



Department  
for Education

# **Progress 8 measure in 2016 and 2017**

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

**February 2015**

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## Summary

In October 2013, we announced that a new secondary school accountability system will be implemented from 2016. It will include two new headline measures, Attainment 8 and Progress 8. This document explains how these measures will be calculated in 2016 (and in 2015 for schools that choose to adopt the new measures a year early). It also includes changes that will apply from 2017.

Schools can choose to opt in to the new performance measures a year early in 2015. Further information about opting in and the mechanism for doing so are in the [Progress 8 early Opt-in Terms and conditions for schools](#).

### A summary of Attainment 8 and Progress 8

Progress 8 aims to capture the progress a pupil makes from the end of primary school to the end of secondary school. It is a type of value added measure, which means that pupils' results are compared to the actual achievements of other pupils with the same prior attainment.

The new performance measures are designed to encourage schools to offer a broad and balanced curriculum at Key Stage 4, and reward schools for the teaching of all their pupils, measuring performance across 8 qualifications. Every increase in every grade a pupil achieves will attract additional points in the performance tables.

Progress 8 will be calculated for individual pupils solely in order to calculate a school's Progress 8 score, and there will be no need for schools to share individual Progress 8 scores with their pupils. Schools should continue to focus on which qualifications are most suitable for individual pupils, as the grades pupils achieve will help them reach their goals for the next stage of their education or training.

Attainment 8 will measure the average grade of a pupil across 8 subjects including mathematics (double weighted) and English (double weighted), 3 further qualifications that count in the English Baccalaureate (EBacc) measure and 3 further qualifications that can be GCSE qualifications (including EBacc subjects) or any other non-GCSE qualifications on the DfE approved list. The details of how qualifications are included in the measure are set out on pages 9-12 of this document.

The Attainment 8 and Progress calculations are described on pages 13-19.

A Progress 8 score will be calculated for each pupil by comparing their average grade (their Attainment 8 score) with the average grade of all pupils nationally who had a similar starting point, or 'prior attainment', calculated using assessment results from the end of primary school. The greater the Progress 8 score, the greater the progress made by the pupil compared to the average of pupils with similar prior attainment. More information about the results used to calculate prior attainment is included on pages 16-17.

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

We have provided schools with Attainment 8 and Progress 8 data based on 2014 results to help them plan for the implementation of Progress 8 and to decide whether to opt in early for 2015 results. We are not publishing this information as it reflects curriculum decisions that schools made before Progress 8 was announced and we do not want schools to be judged on a measure which they were not aware of when pupils started their courses.

## **Expiry or review date**

This guide will next be reviewed before March 2016 in relation to Progress 8 for 2018. It combines and updates the previously published documents on Progress 8:

- Progress 8 school performance measure: Information for school leaders and governing bodies of maintained schools, academies and free schools
- Progress 8 measure in 2016: Technical guide for maintained secondary schools, academies and free schools

## **Who is this guide for?**

This guide is for:

- School leaders, school staff and governing bodies in all maintained schools, including special schools, academies and free schools
- Local authorities

## Secondary school performance measures

From 2016, the headline indicator of school performance will be Progress 8.

### What will be published in the performance tables and RAISEonline from 2016

The headline measures which will appear in the performance tables will be:

- Progress across 8 subjects
- Attainment across the same 8 subjects
- Percentage of pupils achieving the threshold in English and mathematics (currently a C grade)
- Percentage of pupils achieving the English Baccalaureate

We plan to introduce a fifth headline measure to show the percentage of pupils who went on to sustained education, employment or training during the year after they finished their Key Stage 4 qualifications. We currently publish education destination information in the performance tables and all destination information as experimental statistics. We will implement this headline measure once we are sure the statistics are robust.

Further details about what will be published in the performance tables are detailed in the Statement of Intent published each year on the [DfE performance tables website](#).

For schools opting in a year early in 2015 the new headline measures will be published in the performance tables and in RAISEonline alongside current performance measures information.

### The 'expected progress' measure

The current 'expected progress' measure will no longer appear in performance tables from 2016. The system of levels that underpins this measure has been removed, and so this measure is being phased out.

### Floor standard

The floor standard for a school is the minimum standard for pupil achievement and/or progress that the Government expects schools to meet.

In 2016 (or 2015 for those schools that choose to opt in a year early), a school will be below the floor standard if their Progress 8 score is below -0.5, and the upper band of the 95% confidence interval is below zero. If a school's performance falls below this floor

standard, then the school may come under scrutiny through inspection. Confidence intervals are explained in more detail on page 18-19 and in **Annex D**.

Schools in which pupils make one grade more progress than the national average will be exempt from routine inspections by Ofsted in the next academic year.

# Calculating Attainment 8 and Progress 8

## Qualifications included in the measures

Progress 8 is based on a calculation of pupils' performance across 8 subjects, called Attainment 8. These subjects are:

1. A double weighted **mathematics** element that will contain the point score of the pupil's English Baccalaureate (EBacc) mathematics qualification;
2. An English element based on the highest point score in a pupil's EBacc **English language** or **English literature** qualification. This will be double weighted provided a pupil has taken both qualifications. In 2016 an English (combined) qualification can be included and double weighted.
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 remaining 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 non-GCSE qualifications on the DfE approved list. For more information see the list of qualifications that will be included in the [2016 key stage 4 performance tables](#) and in the [2017 key stage 4 performance tables](#).

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.

## Mathematics qualifications

This element of Progress 8 is double weighted. Only mathematics qualifications which also count towards the EBacc can count in the mathematics slot. From 2017 only the new reformed GCSEs in mathematics or AS levels in mathematics or further mathematics will count towards the EBacc and in the mathematics slot of Progress 8.

If a pupil takes the mathematics linked pair GCSEs (Methods in Mathematics and Applications of Mathematics) the two results will be added together for the mathematics slot in Progress 8. These qualifications will count in the performance tables for the last time in 2016.

Where a pupil has taken more than one EBacc mathematics qualification (except for the mathematics linked pair GCSEs), qualifications which are not used in the mathematics slot will not count elsewhere in Progress 8<sup>1</sup>.

Approved mathematical type qualifications that do not count towards the EBacc, e.g. GCSE statistics, will be counted in an 'open' slot of Progress 8 regardless of whether or not a pupil has also taken an EBacc mathematics qualification.

Level 3 Free Standing Mathematics Qualifications will only count in an 'open' slot, and will only count if a pupil has not taken an EBacc mathematics qualification.

## English qualifications

If a student sits both English language and English literature, the higher grade is double-weighted. The lower grade can still count in the 'open group' of subjects (not in the EBacc slots). The combined English language and literature qualification will be available for the last time in 2016 and will be double-weighted in the Progress 8 measure.

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

From 2017 only the new reformed GCSEs in English language and English literature, AS English language, AS English literature and AS English language and literature will count towards the EBacc and in the English slot of Progress 8.

## Qualifications in the English Baccalaureate (EBacc) subjects

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

There are no stipulations about the types of EBacc subjects which can count in the three EBacc slots. 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.

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<sup>1</sup> First entry and discounting rules as set out on page 12 still apply

English literature and English language cannot be included in the EBacc group of subjects. The best of these qualifications will count in the 'English' slot, and the other can count in the 'open group' of subjects.

## Science qualifications

All students have to study some science up to the age of 16. The key stage 4 science curriculum is compulsory in maintained schools, and academies are required to provide a broad and balanced curriculum, including English, mathematics and science, up to the age of 16.

In 2016 and 2017, core and additional science GCSE will take up one slot each in the Progress 8 measure. Core science GCSE alone will take up one slot. Separate GCSEs in biology, chemistry, physics and computer science each take up one slot. The 'double science' level 1/level 2 certificates that are offered by some awarding organisations will take up two slots, provided they are recognised for inclusion in performance tables. All these qualifications can count in the EBacc slots in the measure.

## Changes to science GCSEs

New science GCSEs will be available for teaching from September 2016, with the first examinations in summer 2018. There will be single science GCSEs (biology, chemistry, physics and computer science) and a combined science (double award) GCSE. There will be no awarding of a combined science (single award) GCSE from 2018 onwards.

## Qualifications in the 'open' slots

Up to three GCSE qualifications (including EBacc subjects not used to fill the EBacc slots) and/or non-GCSE qualifications from the approved list for the year in question can count towards the 'open group' of subjects in the Progress 8 measure.

From 2017, approved non-GCSE qualifications are those that develop technical and practical skills not usually acquired through general education and are categorised as Technical Awards.

## Level 3 qualifications

AS levels will count in the appropriate slot of the Progress 8 measure for their subject (for example, mathematics AS-levels will count in the mathematics slot, a French AS-level in the 'EBacc group', and an Art AS-level in the 'open group'). 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 grades A and B will score higher points in Progress 8 than an A\* at GCSE.

Level 3 qualifications not included in the EBacc list can only count in an 'open' slot. This includes Free Standing Mathematics qualifications and Asset Languages Ladder qualifications.

Asset Language Ladder qualifications will only count in an 'open' slot if the pupil has not taken a GCSE in the same language.

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

## Point scores

The point score scale for performance table measures in 2016 will change from the current 16-58 scale to a 1-8 point scale, where 1 is equivalent to a Grade G GCSE and an increase in one point represents an increase of one GCSE grade up to 8, which is equivalent to an A\* GCSE. Different grades in non-GCSE qualifications will also be given a score on this scale.

In 2017, new GCSE qualifications in English and mathematics will be included in the Progress 8 measure. These qualifications will have a new grading scale that uses the numbers 1 to 9 to identify levels of performance (as will other reformed GCSEs once they are introduced over the following two years). Points will be allocated to the new GCSEs on a 1-9 point scale corresponding to the new 1 to 9 grades, e.g. a grade 9 will get 9 points in the performance measures.

During this transition period where a combination of new and old style GCSEs can count towards performance measures, point scores from old style GCSEs will be mapped onto the 1-9 scale (see **Annex A**) and the Progress 8 measure calculated on this basis.

The point scores for different types of qualifications in 2016 and 2017 can be found in **Annex A**.

## Discounting, pathway and first entry rules

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

[Rules for first entry in a particular subject](#) will still apply under Progress 8, as will rules for pathways in English, mathematics and science qualifications. Guidance on discounting and pathway rules can be found in the [RAISEonline document library](#).

## Calculating Attainment 8

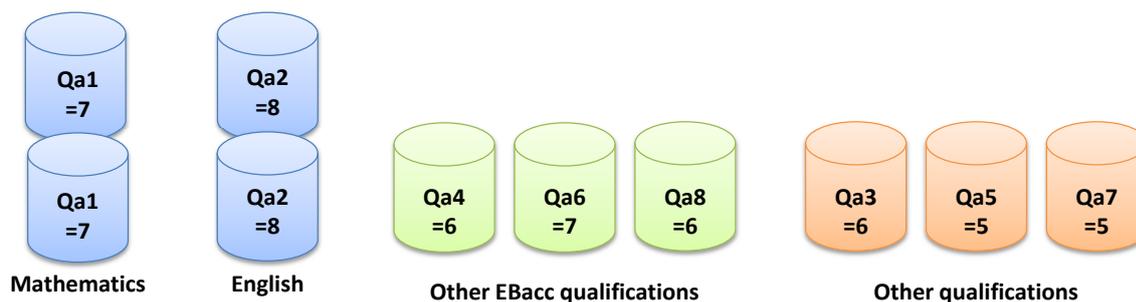
### Worked Example A

Table 1 sets out how the Attainment 8 score would be calculated for a particular pupil, Gillian.

**Table 1: Key stage 4 results for Gillian**

ID	Qualification	Grade	Points	Included in the measure	Element	Doubled?	Total points
Qa1	GCSE mathematics	A	7	✓	Maths	✓	14
Qa2	GCSE English language	A*	8	✓	English	✓	16
Qa3	GCSE English literature	B	6	✓	Other	✗	6
Qa4	GCSE additional science	B	6	✓	EBacc	✗	6
Qa5	GCSE art	C	5	✓	Other	✗	5
Qa6	GCSE core science	A	7	✓	EBacc	✗	7
Qa7	GCSE French	C	5	✓	Other	✗	5
Qa8	GCSE Spanish	B	6	✓	EBacc	✗	6
Qa9	GCSE religious studies	D	4	✗			

Referring to the IDs of qualifications above, the following illustrates the calculation of the Attainment 8 score for Gillian:



$$\begin{aligned}
 \text{Attainment 8 score} &= (\text{Qa1} + \text{Qa1}) + (\text{Qa2} + \text{Qa2 as taken English literature}) \\
 &\quad + \text{Qa4} + \text{Qa6} + \text{Qa8} + \text{Qa3} + \text{Qa5} + \text{Qa7} \\
 &= (7 + 7) + (8 + 8) + 6 + 7 + 6 + 6 + 5 + 5 \\
 &= 65
 \end{aligned}$$

Dividing the Attainment 8 score by 10 gives a pupil's average grade. In this case it is 6.5, between GCSE grades A and B.

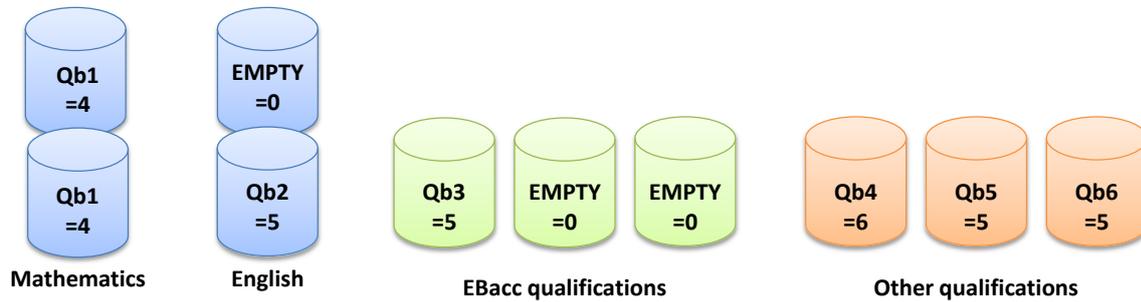
## Worked Example B

Table 2 sets out how the Attainment score would be calculated for another pupil, Hardip.

Table 2: Key stage 4 results for Hardip

ID	Qualification	Grade	Points	Included in the measure	Element	Doubled?	Total points
Qb1	GCSE Mathematics	D	4	✓	Maths	✓	8
Qb2	GCSE English Language	C	5	✓	English	×	5
Qb3	GCSE core science	C	5	✓	EBacc	×	5
Qb4	BTEC First Award in Hospitality	Merit	6	✓	Other	×	6
Qb5	BTEC First Award in Sport	Pass	5	✓	Other	×	5
Qb6	Cambridge National Certificate in Business and Enterprise	Pass	5	✓	Other	×	5
Qb7	NCFE Certificate in Engineering Studies	Pass	5	×			

Referring to the IDs of qualifications above, the following illustrates the calculation of the Attainment 8 score for Hardip:



$$\begin{aligned}
 \text{Attainment 8 score} &= (\text{Qb1} + \text{Qb1}) + (\text{Qb2} + 0) \\
 &\quad + \text{Qb3} + 0 + 0 + \text{Qb4} + \text{Qb5} + \text{Qb6} \\
 &= (4 + 4) + (5 + 0) + 5 + 0 + 0 + 6 + 5 + 5 \\
 &= 34
 \end{aligned}$$

Dividing the Attainment 8 score by 10 gives a pupil's average grade. In this case it is 3.4, between GCSE grades D and E.

Hardip has not taken English literature, so his score for English language is not doubled. Furthermore, he has taken only one EBacc subject, so he scores zero for two of the three EBacc slots. Only three of his four non-GCSE qualifications are counted.

# Calculating Progress 8

## Calculating a pupil's Progress 8 score

Progress 8 scores will be calculated for pupils for the sole purpose of calculating the school's Progress 8 score.

A pupil's Progress 8 score is defined as their Attainment 8 score, minus their estimated Attainment 8 score. The estimated Attainment 8 score is the average Attainment 8 score of all pupils nationally with the same prior attainment at key stage 2 (KS2). 2014 attainment estimates are shown in **Annex B**.

For 2016, a pupil's prior attainment is defined as the average of their KS2 English and mathematics results, in fine graded levels. The input for the prior attainment calculation for 2015 to 2018 is shown in **Annex C**.

### Example of fine level calculation

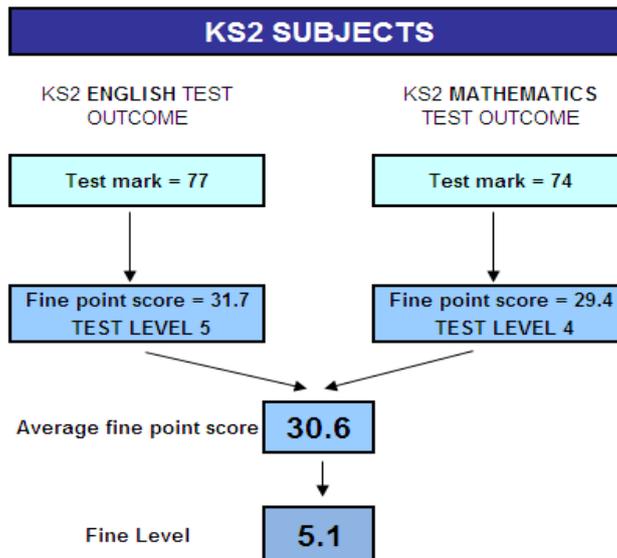
If for example a pupil achieved KS2 English and mathematics test marks of 77 and 74 respectively, this would be converted to a KS2 fine level as depicted by the diagram below.

Test marks are converted to a fine point score by the following formula:

$$\text{Basic level} + \frac{\text{actual test mark} - \text{bottom of level threshold}}{\text{top of level threshold} - \text{bottom of level threshold} + 1}$$

where the level and level thresholds are determined by the mark.

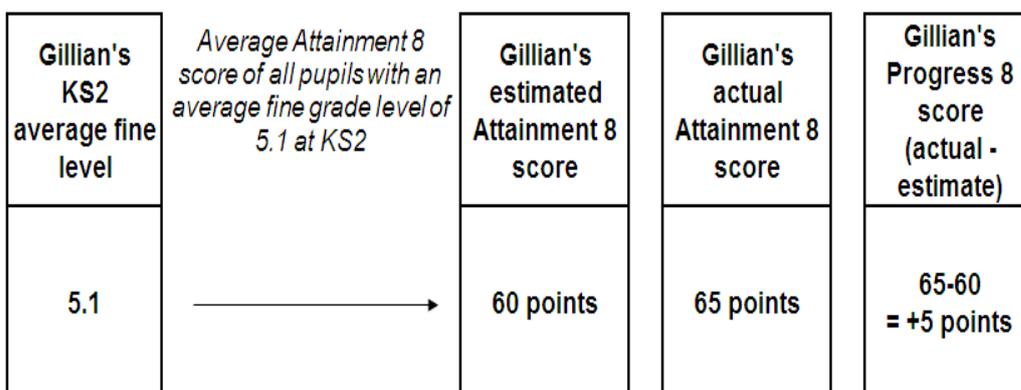
Once the KS2 English and mathematics marks have been converted to fine points an average of the two is taken to provide an overall point score. This is then divided by 6 and rounded to 1 decimal place to obtain the fine level as used in Progress 8 calculations.



### Worked Example A - continued

As we saw, Gillian has an Attainment 8 score of 65. Her KS2 fine level scores were 31.7 and 29.4 in mathematics and English, an average of 30.6, which divided by 6 gives 5.1. The national average Attainment 8 score for pupils with Gillian's KS2 results is 60 in that year.

Gillian's Progress 8 score is the difference between her actual Attainment 8 score and the estimated Attainment 8 score, that is,  $65 - 60 = +5$ .



Dividing her Progress 8 score by 10 gives an average score of + 0.5 grades, which means that Gillian has achieved an average of half a grade better per subject than other pupils with the same prior attainment.

## Calculating a school Progress 8 score

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

### Worked Example A – continued

Let us then say that Gillian is one of 142 pupils in her school's KS4 cohort, who gain a range of Progress 8 scores:

Pupil #	Pupil name	VA score
1	Gillian	+0.5
2	Lindsay	-0.2
...	...	...
142	Hardip	+1.1
<b>Sum</b>		<b>+36.5</b>

## Interpreting Progress 8 scores

A school's Progress 8 score is calculated as the average of its pupil's Progress 8 scores. For all pupils nationally, the average Progress 8 score will be zero. School scores should be interpreted alongside their associated confidence intervals. If the lower bound of the school's confidence interval is greater than zero, it can be interpreted as meaning that the school has achieved greater than average progress compared to pupils nationally, and vice versa if the upper bound is negative.

See **Annex D** for further details on interpreting school scores and their associated confidence intervals.

## 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 estimate and the confidence interval for a school should be taken into account when comparing with other schools, pupil groups or national averages.

Information about how confidence intervals will be calculated is described in **Annex D**.

## **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 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 by 10 (the eight qualifications with English and mathematics both counting for two slots), 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 mathematics, rather than to take more subjects but achieve lower grades overall.

## **Measurement of the progress of pupils with no key stage 2 test results**

### **Pupils working below the level of the test**

When calculating the baseline for each pupil's Progress 8 score, we will use KS2 teacher assessments in cases where pupils have been unable to access the end of KS2 tests. This includes taking account of teacher assessments at Levels 1 and 2. Page 10 of [A technical guide to 2014 key stage 2 to key stage 4 value added measures](#) shows how we currently award points to different pupils in value added performance measures, and we plan to continue with a similar approach.

## Pupils without a test score in English, mathematics or both

Certain pupils without a test score in one or both of English and mathematics, can have their teacher assessment used<sup>2</sup>. If a pupil has assessment information for one subject only, this one subject will be used as the baseline.

## Pupils who have no KS2 assessment

There will be some pupils (those arriving at secondary school from the independent sector or abroad) who have no KS2 results to use as the baseline for the Progress 8 measure. 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).

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. We also expect the school to be able to show to Ofsted, parents and others the progress these pupils have made through secondary school. The school can do this by providing information from robust assessments of their own when the pupil enters the school, and then looking at the pupil's progress to GCSEs.

## Estimated grades

In 2016, the minimum grades each pupil requires to achieve a positive Progress 8 score (also known as their 'estimated grade') will not be known in advance. This is because each pupil's results are compared to other pupils with the same prior attainment *within the same cohort*.

Care should be taken when analysing current data to consider a school's likely Progress 8 results. This is because the reforms following the Wolf Review of Vocational Education came into effect for 2014 performance tables. In addition, many schools will change their curriculum offer in response to the Progress 8 measure, so any modelling based on current national results could be misleading.

However, there are several sources of information that should help schools to plan their teaching for individual pupils:

- Transition matrices should help schools to make predictions for pupils in individual subjects. Transition matrices based on 2014 results are available on RAISEonline. For a range of qualifications, they show the average results achieved by pupils with each key stage 2 (KS2) sublevel. This gives an indication of the average progress

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<sup>2</sup> For 2015 only, this will include pupils in schools that did not run Key Stage 2 tests in 2010.

made by pupils in individual subjects (although schools should be aware that changes in performance may alter this picture by 2016).

- We have provided schools with their own Progress 8 score based on 2014 exam results. This information will not be used for accountability purposes or included in performance tables, but should help schools to consider their curriculum and teaching in light of the accountability reforms.

## **Pupils reaching their estimated grades**

Unlike in the 'expected progress' measures, the Progress 8 measure 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 improves 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.

## **Setting estimated grades in advance**

From 2019 we plan to move to a system in which schools are informed in advance about the results each pupil will require to achieve a positive Progress 8 score. In 2019, expectations will be set three years previously, using 2016 results, so that the information is available to schools during pupils' year 9 study. Then for 2020, expectations would be set from the 2017 results, and so on.

This approach would allow the Progress 8 measure to recognise improvement in national performance, and it will help schools with their target setting.

We will confirm the position for the 2017 and 2018 progress measure later in the year.

This does not affect the introduction of the Progress 8 measure in 2016.

## Annex A – New point score scales for 2016 (and schools opting in early in 2015), and 2017

This annex explains the point score scale that will be used in 2016 and 2017 performance tables. The 2016 point score scale is based on the points currently awarded for each qualification but scores will change to a 1-8 scale. For all level 1, level 2 and AS level qualifications, this can be calculated using this formula:

$$2016 \text{ point score} = \frac{\left( \frac{\text{current point score}}{\text{GCSE size equivalent}} \right) - 10}{6}$$

2016 points will also be used for schools opting in early in 2015.

In 2017, new GCSE qualifications in English and mathematics, graded 1-9, will be included in performance tables. Points will be allocated to the new GCSEs on a 1-9 point scale corresponding to the new 1 to 9 grades, e.g. a grade 9 will get 9 points in the performance measures. All other qualifications will be mapped onto the 1-9 scale.

The tables on the following pages contain the 2016 and 2017 performance tables points for a level and grade structure combination.

It is important to note that the key factor in the grade structure is the number of grades – not the names of grades. For example, a pass/merit/distinction/distinction\* and a Grade C/ Grade B/ Grade A/ Grade A\* structure both have four grades.

**Table A.1 New point score scales for legacy GCSEs**

GCSE grade	2016 Points	2017 Points
G	1.00	1.00
F	2.00	1.50
E	3.00	2.00
D	4.00	3.00
C	5.00	4.00
B	6.00	5.50
A	7.00	7.00
A*	8.00	8.50

**Table A.2 New point score scales for level 1 qualifications**

<b>Level 1 grade structure</b>	<b>Example grade</b>	<b>2016 Points</b>	<b>2017 Points</b>
Pass only	Pass	2.50	1.75
3 grade scheme	Pass	1.50	1.25
	Merit	3.00	2.00
	Distinction	4.00	3.00
4 grade scheme	G	1.00	1.00
	F	2.00	1.50
	E	3.00	2.00
	D	4.00	3.00
5 grade scheme	E	1.00	1.00
	D	1.75	1.38
	C	2.50	1.75
	B	3.25	2.25
	A	4.00	3.00
7 Grade Scheme	GG	1.00	1.00
	FG	1.50	1.25
	FF	2.00	1.50
	EF	2.50	1.75
	EE	3.00	2.00
	DE	3.50	2.50
	DD	4.00	3.00

**Table A.3 New point score scales for level 2 qualifications**

<b>Level 2 grade structure</b>	<b>Example grade</b>	<b>2016 Points</b>	<b>2017 Points</b>
Pass only	Pass	6.00	5.50
3 grade scheme	Pass	5.00	4.00
	Merit	6.50	6.25
	Distinction	7.50	7.75
4 grade scheme	C	5.00	4.00
	B	6.00	5.50
	A	7.00	7.00
	A*	8.00	8.50
5 grade scheme	E	5.00	4.00
	D	5.50	4.75
	C	6.00	5.50
	B	6.50	6.25
	A	7.00	7.00
7 Grade Scheme	Pass Pass	5.00	4.00
	Merit Pass	5.50	4.75
	Merit Merit	6.00	5.50
	Distinction Merit	6.50	6.25
	Distinction Distinction	7.00	7.00
	Distinction* Distinction	7.50	7.75
	Distinction* Distinction*	8.00	8.50
8 Grade Scheme	CD	4.50	3.50
	CC	5.00	4.00
	BC	5.50	4.75
	BB	6.00	5.50
	AB	6.50	6.25
	AA	7.00	7.00
	A*A	7.50	7.75
	A*A*	8.00	8.50

**Table A.4 New point score scales for AS levels and double AS levels**

<b>AS level grade</b>	<b>2016 Points</b>	<b>2017 Points</b>
E	4.50	3.50
D	5.75	5.13
C	7.00	7.00
B	8.25	8.88
A	9.50	10.75

<b>Double AS levels grade</b>	<b>2016 Points</b>	<b>2017 Points</b>
EE	4.50	3.50
ED	5.13	4.20
DD	5.75	5.13
DC	6.38	6.07
CC	7.00	7.00
CB	7.63	7.95
BB	8.25	8.88
BA	8.88	9.82
AA	9.50	10.75

**Table A.5 New point score scales for graded music examinations**

<b>Graded music level</b>	<b>Grade</b>	<b>2016 Points</b>	<b>2017 Points</b>
Grade 6	Pass	7.00	7.00
	Merit	8.00	8.50
	Distinction	8.00	8.50
Grade 7	Pass	7.00	7.00
	Merit	8.00	8.50
	Distinction	8.00	8.50
Grade 8	Pass	8.00	8.50
	Merit	8.00	8.50
	Distinction	8.00	8.50

**Table A.6 New point score scales for free standing mathematics qualifications**

Free standing mathematics qualification grade	2016 Points	2017 Points
E	2.75	1.88
D	3.50	2.50
C	4.25	3.25
B	5.00	4.00
A	5.75	5.13

## Worked examples of how to use these tables

### Example A - Calculating the 2016 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 the 2016 column of Table A.2 gives the points of 2.5.

Grades Distinction\*/Distinction/Merit/Pass are at level 2, which makes for a 4 grade structure, and the 2016 column of Table A.3 gives the points of between 5 and 8.

**Table A.7 New 2016 point score scales for BTEC First Award**

BTEC First Award grade	2016 Points
Level 1 Pass	2.50
Level 2 Pass	5.00
Level 2 Merit	6.00
Level 2 Distinction	7.00
Level 2 Distinction*	8.00

### Example B - Calculating the 2016 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 the 2016 column of Table A.2 gives the points of between 1.5 and 4.

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 the 2016 column of Table A.3 gives the points of between 5 and 8.

**Table A.8 New 2016 point score scales for OCR Cambridge National Certificate**

<b>OCR Cambridge National Certificate grade</b>	<b>2016 Points</b>
Level 1 Pass	1.50
Level 1 Merit	3.00
Level 1 Distinction	4.00
Level 2 Pass	5.00
Level 2 Merit	6.00
Level 2 Distinction	7.00
Level 2 Distinction*	8.00

## Annex B – 2014 Attainment 8 estimates

The estimated Attainment 8 score is the average Attainment 8 score of all pupils nationally with the same prior attainment at key stage 2 (KS2). The following table shows the Attainment 8 estimates for each KS2 average fine level, based on the 2014 cohort averages.

Changes to national subject entry patterns and performance will cause these estimates to change in future years, as they will be derived from averages from later cohorts. As such they should be treated with caution if extrapolating to cohorts beyond 2014.

**Table B.1 Provisional 2013 Attainment 8 estimates for each KS2 fine level**

KS2 average fine level (English & Maths)	2014 Attainment 8 estimate	KS2 average fine level (English & Maths)	2014 Attainment 8 estimate	KS2 average fine level (English & Maths)	2014 Attainment 8 estimate
1.5 <sup>a</sup>	15	3.7	32	4.9	55
2.0 <sup>b</sup>	18	3.8	33	5.0	57
2.5 <sup>c</sup>	19	3.9	35	5.1	60
2.8 <sup>d</sup>	21	4.0	37	5.2	62
2.9	22	4.1	38	5.3	64
3.0	23	4.2	40	5.4	67
3.1	23	4.3	42	5.5	70
3.2	25	4.4	44	5.6	72
3.3	26	4.5	46	5.7	75
3.4	27	4.6	49	5.8 <sup>e</sup>	76
3.5	28	4.7	51		
3.6	30	4.8	53		

a. Pupils with mean KS2 fine grade score of  $\leq 1.5$  are assigned a KS2 score of 1.5

b. Pupils with mean KS2 fine grade score between 1.6 and 2.0 are assigned a KS2 score of 2.0

c. Pupils with mean KS2 fine grade score between 2.1 and 2.5 are assigned a KS2 score of 2.5

d. Pupils with mean KS2 fine grade score between 2.6 and 2.8 are assigned a KS2 score of 2.8

e. Pupils with mean KS2 fine grade score of  $\geq 5.8$  are assigned a KS2 score of 5.8

## Annex C – Key Stage 2 results used to calculate prior attainment

From 2017 onwards, reading and mathematics test results only will be used in calculating KS2 prior attainment fine levels for use in progress 8. For 2016 and for 2015 for schools opting in early to Progress 8, overall English and mathematics KS2 test results will be used to calculate prior attainment. This is summarised in the table below.

	<b>KS4 Cohort</b>	<b>KS2 Cohort</b>	<b>KS2 tests used in calculating prior attainment fine level bands</b>
<b>Progress 8 measure by year</b>	2015	2010	English and mathematics
	2016	2011	English and mathematics
	2017	2012	Reading and mathematics
	2018	2013	Reading and mathematics

## Annex D – Confidence Intervals

A 95% confidence interval will be calculated around each school 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

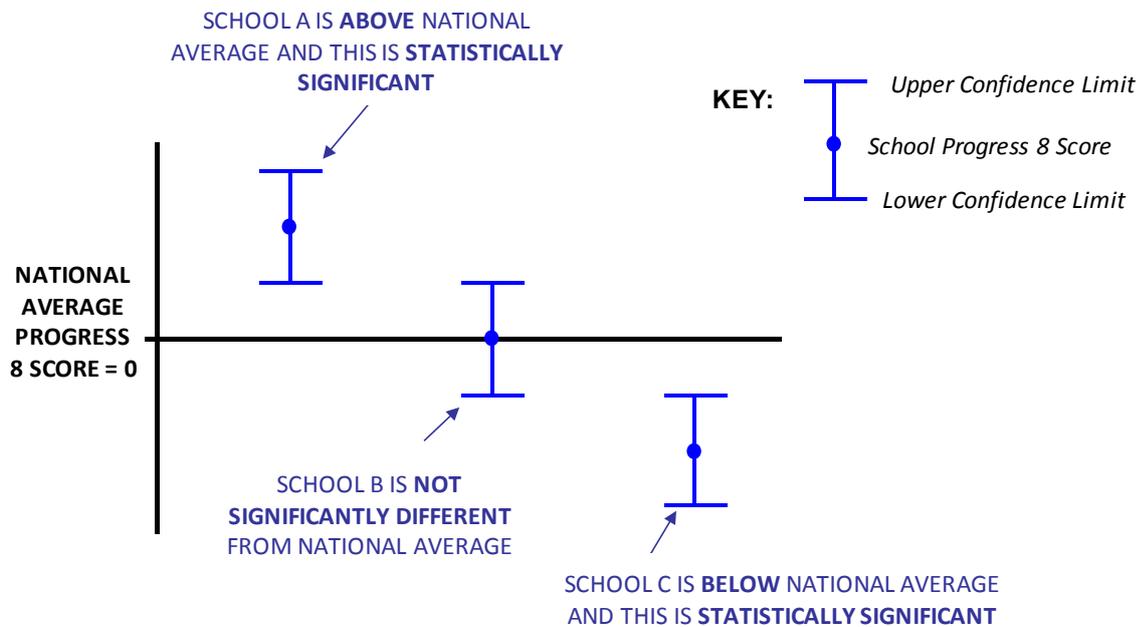
$$CI_s = 1.96 \times \frac{\sigma_N}{\sqrt{n_s}}$$

where:

1.96	is the critical value for a 95% confidence interval;
$\sigma_N$	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 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.



## Worked example A – continued

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

$$CI_s = 1.96 \times \frac{\sigma_N}{\sqrt{n_s}} = 1.96 \times \frac{1.14}{\sqrt{100}} = 1.96 \times 0.114 = 0.2$$

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

$$= [+0.3 - 0.2, +0.3 + 0.2] = [+0.1, +0.5]$$

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.



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