Reports help guide

School summary dashboard series Key Stage 2 - August 2017
Introduction to the KS2 school summary dashboard FFT Aspire

The following help files provide a quick overview of the Key Stage 2 school summary dashboard reports currently available within FFT Aspire (August 2017).
Higher and lower performing pupil groups
The top 3 and bottom 3 performing pupil groups in terms of progress for a range of indicators. A group must have positive progress to appear in the top 3 or negative for the bottom 3. Statistical significance symbols are also indicated here. Switching the VA/CVA toggle may reorder the list or change which groups appear. Cohort size is indicated within brackets. Groups fewer than 5 are not shown.

Use of FFT data
- Provides questions not answers
- Used as the starting point for discussions
- Triangulate alongside a range of other data and professional judgement.

Statistical significance symbols
Statistical significance symbols indicate that the particular area may be worthy of further investigation as part of the self-evaluation process. Green (significantly above) and red (significantly below) circles compare the school’s performance with the national average. Up and down arrows indicate significant rises or falls in performance in comparison with the previous year. Smaller cohorts are more unlikely to be statistically significant.
Scaled Scores in FFT Aspire

Scaled scores

The 2016 Key Stage 2 assessments were the first to assess the new national curriculum, introduced by the DfE in 2014. Results are now no longer reported as levels, and each pupil now receives their test results as scaled scores and their teacher assessments based on the standards in the interim framework. The tests at the end of Key Stage 2 are administered in mathematics, English reading and English grammar, punctuation and spelling. Pupils were teacher assessed at the end of Key Stage 2 in reading, writing, mathematics and science. Scaled Scores for tests range between 80 and 120, with pupils scoring 100+ attaining the ‘expected standard’ and scores of 110+ attaining the ‘higher standard’. Teacher assessments for each subject include a descriptor for working at the ‘expected standard’. Only the writing teacher assessment is converted to a scaled score.

FFT Aspire delivers analysis of the new measures through its familiar suite of interactive visual dashboards. Alongside the headline DfE attainment measures, FFT Aspire includes an extensive list of new performance indicators. FFT Value Added (VA) and Contextual Value Added (CVA) is calculated for each indicator.

Pupil level scaled scores

Edward Cadmium attained a scaled score of 101 in the mathematics test. Being a score of over 100, he reached the DfE’s expected standard. Edward’s (VA) progress is shown as +1.2, as 1.2 was the positive difference between his actual score (101) and his estimated score (99.8). The estimated score is calculated by looking at the average scaled score attained by pupils nationally with similar Key Stage 1 starting points, same gender and month of birth. Switching to CVA may change Edward’s estimate and difference.

Calculating scaled scores backwards for previous years

Following a statistical analysis of national datasets, FFT have now recalculated results for all schools in 2014 and 2015. We believe that this provides schools with a richer set of data and will allow them to broaden their understanding of this year’s results rather than viewing them in relative isolation. To achieve this, we have calculated the percentage of pupils at each scaled score in the 2016 KS2 tests. Then we calculated the percentage of pupils at each mark-point in the KS2 tests, including the level 6 tests, for each year from 2013 to 2015. We use these two sets of percentages to create mark-point to scaled score conversion tables. For example: the top 0.1% of pupils achieved a scaled score of 120 reading. We therefore find the top-scoring 0.1% of pupils in the KS2 reading tests from the previous three years and assign them a scaled score of 120. We then repeat the process for the other scaled scores. This produces national distributions (and national averages) for 2013 to 2015 very close to the distribution for 2016. In FFT Aspire the back-calculation tables are visible for 2014 and 2015 cohorts. A blue dotted line indicates where back-calculated scores end and actual scaled score start.

School level scaled scores

Pupil level scaled scores and progress scores are aggregated up to group and school level. The ‘VA scaled score’ example below provides the mathematics scaled scores for two schools. School A attained a higher overall average scaled score in maths than school B. However, when considering the pupils’ Key Stage 1 starting points, School B has made the most progress.

<table>
<thead>
<tr>
<th>VA scaled score</th>
<th>% expected standard (RWM)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Actual</td>
<td>Expected</td>
</tr>
<tr>
<td>School A</td>
<td>106.3</td>
</tr>
<tr>
<td>School B</td>
<td>105.8</td>
</tr>
</tbody>
</table>

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Progress: Value Added and Contextual Value Added

Progress
Progress compares the attainment of pupils in the school with the attainment of ‘similar pupils’ nationally. The similar pupils’ attainment becomes an estimate of performance. The difference between the school’s attainment and the estimate is progress, which can be a positive, negative or a neutral value. Progress is only calculated for ‘matched pupils’; those with prior KS1 attainment.

All measures which appear in the performance tables use the same model as per DfE value added. For VA measure only included in Aspire similar pupils are defined as having similar prior attainment, the same gender and month of birth; CVA also includes these factors plus additional pupil contextual factors and accounts for the profile of the school. Both models use interaction terms; this means the impact of each factor on the other factors is accounted for.

Analysing performance
A common initial question for senior leaders is simply ‘How did the cohort perform in comparison with national averages?’. The attainment gauge here supports this investigation. We can see that 35% of pupils attained the Expected Standard in reading, writing and mathematics combined, and we quickly identify that this performance is below the national average. The gap is 17 percentage points below the national average.

Arguably a more important question for self-evaluation purposes regards the relative progress made by pupils. The VA gauge supports senior leaders in answering the question ‘How are the pupils in my school progressing in comparison to pupils with similar starting points nationally?’ The VA gauge above suggests that 9 percent of pupils in the cohort made expected the standard than their equivalents nationally.

The third question for analysis is ‘How are the pupils in my school progressing in comparison to pupils with similar profiles in those schools with similar intakes?’ The CVA gauge indicates that progress is in-line with similar pupils in similar schools.

The next steps for the evaluation process are to move through the other reports within the summary dashboard and break down the headline indicators by subjects and pupil groups. This will provide a wider picture of performance.

Factors used within progress models

<table>
<thead>
<tr>
<th>Pupil context factors</th>
<th>KS2 DfE Value added</th>
<th>FFT Value added</th>
<th>Contextual Value added</th>
</tr>
</thead>
<tbody>
<tr>
<td>Prior attainment</td>
<td>RWM</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Subject variations</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Gender</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Month of Birth</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>EAL</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>FSM</td>
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<td></td>
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<tr>
<td>SEN</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ethnicity</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mobility (joined late / time in school)</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

| School context factors                |                     |                |                        |
| Mean Intake TA Level                  |                     |                |                        |
| Spread of Intake Test Level           |                     |                |                        |
| FSM Entitlement (Percentile Rank)     |                     |                |                        |
| Geodemographic Data (Percentile Rank) |                     |                |                        |
School summary dashboard: Attainment & progress

What does the report show?
A visual representation of school and national average attainment over time through charts and tables. Progress (Value Added or Contextual Value Added) is calculated for the selected indicators. Any two indicators can be displayed on the charts. The table at the bottom of the report provides analysis for a wide range of performance measures. The whole report can be recalculated for specific pupil groups. Use caution when interpreting performance of smaller cohorts; in a pupil group size of 10 pupils, each pupil's performance represents 10% of the group's performance.

Navigation
Eight reports make up the KS2 summary dashboard. Click on a tab name to change report.

KS2 attainment & progress (value added)
School attainment is compared against the national average. Progress compares the school's attainment against the attainment of 'similar pupils' nationally. The VA/CVA toggle switches the progress model between Value Added (VA) and Contextual Value Added (CVA).

In this VA example, 35% of pupils attained the Expected standard. Although below the national average, the attainment was 9 percentage points above the performance of similar pupils nationally.

Use of FFT data
- Provides questions not answers
- Used as the starting point for discussions
- Triangulate alongside a range of other data and professional judgement.

Statistical significance symbols
Statistical significance symbols indicate that the particular area may be worthy of further investigation as part of the self-evaluation process. Green (above) and red (below) circles compare the pupil group’s performance with the national average. Up and down arrows indicate significant rises or falls in performance in comparison with the previous year. Smaller cohorts are more unlikely to be statistically significant.

Time series chart
Visual display of school and national average attainment over time for up to two selected indicators. Where appropriate, new scaled score indicators have been calculated backwards for 2014 & 2015 results. A blue dotted line indicates where back-calculated scores end and actual scaled scores start.

Year groups
Outcomes of previous cohorts can be displayed on the report by selecting the required year group.

Filters
Use the filters to recalculate the values on the whole report for specific groups of pupils. The selected group names will appear at the top of the report in a grey bar.

FFT Rank
FFT national ranking for indicator split into hundredths (1 = highest, 100 = lowest). Ranks are calculated for attainment and progress. Caution: ranks between 20 to 80 tend to be volatile between years.

Displaying other indicators
Any two indicators can be selected to appear in the charts by clicking on the button.

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School summary dashboard: Attainment & progress

The report displays a three year history of attainment and progress for a range of key performance indicators. Statistical significance is indicated for attainment and progress in comparison with the national average. Statistically significant changes from the previous year are also indicated with the direction. The whole report can be re-calculated to focus on specific groups of pupils (e.g. FSM6 boys).

### KS2 Actual Results

Actual results and progress are displayed for a range of key summary performance indicators. Any two of these indicators can be represented visually within the charts and rankings at the top of the report.

### Small cohorts

Use caution when interpreting performance of smaller cohorts; in a pupil group size of 10 pupils, each pupil’s performance represents 10% of the group’s performance.

### Statistical significance symbols

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### Use of FFT data

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**Filters**

Use the filters to recalculate the values on the whole report for specific groups of pupils. The selected group names will appear at the top of the report in a grey bar.

**KS2 Pupil progress indicators**

Progress compares school attainment against the attainment of ‘similar pupils’ nationally. The VA/CVA toggle switches the progress model between Value Added (VA) and Contextual Value Added (CVA). Only matched pupils (those with KS1 prior attainment) are included within progress. The % of matched pupils is displayed for each cohort on the top row.

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**Navigation**

Eight reports make up the KS2 summary dashboard. Click on a tab name to change report.

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What does the report show?
The interactive report allows side-by-side comparison of attainment and progress across any three indicators from the indicators selector. The tables and charts help illuminate variation between performance of pupil groups. Use caution when interpreting performance of smaller cohorts; in a pupil group size of 10 pupils, each pupil’s performance represents 10% of the group’s performance.

Navigation
Eight reports make up the KS2 summary dashboard. Click on a tab name to change report.

Actual results
Aggregated attainment results for the selected indicators are displayed for each pupil group.

Pupil progress
Value Added (VA) or Contextual VA (CVA) perspective of progress. Only matched pupils are included in progress (those with KS1 attainment). Statistical significance and trends indicated.

S-curve chart
Visual display of pupil groups performance for any highlighted (turns blue) attainment or progress indicator column. Cohort size is indicated within the brackets. The values are ranked high to low with statistical significance indicated (green or red). Grey values are not statistically significant, but could be larger than values that are. Cohort size impacts on statistical significance calculations.

Statistical significance symbols
Statistical significance symbols indicate that the particular area may be worthy of further investigation as part of the self-evaluation process. Green (above) and red (below) circles compare the pupil group’s performance with the national average. Up and down arrows indicate significant rises or falls in performance in comparison with the previous year. Smaller cohorts are more unlikely to be statistically significant.

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Year groups
Outcomes of previous cohorts can be displayed on the report by selecting the appropriate year group. The KS2 assessments introduced in 2016 have been back-calculated for the 2014 and 2015 reported years.

Displaying other indicators
Any two indicators can be selected to appear in the table by clicking on the button.

School summary dashboard: Pupil groups
What does the report show?
This interactive report provides analysis of a wide range of performance indicators for each KS2 subject. The charts on the right side can display any of the listed measures by clicking on the indicator name to turn it blue. The whole report can be recalculated for specific pupil groups. Use caution when interpreting performance of smaller cohorts; in a pupil group size of 10 pupils, each pupil’s performance represents 10% of the group’s performance.

Actual results and Pupil progress
A range of attainment results and progress (VA or CVA) displayed for each subject. Only matched pupils are included in progress (those with KS1 attainment). Statistical significance and trends are indicated. The new assessments introduced in 2016 have been back-calculated for 2014 and 2015 cohorts.

Use of FFT data
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Statistical significance symbols
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School summary dashboard: Disadvantaged pupils

Navigation & report options
Click on the reporting year selector to view performance from a previous year. Select a performance indicator to be displayed in the table from the ‘Indicators’ selector. Click on the Export icon to create a PDF of the on-screen report.

What does the report show?
This interactive report focuses on the gap or difference between FSM6 students (those in receipt of Free School Meals within the last six years) and non-FSM6 students.

Attainment line graph
The actual score in the measure over three years. Each line represents a different group of pupils: the FSM6 students at the school (pink); the non-FSM6 students at the school (blue); non-FSM6 students across the national cohort (grey). The lines highlight the trend for each group over the three year period.

Table
The table details the attainment and progress score FSM6 and non-FSM6 pupils at the school. The “Gap” column is the percentage difference between FSM6 and non-FSM6 students in the attainment or progress measure. The groups on the lefthand side correspond to those on the Progress gap bar chart.

Indicators
Select the measure to be calculated in the dashboard.

Progress line graph
The value added score in the selected measure.

Progress gap bar chart
The value added score in the measure defined by various pupil characteristics. Each pair of bars represent the scores of the FSM6 and non-FSM6 pupils in amongst various pupil groups. The pupil group is described at the bottom of the chart. The vertical distance between the pink and blue bar represents the attainment gap between the FSM6 and non-FSM6 pupil within the year group.

Tooltips
Appears when hovering the mouse cursor over the each of the marks and bars on the graphs. Details the data behind the mark.
What does the report show?
The report displays named pupil attainment and progress for end of Key Stage 2 tests and teacher assessments. The report helps quickly identify variations in an individual pupil's performance in reading, writing, mathematics & GPS.

Navigation
Eight reports make up the KS2 summary dashboard. Click on a tab name to change report.

Pupil details and context
A blue token can indicate free school meal entitlement in the last 6 years (PP), English as an additional language (EAL) or special educational needs (SEN).

Key stage 1 prior attainment
Previous teacher assessment results in reading, writing and maths displayed.

HML indicates which third nationally the pupil ranked in terms of their overall average KS1 attainment (H = highest third, M = middle third & L = lowest third).

Coloured circles represent attainment being below (red), in-line (yellow) or above (green) the relevant KS1 expected level. Pupils missing KS1 attainment will not have estimated grades.

Use of FFT data
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Attainment (Act)
Pupils' scaled scores are shown for attainment in Reading, Mathematics and GPS. Writing attainment is shown as one of 'N' = Expected Standard, 'A' = Higher Standard, and 'W' = working toward national standard. Cohorts prior to 2016 will have their NC levels shown for attainment.

Estimate (Est)
The estimate represents the average scaled score that was attained by 'similar pupils'. Estimates may change when switching between VA and CVA as the definition of 'similar pupils' changes.

Progress (Diff)
The difference between the estimated scaled score and the actual scaled score. Pupils in the top 20% or 25% (depending on the subject) nationally for progress have their score highlighted in green, with those in the bottom 20% or 25% are coloured red.
What does this report show?
This interactive report shows an additional and easy way to analyse your performance visually. Using the scatterplot feature in FFT Aspire allows you to quickly identify excellence and under performance on the same chart.

Navigation & report options
Use the tabs to navigate through each area of the summary dashboard. Click on the reporting year selector to view performance from a previous year. Click on the Export icon to create a PDF of the on-screen report.

X and Y axis dropdowns
Click the dropdowns to change the measure for the corresponding axis on the chart. There are a range of Attainment, Progress, Estimated and Prior Attainment measures from which to select.

Highlighted by
This dropdown lists pupil characteristics collected in the Census. Selecting a factor splits the marks on the scatterplot into each groups based on that characteristic. By way of example, selecting “Gender” defines the sample on “Male” and “Female”, which a different icon for each.

Filters
Use the filters to select a specific pupil group tp include on the scatterplot. Applying no filter includes all pupils (this is the default).

Swap axes
Switches the measures selected in the axes dropdowns.

Highlight legend
Describes which icons define each group selected using the “highlighted by” dropdown. Click on the name of a sub-group to hide it from the scatterplot.

Tooltips
Hover over the mark on the scatterplot to display the pupil’s name and their scores in the selected X and Y axes measures. Pupils with the same scores who occupy the same spot on the scatterplot stack into the one tooltip.
School summary dashboard: Context

What does this report show?
The report is separated into two areas: the context of the year group and attendance rates. The Context area provides a profile breakdown of the year group, and the profile of the national year group for comparative purposes. The Absence area focuses on absence rates of specific pupil groups and provides national comparative figures for the year group.

Navigation
Six reports make up the KS2 summary dashboard. Click on a tab name to change report.

Context
Breakdown of pupil context and characteristics in numbers and percentages of the cohort. The national cohort profile is provided for comparison.

Use of FFT data
- Provides questions not answers
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Small cohorts
Absence rates for small groups of pupils can be heavily influenced by a single pupil. Always consider the cohort size when interpreting aggregated data.

Pupil groups
Prior attainment group: Each pupil is ranked nationally based on their overall Key Stage 1 teacher assessments. Attainment bands group pupils into thirds, based on their KS1 attainment ranking position. Note, the percentages may not add up to 100% here, as pupils who do not have prior attainment are not included in a group. The groups are:

- Higher = the percentage of pupils who were in the top third of KS1 attaining pupils nationally;
- Middle = the percentage of pupils who were in the middle third of KS1 attaining pupils nationally;
- Lower = the percentage of pupils who were in the bottom third of KS1 attaining pupils nationally.

FSM: pupils entitled to free school meals in the last census before the end of the key stage (also known as FSM current)
FSM (in last 6 years): Pupil Premium pupils, entitled to free school meals at any point in the last 6 years (referred to elsewhere as FSM6)
FSM Ever: pupils who have been ever been listed on a school census as entitled to free school meals
Mobility: Pupils who were in the school for half or less of the key stage i.e. those who joined in year 5 or year 6.