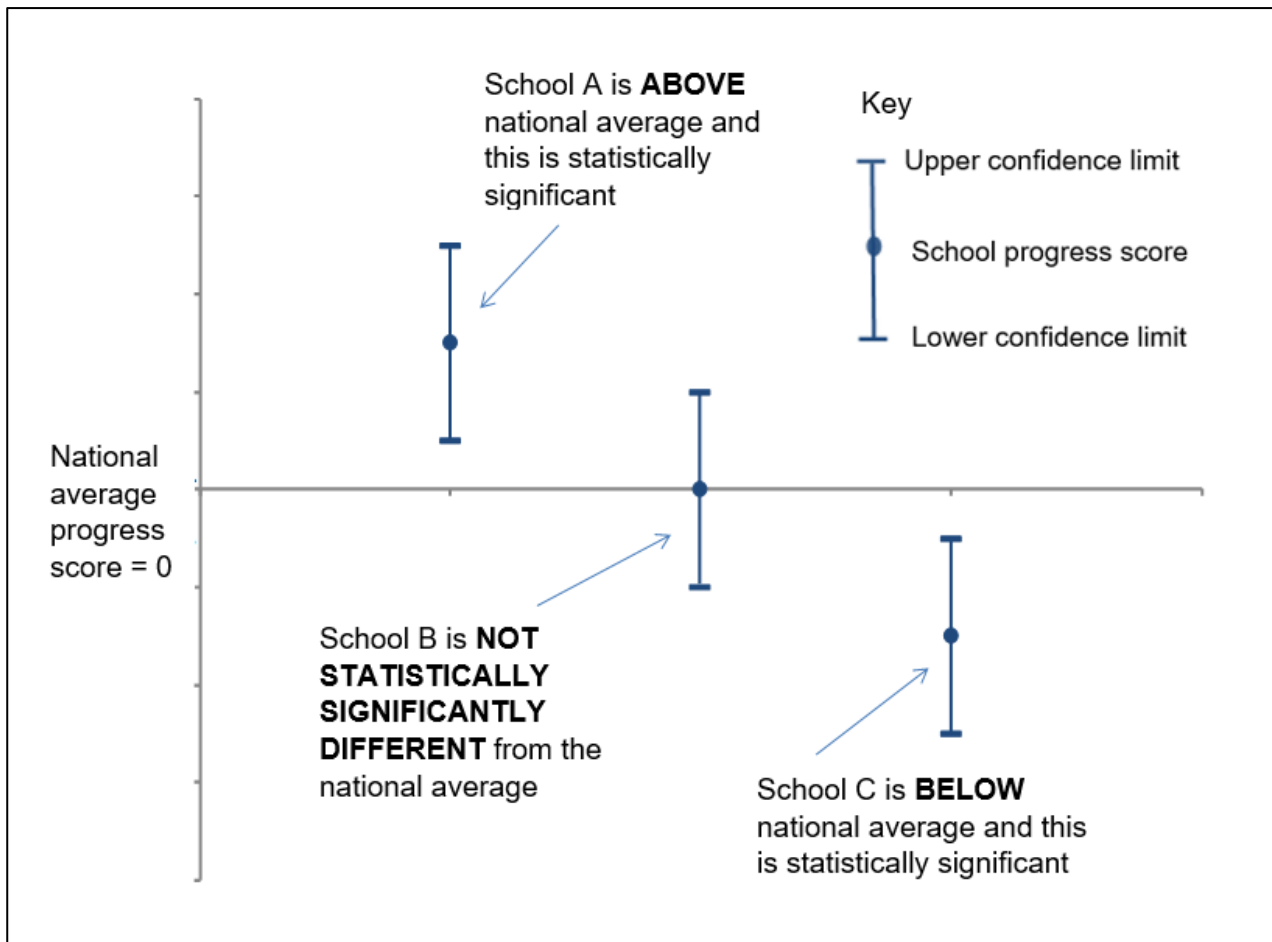
where:

1.96	is the critical value for a 95% confidence interval
σ_N	is the standard deviation of the Progress 8 scores for all eligible pupils <u>nationally</u>
n_s	is the number of eligible pupils that belong to the school

The national average Progress 8 score of all pupils at state-funded maintained mainstream school scores will be 0.

- when a school has their lower confidence interval limit higher than zero ($LowCI_s > 0$), the school's Progress 8 score is above average, and the result is statistically significant
- when a school has their upper confidence interval limit lower than zero ($UppCI_s < 0$), the school's Progress 8 score is below average, and the result is statistically significant
- in the other case when the confidence interval straddles zero ($LowCI_s < 0 < UppCI_s$), the school's Progress 8 score is likely to be above or below average, and the result is not statistically significant

Figure 2: Confidence intervals



Worked example A – continued

We can calculate the size of the confidence interval for the school's Progress 8 score using CI_s :

$$CI_s = 1.96 \times \sigma_N / \sqrt{(n_S)} \quad 1.96 \times 1.408265 / \sqrt{142} = 1.96 \times 0.1182 = 0.23$$

We derive the confidence interval for the school's Progress 8 score:

$$= [+0.27 - 0.23, +0.27 + 0.23] = [+0.04, +0.5]$$

As $LowCI_s > 0$, we can say that the school's Progress 8 score is above the national average Progress 8 score, and say this result is statistically significant.

Standard deviation of all Progress 8 scores and Progress 8 element scores nationally

The below standard deviations are based on the Progress 8 scores of all eligible pupils at mainstream schools and are the national figures used in confidence interval calculations.

Table 27: Revised 2022 standard deviations of Progress 8 and Progress 8 element scores nationally

Measure	Revised 2022
Progress 8	1.408359
Progress 8 English element	1.609325
Progress 8 Maths element	1.530366
Progress 8 EBacc element	1.636993
Progress 8 Open element	1.630237

Annex J: Worked examples of MAT measures

MAT level Progress 8

Table 28 shows a MAT with 5 eligible academies, with a range of Progress 8 scores. In the worked example each academy is given a weighted score by multiplying the academy's Progress 8 score by the total weight (number of pupils at the end of key stage 4 multiplied by number of years in the MAT) of the academy. To get the MAT Progress 8 score, the total weight of all academies in the MAT is divided by the total weighted score also of all academies in the MAT. This value is then rounded to one decimal place.

Table 28: MAT measures Progress 8 worked example

	(i) Progress 8 score	(ii) Number of pupils at end of key stage	(iii) Number of years with MAT	(iv) Total weight (ii) * (iii)	(v) Weighted score (i) * (iv)
Academy 1	2.5	140	5	700	1,750
Academy 2	-2.5	224	3	672	-1,680
Academy 3	3.3	188	4	752	2,481.6
Academy 4	-1.5	111	3	333	-499.5
Academy 5	-1.5	124	3	372	-558
Total		787		2,829	1,494.1
MAT score (sum of v / sum of iv)					+0.5

MAT level EBacc entry

Table 29 outlines a MAT with 5 eligible academies, with a range of EBacc entry percentages. Each academy is given a total weighted pupils entered for EBacc score by multiplying the pupils entered for the EBacc in that academy by the number of years in the MAT. The total weighted pupils entered for EBacc in all academies in the MAT is then divided by the total weighted pupils at end of key stage (number of pupils at end of key stage multiplied by number of years in the MAT) in all academies in the MAT, to give the MAT EBacc entry percentage.

Table 29: MAT measures EBacc entry worked example

	(i) Number of pupils at end of key stage	(ii) Pupils entered for the EBacc	% of pupils entered for the EBacc	(iii) Number of years with MAT	(iv) Total weighted pupils at end of key stage (i) *(iii)	(v) Total weighted pupils entered for EBacc (ii) * (iii)
Academy 1	172	13	8%	5	860	65
Academy 2	264	121	46%	4	1,056	484
Academy 3	194	83	43%	5	970	415
Academy 4	102	25	25%	4	408	100
Academy 5	89	71	80%	3	267	213
Total	821	313			3,561	1,277
Unweighted MAT EBacc entry rate ((sum of ii / sum of i) * 100)		38%		Weighted MAT EBacc entry rate ((sum of v / sum of iv) * 100)		36%

MAT level achieving EBacc at grade 5 or above

Table 30 outlines a MAT with 5 eligible academies, with a range of achieving EBacc at grade 5 or above percentages. Each academy is given a total weighted pupils achieving grade 5 or above for EBacc score by multiplying the pupils achieving 9-5 for the EBacc in that academy by the number of years in the MAT. The total weighted pupils achieving 9-5 for EBacc in all academies in the MAT is then divided by the total weighted pupils at end of key stage (number of pupils at end of key stage multiplied by number of years in the MAT) in all academies in the MAT, to give the MAT EBacc entry percentage.

Table 30: MAT measures achieving 9-5 in EBacc worked example

	(i) Number of pupils at end of key stage	(ii) Pupils achieving EBacc at grade 5+	% of pupils achieving EBacc at grade 5+	(iii) Number of years with MAT	(iv) Total weighted pupils at end of key stage (i) * (iii)	(v) Total weighted pupils achieving EBacc at grade 5+ (ii) * (iii)
Academy 1	163	98	60%	5	815	490
Academy 2	215	61	28%	5	1,075	305
Academy 3	222	42	19%	4	888	168
Academy 4	114	30	26%	4	456	120
Academy 5	124	27	22%	3	372	81
Total	838	258			3,606	1,164
Unweighted MAT pupils achieving EBacc at grade 5+ ((sum of ii / sum of i) * 100)			31%		Weighted MAT pupils achieving EBacc at grade 5+ ((sum of v / sum of iv) * 100)	32%

MAT level achieving grade 5 or above in English and Maths

Table 31 outlines a MAT with 5 eligible academies, with a range of achieving grade 5 or above in English and maths percentages. Each academy is given a total weighted pupils achieving grade 5 or above in English and maths score by multiplying the pupils achieving grade 5 or above in English and maths in that academy by the number of years in the MAT. The total weighted pupils achieving grade 5 or above in English and maths in all academies in the MAT is then divided by the total weighted pupils at end of key stage (number of pupils at end of key stage multiplied by number of years in the MAT) in all academies in the MAT, to give the MAT achieving English and maths percentage.

Table 31: MAT measures achieving grade 5 or above in English and maths worked example

	(i) Number of pupils at end of key stage	(ii) Pupils entered achieving grade 5+ in English and Maths	% of pupils achieving grade 5+ in English and Maths	(iii) Number of years with MAT	(iv) Total weighted pupils at end of key stage (i) * (iii)	(v) Total weighted pupils achieving grade 5+ in English and Maths (ii) * (iii)
Academy 1	155	91	59%	5	775	455
Academy 2	162	68	42%	3	486	204
Academy 3	123	61	50%	5	615	305
Academy 4	223	105	47%	4	892	420
Academy 5	198	116	59%	4	792	464
Total	861	441			3,560	1,848
Unweighted MAT pupils achieving grade 5+ in English and Maths ((sum of ii / sum of i) * 100)			51%	Weighted MAT pupils achieving grade 5+ in English and Maths ((sum of v / sum of iv) * 100)		52%

MAT level Attainment 8

Table 32 shows the Attainment 8 score for a MAT, with 5 eligible academies, each with their own Attainment 8 score. Each academy is given their own weighted score by multiplying the academy's Attainment 8 score by the total weight of that academy (number of pupils at end of Key Stage 4 multiplied by the number of years in the MAT). To get the MAT score the total weighted score of all academies in the MAT is divided by the total weight of all academies in the MAT. This value is then rounded to the nearest decimal place.

Table 32: MAT measures Attainment 8 worked example

	(i) Attainment 8 score	(ii) Number of pupils at end of key stage	(iii) Number of years with MAT	(iv) Total weight (ii) * (iii)	(v) Weighted score (i) * (iv)
Academy 1	54	140	5	700	37,800
Academy 2	41	224	3	672	27,552
Academy 3	36	188	4	752	27,072
Academy 4	61	111	3	333	20,313
Academy 5	58	124	3	372	21,576
Total		787		2,829	134,313
MAT score (sum of v / sum of iv)					47.5

The same measure is also produced for disadvantaged pupils in the MAT:

Table 33: Attainment 8 for disadvantaged pupils in a MAT

	(i) Disadvant aged Attainment 8 score	(ii) Number of disadvanta ged pupils at end of key stage	(iii) Number of years with MAT	(iv) Total weight (ii) * (iii)	(v) Weighted score (i) * (iv)
Academy 1	40	30	5	150	6,000
Academy 2	45	59	3	177	7,965
Academy 3	39	50	4	200	7,800
Academy 4	51	22	3	66	3,366
Academy 5	47	90	3	270	12,690
Total		251		863	37,821
MAT score (sum of v / sum of iv)					43.8

MAT level EBacc APS

Table 34 shows the EBacc APS score for a MAT, with 5 eligible academies, each with their own EBacc APS score. Each academy is given their own weighted score by multiplying the academy's EBacc APS score by the total weight of that academy (number of pupils at end of Key Stage 4 multiplied by the number of years in the MAT). To get the MAT score the total weighted score of all academies in the MAT is divided by the total weight of all academies in the MAT. This value is then rounded to the nearest 2 decimal places.

Table 34: MAT measures EBacc APS worked example

	(i) EBacc APS	(ii) Number of pupils at end of key stage	(iii) Number of years with MAT	(iv) Total weight (ii) * (iii)	(v) Weighted score (i) * (iv)
Academy 1	3.74	210	4	840	3,141.6
Academy 2	3.77	178	3	534	2,013.18
Academy 3	5.44	142	5	710	3,862.4
Academy 4	4.27	232	5	1,160	4,953.2
Academy 5	4.96	114	3	342	1,696.32
Total		876		3,586	15,666.7
MAT score (sum of v / sum of iv)				4.37	

Annex K – Revised 2022 Attainment 8 averages

Each Attainment 8 average is the average Attainment 8 score of all pupils nationally in state-funded mainstream schools within the same prior attainment group at KS2. The following tables show the revised Attainment 8 averages for each KS2 prior attainment group, based on the 2022 cohort averages.

Changes to national subject entry patterns and performance, as well as changes to the methodology and grading as a result of COVID-19 this year will cause these averages to change in future years. Schools may change their curriculum offer in response to the Progress 8 measure and to the Government's EBacc ambition, so any modelling based on current national results could be misleading.

Table 35: Revised 2022 Attainment 8 averages and English, maths, EBacc and open averages for each KS2 prior attainment group

KS2 prior attainment group	KS2 average scaled score range	Attainment 8 average	English average	Maths average	EBacc average	Open average
1	59 to 82	18.54	4.37	2.60	5.16	6.40
2	82.5 to 86	19.87	4.90	2.74	5.22	7.01
3	86.5 to 87.5	22.75	5.51	3.44	6.03	7.77
4	88 to 89	24.34	5.82	3.84	6.49	8.20
5	89.5 to 90.5	26.23	6.24	4.28	6.98	8.71
6	91 to 92	27.84	6.58	4.68	7.45	9.13
7	92.5 to 93	29.48	6.87	5.03	7.91	9.66
8	93.5 to 94	30.97	7.20	5.42	8.33	10.02
9	94.5 to 95	32.46	7.48	5.80	8.77	10.41
10	95.5 to 96	33.84	7.76	6.12	9.17	10.79
11	96.5 to 97	35.31	8.02	6.47	9.63	11.18
12	97.5 to 98	37.14	8.39	6.90	10.18	11.67
13	98.5 to 99	38.70	8.68	7.26	10.65	12.11
14	99.5 to 100	40.33	8.99	7.63	11.16	12.55
15	100.5 to 101	42.03	9.32	7.98	11.71	13.03
16	101.5 to 102	43.69	9.62	8.35	12.25	13.47
17	102.5 to 103	45.79	10.00	8.82	12.94	14.03
18	103.5 to 104	47.52	10.31	9.19	13.53	14.49
19	104.5 to 105	49.66	10.70	9.64	14.26	15.05
20	105.5 to 106	51.95	11.12	10.13	15.03	15.67
21	106.5 to 107	54.23	11.50	10.63	15.83	16.27
22	107.5 to 108	56.58	11.93	11.14	16.63	16.88
23	108.5 to 109	59.05	12.32	11.71	17.49	17.54
24	109.5 to 110	61.57	12.76	12.21	18.35	18.24
25	110.5 to 111	63.85	13.20	12.68	19.10	18.87
26	111.5 to 112	66.48	13.63	13.23	20.03	19.59
27	112.5 to 113	68.91	14.02	13.78	20.82	20.29
28	113.5 to 114	71.19	14.34	14.33	21.63	20.88
29	114.5 to 115	73.55	14.78	14.81	22.39	21.57
30	115.5 to 116	75.69	15.12	15.29	23.10	22.19
31	116.5 to 117	77.86	15.47	15.74	23.80	22.85
32	117.5 to 118	79.51	15.69	16.13	24.32	23.37
33	118.5 to 119	81.60	16.14	16.47	24.94	24.04
34	119.5 to 120	83.00	16.36	16.68	25.43	24.53

Table 36: Revised 2022 Attainment 8 averages for EBacc pillars

KS2 prior attainment group	KS2 average scaled score range	Science average	Humanities average	Languages average
1	59 to 82	2.22	1.91	4.43
2	82.5 to 86	2.17	1.72	3.32
3	86.5 to 87.5	2.39	1.99	3.53
4	88 to 89	2.53	2.15	3.56
5	89.5 to 90.5	2.70	2.30	3.57
6	91 to 92	2.83	2.47	3.52
7	92.5 to 93	2.96	2.61	3.54
8	93.5 to 94	3.08	2.74	3.62
9	94.5 to 95	3.20	2.88	3.59
10	95.5 to 96	3.31	3.01	3.74
11	96.5 to 97	3.44	3.20	3.83
12	97.5 to 98	3.61	3.39	3.89
13	98.5 to 99	3.74	3.54	3.94
14	99.5 to 100	3.88	3.72	4.00
15	100.5 to 101	4.04	3.94	4.08
16	101.5 to 102	4.21	4.14	4.14
17	102.5 to 103	4.41	4.36	4.27
18	103.5 to 104	4.59	4.58	4.38
19	104.5 to 105	4.80	4.81	4.55
20	105.5 to 106	5.05	5.08	4.67
21	106.5 to 107	5.30	5.34	4.86
22	107.5 to 108	5.54	5.60	5.04
23	108.5 to 109	5.82	5.88	5.22
24	109.5 to 110	6.09	6.15	5.45
25	110.5 to 111	6.33	6.40	5.68
26	111.5 to 112	6.63	6.67	5.88
27	112.5 to 113	6.89	6.91	6.17
28	113.5 to 114	7.17	7.14	6.38
29	114.5 to 115	7.41	7.36	6.65
30	115.5 to 116	7.66	7.57	6.85
31	116.5 to 117	7.91	7.75	7.16
32	117.5 to 118	8.09	7.92	7.36
33	118.5 to 119	8.31	8.18	7.63
34	119.5 to 120	8.46	8.25	7.84

Table 37: Revised 2022 Average EBacc and open slots filled for each KS2 prior attainment group

KS2 prior attainment group	KS2 average scaled score range	Average EBacc slots filled (out of 3)	Average open slots filled (out of 3)
1	59 to 82	2.09	2.16
2	82.5 to 86	2.30	2.38
3	86.5 to 87.5	2.42	2.48
4	88 to 89	2.46	2.52
5	89.5 to 90.5	2.52	2.57
6	91 to 92	2.56	2.59
7	92.5 to 93	2.60	2.64
8	93.5 to 94	2.64	2.66
9	94.5 to 95	2.68	2.70
10	95.5 to 96	2.71	2.73
11	96.5 to 97	2.72	2.73
12	97.5 to 98	2.75	2.76
13	98.5 to 99	2.77	2.78
14	99.5 to 100	2.80	2.81
15	100.5 to 101	2.81	2.82
16	101.5 to 102	2.82	2.83
17	102.5 to 103	2.85	2.85
18	103.5 to 104	2.86	2.86
19	104.5 to 105	2.88	2.88
20	105.5 to 106	2.89	2.89
21	106.5 to 107	2.90	2.90
22	107.5 to 108	2.92	2.91
23	108.5 to 109	2.92	2.92
24	109.5 to 110	2.94	2.93
25	110.5 to 111	2.94	2.94
26	111.5 to 112	2.96	2.95
27	112.5 to 113	2.96	2.96
28	113.5 to 114	2.97	2.96
29	114.5 to 115	2.97	2.96
30	115.5 to 116	2.98	2.97
31	116.5 to 117	2.98	2.97
32	117.5 to 118	2.98	2.97
33	118.5 to 119	2.98	2.97
34	119.5 to 120	2.99	2.98

Annex L – Other additional measures

We will also publish some additional measures on Find School and College Performance Data. These are outlined below. They are also subject to the same methodology changes as the headline measures – we will count entries from qualifications taken between January 2020 and August 2021 but not results, unless stated below.

The proportion of pupils achieving a grade 4 or above in English and maths

For transparency and to help schools show progress, the headline threshold attainment measure in English and maths is also published at grade 4 and above. This measure has the same methodology as its headline counterpart regarding qualification inclusion and requirements. The additional measure shows where pupils achieved a grade 4 or above in GCSE English language or English literature and maths.

The proportion of pupils achieving the EBacc at grade 5 or above and grade 4 and above.

Following the introduction of EBacc APS in 2018, the EBacc attainment threshold measure is no longer a headline measure. We will continue to publish as additional measures the proportion of pupils achieving the EBacc at grade 5 and above, and at grade 4 and above.

Average number of EBacc slots filled in Attainment 8 at school level

To help schools understand their EBacc entry rates in more detail, the number of EBacc slots filled per pupil within a school divided by the total number of pupils at the end of KS4 within the school. The number of EBacc slots filled per pupil is calculated according to Attainment 8 methodology outlined earlier in the guidance. Because this measure is calculated using results included in Attainment 8, it does not include entries data from qualifications taken between January 2020 and August 2021.

Average number of open slots filled in Attainment 8 at school level

The number of Open slots filled per pupil within a school divided by the total number of pupils at the end of KS4 within the school. The number of Open slots filled per pupil is calculated according to Attainment 8 methodology outlined earlier in the guidance. Because this measure is based on the results included in Attainment 8, it does not include entries data from qualifications taken between January 2020 and August 2021.

Pupils achieving 5 or more GCSEs at grade 4 or above including English and maths

This measure is calculated as per the following:

The attainment threshold is set to include those who achieve a grade 4 or above

A pupil would have to achieve a grade 4 or above in English literature or English language. There is no requirement to sit both.

The combined science qualification is counted as one GCSE.

Annex M – Pupils and Institutions included in KS4 Performance Measures

Pupils at the end of KS4

Pupils are identified as being at the end of KS4 if they were on roll at the school and in year 11 at the time of the January school census. Age is calculated as of 31 August at the start of the academic year, and the majority of pupils at the end of KS4 were age 15 at this point. Some pupils may complete this key stage in an earlier or later year group.

Institutions

Included in KS4 National statistics

National statistics include all state funded schools. This includes academies, free schools, city technology colleges, further education colleges with provision for 14- to 16-year-olds and state-funded special schools.

Included at school level on the Find School and College Performance Data website

Provisional performance measures are published at school level for state funded schools only²⁷. These figures are updated to include independent schools as part of the revised release.

Pupils and their results are attributed to schools according to rules set out in the [‘Understanding school and college performance measures’ guidance](#).

²⁷ All state-funded schools include local authority maintained mainstream schools, academies, free schools, city technology colleges, state-funded special schools and some information for further education colleges with provision for 14 to 16 year-olds. They exclude independent schools, independent special schools, non-maintained special schools, hospital schools, pupil referral units and alternative provision. Alternative provision includes academy and free school alternative provision.

Annex N – Timeline of changes since 2016

Table 37 provides a high-level summary of the range of school and college KS4 performance measures since 2016, detailing extensions to reporting (additional measures, or extending coverage to include more qualifications). It also outlines any methodological changes to how measures are calculated. Note methodological changes are not applied retrospectively to previous cohorts/tables.

Table 38: Timeline of changes since 2016

Year	Change
2016	<p>A new set of headline measures were introduced for all state funded secondary schools:</p> <ul style="list-style-type: none"> • Progress 8 • Attainment 8 • the percentage of pupils achieving A*-C in English and Maths • the percentage of pupils achieving the English Baccalaureate • the percentage of pupils entering the English Baccalaureate • the percentage of students staying in education or employment after Key Stage 4 (destinations) <p>New additional measures introduced:</p> <ul style="list-style-type: none"> • percentage of pupils entering more than one language qualification • the percentage of pupils entering physics, chemistry and biology <p>Methodology change: Point score scale changes from 16-58 scale to a 1-8 point scale, where 1 is equivalent to a grade G GCSE and 8 equivalent to an A* GCSE</p> <p>Removal of ‘in school’ disadvantaged gap measures</p> <p>Floor standard definition changed: Progress 8 score below -0.5, unless the confidence interval suggests the score may not be below average.</p>
2017	<p>Reformed GCSE qualifications: English and maths GCSEs, graded 9-1, were included in performance tables.</p> <p>Change to headline performance measures to reflect changes in grading:</p> <ul style="list-style-type: none"> • the proportion of pupils achieving a grade 5 or above in English and maths • the proportion of pupils achieving the EBacc - grade 5 or above in English and maths, and grade C or above in unreformed subjects <p>New additional measures:</p> <ul style="list-style-type: none"> • the proportion of pupils achieving in English and maths – grade 4 or above

	<ul style="list-style-type: none"> the proportion of pupils achieving the EBacc – grade 4 or above in English and maths, and grade C or above in unreformed subjects. <p>New supporting information published:</p> <ul style="list-style-type: none"> average number of EBacc slots filled in Attainment 8 at school level average number of open slots filled in Attainment 8 at school level <p>Multi academy trust measures introduced:</p> <ul style="list-style-type: none"> Progress 8 Percentage entering EBacc Percentage achieving EBacc at grade 5 and above/grade 4 and above
2018	<p>Reformed GCSE qualifications: most GCSEs in EBacc subjects were graded 9 to 1.</p> <p>Change in headline performance measure: EBacc threshold attainment measure replaced as a headline measure with a new measure; EBacc average point score (APS).</p> <p>New additional measures (to replace old threshold measures based on unreformed GCSEs):</p> <ul style="list-style-type: none"> EBacc attainment at grade 4 and above EBacc attainment at grade 5 and above <p>Methodology change: A minor change to Progress 8 to reduce the disproportionate effect that extremely negative individual scores can have on a school’s overall score.</p> <p>Multi academy trust measures introduced:</p> <ul style="list-style-type: none"> EBacc average point score
2019	<p>Almost all GCSEs were graded 9-1.</p> <p>There were no changes to KS4 performance measures</p> <p>The floor and coasting standards were removed.</p>
2020	<p>No accountability measures produced at school level (apart from destination measures) due to the COVID-19 pandemic and the cancellation of most exams, tests and assessments. The school and college checking exercise was also cancelled.</p> <p>Centre Assessed Grades were used to award qualifications.</p>
2021	<p>No accountability measures produced at school level (apart from destination measures, exam entries information and EBacc entry measure) due</p>

	<p>to the COVID-19 pandemic and the cancellation of most exams, tests and assessments. The school and college checking exercise was also cancelled.</p> <p>Teacher Assessed Grades were used to award qualifications.</p>
2022	<p>Accountability measures at school level return, following return of exams.</p> <p>Methodology changes:</p> <ul style="list-style-type: none"> • New KS2 baseline for Progress 8 due to the introduction of scaled scores to replace levels • Qualification results achieved between January 2020 and August 2021 not included in performance measures. <p>New MAT measures published:</p> <ul style="list-style-type: none"> • Attainment 8 • Percentage of pupils achieving grade 5 or above in English and maths



Department
for Education

© Crown copyright 2023

This publication (not including logos) is licensed under the terms of the Open Government Licence v3.0 except where otherwise stated. Where we have identified any third party copyright information you will need to obtain permission from the copyright holders concerned.

To view this licence:

visit www.nationalarchives.gov.uk/doc/open-government-licence/version/3

email psi@nationalarchives.gsi.gov.uk

write to Information Policy Team, The National Archives, Kew, London, TW9 4DU

About this publication:

enquiries www.education.gov.uk/contactus

download www.gov.uk/government/publications



Follow us on Twitter:
[@educationgovuk](https://twitter.com/educationgovuk)



Like us on Facebook:
facebook.com/educationgovuk