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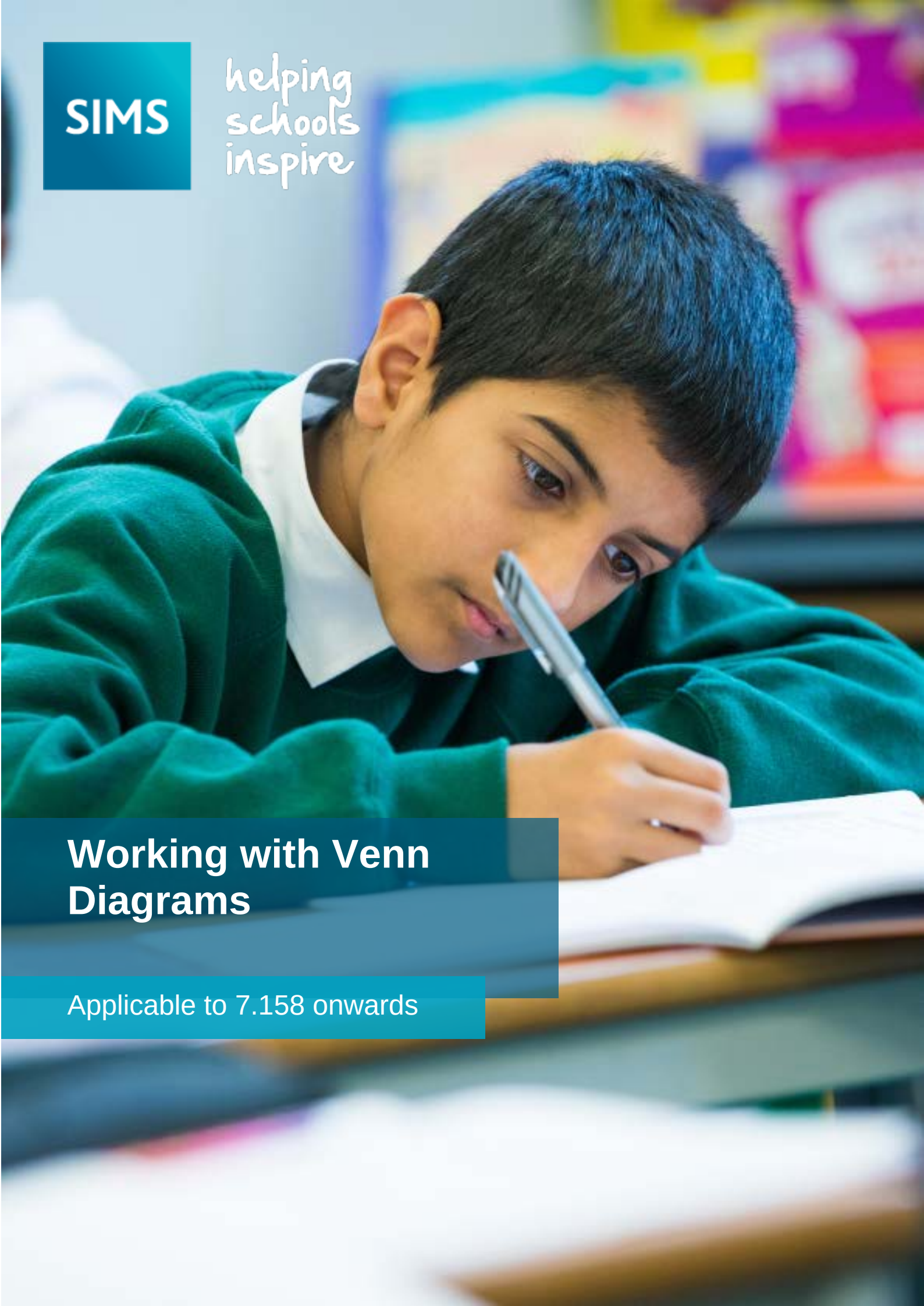

# Working with Venn Diagrams

Applicable to 7.158 onwards

# Revision History

| Version | Change Description | Date |
|---|---|---|
| 7.158 - 1.0 | Initial release. | 23/06/2014 |
| 7.158 - 1.1 | Rebranding of front cover. | 23/07/2014 |



Capita Doc Ref: DiscWVD7158/HBK/230714/FT

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Please ensure that you include the module name, version and aspect of documentation on which you are commenting.

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# 01 | Getting Started



## Introduction

A large portion of the content of this handbook has been taken from a chapter of the same name previously included in the *Discover User Guide*. The creation of this smaller handbook is a continued effort to reduce the size and complexity of the Discover documentation.

## Additional Documentation

All available Discover documentation is accessible from within the **Discover** application via the **Documentation Centre**:

# 02 | Working with Venn Diagrams



## Introduction

You can select up to three data points from a graph(s) that you are currently viewing and drag and drop them onto the canvas to create a Venn diagram. As a general rule, data points from any graphs that are based on a cohort of pupil/students or a count of staff can be merged into a Venn diagram.

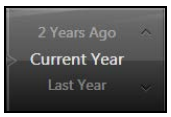
It is not possible to create a Venn diagram by merging pupil/student data with staff data. However, you can create Venn diagrams using data points from different academic years.

## Creating a Venn Diagram

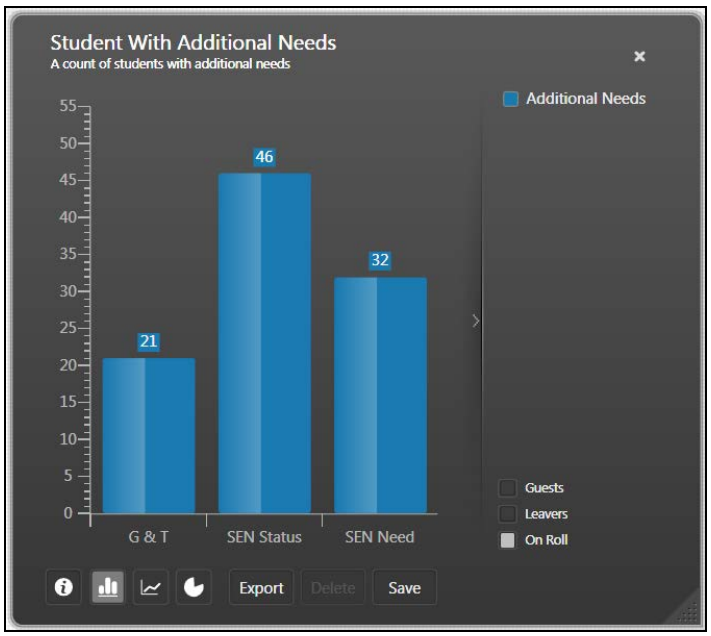
In the following example, the **Students with Additional Needs** graph is selected by clicking the **SEN** button.

*SEN button*

This example uses data points from the Current Year. If you want to compare the same data points across years, please ensure that you select the required year from the **Academic Year Selector** before dragging the data point onto the Discover canvas.

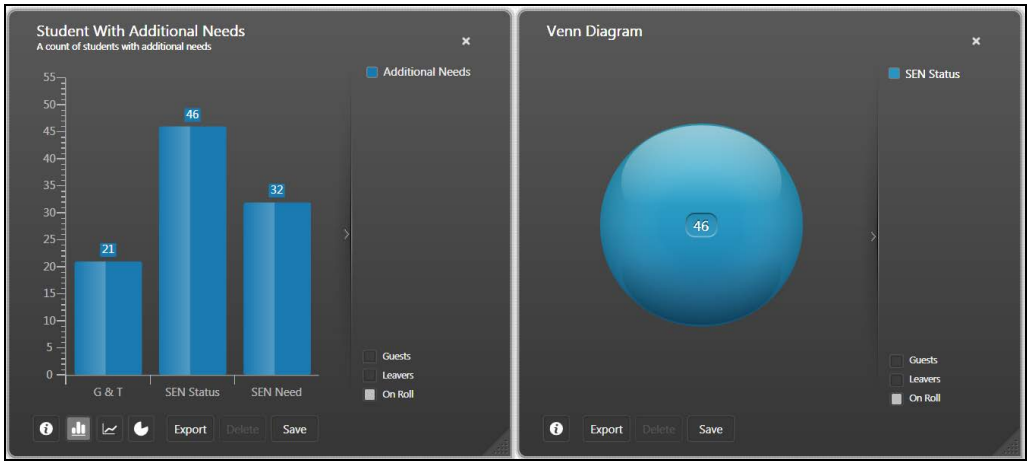



1. Select the required graph name from the drop-down list. Ensure that the appropriate **Client Filter** is selected, e.g. **Guests**, **Leavers** or **On Roll** pupil/students.



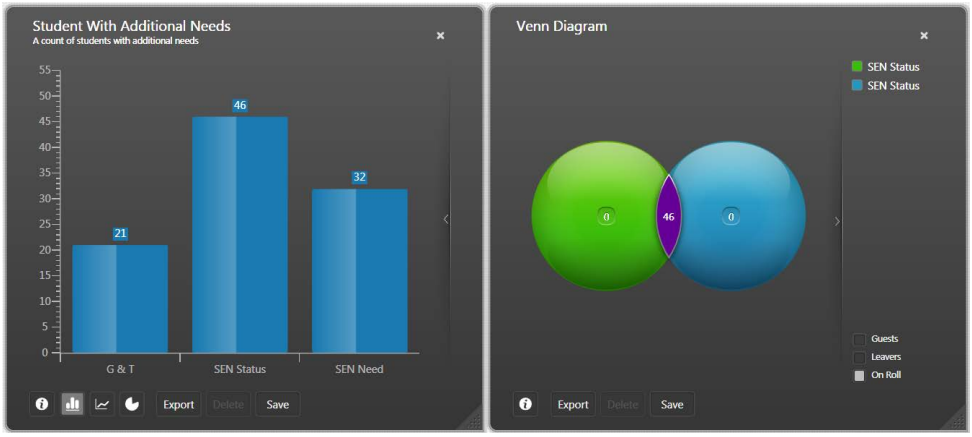

2. Click into the required data point on the graph and drag and drop it onto the Discover canvas.

A single, circular Venn diagram is created for the data point. It is labelled with a legend label in the right-hand side of the new graph showing the colour used to represent the data point. The number of pupil/students, who make up the total of the data point, is shown in the centre of the first Venn diagram circle.




3. Click into a second data point from the original graph and drag and drop it onto the Venn circle in the new graph.

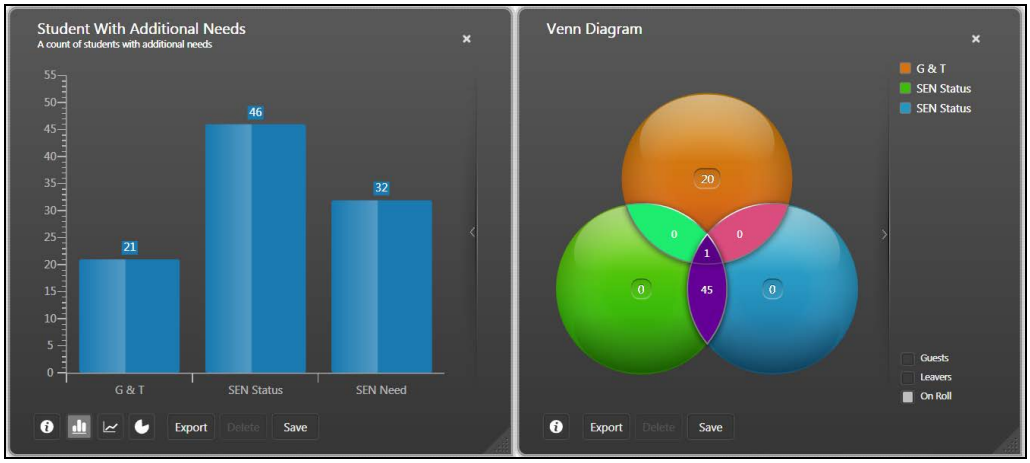
   A second circle is created and labelled with a legend in the right-hand side of the graph showing the colour used to represent this data point. The number of pupil/students, who make up the total of the data item, is shown in the centre of the second Venn diagram circle.




   The intersection between the two data points is shown in another colour. This does not have a legend label because it does not represent a data point. The intersection does not necessarily contain any common data but where it does, the number of pupil/students who share the attributes of both data points, is displayed in the intersection.

4. Click into a third data point from the original graph and drag and drop it onto the Venn circles in the new graph.

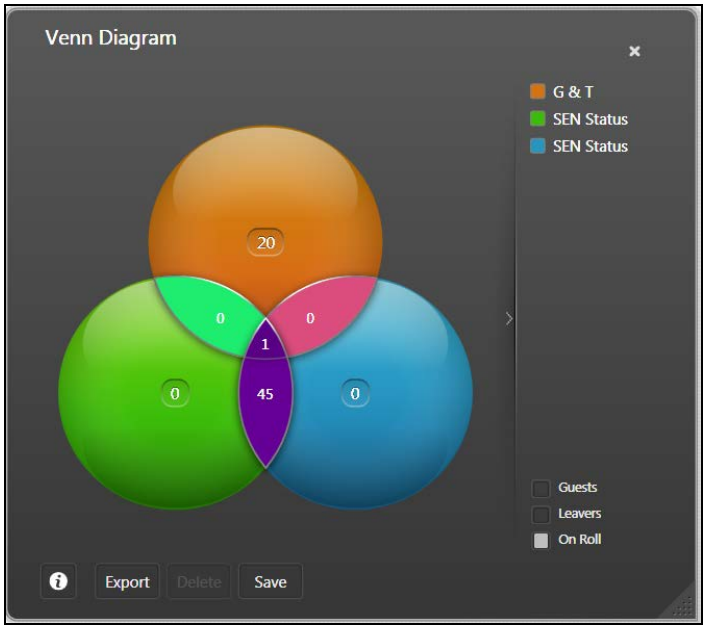
A third circle is created and labelled with a legend label in the right-hand side of the graph showing the colour used to represent this data point. The number of pupil/students, who make up the total of the data point, is shown in the centre of the third Venn diagram circle.




Where the three data points (each represented by an individually coloured circle) intersect, each area of the intersection is represented by a different coloured segment. The number of pupil/students, who share the attributes of any, some or all of the data points, is displayed in each intersection.

## Saving a Venn Diagram

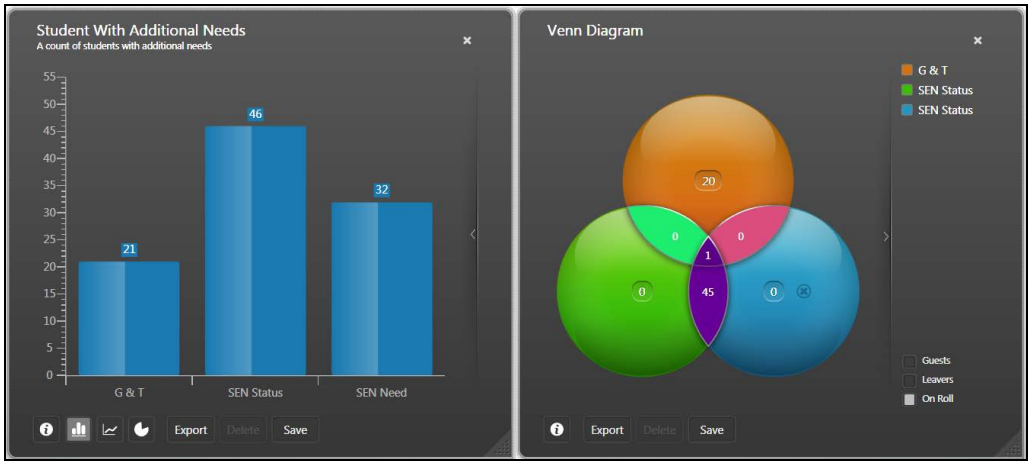
When you are creating a Venn diagram from a selection of data points from other compiled graphs, the title remains as 'Venn Diagram' until such time as you save the newly created graph. This enables you to give the Venn diagram a meaningful name based on the data points and years you have selected.



In order not to complicate legend labels and titles unnecessarily, the source year is not displayed if you are only working with the current year's data. For example, if you have the current year selected and create graphs using only the current year's data, the source year is not displayed on these graphs.

## Removing a Circle from a Venn Diagram

It is possible to remove one or more of the Venn diagram circles and build another Venn using different data points from another graph, if required.




Allow the mouse to hover over the relevant circle. A small circular **Delete** button is displayed. The following graphic is representative only, the background colour of the **Delete** button differs depending on the colour of the circle over which the mouse is hovering (please see *Hints and Tips for Viewing the Data in Each Segment of a Venn Diagram* on page *14*).

*Delete button*

Click the **Delete** button to remove the relevant circle.

***IMPORTANT NOTES:*** *When creating a Venn diagram from multiple graphs, the* ***Population Filter*** *that is selected on the graph from which the first data point is chosen determines how the subsequent data points are displayed. For example, if the* ***Student Totals by Year Group*** *graph has the* ***On Roll*** *population filter selected and* ***Year Group 8*** *is chosen as the first data point to use in a Venn diagram, the subsequent data points dropped onto the Venn diagram from other graphs only show* ***On Roll*** *pupil/students and not* ***Guests*** *or* ***Leavers****.*

## Colour Conformity for Gender Based Data

Previously, on some pre-defined graphs, the data point for boys were coloured in pink and data points for girls were coloured blue. To prevent gender confusion when viewing data in compiled graphs, data points for **Male** pupil/students now default to blue and data points for **Female** pupil/students now default to pink.

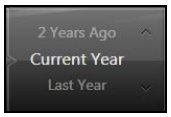
# Creating a Venn Diagram Containing Data from Multiple Academic Years

Venn diagrams differ from graphs in that they are not based on a main context year. Any circles in a Venn diagram could potentially contain a combination of data from multiple academic years. Where Venn diagrams have been created using data from multiple years, the legend labels clearly indicate the source year that each data point relates to. It is also possible to select the required pupil/student population displayed in the Venn diagram by changing the population filter from the default of **On Roll** to either **Guests** or **Leavers**.

> *NOTE: If a data point containing Leavers is dragged onto a graph containing data from a different academic year, the Leavers will not be visible if they have already left the school prior to the academic year that you are viewing.*

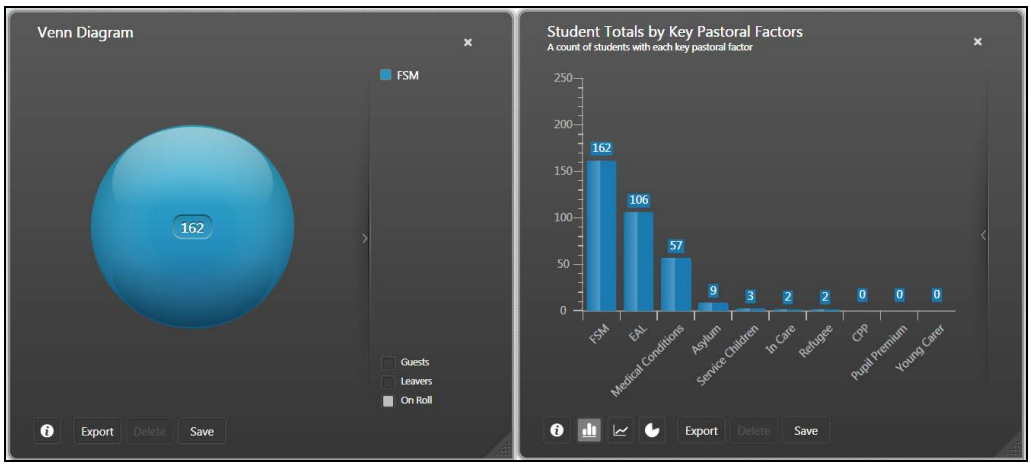
The following instructions are for illustration purposes only, you will want to create your own school specific, multiple year Venn diagrams.

1. Select the **Current Year** from the **Academic Year Selector**.



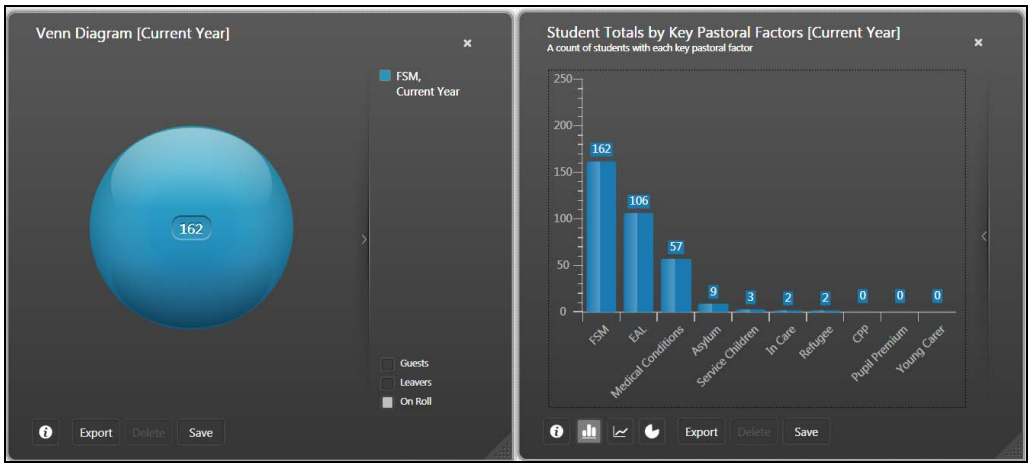

2. Click the **Pastoral** catalogue button on the **Discover Application Bar** to view the drop-down list of available pre-defined graphs.
3. Drag and drop the **Student Totals by Key Pastoral Factors** graph definition onto the canvas.

   When the graph has compiled, drag the **FSM** data point and drop it onto the Discover canvas.

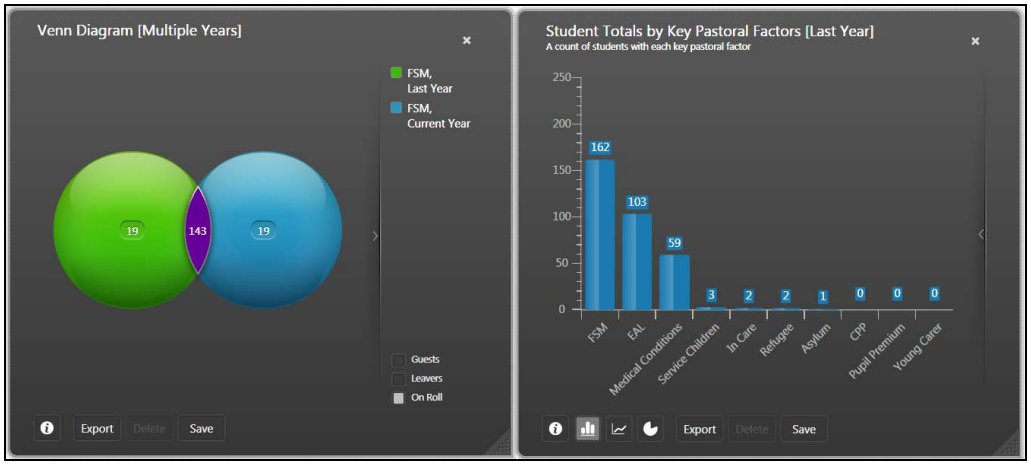



A single circle representing the pupil/students who are eligible for **Free School Meals** in the **Current Year** is displayed.

4. Select **Last Year** from the **Academic Year Selector**. As soon as you select a different year, the title of the single circle **Venn Diagram** is appended with **(Current Year)**. The title of the **Student Totals by Key Pastoral Factors** graph is also appended with **(Current Year)**.




5. Click the **Pastoral** catalogue button on the **Discover Application Bar** to view the drop-down list of available pre-defined graphs.
6. Drag and drop the **Student Totals by Key Pastoral Factors** graph definition onto the Discover canvas. The title of the **Student Totals by Key Pastoral Factors** graph is appended with **(Last Year)** so that you can clearly differentiate from the data in the initial graph.
7. When the graph has compiled, drag the **FSM** data point and drop it onto the single circle Venn diagram.

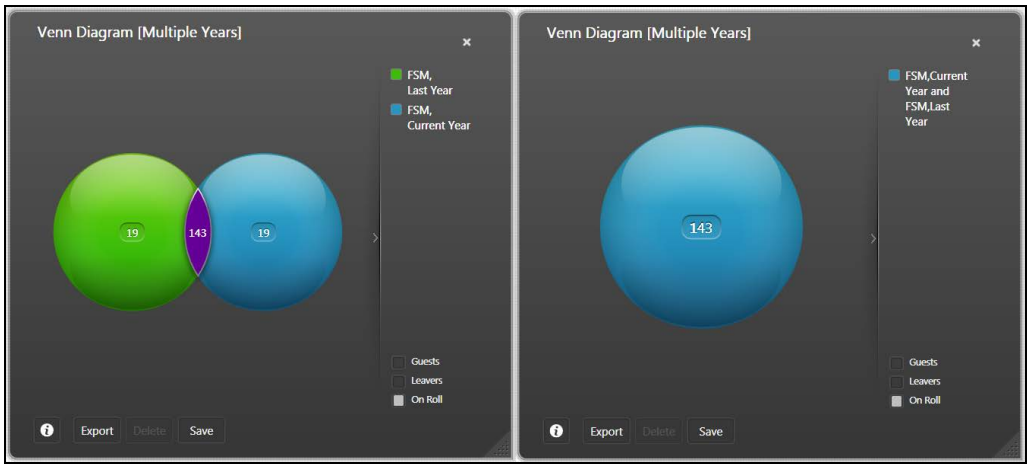



An additional circle is created representing the pupil/students who are eligible for **Free School Meals** in the **Last Year**. The title of the Venn diagram now indicates that it contains data from **(Multiple Years)**.

8. Close the **Student Totals by Key Pastoral Factors** graph and move the **Venn Diagram (Multiple Years)** into the centre of the Discover canvas.

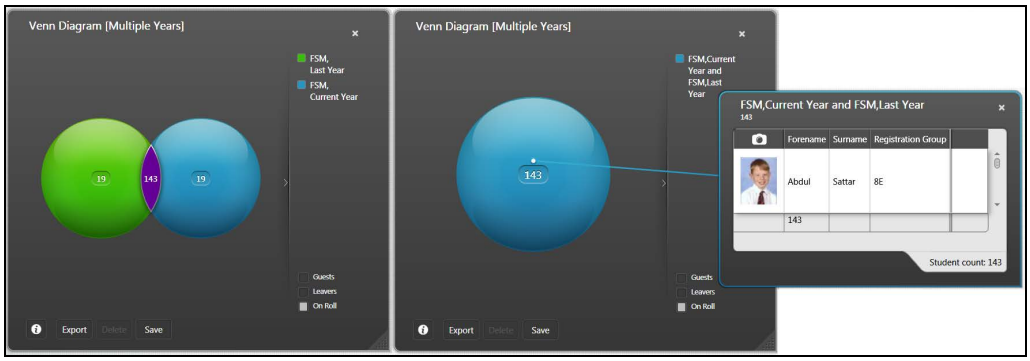
9. Click into the central intersection of the two circles to display a pop-up containing the total number of pupil/students who fall into the population of being eligible for **Free School Meals** in the **Current Year** and **Last Year**.


10. Click into the main body of each of the circles separately to display a pop-up containing the total number of pupil/students who fall into the population of being eligible for **Free School Meals** in each individual year.
11. Close the pop-ups, then drag and drop the central intersection of the two circles onto the Discover canvas to create a new **Venn Diagram (Multiple Years)**.

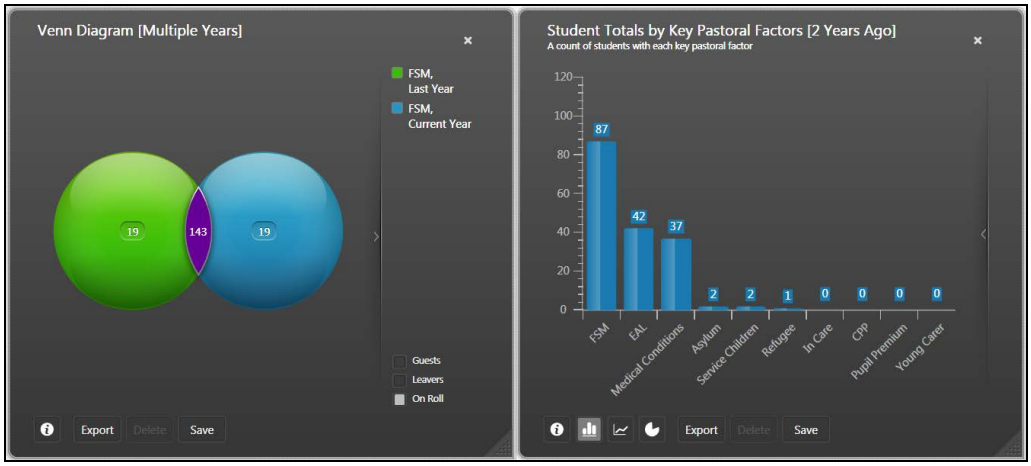



A single circle representing the population of pupil/students who are eligible for **Free School Meals** in the **Current Year** and **Last Year** combined is displayed.

12. Click into the main body of the circle in the new **Venn Diagram (Multiple Years)** graph to display a pop-up containing the combined pupil/student population who are eligible for **Free School Meals** in the **Current Year** and **Last Year**.




13. Close the pop-up, then close the original two circle **Venn Diagram (Multiple Years)** graph, so that only the single circle **Venn Diagram (Multiple Years)** remains on the Discover canvas.
14. Select **2 Years Ago** from the **Academic Year Selector**.
15. Click the **Pastoral** catalogue button on the **Discover Application Bar** to view the drop-down list of available pre-defined graphs.
16. Drag and drop the **Student Totals by Key Pastoral Factors** graph definition onto the Discover canvas. The title of the **Student Totals by Key Pastoral Factors** graph is appended with **(2 Years Ago)** so that you can clearly differentiate from the data in the initial graph.
17. When the graph has compiled, drag the **FSM** data point and drop it onto the single circle Venn diagram.

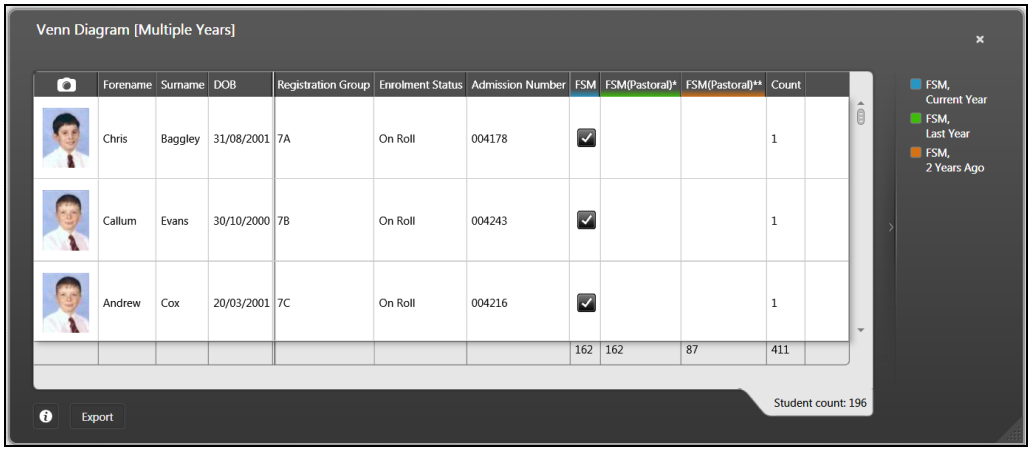



An additional circle is created representing the population of pupil/students who are eligible for **Free School Meals** in the data from **2 Years Ago**.

The central intersection of the two circles contains the combined pupil/student population who are eligible for **Free School Meals** across the three years of data.

18. Close the **Student Totals by Key Pastoral Factors (2 Years Ago**) graph.

19. Click the **information** button in the bottom left-hand corner of the **Venn Diagram (Multiple Years)** graph to rotate the graph by 180 degrees and view the underlying data.

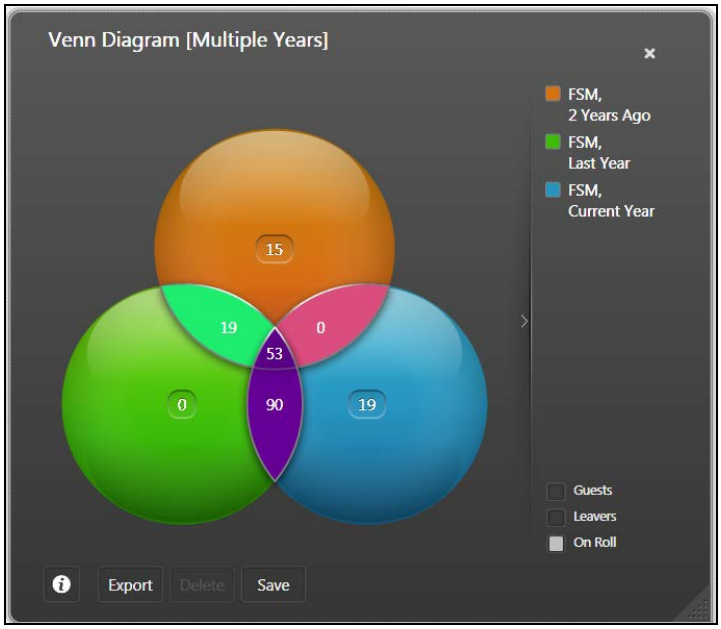



The legend label is displayed on the reverse of the compiled Venn diagram. The colours used in the legend label are applied to the column headings to enable you to easily identify the source and meaning of the data. The colour of the column headings corresponds with the colour of the circles on the front of the compiled Venn diagram enabling you to see which pupil/students fall into which data circle.

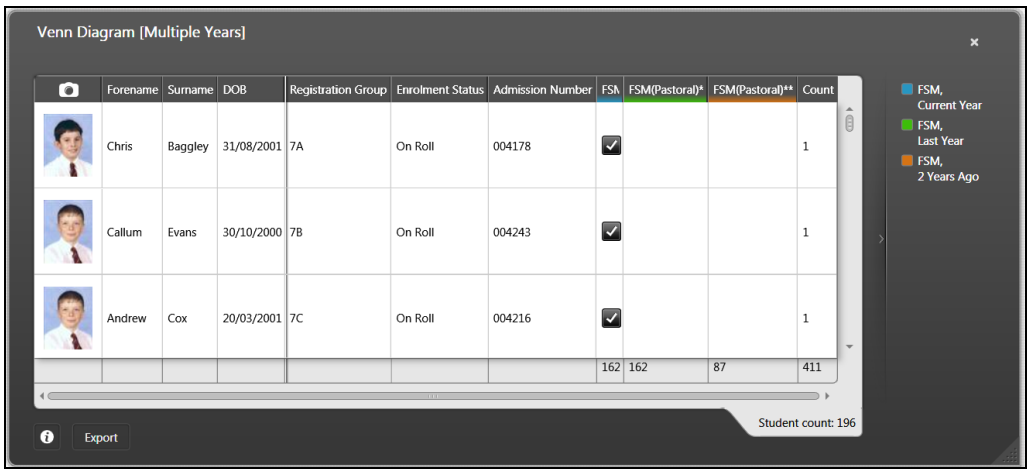
20. Click the **information** button again to rotate the graph by 180 degrees and return to the front.
21. Close the graph definition when you have finished.

## Improvements to the Legend Labels on Venn Diagrams

Where Venn diagrams have been created using data from multiple years, the legend labels clearly indicate the source year that each data point relates to. The way that the information is displayed in the legend labels has been improved to ensure clarity and enhance readability.




The legend label is also displayed on the reverse of a compiled graph/Venn diagram. The colours used in the legend label are applied to the column headings to enable you to easily identify the source and meaning of the data.




You can choose to show or hide the legend labels displayed on Venn diagrams by clicking the **Show / Hide Graph Legend** indicator.

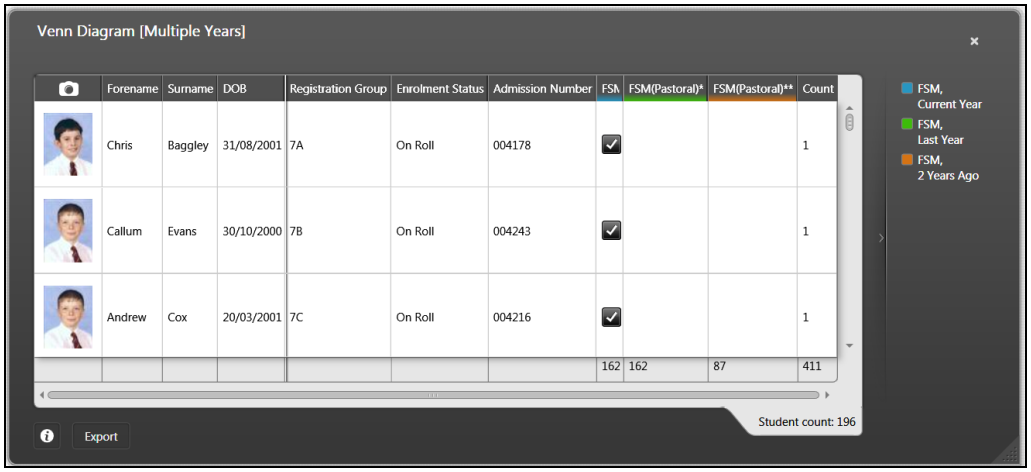
This indicator is represented by a backwards or forwards facing arrow depending on whether the legend labels are currently visible. Clicking the arrow decreases or increases the space available for displaying the data. This action can be undone at any time to restore the original legend labels.

## Hints and Tips for Viewing the Data in Each Segment of a Venn Diagram

- Before creating pop-ups, it is advisable to maximize the space available on the Discover canvas so that there is sufficient room to arrange the pop-ups into a suitable position around the Venn diagram. Click the relevant **Catalogue** button to close the drop-down list of available graph outputs and close any other graph outputs that you may have been looking at.
- When you click into a segment of the Venn diagram, a pop-up is created. It is possible to create a pop-up for each individual segment of the Venn diagram.
- Each pop-up is labelled according to the population of pupil/students that it represents in the Venn diagram. The total number of pupil/students who fall into this population is shown in the top left-hand corner of the pop-up. Use the scroll bar to view the details of all the pupil/students. Click into a column heading on a pop-up to sort the pupil/students by the data field represented in the column heading.
- Once pop-ups have been created, the Venn diagram and its associated pop-ups can be moved around the Discover canvas by dragging the Venn diagram. The pop-ups remain in position in relation to the Venn diagram unless they are clicked on and dragged independently of the original graph.
- The pop-ups can be dragged and dropped so that they are adjacent to the segment of the Venn diagram that they relate to. A line indicator links each pop-up to its related segment on the Venn diagram and the line indicator expands and contracts as the pop-up is moved around the Discover canvas. The colour of the line indicator and the pop-up surround correspond to the colour of the applicable segment in the Venn diagram.
- The graph showing the Venn diagram cannot be closed or resized whilst the pop-ups remain open. To close a pop-up, click into the appropriate segment of the Venn diagram and the pop-up and its associated line indicator are removed.
- Changing the **Client Filters** on the Venn diagram results in all the pop-ups closing automatically.
- When viewing the reverse side of a Venn diagram, it is suggested that you stretch the dialog as far across the Discover canvas as possible so that all the data columns can be seen clearly. Use the scroll bar to view the details of all the pupil/students.

- If you inadvertently drag the Venn diagram and its associated pop-ups off the bottom of the Discover canvas, click into the Discover canvas and drag the mouse cursor upwards until the graph reappears.


Reverse side of a Venn diagram



# 03 | Compiling the Predefined Assessment Graph Definitions

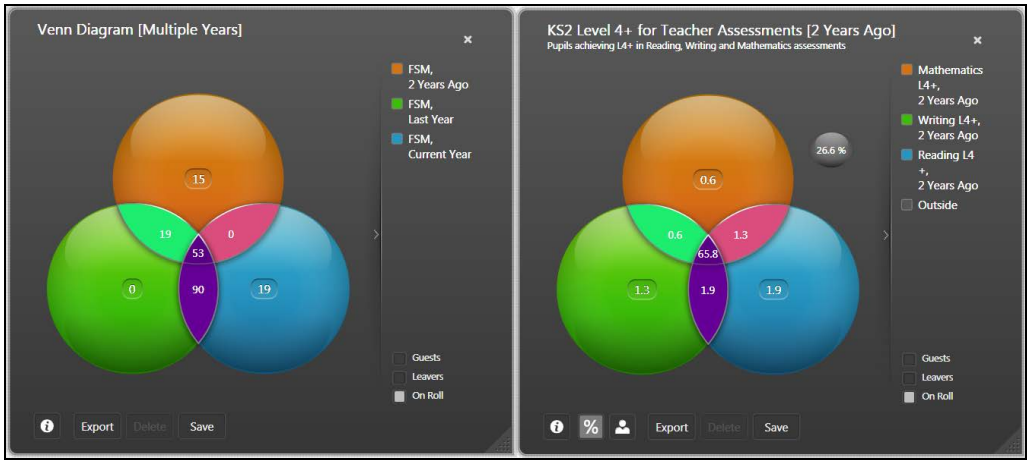


## Introduction

A number of improvements have been made to the display elements of the predefined Assessment graph definitions available from within Discover. The graph definitions that are compiled as Venn diagrams can be viewed by percentage mode or by pupil/student population count mode.

### Comparing the Graphical Outputs

The percentage mode and pupil/student population count mode options are only visible when viewing a compiled output of one of the predefined Assessment graph definitions provided by Capita SIMS and are not available when viewing a Venn diagram of your own creation.




The graphical output on the left-hand side is a user defined Venn diagram composed of different data points from a number of graphs. The graphical output on the right-hand side is a predefined Assessment graph definition. There are two mode buttons on the front of the graph that enable you to switch between viewing the output in percentage mode or by pupil/student population count mode.

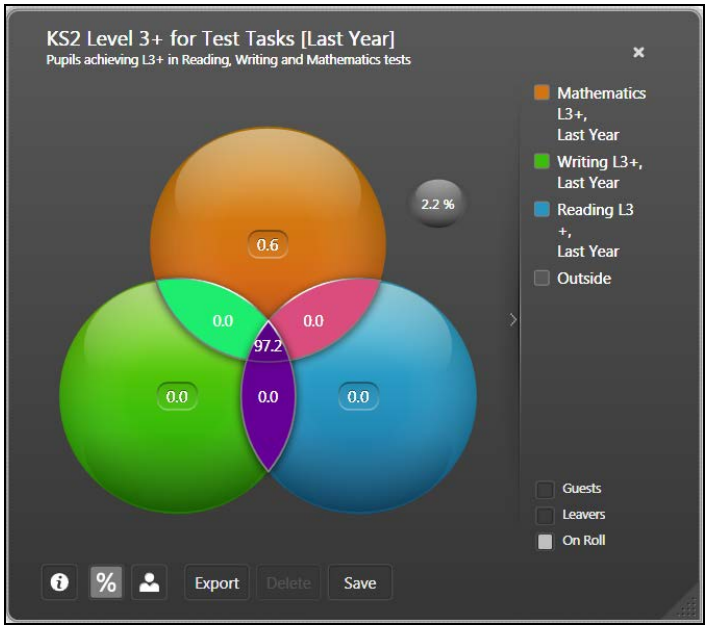
# Viewing the Outside Population of Pupil/Students

As well as the ability to view predefined Assessment Venn diagrams in percentage mode or by pupil/student population count mode, there is another feature that indicates the **Outside** population of pupil/students who have not attained the levels required to result in their inclusion in the circles of the Venn.


Click the **Outside** circle to display a pop-up of the pupil/students who are part of the original cohort assessed at Key Stage 2 Level 4+ for Teacher Assessments but who have not achieved any of the requirements.

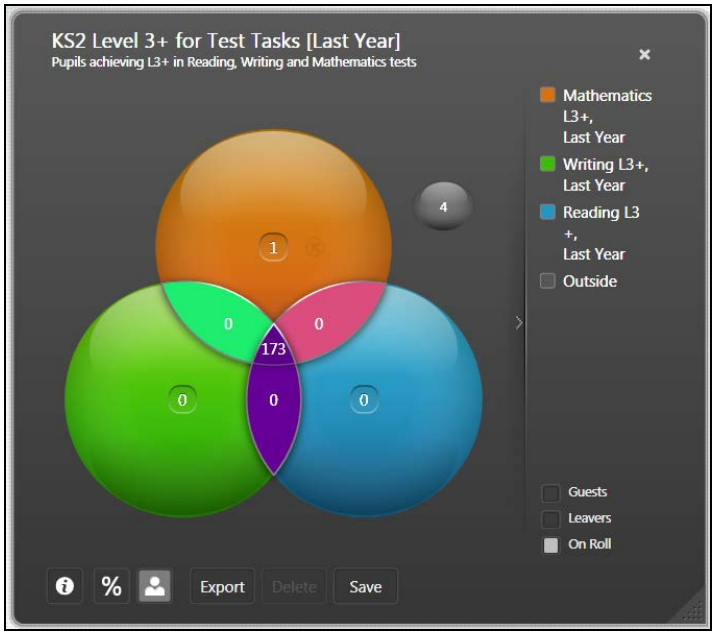
## Changing the Pupil/Student Population

The predefined Assessment graph definitions provided by Capita SIMS are displayed in **Percentage** mode by default.



You can switch between this mode and the **Pupil/Student Population Count** mode by clicking the relevant buttons on the front of the compiled Venn diagram.

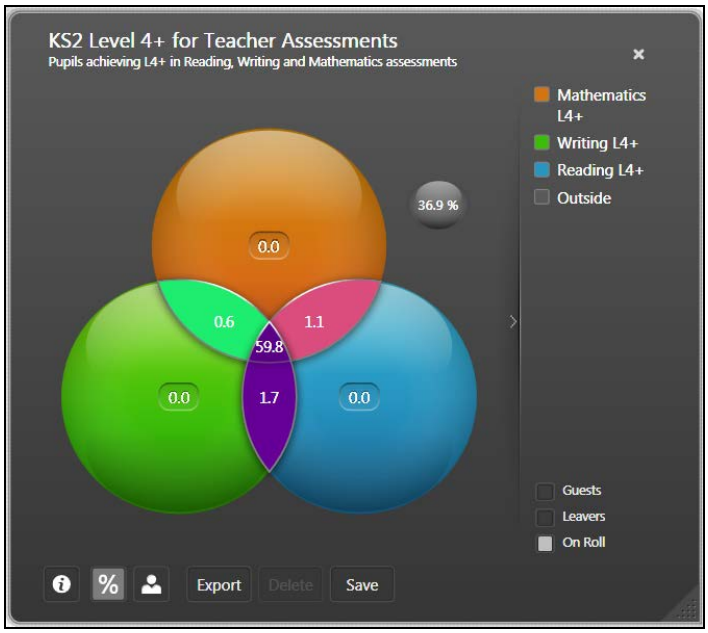
The following graphic shows the same Venn diagram viewed by the **Pupil/Student Population Count** mode.



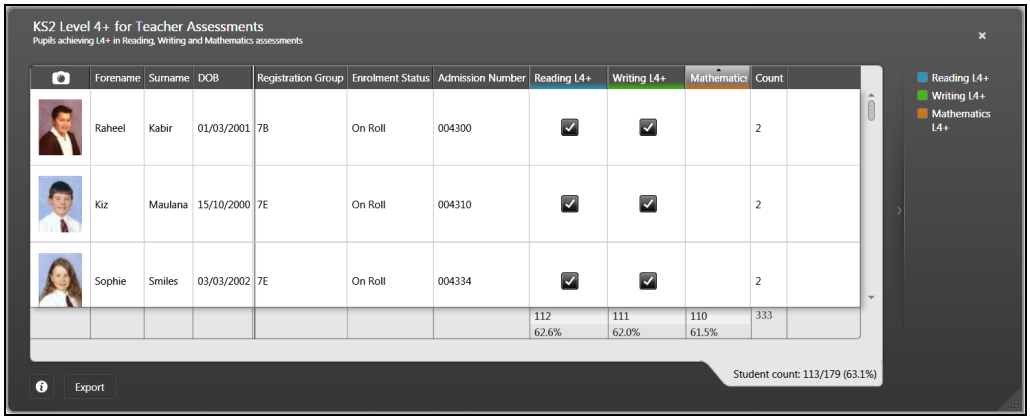

## Understanding the Figures on the Reverse of a Venn Diagram

The columns on the reverse side of a Venn diagram are colour coded to correspond with the colour of the Venn circles on the front of the Venn diagram. As the Venn diagram totals are displayed as a percentage by default, this example explains the percentage calculations before explaining the pupil/student count calculations.

When viewing the front of this Venn diagram, the total for the pupil/students who have achieved Level 4+ in Mathematics is displayed in an orange circle, the total for Writing at Level 4+ is displayed in a green circle, the total for Reading at Level 4+ is displayed in a blue circle and the percentage of pupil/students who have not achieved Level 4 in any of the three subjects is displayed as an **Outside** value in a small circle separate from the main Venn diagram.

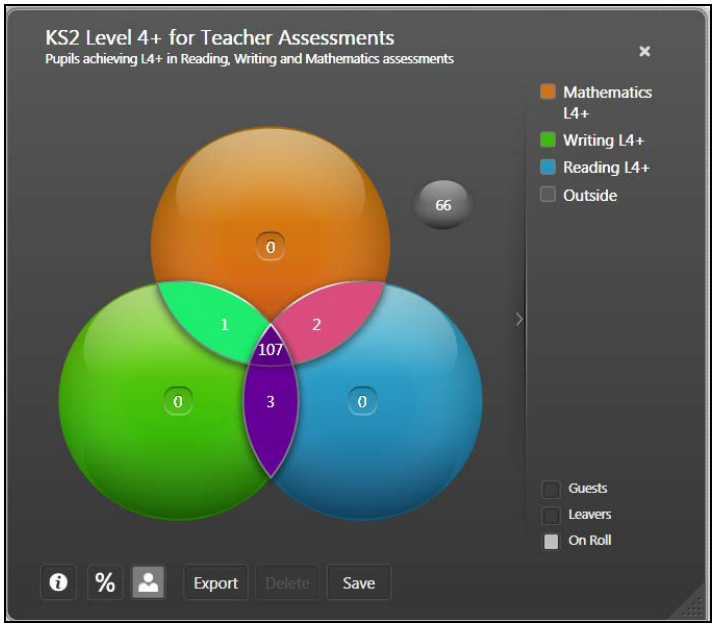



In this example, the **Outside** value is 36.9%. Subtracting 36.9% from 100% leaves a population of 63.1% pupil/students of the Key Stage 2 cohort who have achieved Level 4 in some or all of the three subjects.




The total displayed at the bottom of each column is calculated by adding together the values in all the segments that intersect with each of the coloured circles on the front of the Venn diagram. For example, the blue Reading circle is intersected by 59.8, 1.7, 1.1 and 0.0. These values added together total 62.6% of the overall cohort of pupil/students of 63.1% who have achieved Level 4+ in some or all of the three subjects.

Looking at the front of this Venn diagram with the pupil/student count option selected instead of the default of percentages, the blue Reading circle is intersected by 107, 3, 2 and 0. These values added together total 112. Both of these totals are displayed at the bottom of the blue **Reading L4+** column irrespective of the display option selected when compiling the Venn diagram, e.g. percentage or pupil/student population count.



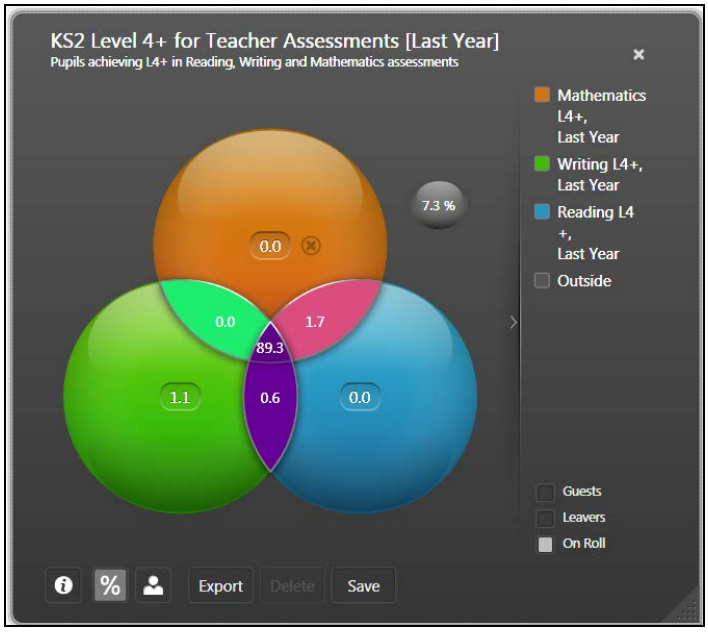

The **Count** column is a cumulative total of the three column totals, e.g. 112+111+110=333.

The **Student count:** figure of 113/179 indicates that out of the entire pupil/student cohort of 179 students, 113 have achieved Level 4+ in some or all of the three subjects and 66 pupil/students displayed in the **Outside** circle have not achieved Level 4+ in any of the three subjects.

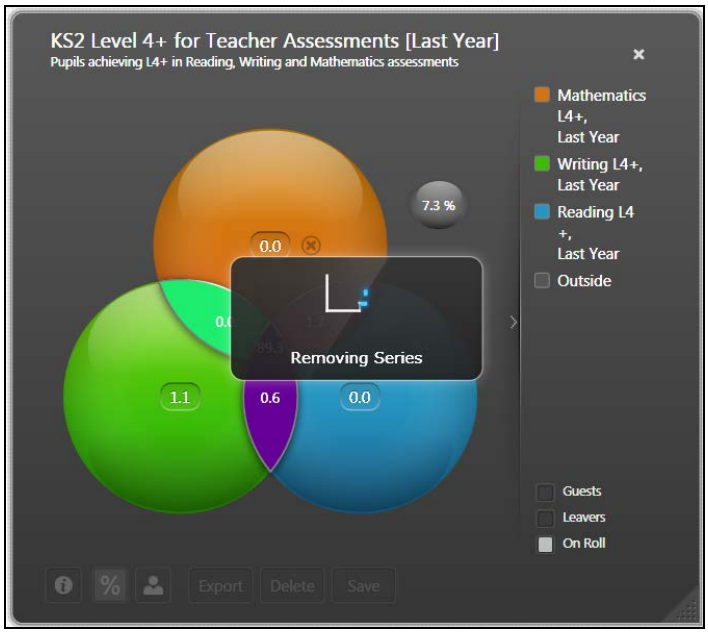
## Adding Another Data Point to a Compiled Venn Diagram

It is possible to drag and drop a different data point onto a compiled predefined Assessment Venn diagram. This enables you to customise and build another Venn diagram using data points from another graph, if required.

However, it is not possible to fundamentally alter the original graph definition so, if you are viewing a three circle Venn diagram and try to drop an additional data point onto it, this is not possible because a three circle Venn diagram cannot contain four circles.

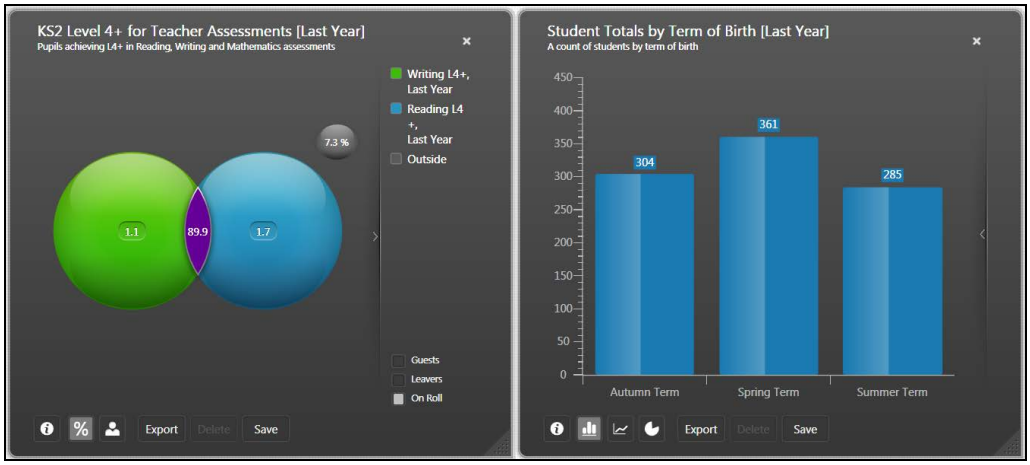



To enable you to drag and drop a different data point onto a four circle Venn diagram, you must first remove one of the original circles by clicking the **Delete** button.

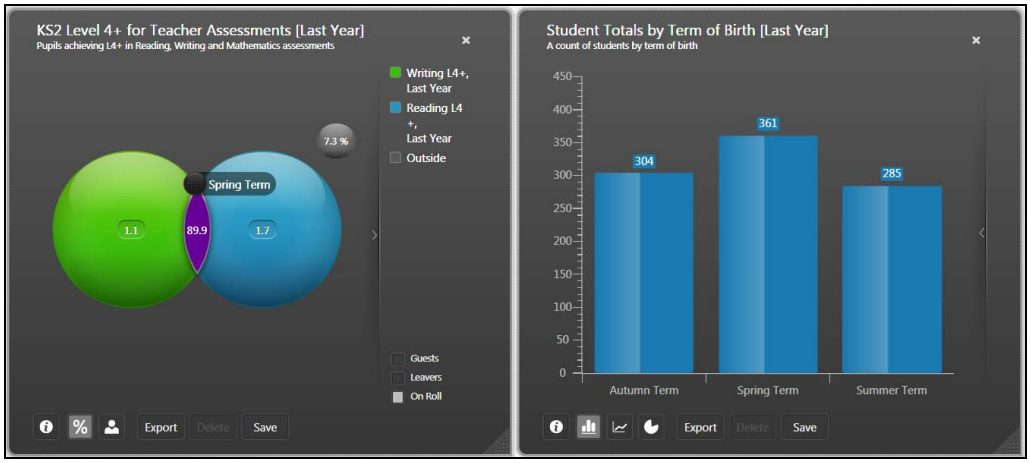



The **Removing Series** caption is displayed whilst the deleted circle is removed from the Venn diagram.

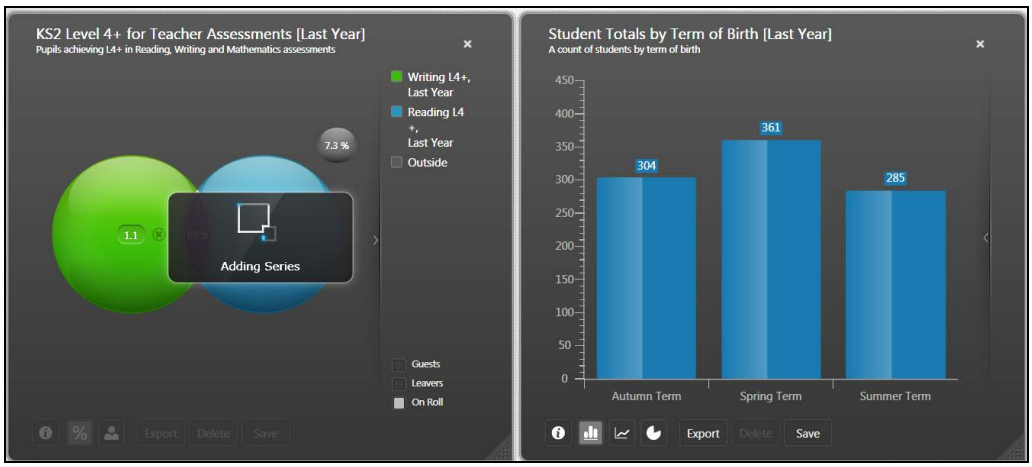
Select the required graph definition that contains the data point that you want to drag and drop onto the Venn diagram and drop it onto the Discover canvas.



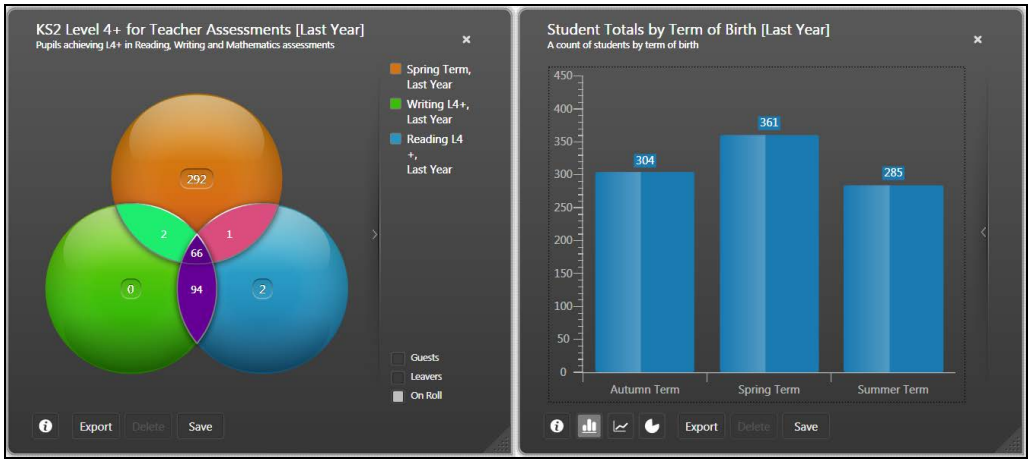

Once the graph definition is compiled, drag the required data point from this graph definition and drop it onto the Venn diagram.




The **Adding Series** caption is displayed whilst the additional data point is incorporated into the Venn diagram.



Once the additional data point is displayed in a Venn circle of its own, you will notice that the default count of percentages has changed to the pupil/student population count. Additionally, the **Outside** circle is no longer visible.



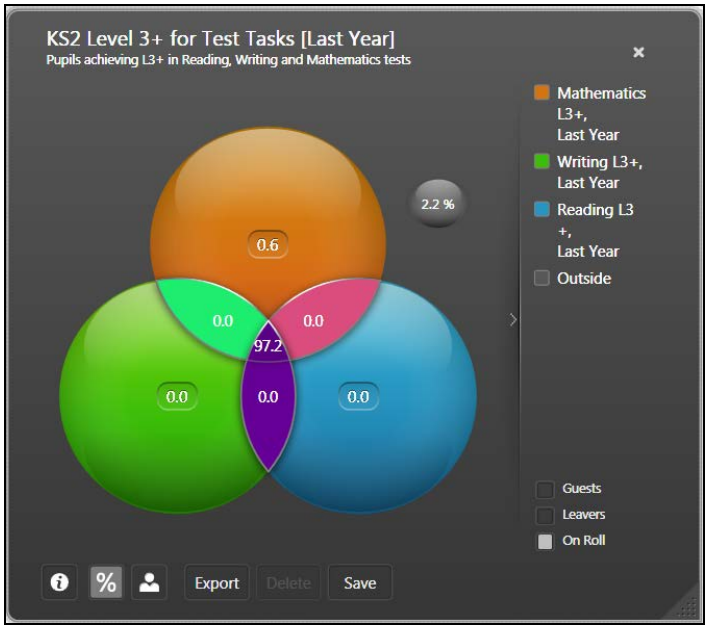

The option to select either the **Percentage** or the **Pupil/Student Population** buttons are no longer available from the front of the graph. When an additional data point is added to a Venn diagram, you can no longer view the totals as a percentage because the newly added data point may contain pupil/students who are not present in the original Venn diagram population of pupil/students.

**More Information:**
*Removing a Circle from a Venn Diagram* on page *7*

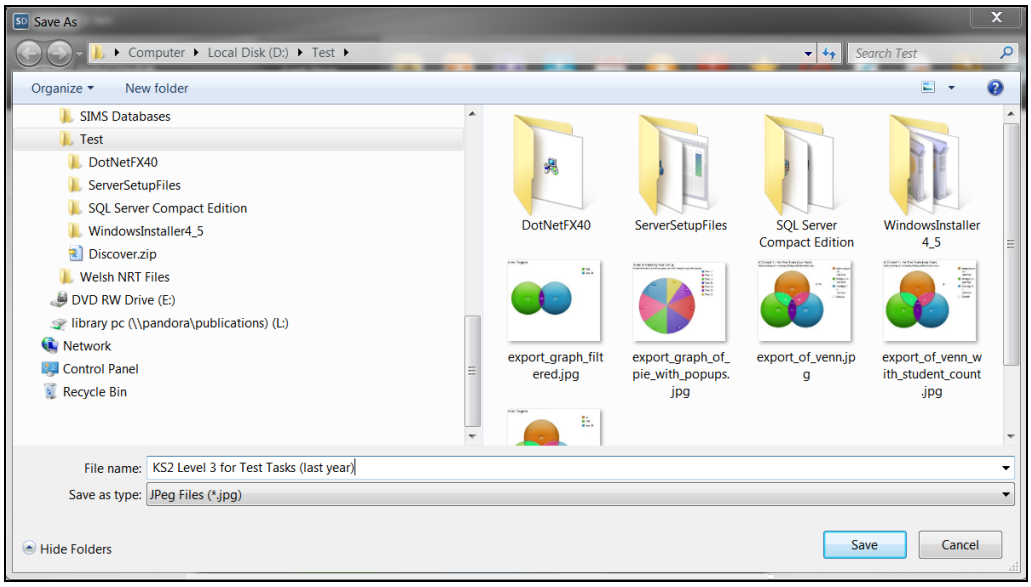
## Exporting a Venn Diagram as an Image

When exporting a Venn diagram as an image, the value of the **Outside** pupil/student population is displayed for both the **Percentage** option and the **Pupil/Student Population Count** option.

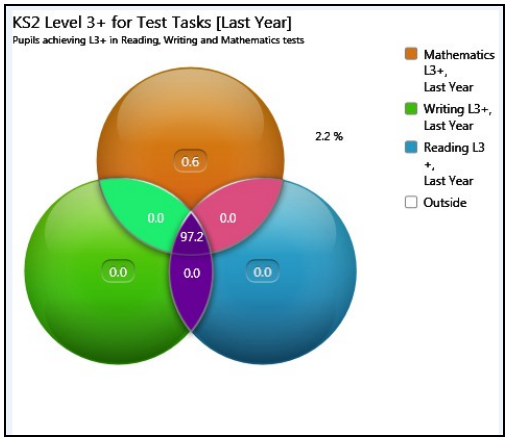
1. After compiling an Assessment Venn diagram graph definition on the Discover canvas, click the **Export** button to display the **Save As** dialog.



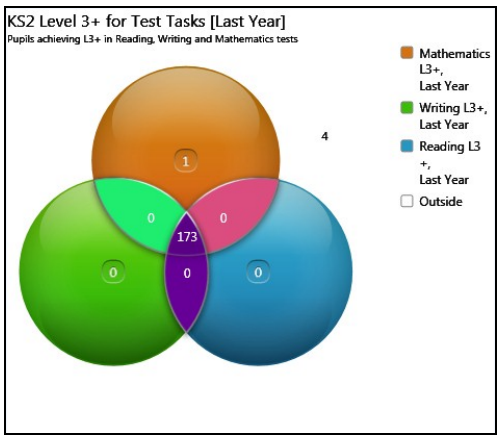

2. Navigate to a suitable storage location, enter a suitable **File name** to enable you to identify the graphical output of this Venn diagram and click the **Save** button.



When you view the image of the Venn diagram, the legend label clearly indicates the data points the Venn diagram comprises.




You can also see that the **Outside** figure is clearly visible as a percentage and as a value of the pupil/student population count option.



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