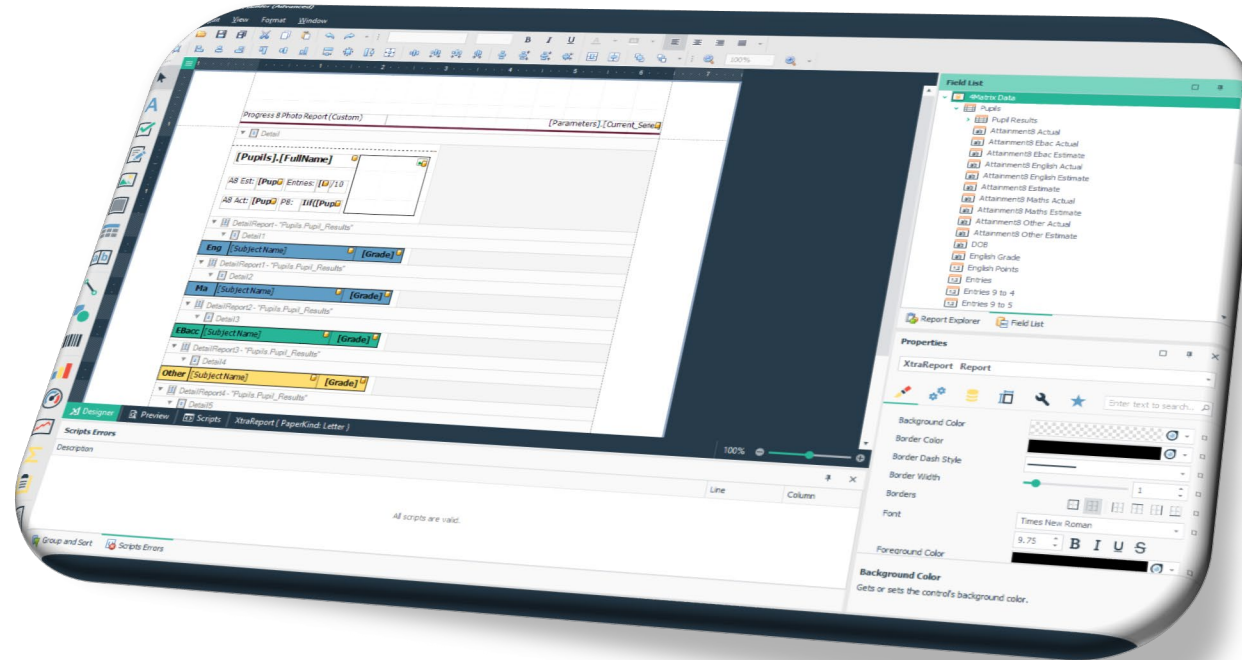


4Matrix Custom Reports - Guidance



Last revised: 21/10/2019

This guide focuses on the Advanced Report Builder tool and apart from basic setup, all topics use an example report from www.4matrix.com/customreports

Topic	Page	Example
Basic Setup	3 - 4	Basic navigation and setup
Colour Formatting	5 - 8	Negative P8 scores show in red
Filter Pupils	9 - 10	Only include pupils with a grade 5 or above in English and Maths
Custom Pupil Sort	11 – 12	Sort pupils by English points/grade from lowest to highest
Set Column Count	13	Overwrite the default column count
Set Row Count	14 - 20	Overwrite the default row count to 2 rows per page
Adding Target Grades for Specific Subjects	22 - 27	Adding English and Maths Targets to a report

3: Basic Setup

The screenshot displays the 4Matrix Report Builder (Advanced) software interface. The main workspace is a grid divided into three horizontal sections: Header, Body, and Footer. The Header section is currently selected. The interface includes a menu bar (File, Edit, View, Format, Window) and a toolbar with various icons for file operations, editing, and formatting. On the right side, there is a 'Field List' panel showing a tree structure of data fields (4Matrix Data, Pupils, Parameters) and a 'Properties' panel for configuring report elements. The bottom of the interface features tabs for 'Designer', 'Preview', and 'Scripts', with 'Designer' being the active view. Annotations with purple arrows point to specific features: 'Open/New/Save/Print options' points to the top-left toolbar; 'Text formatting' points to the top-right toolbar; 'Zoom controls' points to the zoom slider in the top-right; 'Field list (click to expand)' points to the 'Field List' panel; 'Click and drag fields from here to place fields into the report body' points to the field list items; 'Other formatting options' points to the 'Properties' panel; 'Options to drag and drop report components such as labels/free text boxes, etc' points to the left-hand toolbar; 'Click Detail to change column count and sections' points to the 'Detail' tab in the grid; 'Click and drag to make each section bigger' points to the grid lines; and 'Tabs for Design/Preview/Scripts views' points to the bottom tabs.

Open/New/Save/Print options

Text formatting

Zoom controls

Field list (click to expand)

Click and drag fields from here to place fields into the report body

Other formatting options

Options to drag and drop report components such as labels/free text boxes, etc

Click Detail to change column count and sections

Click and drag to make each section bigger

Header

Body

Footer

Designer | Preview | Scripts | Report [PaperKind: Letter]

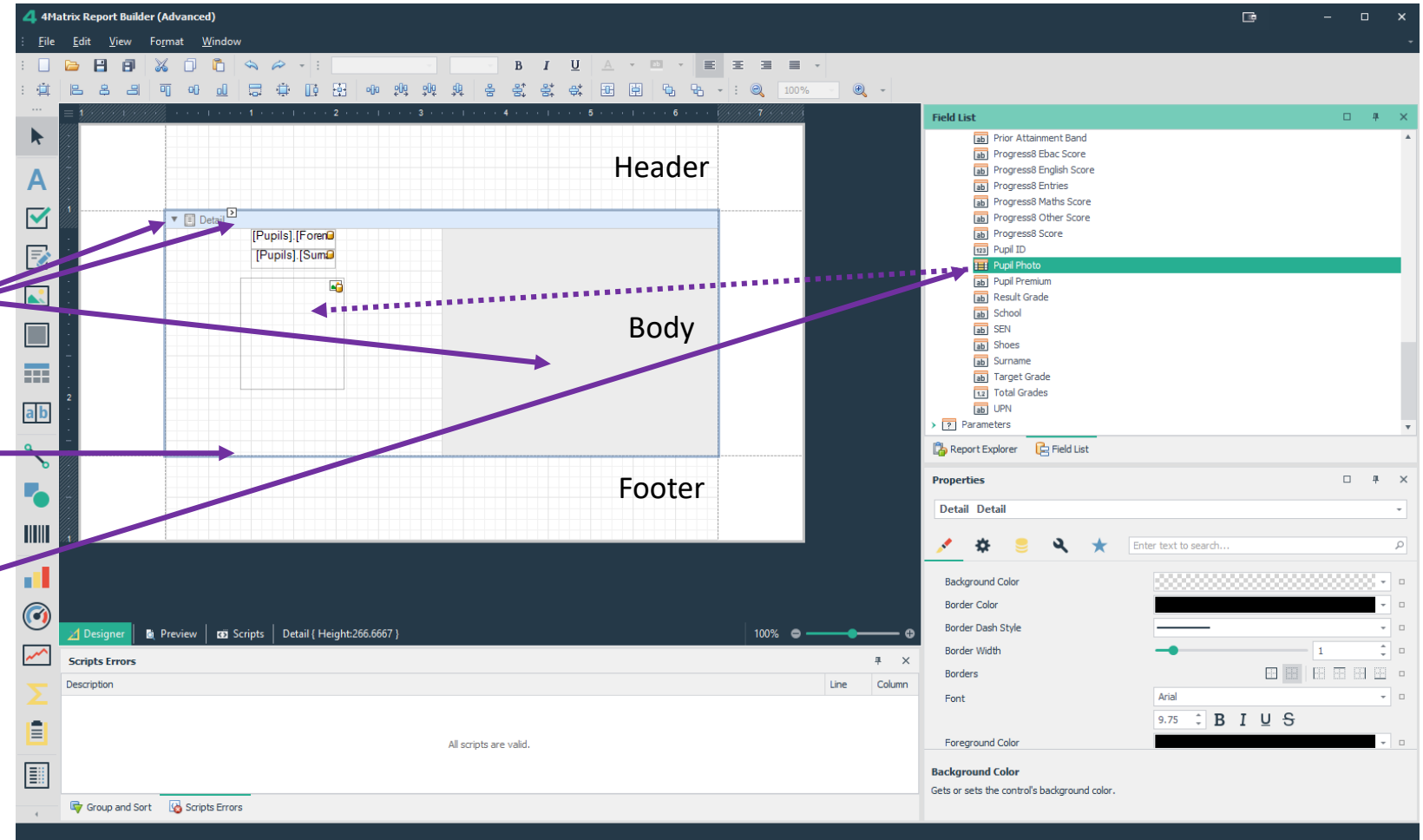
Scripts Errors

Group and Sort | Scripts Errors

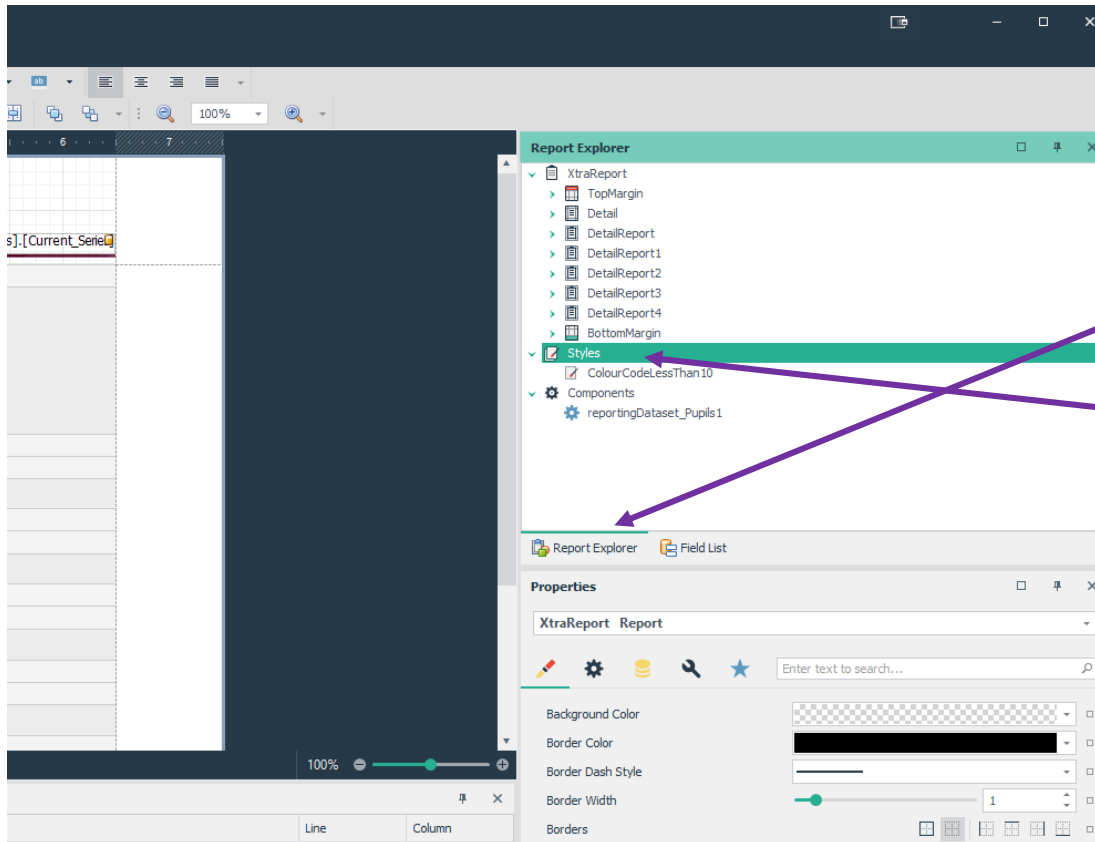
4: Basic Setup Cont./

In this example we have:

- 1) Selected Details and used the small arrow to access column count and set this to 2 (you can now see a grey area to the right of the main body, but we only need to work with 1st record/column)
- 2) Dragged the main Body section down to make it bigger
- 3) Dragged Forename, Surname and Photo from the Fields list into the Body
- 4) Centred the text in the Forename and Surname fields

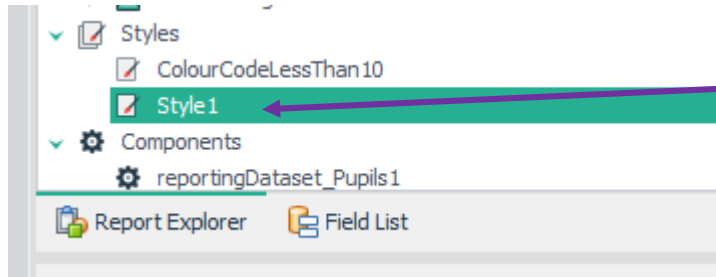


5: Colour Formatting



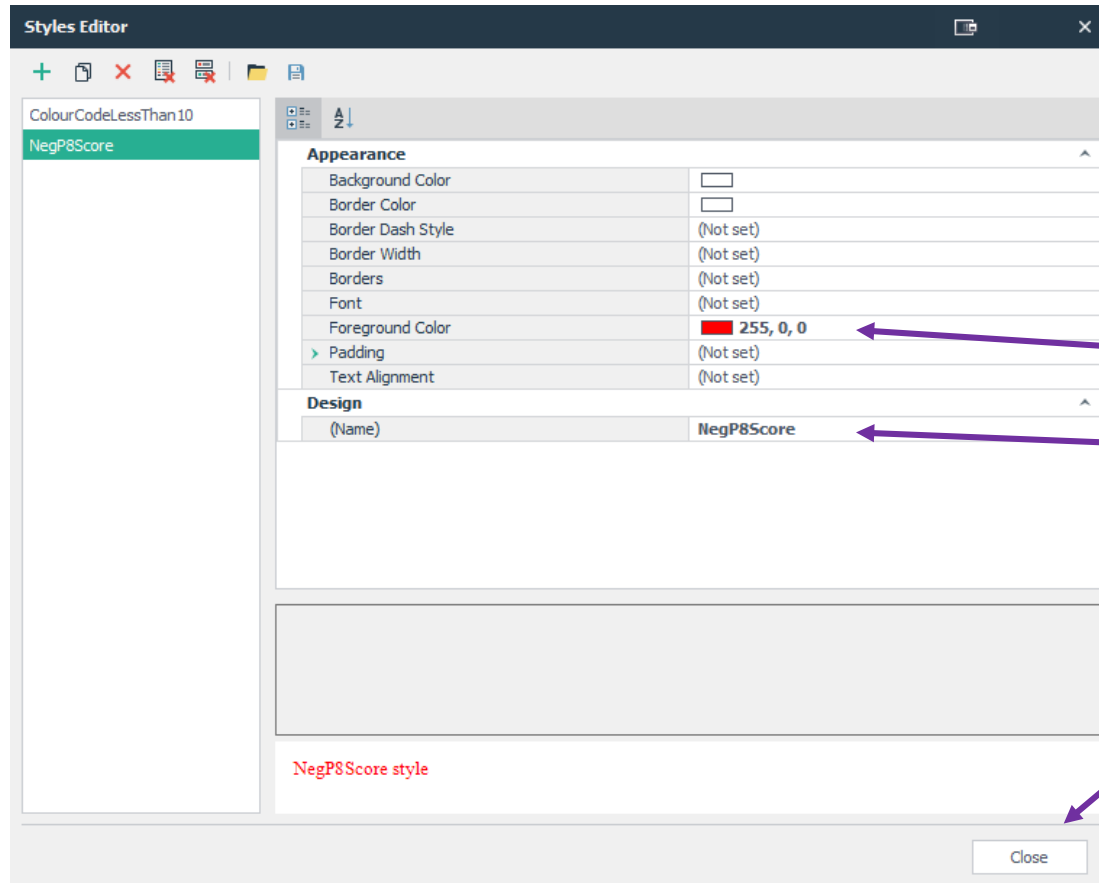
1) On opening the report (or creating a new one), switch to Report Explorer tab

2) Right-click Styles and select Add Style



3) Style1 will appear in the list, right click it and select Edit Styles

6: Colour Formatting Cont./



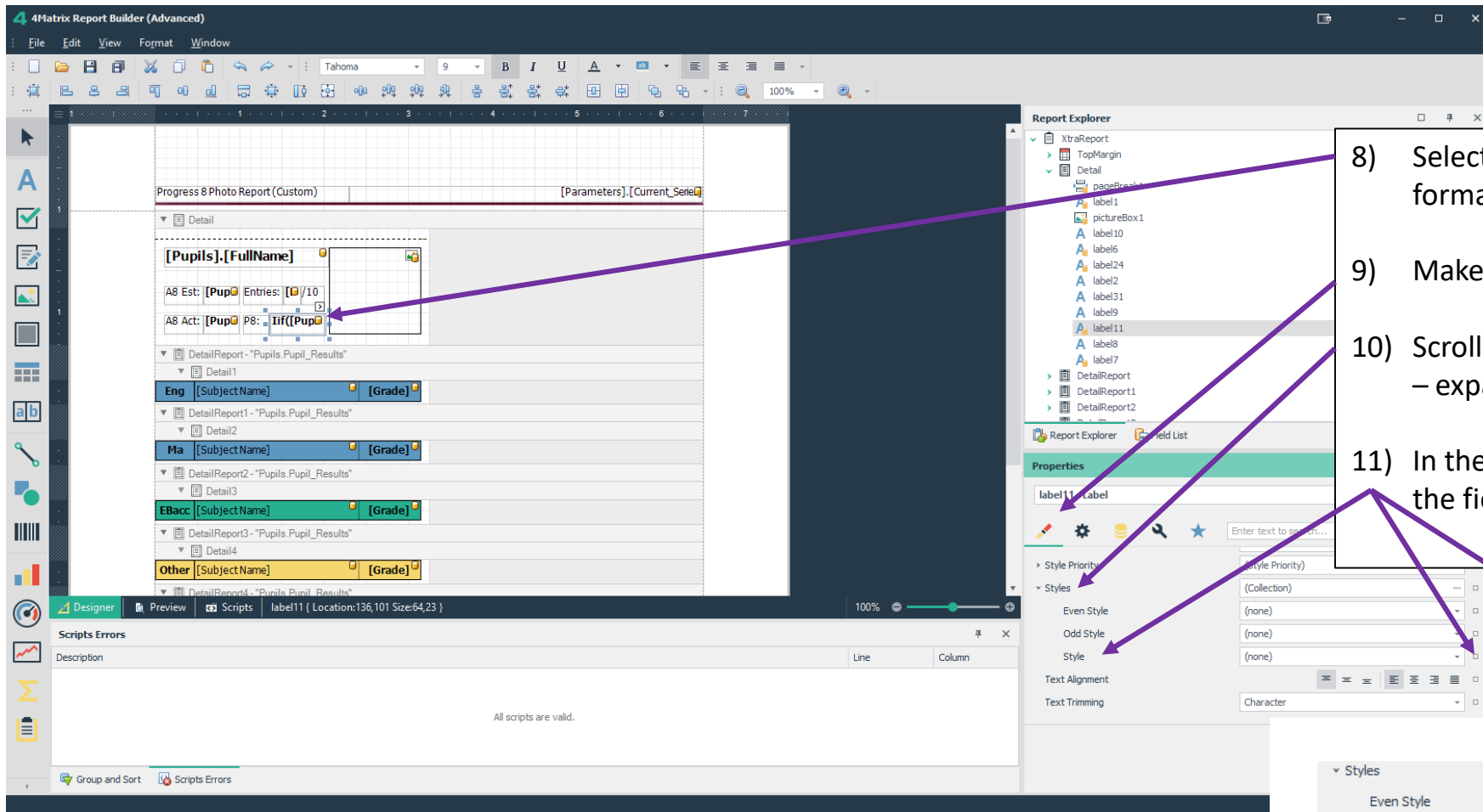
4) A pop-up will appear.

5) Set the foreground colour accordingly

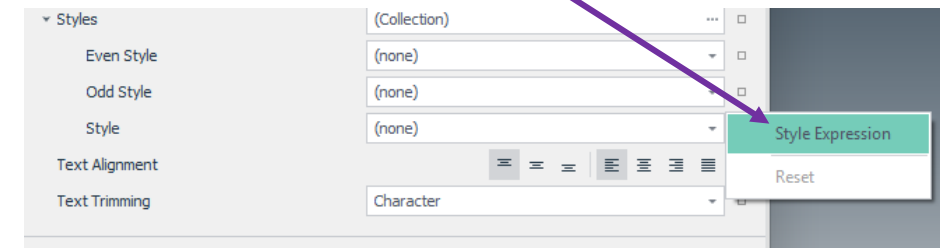
6) Change the name accordingly i.e. 'NegP8Score'

7) Click close when finished

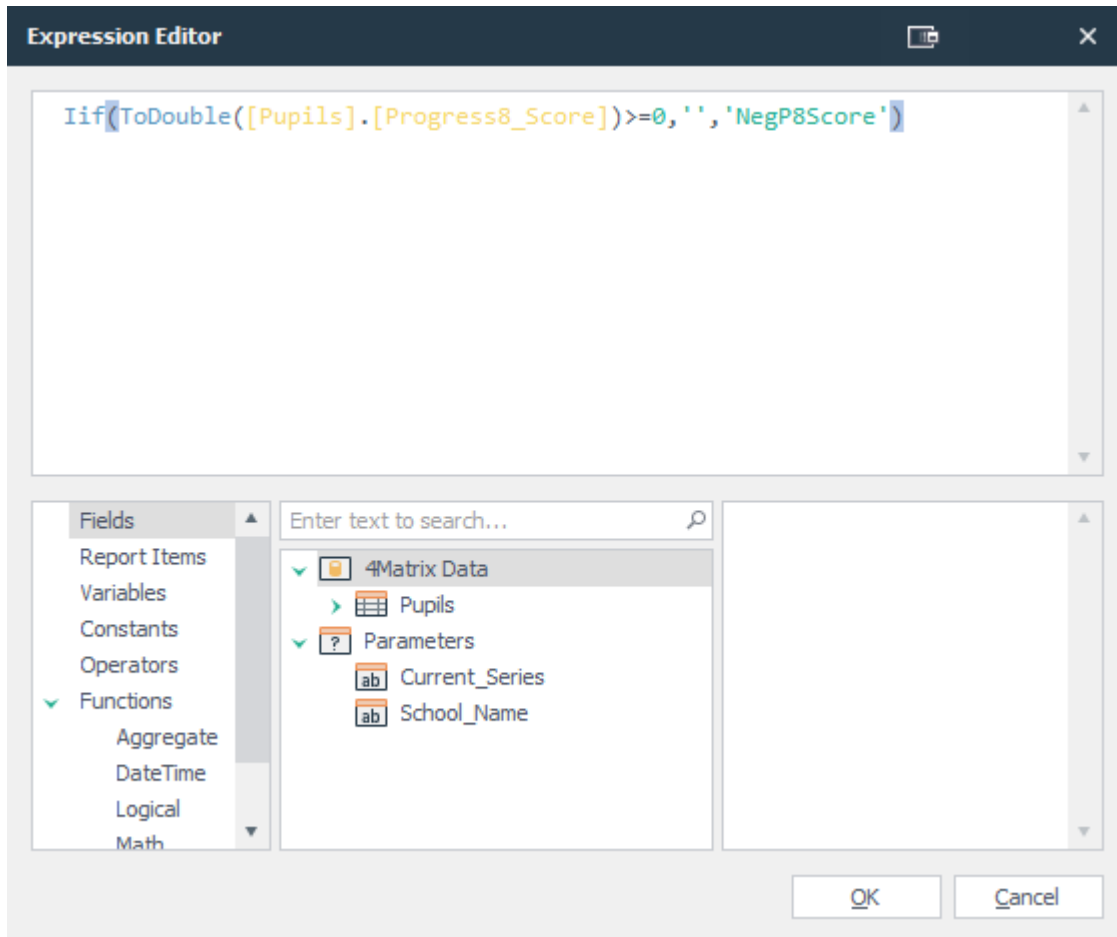
7: Colour Formatting Cont./



- 8) Select the field in the report to apply the formatting to
- 9) Make sure that the 'Paint Brush' icon is selected
- 10) Scroll down the properties list until you find Styles – expand this
- 11) In the Style row, click the small box to the right of the field and select Style Expression



8: Colour Formatting Cont./



1) In the pop-up that appears you can define your expression.

2) The example to the left is:

```
Iif(ToDouble([Pupils].[Progress8_Score])>=0, '', 'NegP8Score')
```

This code applies the following logic:

If the pupils Progress 8 score is greater than or equal to 0, do nothing, otherwise use the NegP8Score style (which applies a red font)

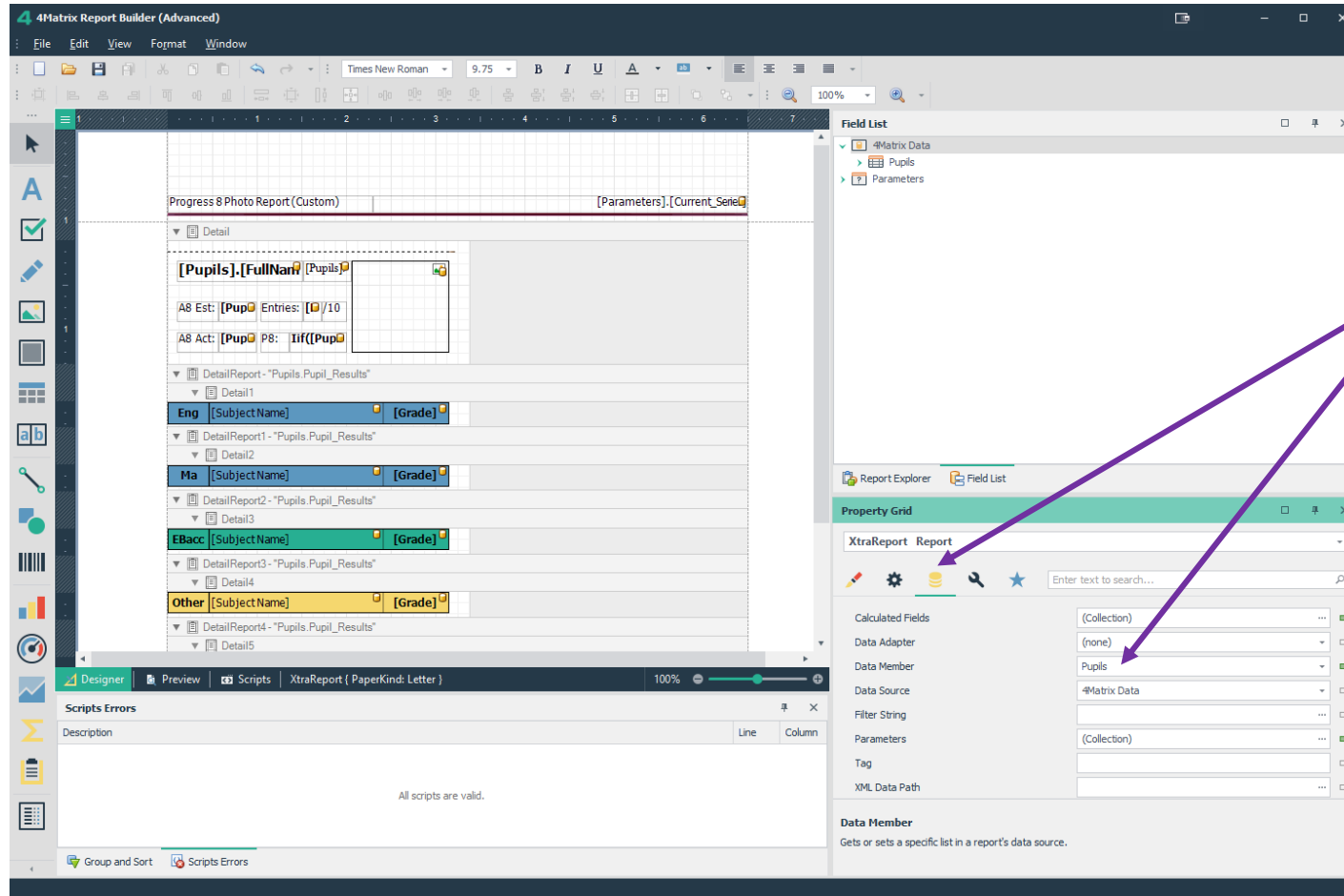
3. Click OK to apply the style/expression

If you wanted Progress 8 scores that are 0 or above to show in green, repeat the process on pages 3 - 5, creating another Style called 'PosP8Score', with green foreground.

In the Expression Editor, use the following code:

```
Iif(ToDouble([Pupils].[Progress8_Score])>=0, 'PosP8Score', 'NegP8Score')
```


9: Filter Pupils



1) On opening the report, click the database icon (it looks like a stack of gold coins!) and make sure that the Data Member field is set to Pupils

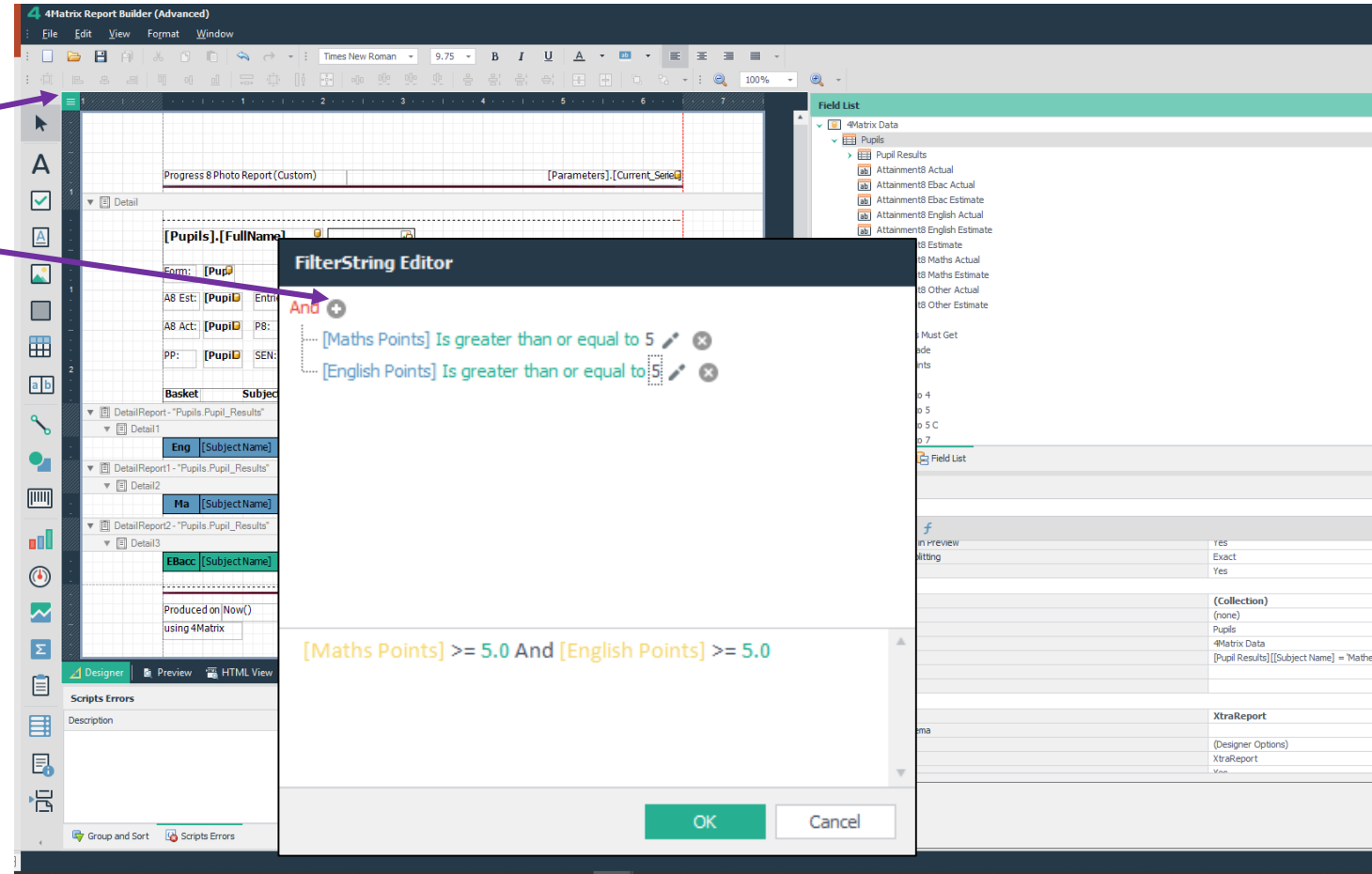
10: Filter Pupils Cont./

- 2) Click the small 3 lines in top left of report to open a sub-menu, then click the ellipses on Filter String
- 3) In the pop-up, use the (+) button to add the first filter string, as per the example here, and repeat to add additional filters
- 4) Click OK, save the report, and generate it – the filters should be applied

Notes:

Text example to filter to pupils with a grade 5 or above in Maths:

*[Pupil Results][[Subject Name] = 'Mathematics (9-1)'
And [Points19] >= 5]*



11: Custom Pupil Sort

The screenshot shows the 4Matrix Report Builder (Advanced) interface. The main workspace displays a report design for 'Progress 8 Photo Report (Custom)'. The design includes a header section with '[Parameters].[Current_Serie]' and a detail section with '[Pupils].[FullName]'. Below the detail section, there are four sub-reports: 'DetailReport - "Pupils.Pupil_Results"', 'DetailReport1 - "Pupils.Pupil_Results"', 'DetailReport2 - "Pupils.Pupil_Results"', and 'DetailReport3 - "Pupils.Pupil_Results"'. Each sub-report has a 'Detail' section with fields like '[Subject Name]' and '[Grade]'. The 'Group and Sort' tab is active at the bottom, showing a table with columns: Field Name, Sort Order, Show Header, and Show Footer. The 'Field List' panel on the right shows a tree structure under '4Matrix Data' with 'Pupils' selected. The 'Properties' panel on the right shows the 'XtraReport Report' properties, including 'Data Adapter', 'Data Member', 'Data Source', 'Filter String', 'Parameters', and 'Tag'. The 'Data Member' is set to 'Pupils'.

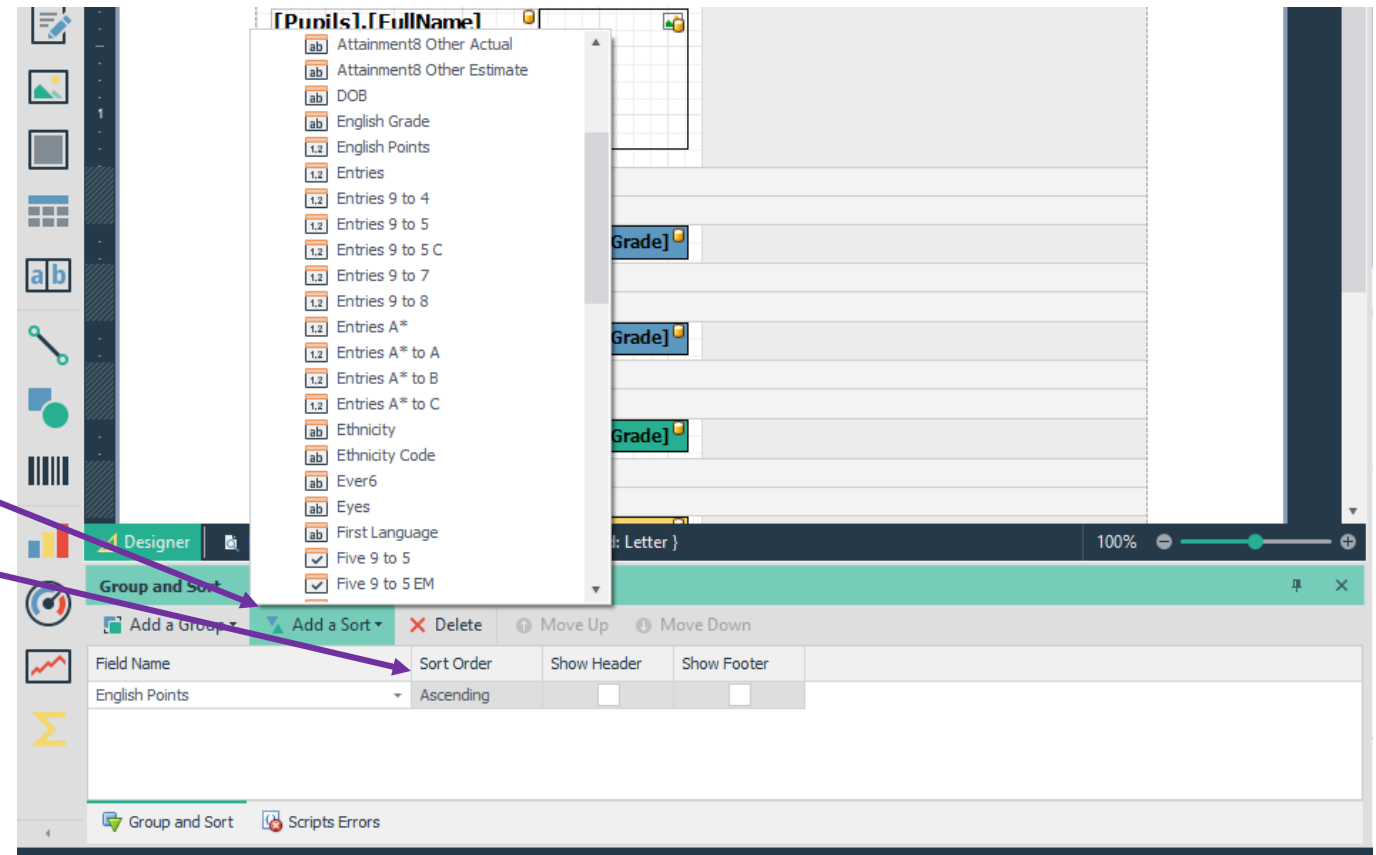
1) Without any fields in the report selected, go to the Database (coins) icon and in the Data Member field, select Pupils

2) Open the Groups and Sort tab

12: Custom Pupil Sort Cont./

3) Select Add Sort and choose a field to sort the report by e.g. English points

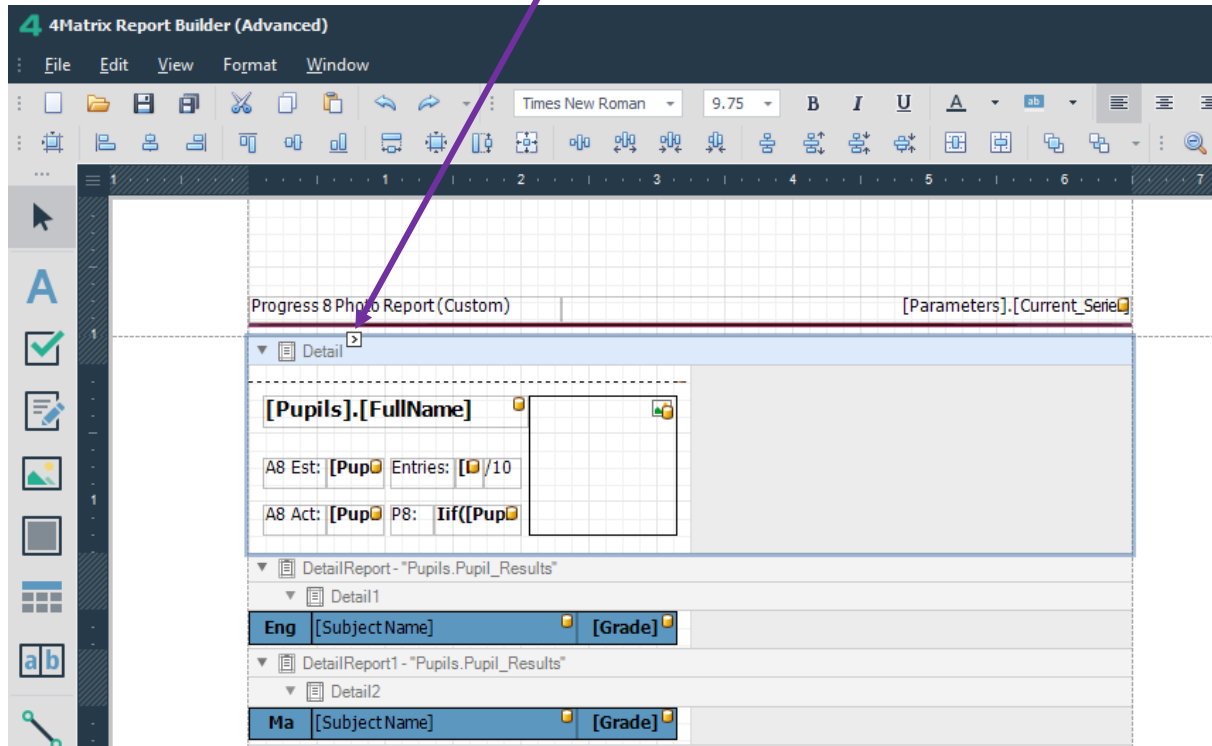
4) You can change the order by selecting the Sort Order cell



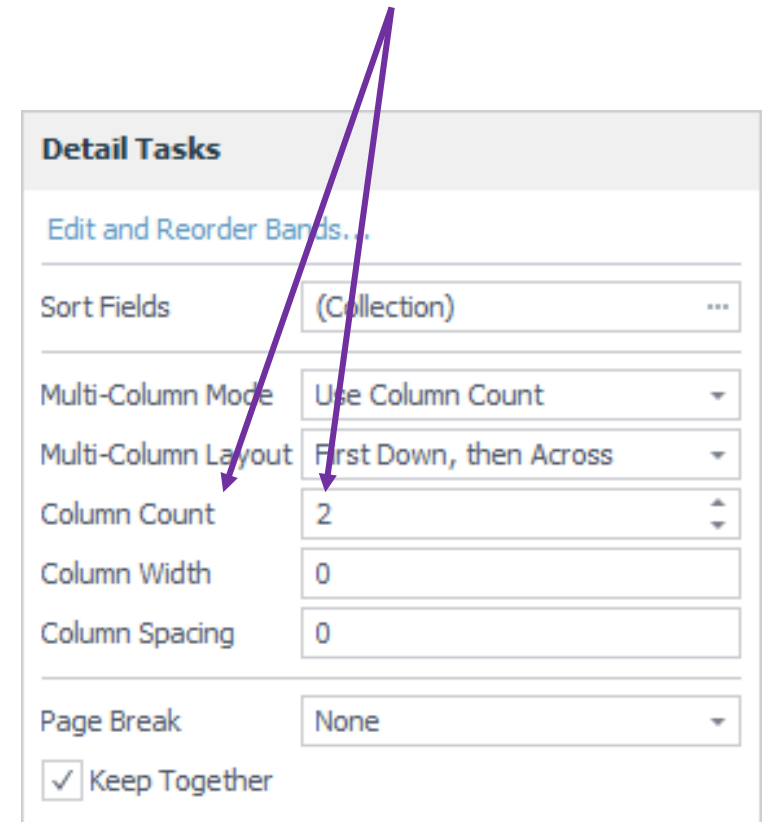
Please note that this applies a 'string' sort, so it will work for values a-z and 1-9. If you have values of 10 or above, it will sort as 1, 10, 11, 12, ... 2, 21, 22... and so on.

13: Set Column Count

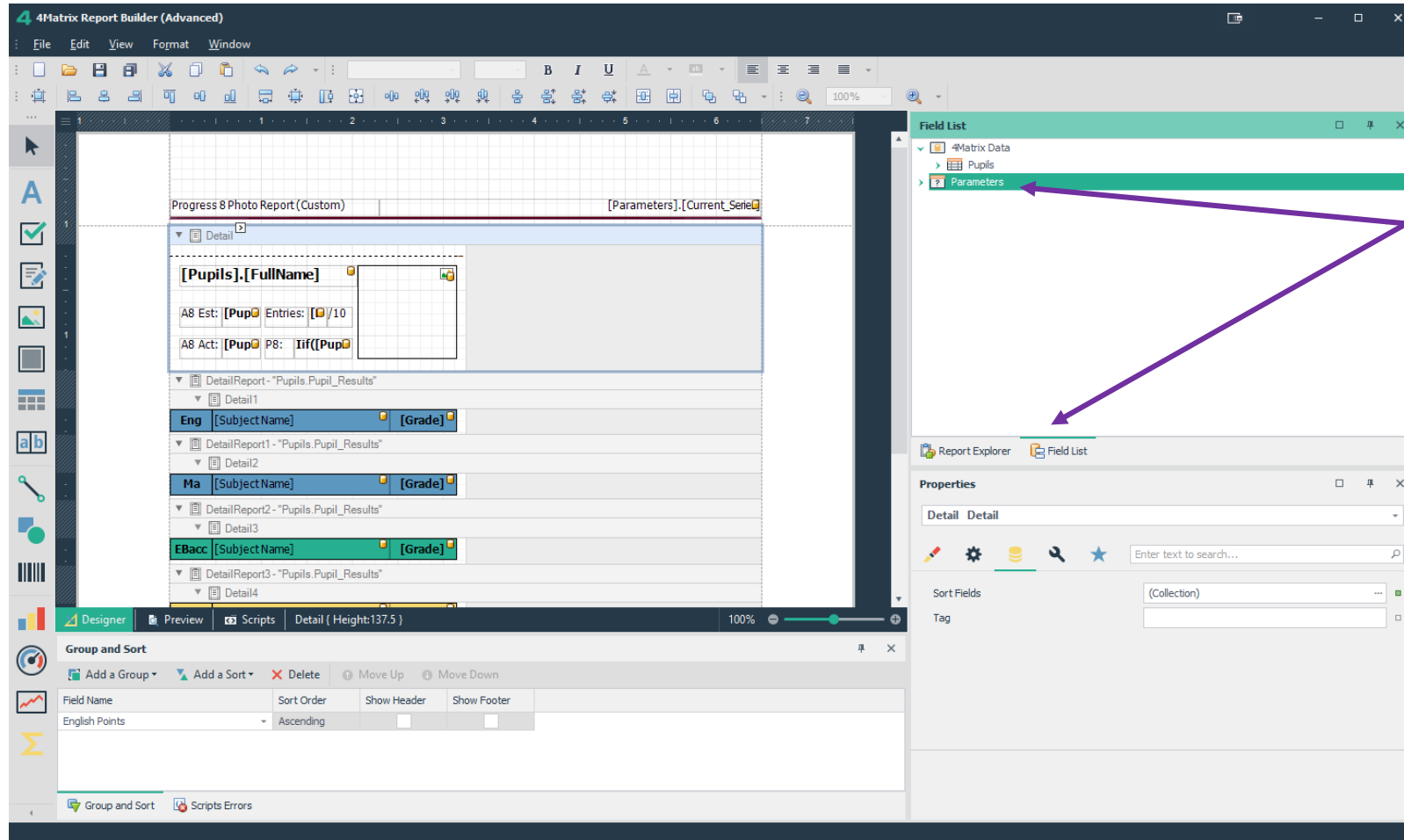
- 1) To set a column count, click the Detail label and select the small arrow that appears



- 2) In the pop-up, set the column count

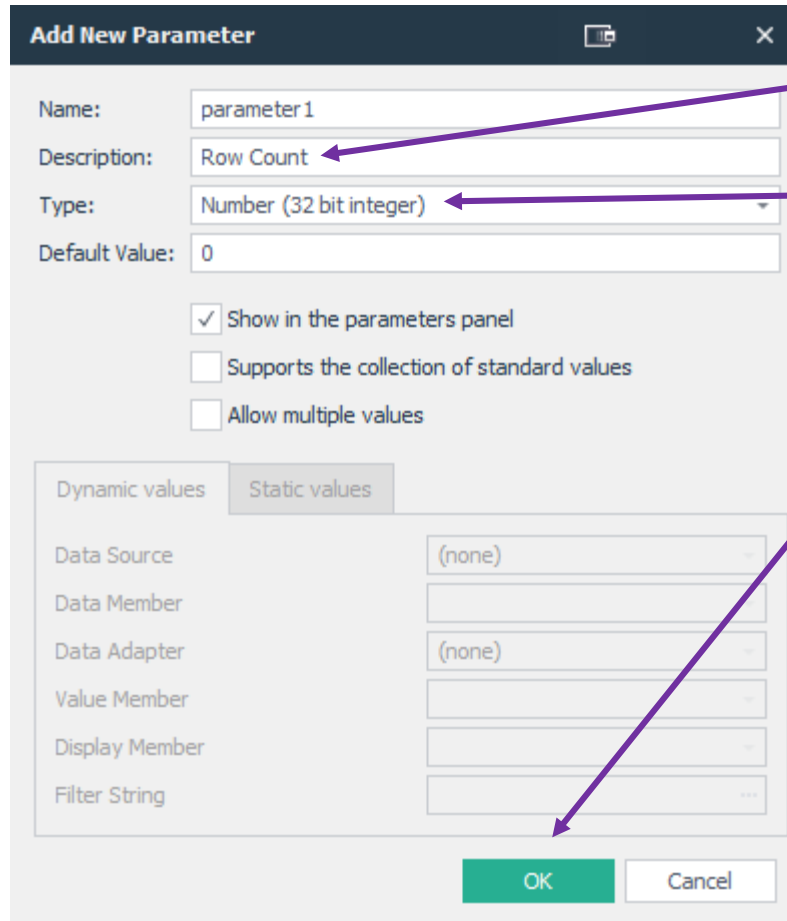


14: Set Row Count



- 1) Go to the Field list tab
- 2) Right-click Parameters and select Add Parameter

15: Set Row Count Cont./



The screenshot shows the 'Add New Parameter' dialog box. It has a title bar with a close button. The form contains the following fields and options:

- Name:** parameter1
- Description:** Row Count
- Type:** Number (32 bit integer)
- Default Value:** 0
- ☒ Show in the parameters panel
- ☐ Supports the collection of standard values
- ☐ Allow multiple values
- Dynamic values** (selected tab) / **Static values** (disabled tab)
- Data Source:** (none)
- Data Member:**
- Data Adapter:** (none)
- Value Member:**
- Display Member:**
- Filter String:**
- Buttons:** OK (green), Cancel (white)

Four purple arrows point from the numbered instructions on the right to specific elements in the dialog:

- Arrow 3 points to the Description field.
- Arrow 4 points to the Type dropdown menu.
- Arrow 5 points to the OK button.
- An additional arrow points from the top of the dialog box to the instruction '3) In the pop-up, provide a description'.

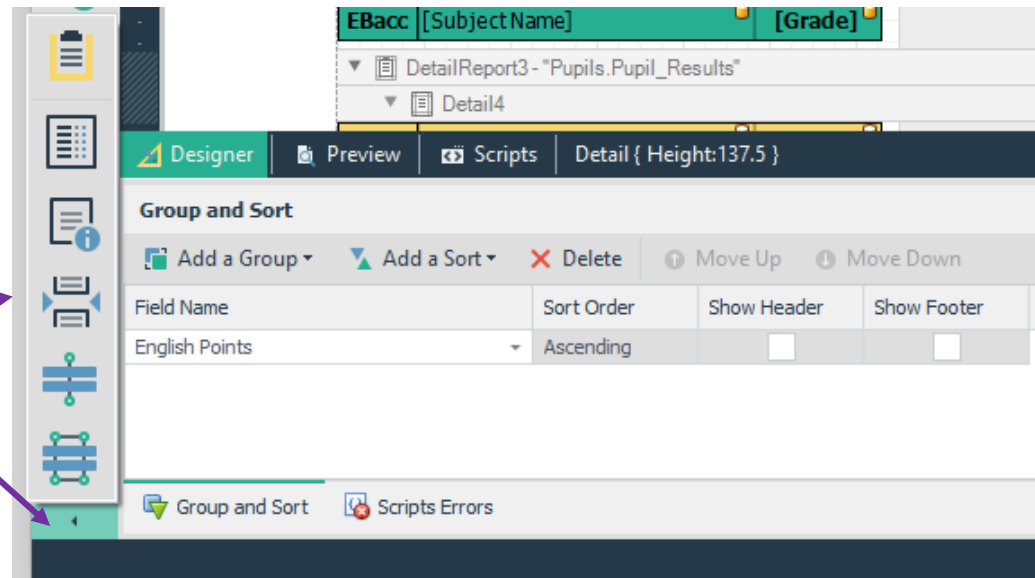
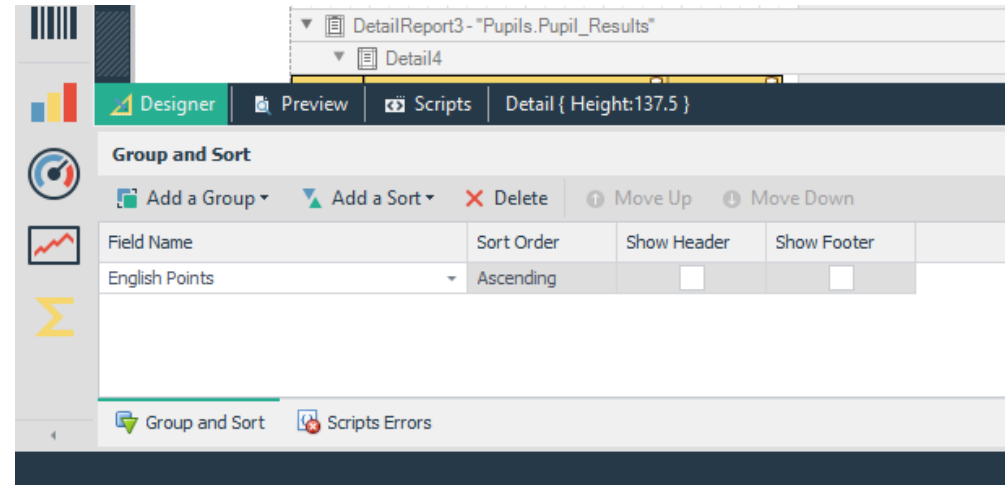
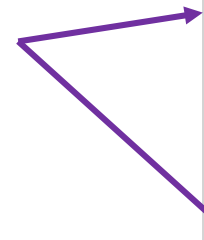
- 3) In the pop-up, provide a description
- 4) Set the Type to Number (32 bit integer)
- 5) Click OK

16: Set Row Count Cont./

- 6) Back in the main report editor view, find the following icon in the left-hand menu:



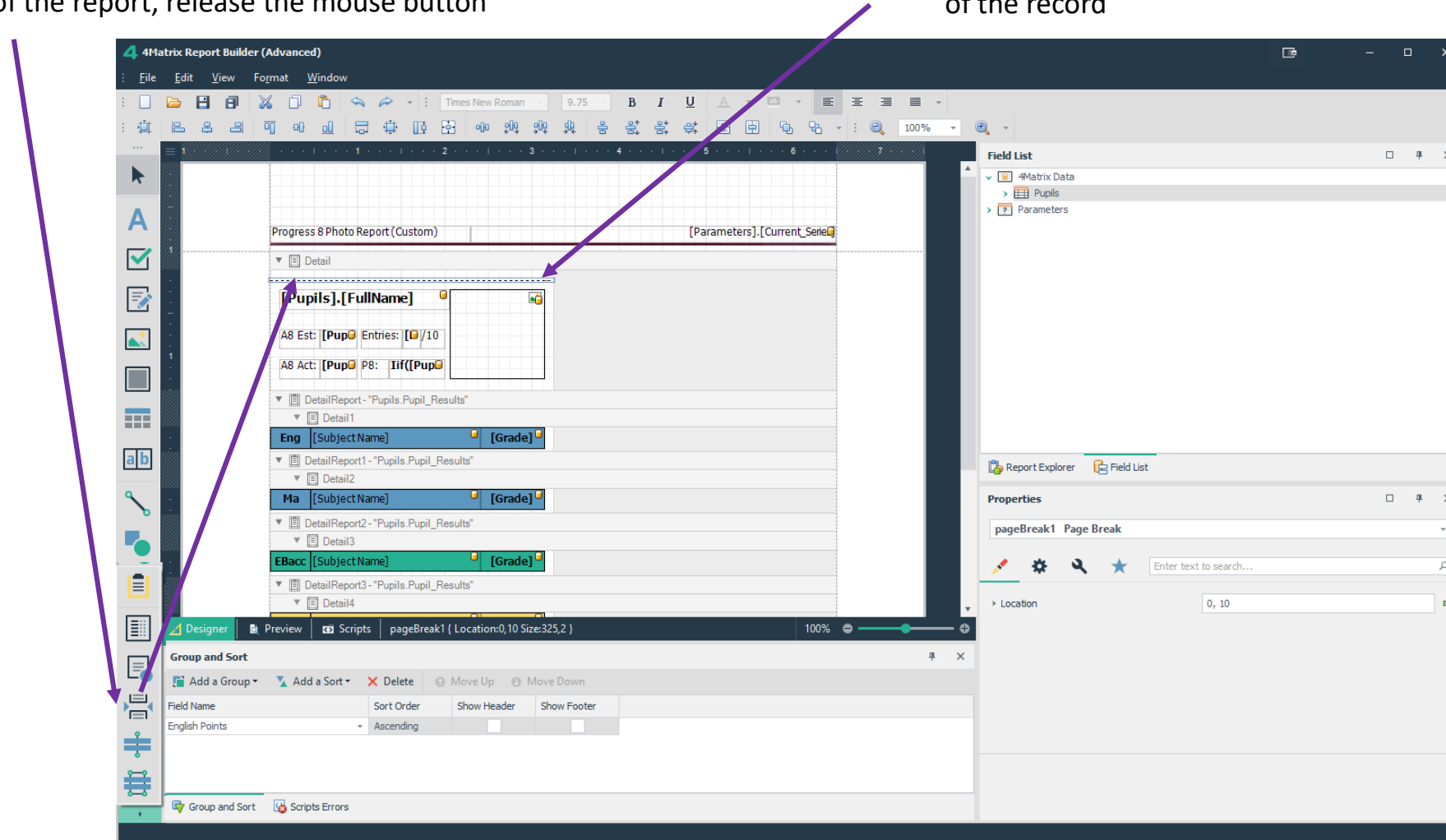
- 7) If you don't see it, click the little arrow at the bottom to access it:



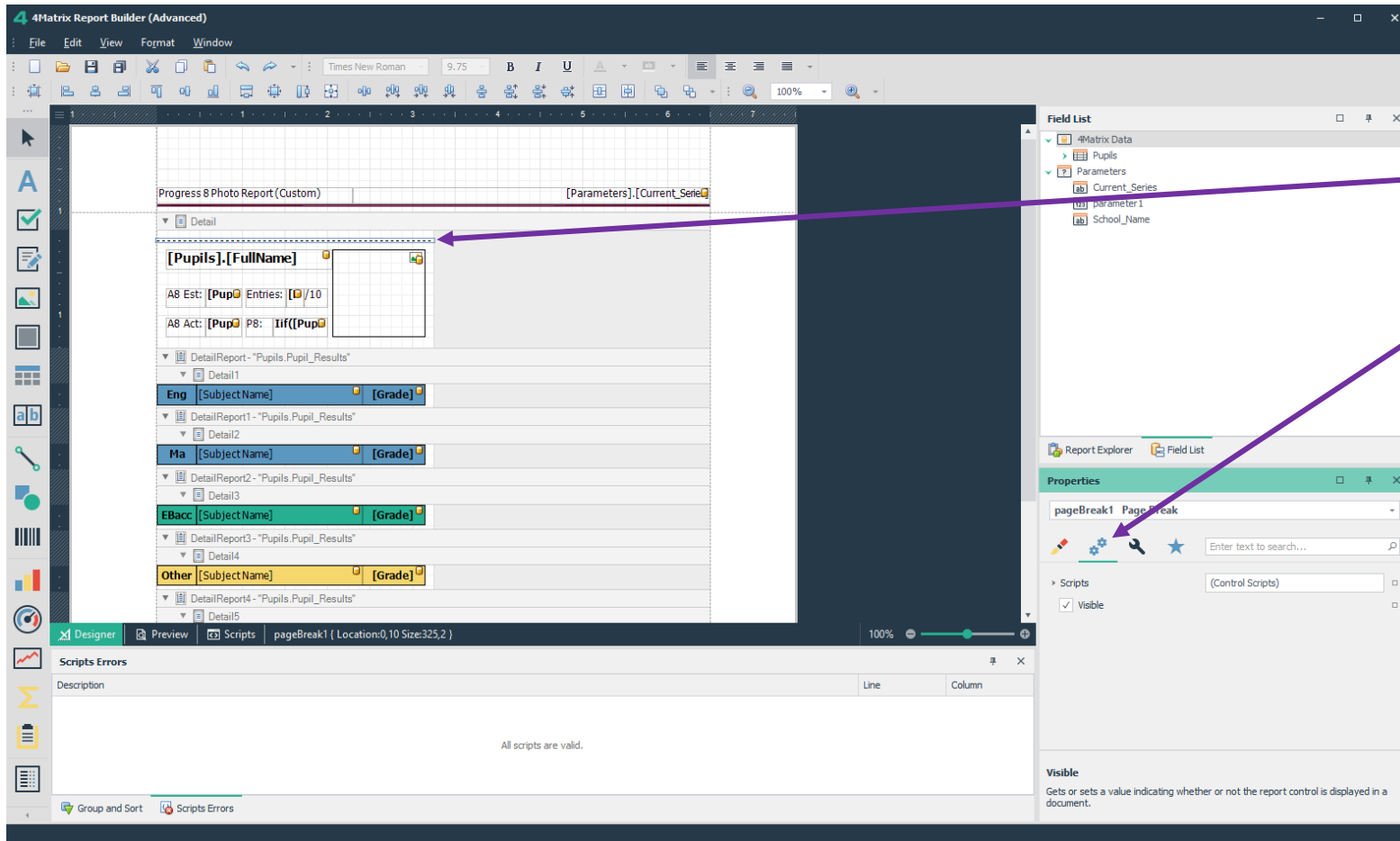
17: Set Row Count Cont./

8) Click and drag the icon into the details panel at the top of the report, release the mouse button

9) You should now see a black dotted line across the top of the record



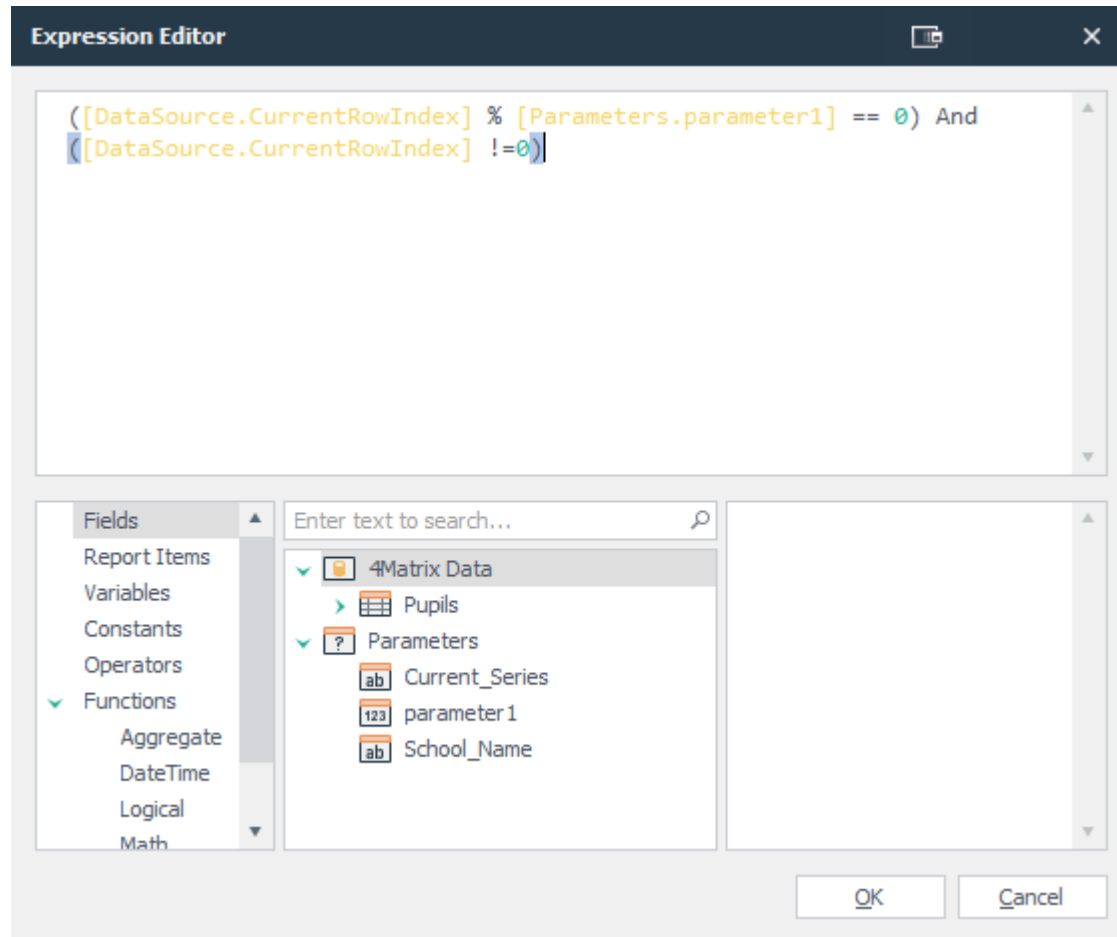
18: Set Row Count Cont./



10) Click the black dotted line to select it

11) Under the Settings (cog) icon, click the lowest small box icon and in the dropdown that appears, select Visible Expression

19: Set Row Count Cont./



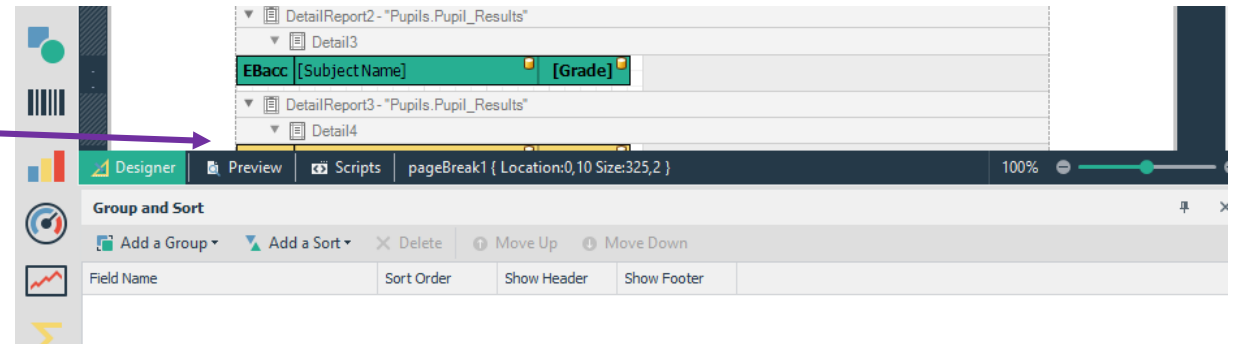
12) In the pop-up type the following:

```
([DataSource.CurrentRowIndex] % [Parameters.parameter1] == 0)  
And ([DataSource.CurrentRowIndex] != 0)
```

13) Click OK

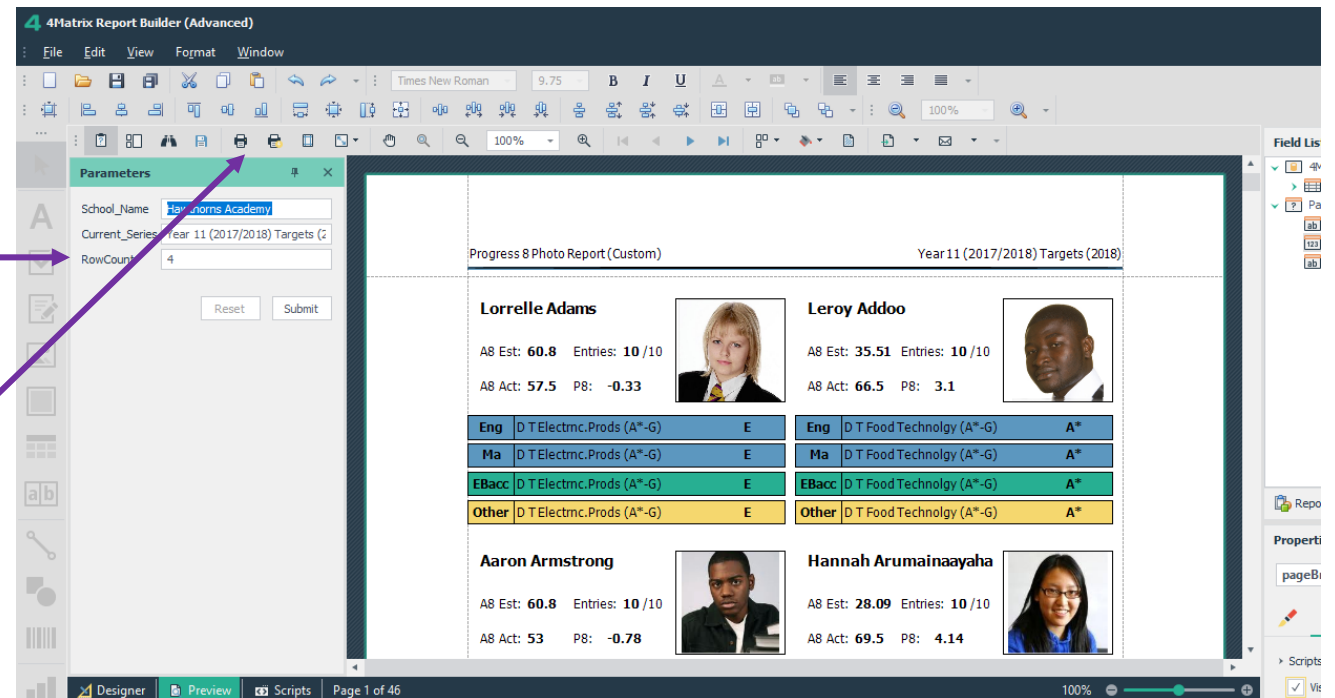
20: Set Row Count Cont./

14) Back in the main report editor view, click Preview

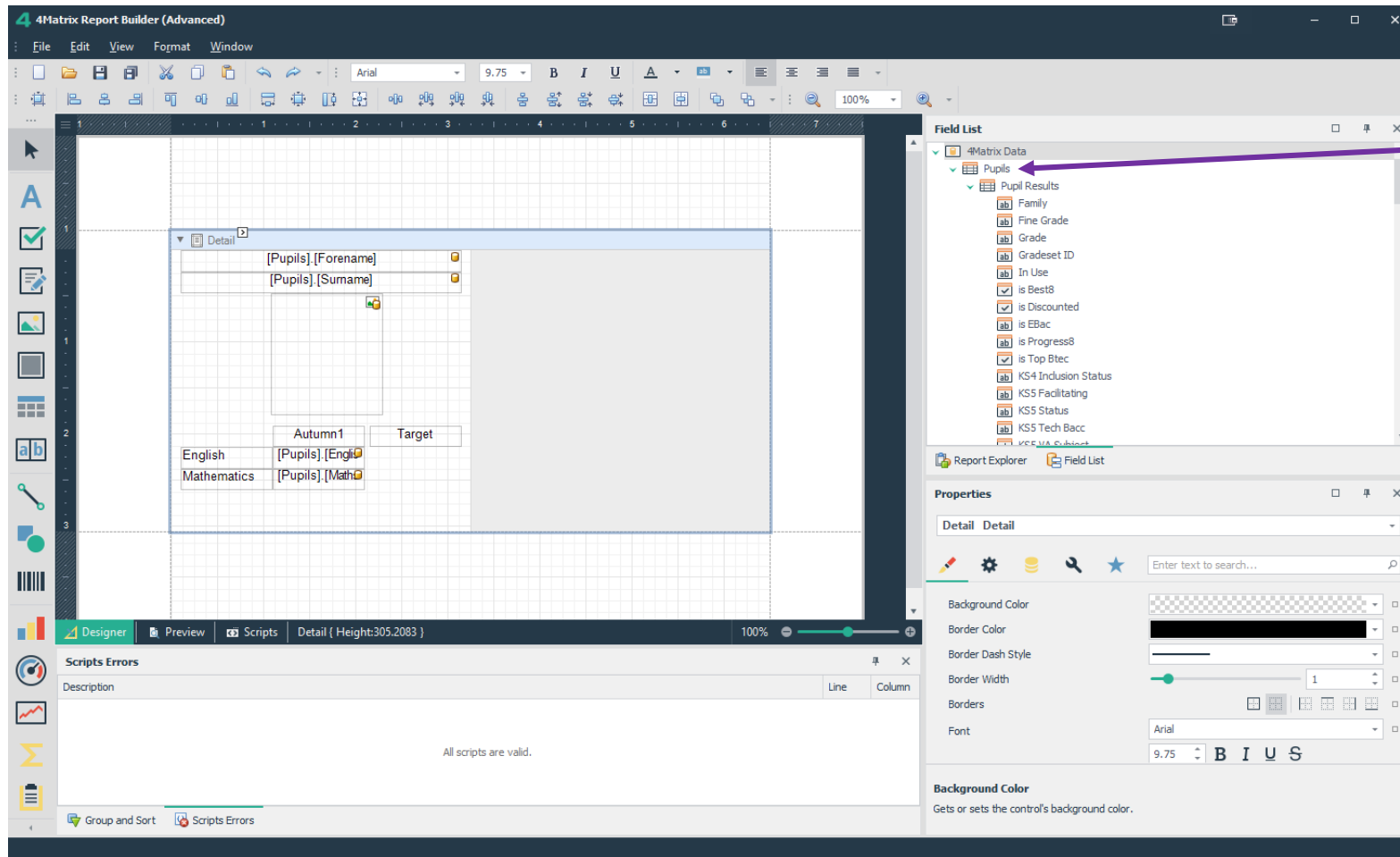


15) There will now be a RowCount option in the preview window. Note that to show 2 rows of pupils, this must be set to 4. For 3 rows of pupils, set it to 6, etc.

The row count value does not save to the report file, so if you need to print the report with the custom rows, use the print options from this preview window.

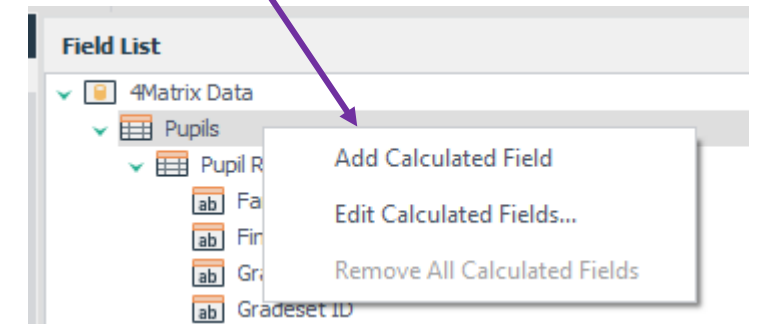


21: Adding Target Grades for Specific Subjects

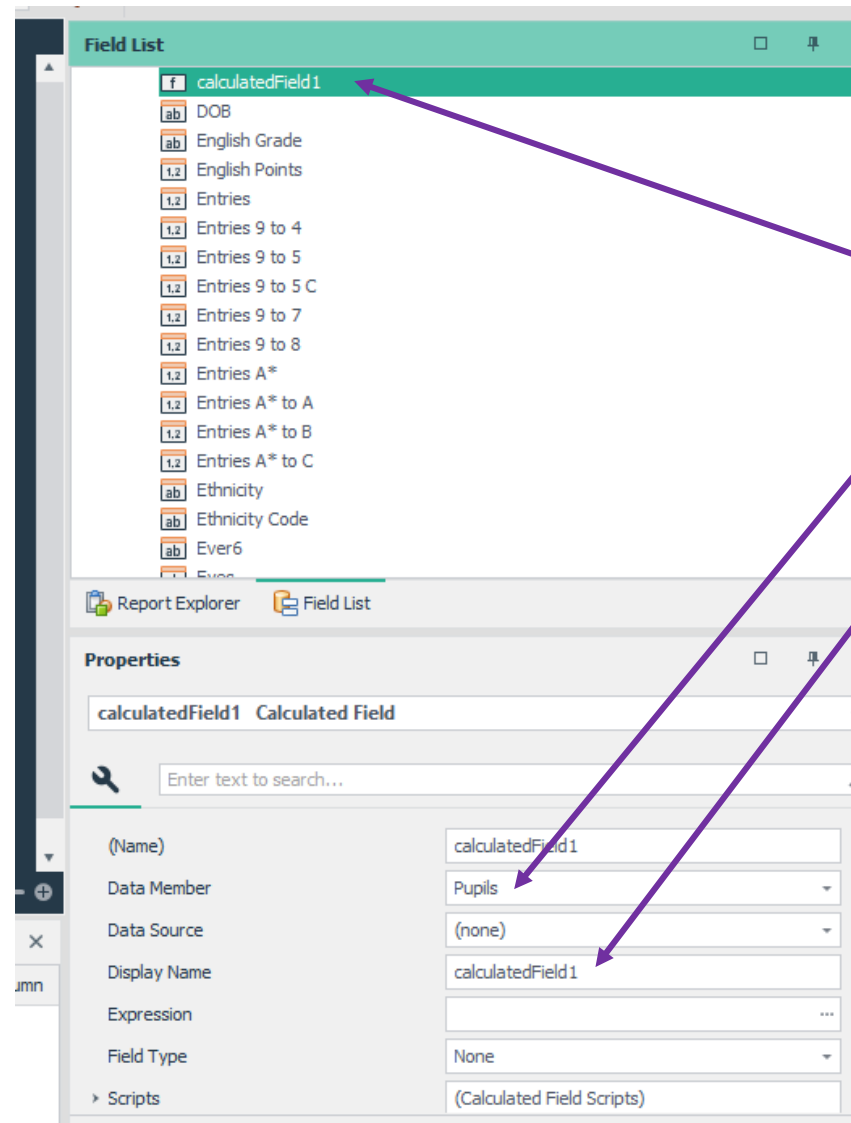


1) In the field list, right-click Pupils

2) Select Add Calculated Field



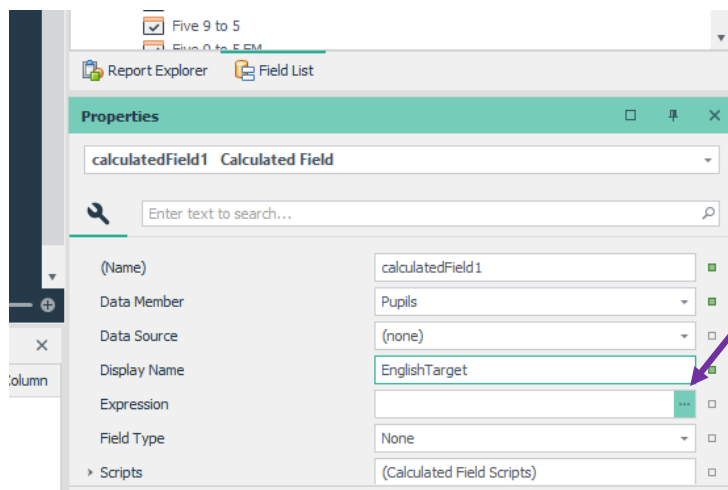
22: Adding Target Grades for Specific Subjects Cont./



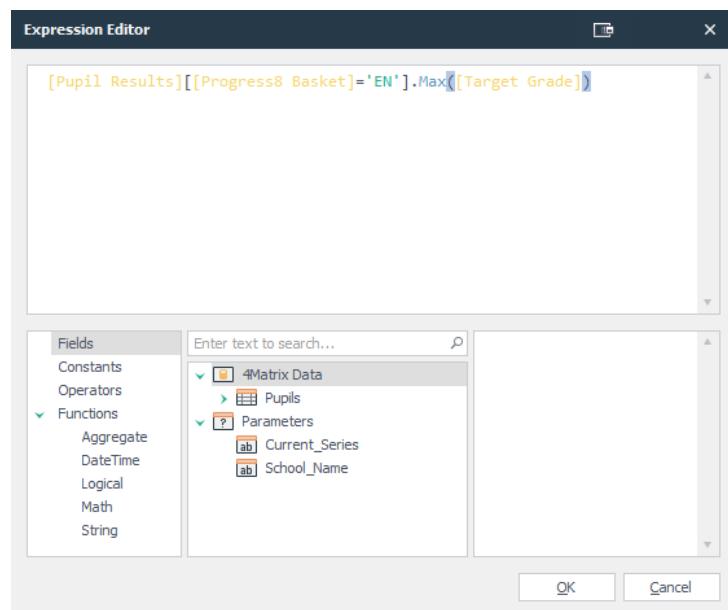
3) With the new Calculated Field selected, make sure the Data Member value is set to Pupils

4) Rename the Display Name to something more meaningful i.e. EnglishTarget

23: Adding Target Grades for Specific Subjects Cont./



5) Click the ellipses in the Expression field



6) In the pop-up (Expression Editor) use the following text:

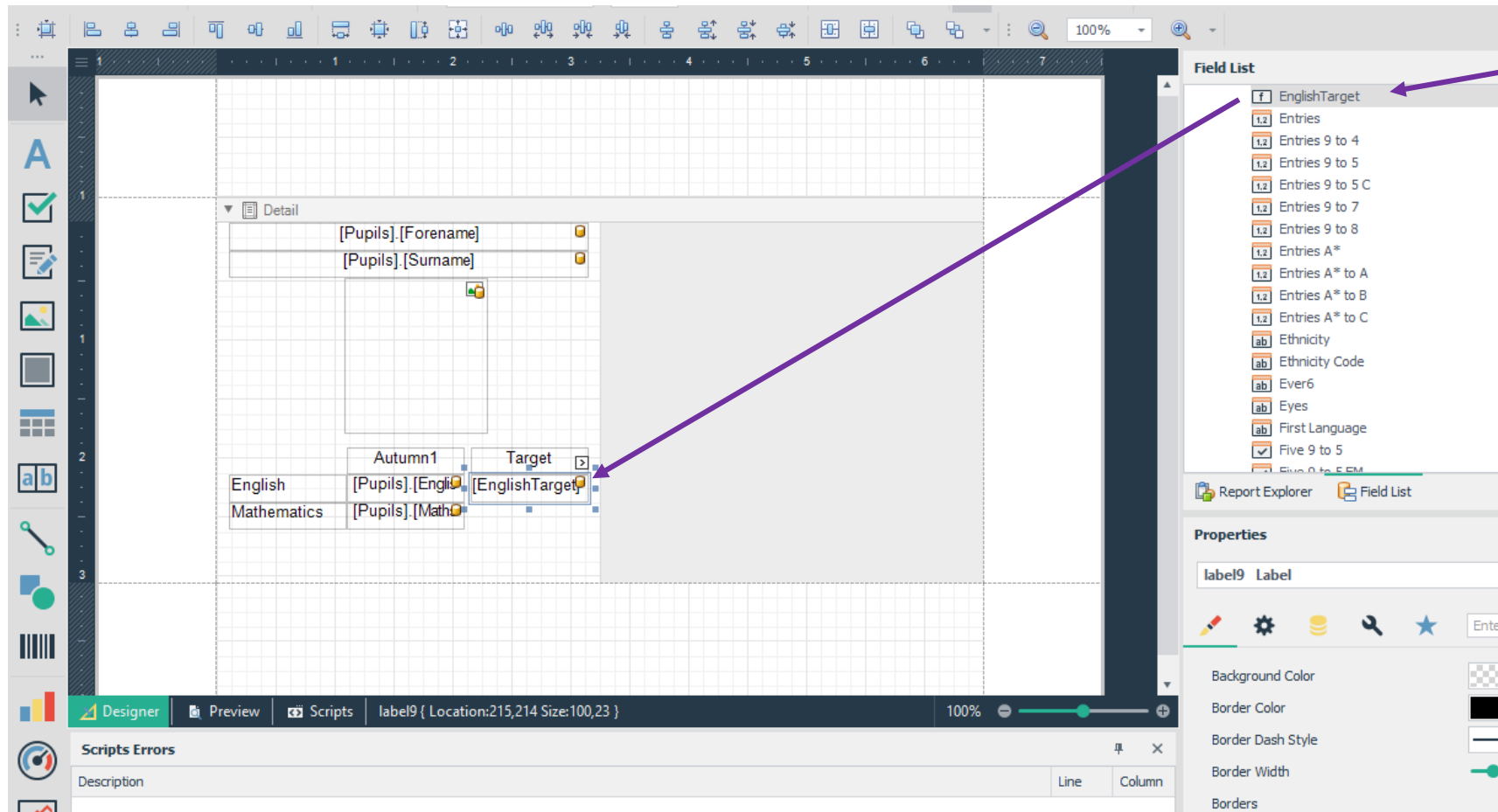
`[Pupil Results][[Progress8 Basket]='EN'].Max([Target Grade])`

Notes:

This code gets the highest of either Language or Literature

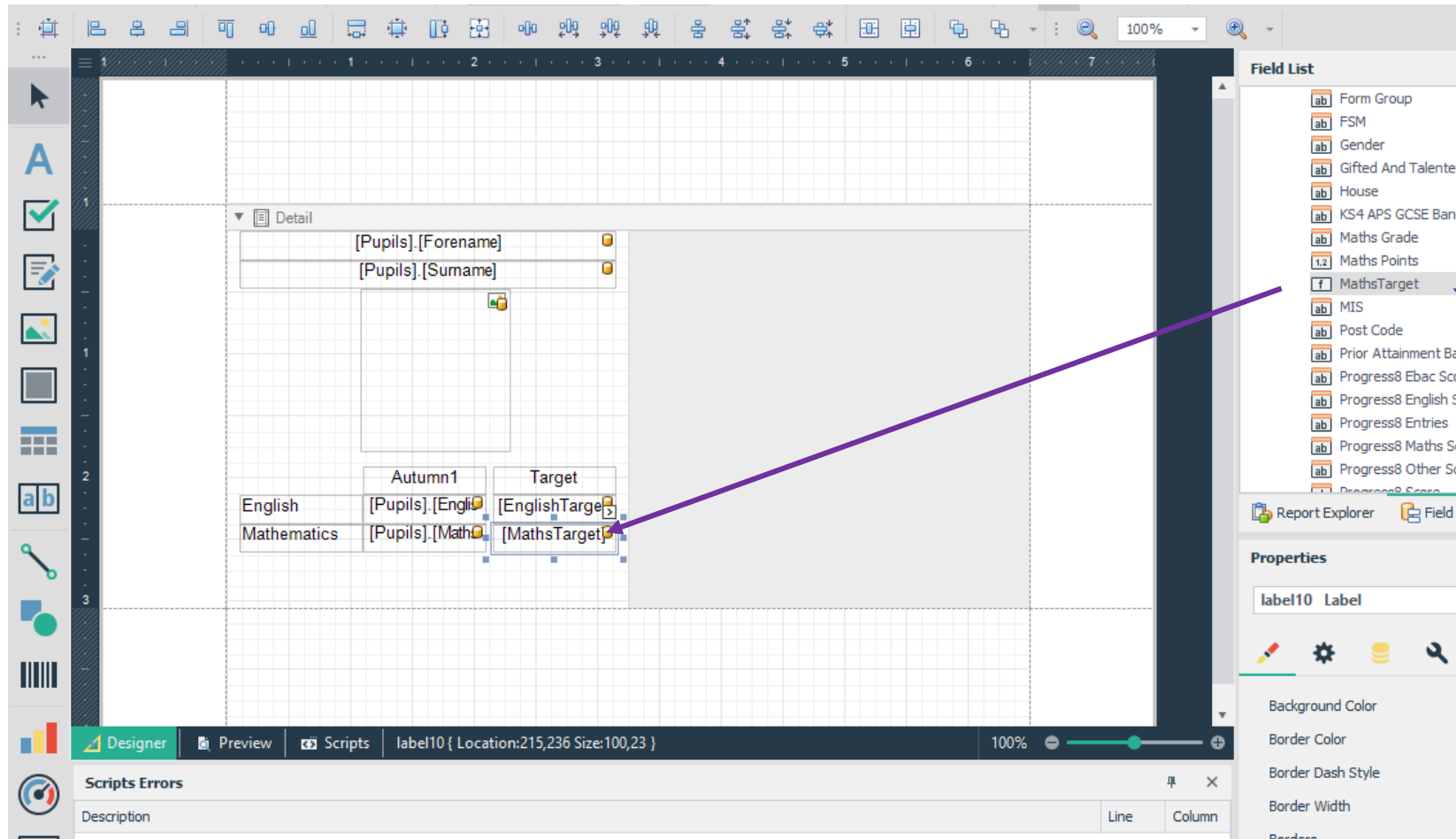
This will only get the 'whole grade' i.e 4, 5, 6 etc, not fine grades i.e. 4-, 5+, 6+ etc (it is not currently possible to get the Target Fine Grade value)

24: Adding Target Grades for Specific Subjects Cont./



- 7) Drag and drop the EnglishTarget field (or whatever you have named it as) into the desired place on the report, and re-size as necessary

25: Adding Target Grades for Specific Subjects Cont./



- 7) Repeat the process to add a Calculated Field for Maths, using the following expression:

[Pupil Results][[Progress8 Basket]='MA'].Max([Target Grade])

- 8) Drag and drop the MathsTarget field onto the report

26: Adding Target Grades for Specific Subjects Cont./

Custom Pupil Reports - 4Matrix [4Matrix Demo Account]

FILE HOME CDA REPORTS ADMIN HELP

Pupil Summary 5A* to C (Photos) Photo Report Report Builder Batch Printing

Custom Pupil Reports More Columns

UPN	Forename	Surname	Gender	Ethnicity	DOB	Form Group	Eyes	KS4 APS G...	Prior Attain...	School	Shoes	DOB
H44400010...	Lorrelle	Adams	Female	White - Briti...	07/09/1994	11A	Blue	Below 4	U	Green Acad...	5	07/09/1994
H44400010...	Leroy	Addoo	Male	Any Other ...	10/01/1995	11A	Blue		M	Stone Acad...	4	10/01/1995
H44400010...	Aaron	Armstrong	Male	Any Other ...	10/05/1995	11A	Green	Below 4	U		3	10/05/1995
H44400010...	Hannah	Arumainay...	Female	Any Other ...	08/09/1994	11A		4-6	M			08/09/1994
H44400010...	Dayan	Asokan	Male	Any Other ...	18/06/1995	11A		4-6	U			18/06/1995
H44400010...	Aloma	Asota	Male	Black - Afri...	31/07/1995	11A		Below 4	M			31/07/1995
H44400010...	Marie	Augustin	Female	Black Carib...	17/06/1995	11A		4-6	M			17/06/1995
H44400010...	Richard	Augustus-P...	Male	Any Other ...	26/11/1994	11A		4-6	U			26/11/1994
H44400010...	Louise	Aylwin	Female	White - Briti...	28/11/1994	11A			M			28/11/1994
H44400010...	Zara	Azad	Female	Other Pakis...	13/01/1995	11A		4-6	M			13/01/1995
H44400010...	Rani	Bahri	Female	Indian	08/04/1995	11A		4-6	U			08/04/1995
H44400010...	Aretha	Bailey	Female	Black Carib...	26/04/1995	11A		Below 4	M			26/04/1995
H44400010...	Tommy	Balnys	Male	White Euro...	04/12/1994	11A		4-6	U			04/12/1994
H44400010...	Charlene	Barnard	Female	Refused	13/02/1995	11A		4-6	M			13/02/1995
H44400010...	Teresa	Barrett	Female	White - Briti...	05/10/1994	11A		4-6	M			05/10/1994
H44400010...	Leonora	Bastien	Female	Black Carib...	11/02/1995	11A			L			11/02/1995
H44400010...	Aaron	Belardo	Male	Any Other ...	07/04/1995	11A		Below 4	U			07/04/1995
H44400010...	Maria	Bergin	Female	White - Irish	08/07/1994	11A		4-6	L			08/07/1994
H44400010...	Andrew	Bernett	Male	White - Briti...	06/10/1994	11A			L			06/10/1994
H44400010...	Oby	Beya Bonse	Female	Black - Afri...	07/06/1995	11A			M			07/06/1995
H44400010...	Marie	Black	Female	White - Briti...	03/12/1994	11A		Below 4	U			03/12/1994
H44400010...	Louise	Bloxham	Female	White - Briti...	15/04/1995	11A		4-6	M			15/04/1995
H44400010...	Christina	Boulbassa	Female	White - Briti...	17/03/1995	11A			M			17/03/1995
H44400010...	Heather	Brady	Female	White - Briti...	22/09/1994	11A			U			22/09/1994
H44400010...	George	Brew	Male	Black - Afri...	02/04/1995	11A		4-6	M			02/04/1995
H44400010...	Dawn	Buck	Female	Refused	06/12/1994	11A		4-6	U			06/12/1994
H44400010...	Alfred	Bush	Male	White and ...	26/12/1994	11A			L			26/12/1994
H44400010...	Elizabe	Carey	Female	Any Other ...	01/06/1995	11A		Below 4	L			01/06/1995

Options

Target Series: Y11 Target Grades (2018) Admin ...

Result Placeholder Subject: <None>

☐ Include Discounted Results

Basic Advanced

Step 1. Create Template

In order to generate a custom report please first create a template

Open Template Editor

Step 2. Generate Report

Please choose a report template to be generated for the selected pupils

C:\Users\Chris\Downloads\Rep...

Generate Report

Selected Series: Year 11 (2017/2018) Summer Term (2018) Change

Open Windows:

9) Now save the report and close the report editor

10) Set the Target Series to use (for the English and Maths grades)

11) Load the new report file here

12) Click generate to see the report, an example is on the next page.



You can apply instructions from other topics in this guide to add colour-coding to the target grade, edit the row and column counts, and customise the report to your own requirements.



27: Adding Target Grades for Specific Subjects Cont./



4Matrix Report - My Custom Report



File View Background



Save Print 100% Exit



	Lorrelle Adams			Hannah Arumainaayaha		
						
	Autumn1	Target		Autumn1	Target	
English	6	7		English	5	6
Mathematics	5	6		Mathematics	7	7

	Leroy Addoo			Dayan Asokan		
						
	Autumn1	Target		Autumn1	Target	
English	5	4		English	4	6
Mathematics	5	7		Mathematics	7	7

	Aaron Armstrong			Aloma Asota		
						

	Marie Augustin			Zara Azad		
						
	Autumn1	Target		Autumn1	Target	
English	7	8		English	7	7
Mathematics	7	9		Mathematics	6	9

	Richard Augustus-Payn			Rani Bahri		
						
	Autumn1	Target		Autumn1	Target	
English	6	7		English	6	7
Mathematics	3	5		Mathematics	4	4

	Louise Aylwin			Aretha Bailey		
						

Page 1 of 31 | 100%