

Grapher 23 New Features

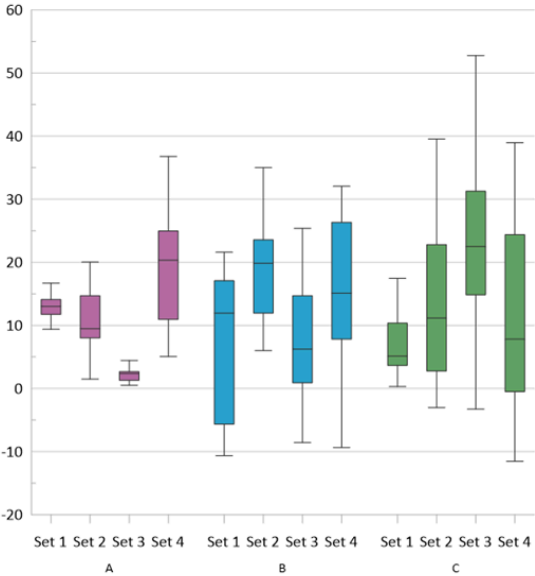
The new Grapher Beta is here! Our focus remains on increasing usability, improving workflows to increase time savings, and including the most commonly requested new features. The top new features are listed below.

If you're curious about how these new features can improve your workflow, [reach out to our world class technical support team](#) today!

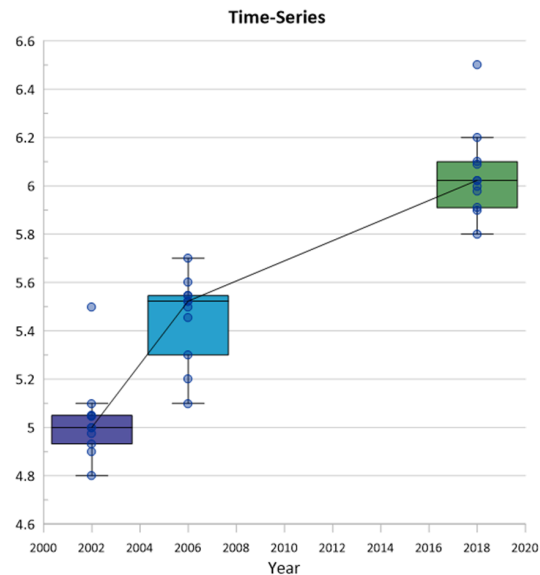
Grouped Box Plots

Users can now create grouped box plots by specifying a category column! No more vlookups and pivot tables in Excel, plug in your data directly from the original database or instrument!

	A	B	C	D	E
1	Location	Set 1	Set 2	Set 3	Set 4
2	A	16.67	10.56	2.08	8.19
3	A	36.39	7.6	0.5	10.95
14	A	3.06	14.7	1.29	12.73
15	A	11.74	18.84	1.68	15.29
16	B	9.97	35.01	0.5	17.66
17	B	21.6	23.57	1.09	7.8
25	B	-10.653333	19.83	-8.5466667	23.38
26	B	-5.6533333	26.93	39.04	32.05
27	C	3.85	20.42	20.106667	25.55
28	C	22.98	33.24	29.053333	24.36
29	C	7.6	39.55	22.48	18.05
38	C		4.0666667	28	11.94
39	C		11.173333	38.52	38.96
40	C		2.76		4.84
41	C		7.7466667		-0.49



In previous versions of Grapher, data needed to be separated into individual columns based on what category the data belonged to. In this example, the variable data sets have been grouped by the *Location* category. Now you can leave your data as is, saving you time reformatting your data!



Grouped box plot axes also allow you to combine your box plots with other plot types to make your data's story even more compelling.

▼ What is this new feature

This feature gives you the option to enter your data in its original form, having Grapher do the work to split out the box plots into groups based on a category column. This feature allows you to:

- Break out one or more columns of data into groups
- Swap the grouping to be either by variable or by category
- Color code the boxes via intuitive color methods
- Save time crunching numbers in Excel!

Specifically, these commands have been added/ modified:

- **Home | New Graph | Statistical:** Four new box plot variants have been added to the statistical plot ribbon. They can also be found in the Wizard and called via Automation.
 - Vertical Grouped Box Plot
 - Horizontal Grouped Box Plot
 - Notched Vertical Grouped Box Plot
 - Notched Horizontal Grouped Box Plot
- **Property Manager | Plot | Data:** Two new options have been added to change how the box plots read your data and how they are displayed
 - Data in groups checkbox
 - Group by dropdown
- **Property Manager | Fill | Color method:** Three ways to easily color your plots
 - Color by box
 - Color by category
 - Color by variable

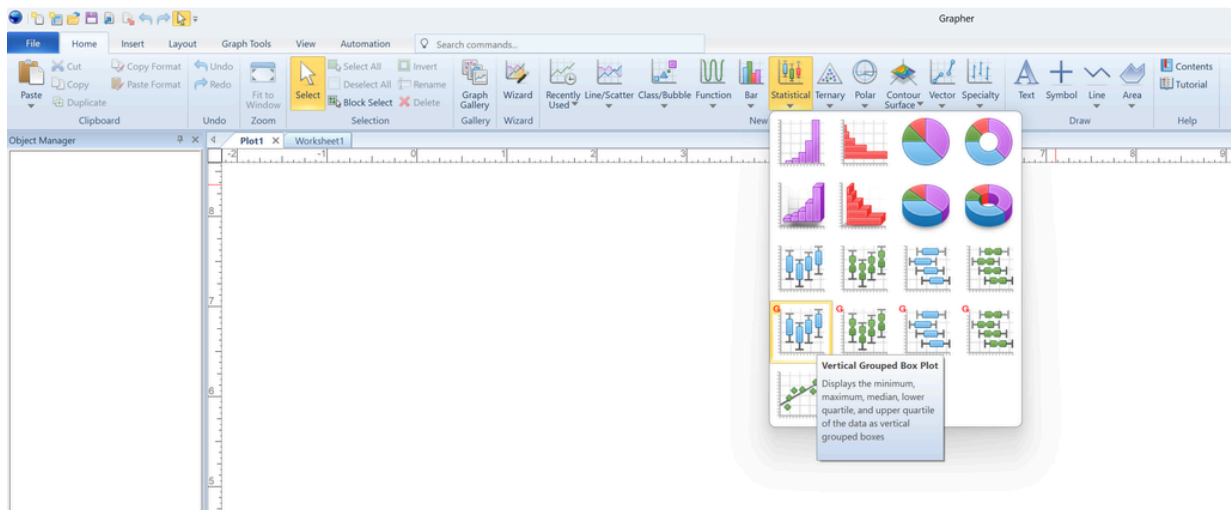
▼ How to use it

To use this feature, all you need to start with is a data file with columns for quantitative data and categorical data.

There are three ways to access this feature:

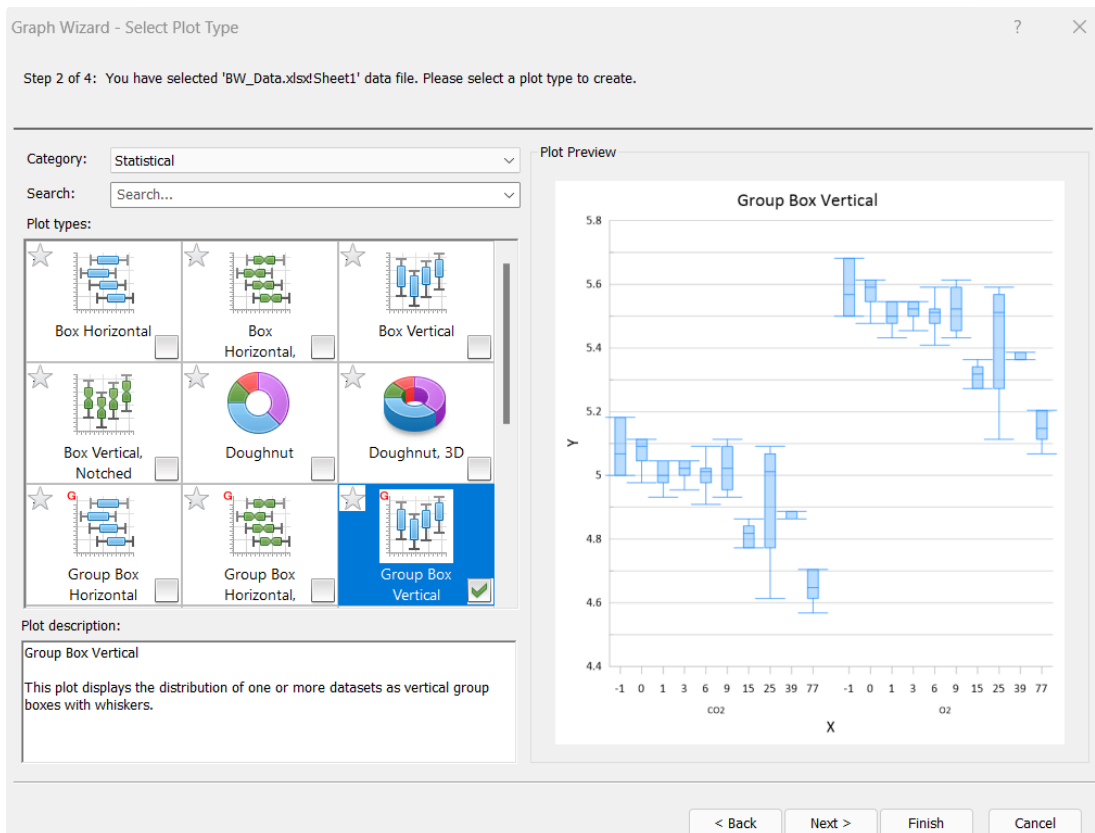
1. Ribbon

a. Home | New Graph | Statistical



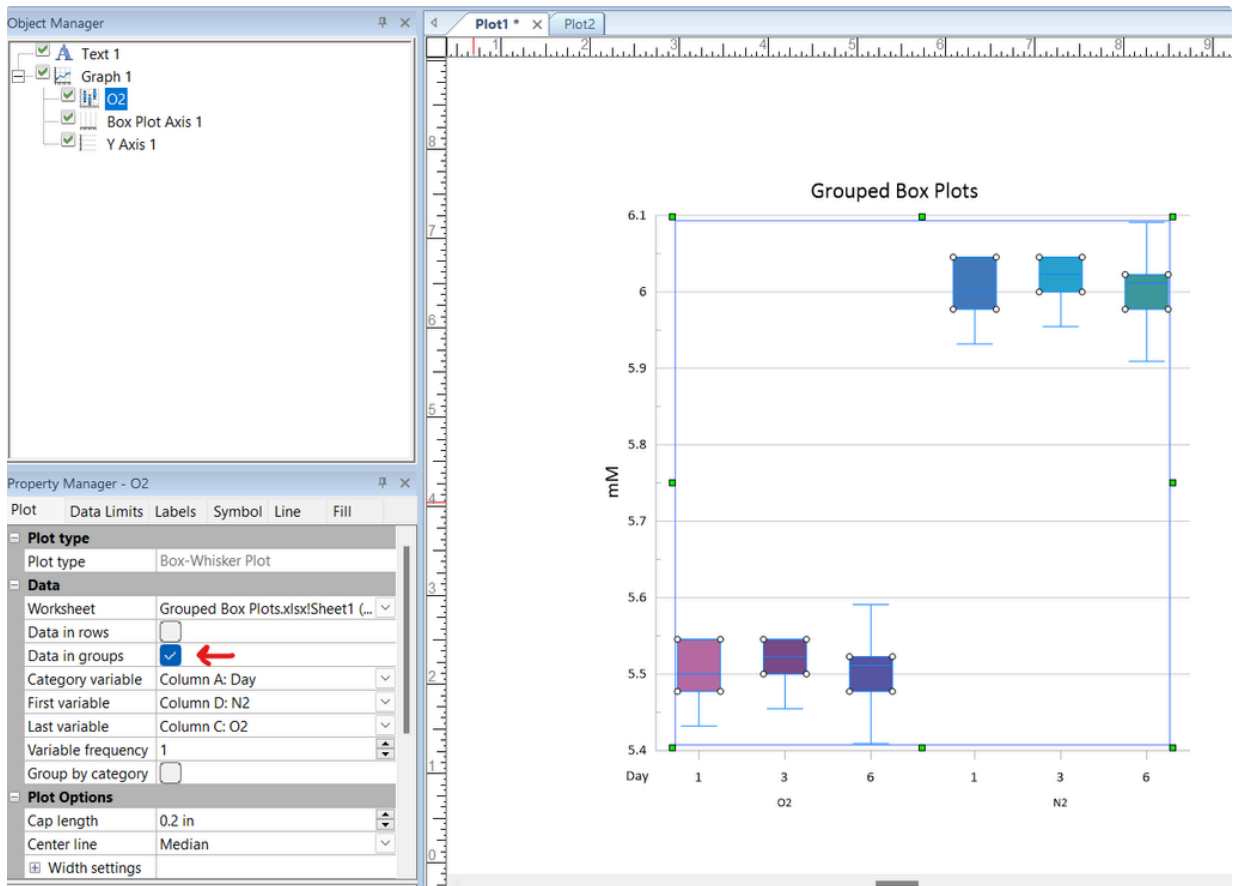
2. Graph Wizard

a. Click through as you would and choose one of the new Grouped Box Plot options on step two



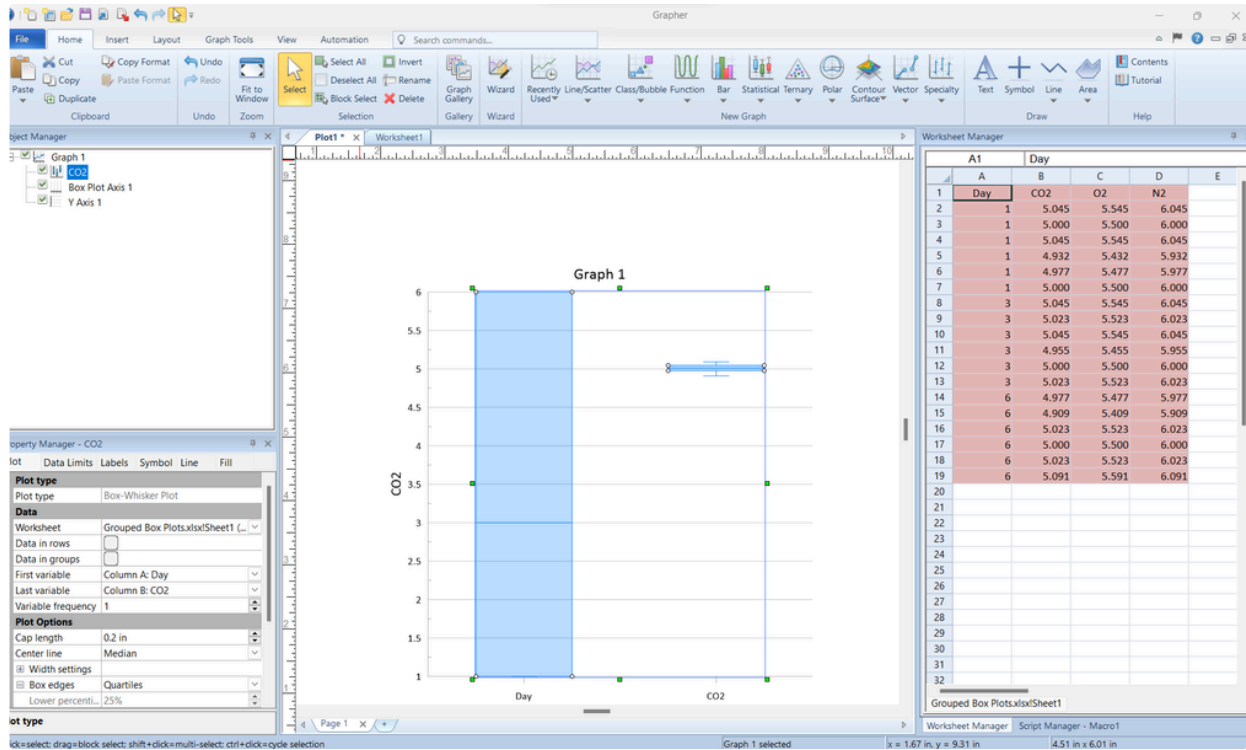
3. Property Manager

a. Start from an existing regular box plot and click "Data in groups"



Follow these steps to try it out:

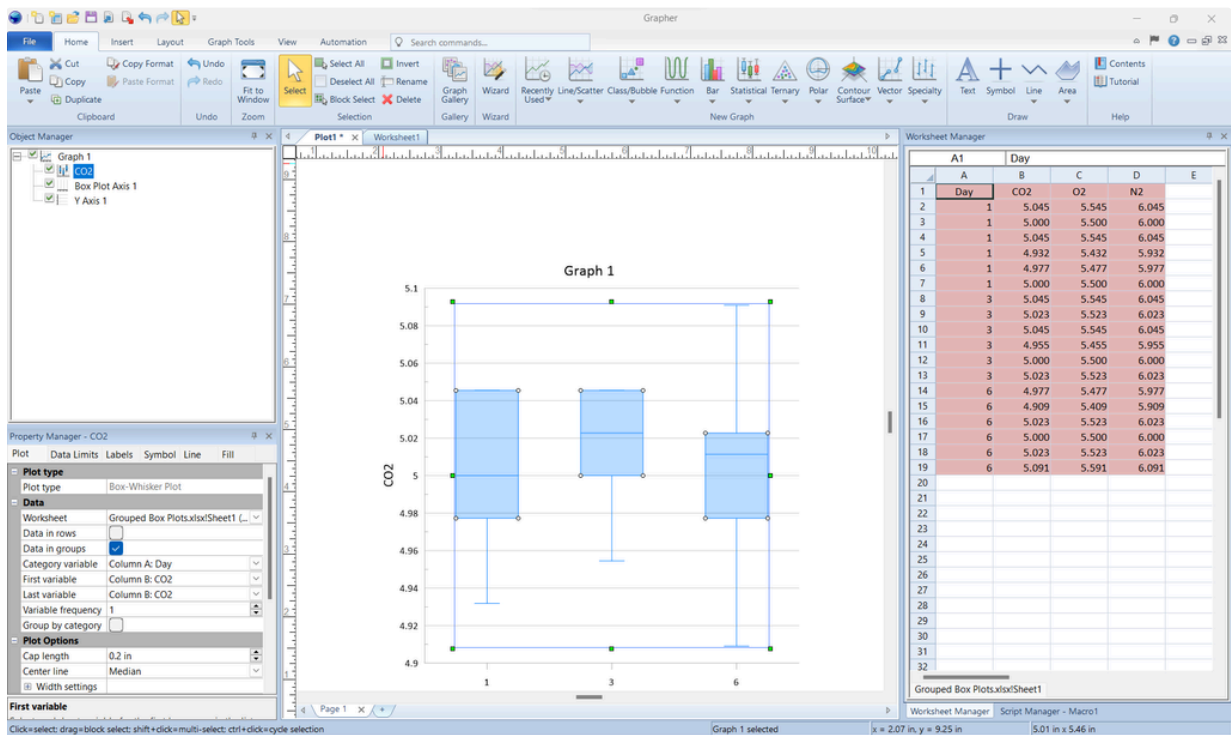
1. Start with a regular Box Plot (New Graph | Statistical | Vertical Box Plot | *Grouped Box Plots.xlsx*):



Default behavior simply creates box plots from single columns in the range specified between the First and Last variable

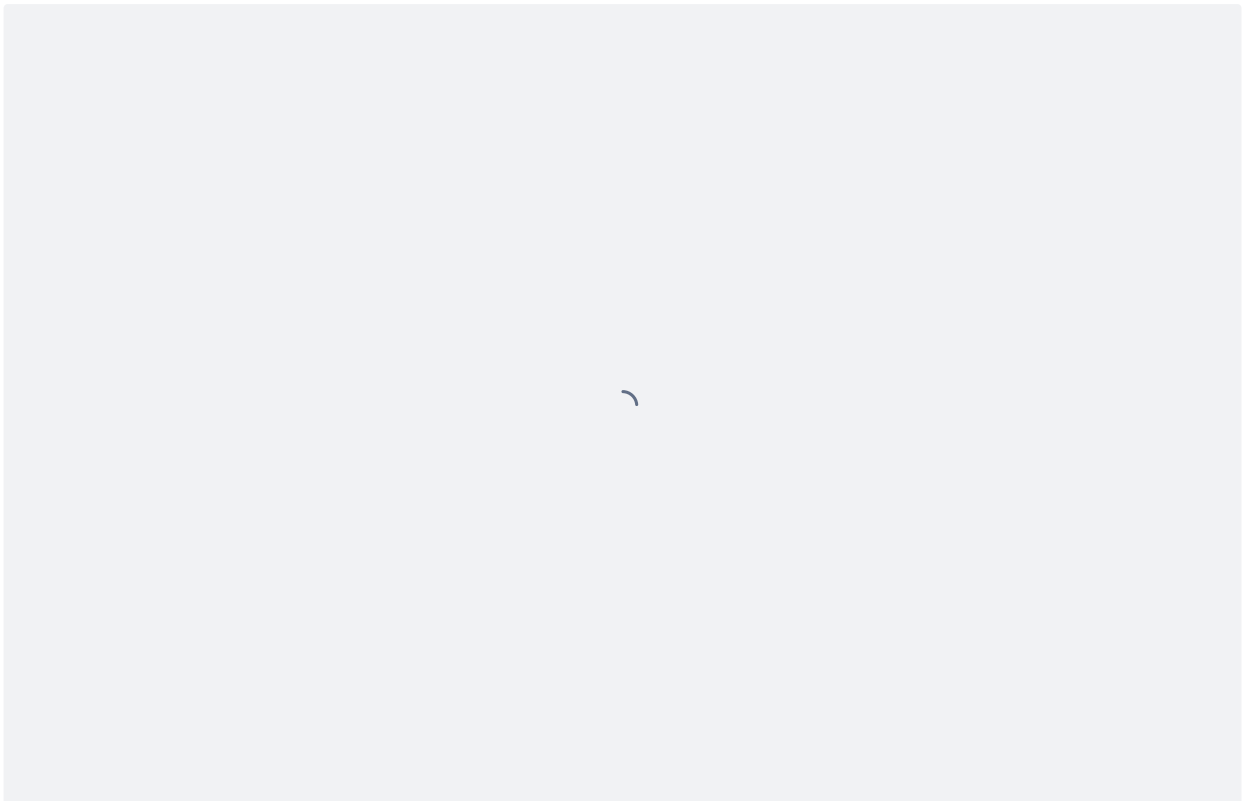
2. Property Manager | Plot | Data | *Data in groups*

- a. Make sure you specify the variable column range properly in the First and Last variable dropdowns. If the first and last columns match, that is the only column that gets grouped.



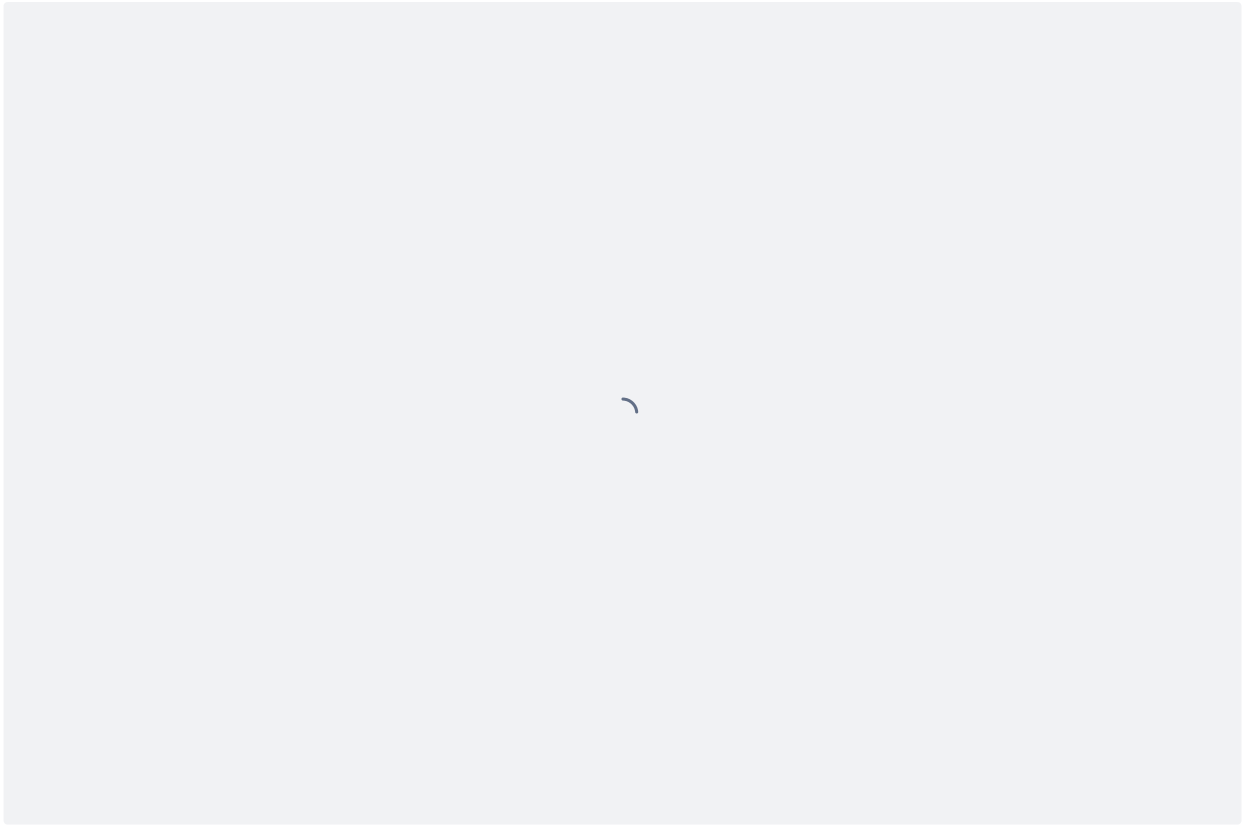
Grapher has detected three unique values in the Category column and has grouped the data from Column B into three groups

3. Extend the range in Last variable to Column D :



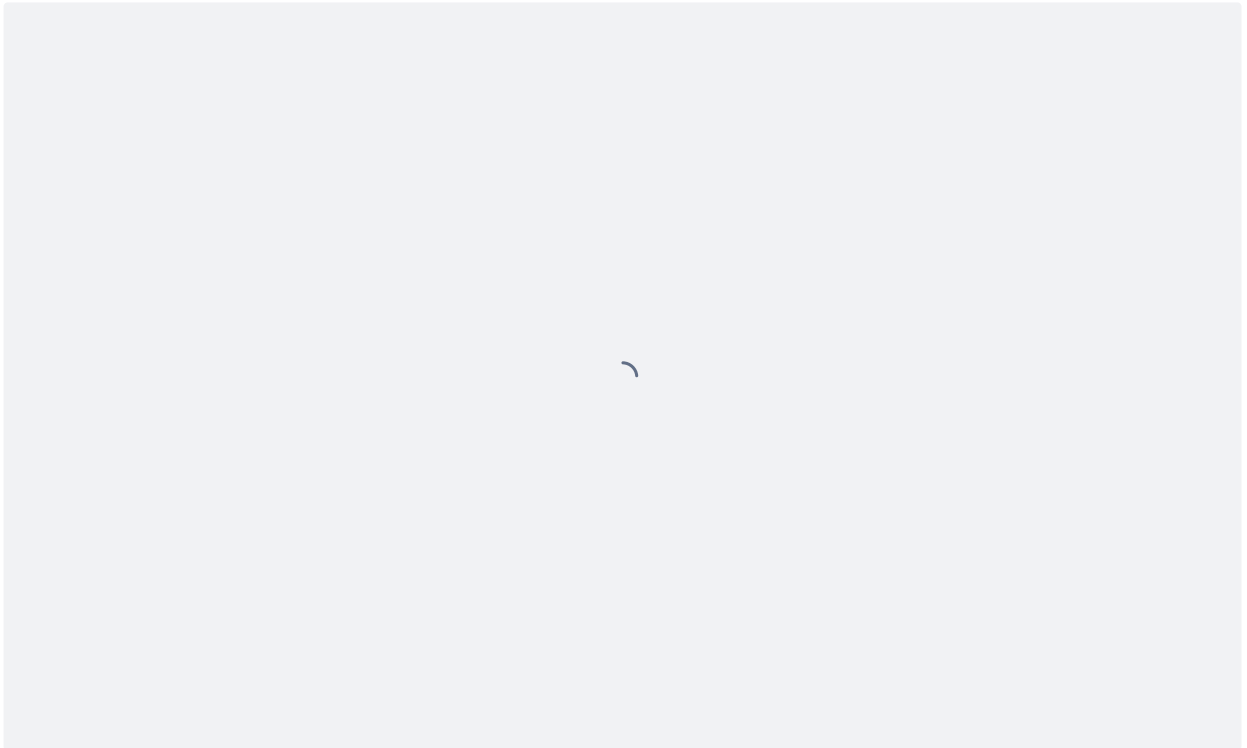
Now Grapher has plotted the same groupings for three different data variables

4. Change the Grouping method by selecting **Property Manager | Plot | Data | Group by category/ variable**



Need to group your data differently? Choose your preferred grouping method with the Group by dropdown!

5. Finally, bring your graph to life with classic Grapher color fill customization via **Property Manager | Fill | Color method:**



Intuitively color your boxes to visually show your groupings

If you have any questions, problems or feedback, please contact svivas@goldensoftware.com

Thank you!