

Producing Summary Tables in SAS® Enterprise Guide®

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ABSTRACT

This paper shows, step-by-step, how to use the Summary Tables task in Enterprise Guide to produce polished reports. Summary Tables is based on the TABULATE procedure, but you don't need to know how to use PROC TABULATE or even how to write SAS programs to use this feature. Whether you are a seasoned SAS programmer or new to SAS, Summary Tables can make creating summary reports easier. This paper is similar to paper 113-31, but uses different examples. You may want to compare the two papers.

INTRODUCTION

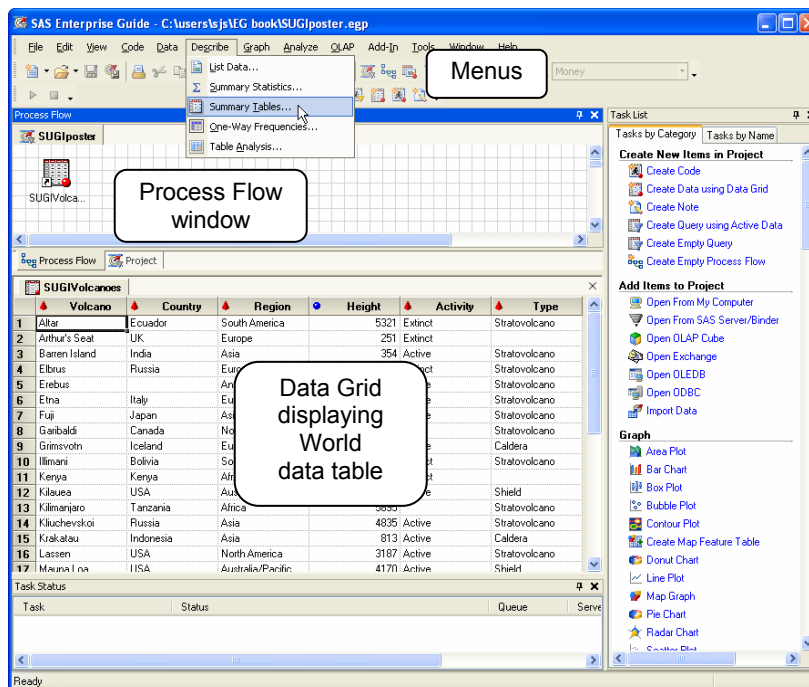
The TABULATE procedure in SAS is a powerful way to create complex and attractive reports. However, getting your report arranged just the way you want it can take extensive trial and error. Enterprise Guide to the rescue....

The Summary Tables task in Enterprise Guide is a point-and-click interface to the TABULATE procedure. Using it you can easily arrange and rearrange your report to see how it will look before you even run it. You can also change titles, headers, fonts, colors, and data formats. In fact, practically any feature you can set in PROC TABULATE code in SAS you can change interactively in Summary Tables. Summary Tables is faster, easier, and saves you from having to figure out where to put all those asterisks and parentheses. Once you've perfected your table in Enterprise Guide, you can, if you wish, save the code and run it from the SAS System.

This paper was written using SAS Enterprise Guide 3. If you are using SAS Enterprise Guide 2 or 4 you will see big differences in the Project and Process Flow windows, but only slight differences in the Summary Tables task.

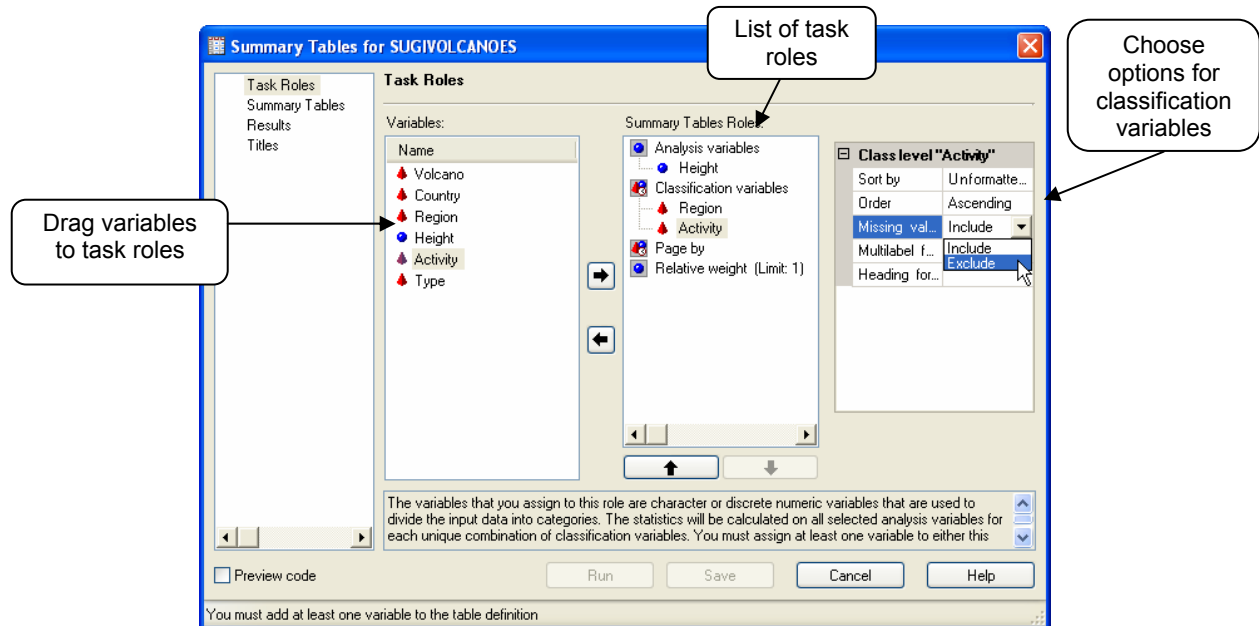
OPENING THE SUMMARY TABLES TASK

To make a data set active, click its icon in the Process Flow or Project window. Then open the Summary Tables task by selecting **Describe** ► **Summary Tables** from the menu bar. Enterprise Guide will open a Summary Tables window for the active data set.



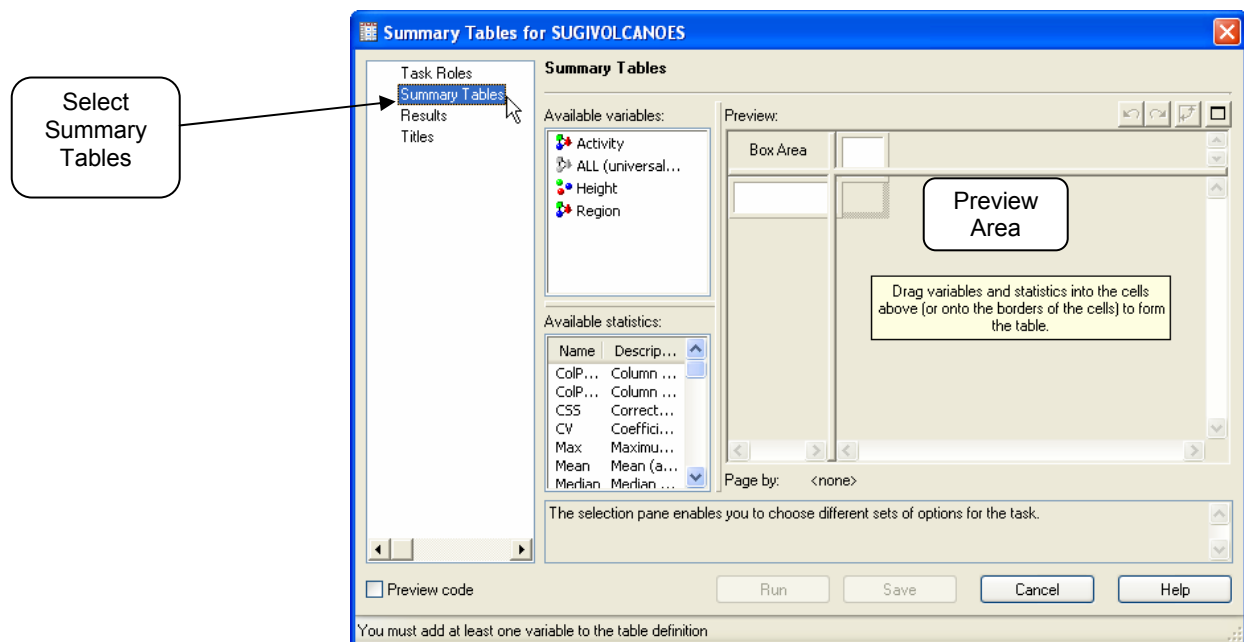
TASK ROLES PANE


Before you can do anything else in Summary Tables, you must assign variables to task roles. To do this, drag a variable from the list of variables to the list of task roles. You must have at least one analysis or classification variable. Classification variables are ones whose values will form the rows, columns or pages of the report. Classification variables may be numeric or character. Analysis variables are ones whose values will be summarized in the data cells of the table. Analysis variables must be numeric. For classification variables, you may set some options in the Task Roles pane including sort order and whether missing values will be included.

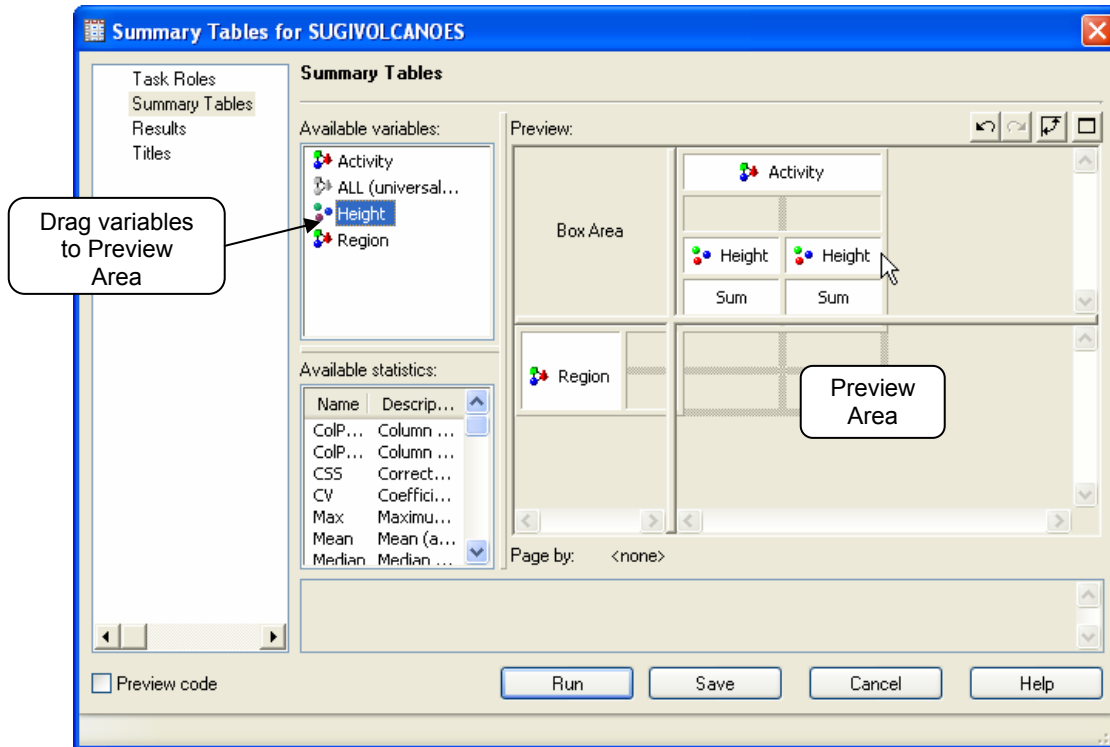


SUMMARY TABLES PANE


Before you can run a report, you must tell Enterprise Guide how to arrange the report. To open the Summary Tables pane, click Summary Tables in the list of options on the left.



To assign a variable to serve as rows or columns of your report, drag the variable name from the list of Available Variables to the Preview area. It may take a little practice to get variables where you want them. The trick is to watch the cursor. If the cursor looks like the universal “not allowed” symbol, , then you cannot drop the variable. When the cursor changes to a line or a box, then you can drop the variable.



Once the variables are where you want them, click Run to see your report.

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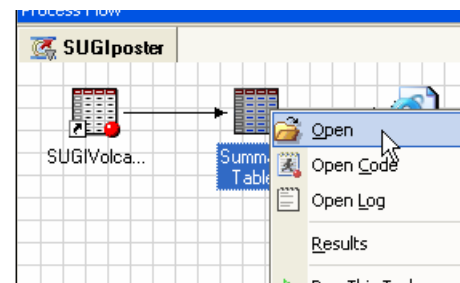
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Summary Tables

Region	Activity	
	Active	Extinct
	Height	Height
	Sum	Sum
Africa	6528.00	5199.00
Antarctica	3794.00	.
Asia	11264.00	.
Australia/Pacific	8189.00	1125.00
Europe	6723.00	7348.00
North America	14019.00	.
South America	15093.00	11779.00

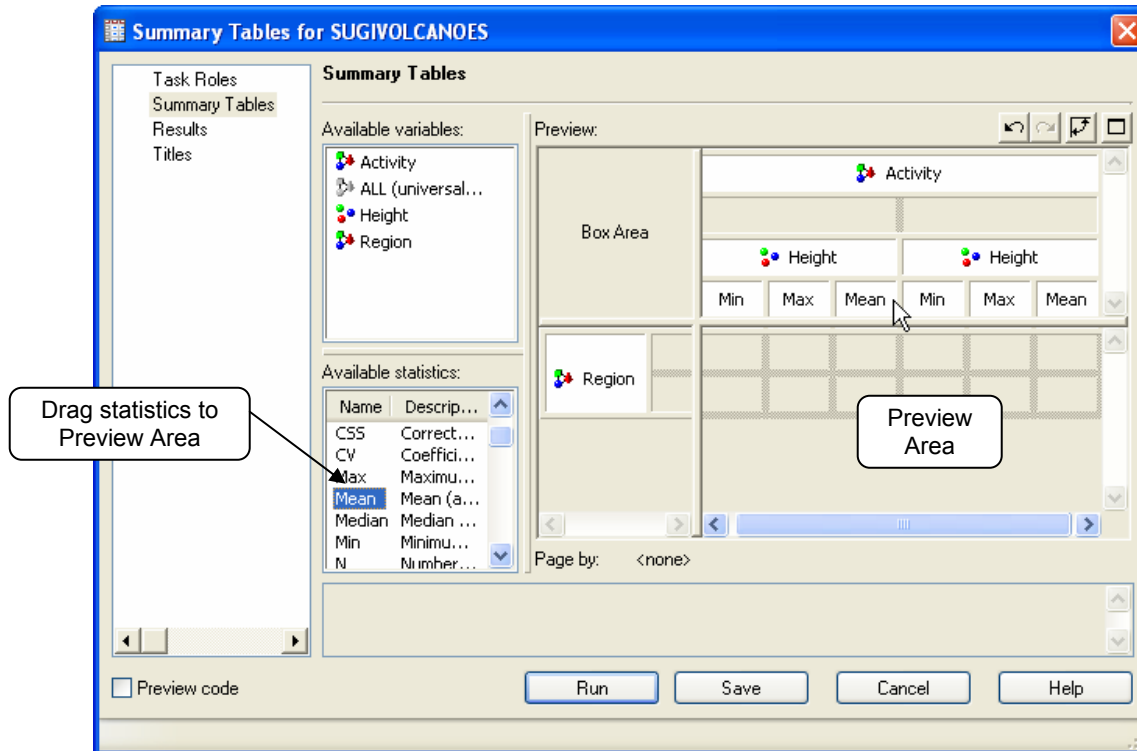
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To re-open a task so you can make changes to it, double-click the Summary Tables task icon in the Process Flow or Project window, or right-click and select Open.




CHOOSING STATISTICS

The default statistic for a classification variable is N (the number of observations in that group), and the default statistic for an analysis variable is SUM (the total of the values in that group). You can insert other statistics into your table by clicking on an item in the Available Statistics box and dragging it to the Preview area.



Once the variables are where you want them, click Run to see your report.

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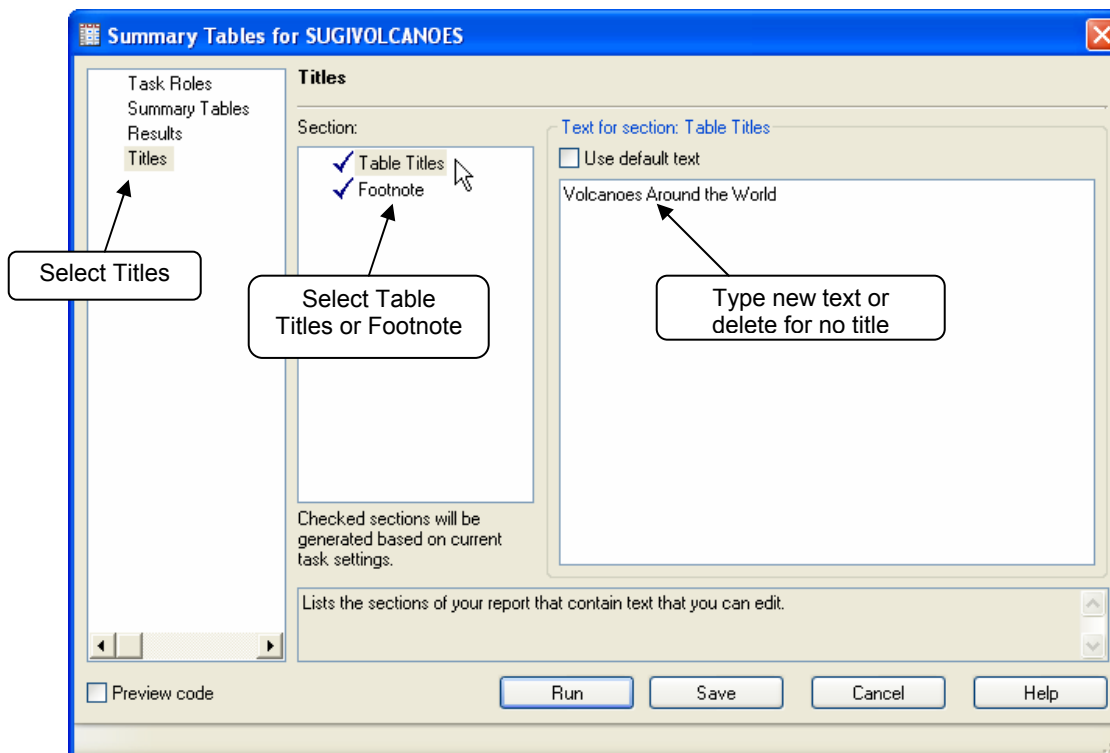
Summary Tables

	Activity					
	Active			Extinct		
	Height			Height		
	Min	Max	Mean	Min	Max	Mean
Region						
Africa	3058.00	3470.00	3264.00	5199.00	5199.00	5199.00
Antarctica	3794.00	3794.00	3794.00	.	.	.
Asia	354.00	4835.00	2252.80	.	.	.
Australia/Pacific	1222.00	4170.00	2729.67	1125.00	1125.00	1125.00
Europe	367.00	3350.00	1680.75	251.00	5633.00	2449.33
North America	2549.00	5426.00	3504.75	.	.	.
South America	2708.00	5976.00	3773.25	5321.00	6458.00	5889.50


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CHANGING TITLES AND FOOTNOTES

You will probably want to change the titles and footnotes. To open the Titles pane, click Titles in the list on left. Click Table Titles, uncheck the Use Default Text box, and type in the new title (or delete the text to have no title). For footnotes, click on Footnote and do the same.



To see the report with the new title and footnote (in this case, no footnote), click Run.

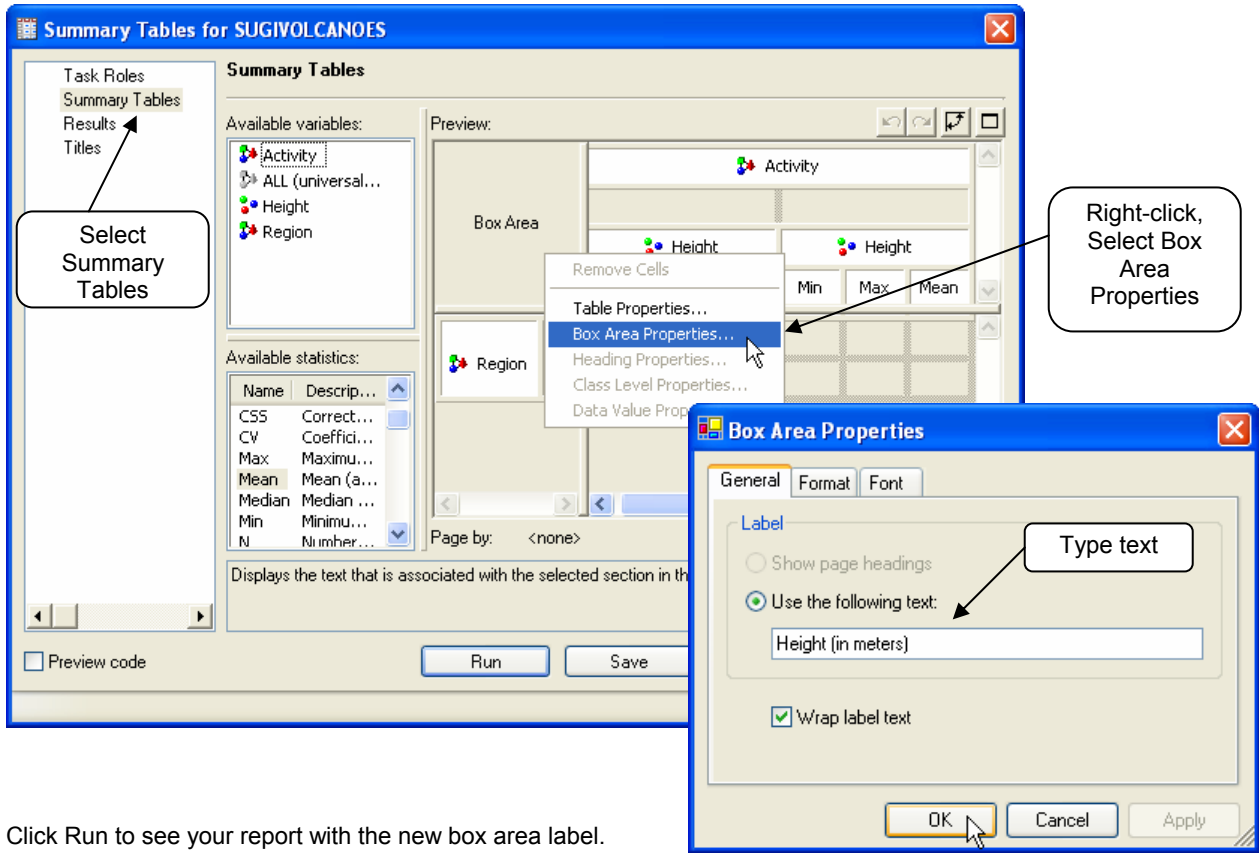
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Volcanoes Around the World

Region	Activity					
	Active			Extinct		
	Height			Height		
	Min	Max	Mean	Min	Max	Mean
Africa	3058.00	3470.00	3264.00	5199.00	5199.00	5199.00
Antarctica	3794.00	3794.00	3794.00	.	.	.
Asia	354.00	4635.00	2252.80	.	.	.
Australia/Pacific	1222.00	4170.00	2729.67	1125.00	1125.00	1125.00
Europe	367.00	3350.00	1680.75	251.00	5633.00	2449.33
North America	2549.00	5426.00	3504.75	.	.	.
South America	2708.00	5976.00	3773.25	5321.00	6458.00	5889.50

CHANGING BOX AREA PROPERTIES

There is always an empty box in the upper right corner of a Summary Tables report. To put text in this box, right-click anywhere in the Preview area. Then select Box Area Properties, and type in the text you want.



Click Run to see your report with the new box area label.

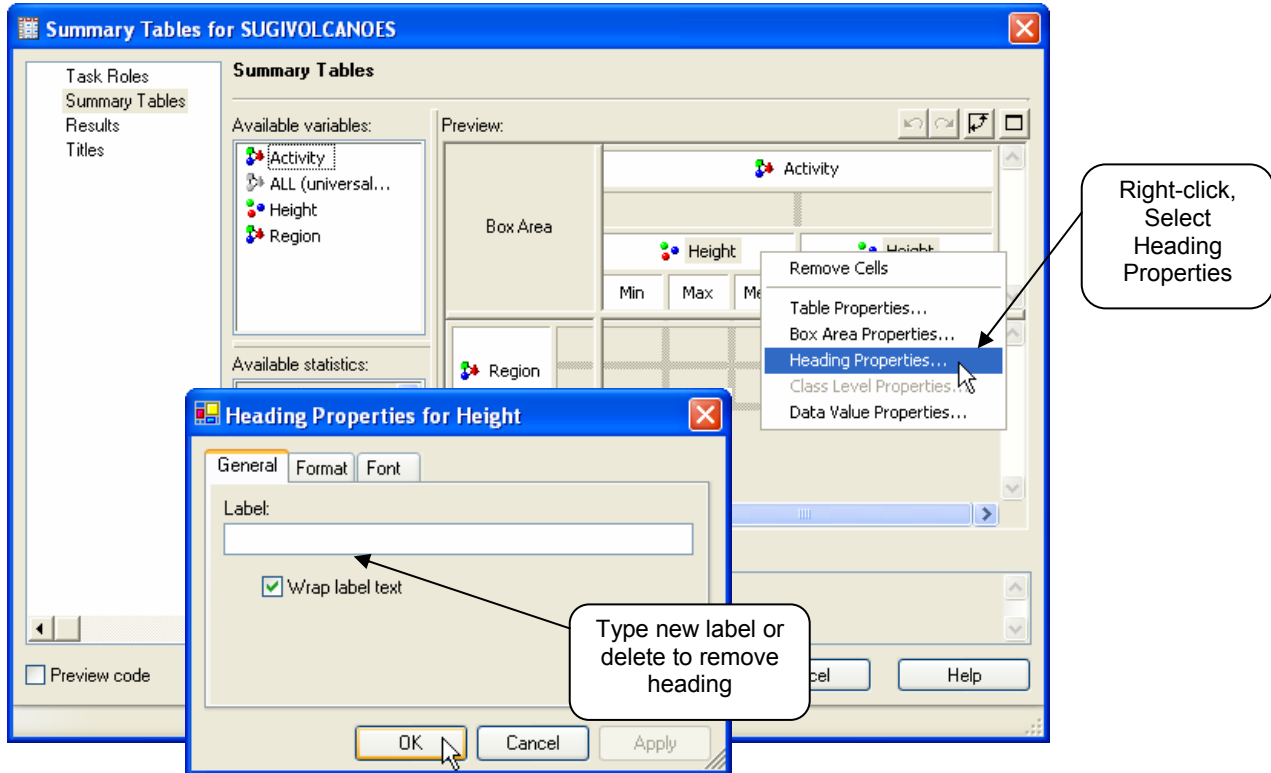
sas. | Enterprise Guide[®] *The Power to Know.*

Volcanoes Around the World


Height (in meters)	Activity					
	Active			Extinct		
	Height			Height		
	Min	Max	Mean	Min	Max	Mean
Region						
Africa	3058.00	3470.00	3264.00	5199.00	5199.00	5199.00
Antarctica	3794.00	3794.00	3794.00	.	.	.
Asia	354.00	4835.00	2252.80	.	.	.
Australia/Pacific	1222.00	4170.00	2729.67	1125.00	1125.00	1125.00
Europe	367.00	3350.00	1680.75	251.00	5633.00	2449.33
North America	2549.00	5426.00	3504.75	.	.	.
South America	2708.00	5976.00	3773.25	5321.00	6458.00	5889.50

CHANGING ROW OR COLUMN HEADING PROPERTIES

Summary Tables uses the names of the variables for row and column headings. You may want to change them to more descriptive labels, or remove them entirely. To do this, right-click the heading you want to change and select Heading Properties. In the Heading Properties window you can type in a new label. If you change the label to blank, then Enterprise Guide will delete that heading from the table.



Click Run to see your report with the new headings.

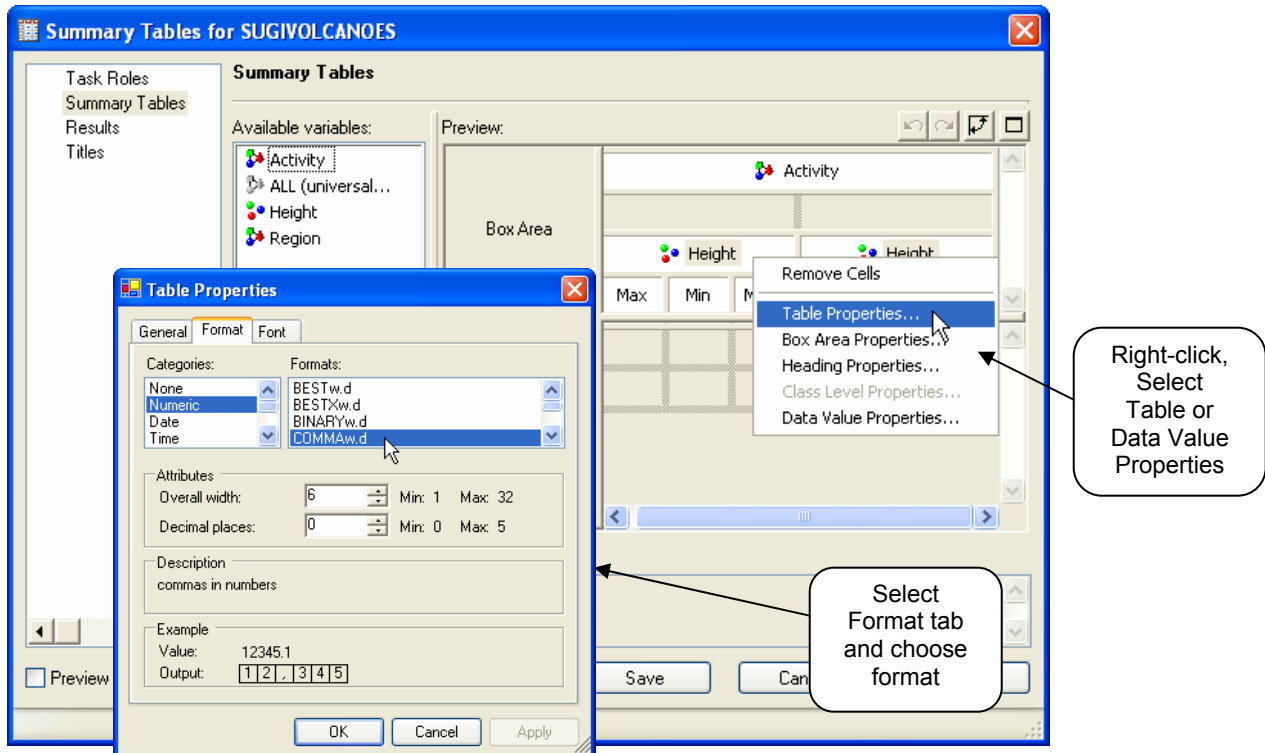
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Volcanoes Around the World

Height (in meters)	Active			Extinct		
	Min	Max	Mean	Min	Max	Mean
Region						
Africa	3058.00	3470.00	3264.00	5199.00	5199.00	5199.00
Antarctica	3794.00	3794.00	3794.00	.	.	.
Asia	354.00	4835.00	2252.80	.	.	.
Australia/Pacific	1222.00	4170.00	2729.67	1125.00	1125.00	1125.00
Europe	367.00	3350.00	1680.75	251.00	5633.00	2449.33
North America	2549.00	5426.00	3504.75	.	.	.
South America	2708.00	5976.00	3773.25	5321.00	6458.00	5889.50

CHANGING TABLE OR DATA VALUE PROPERTIES

If you want to make a change to all the data cells in a report, right-click anywhere in the Preview area and select Table Properties. However, if you want to make a change to just one row or column, right-click on the heading for that row or column and select Data Value Properties. Select the Format tab and specify the format you wish.



Click Run to see the report with the new data format.

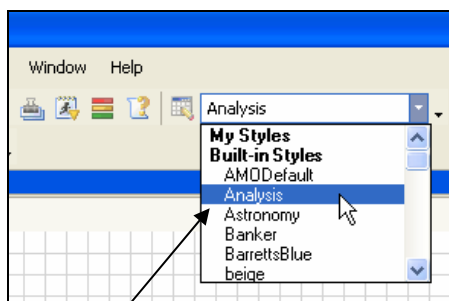
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Volcanoes Around the World

Height (in meters)	Active			Extinct		
	Max	Min	Mean	Max	Min	Mean
Region						
Africa	3,470	3,058	3,264	5,199	5,199	5,199
Antarctica	3,794	3,794	3,794	.	.	.
Asia	4,835	354	2,253	.	.	.
Australia/Pacific	4,170	1,222	2,730	1,125	1,125	1,125
Europe	3,350	367	1,681	5,633	251	2,449
North America	5,426	2,549	3,505	.	.	.
South America	5,976	2,708	3,773	6,458	5,321	5,890

CHANGING THE OVERALL STYLE

Enterprise Guide comes with many built-in style templates, and you can create your own custom style templates using the Style Manager. Once you have created a report, you can easily change its style by selecting a different style template from the Style box on the menu bar. This is a temporary change in style. If you rerun the task, the style will return to the default. There are other ways to change the style that are permanent, but changing styles using the Style box on the menu bar allows you to choose styles and see the result immediately. Here is how this report looks in the Analysis style.



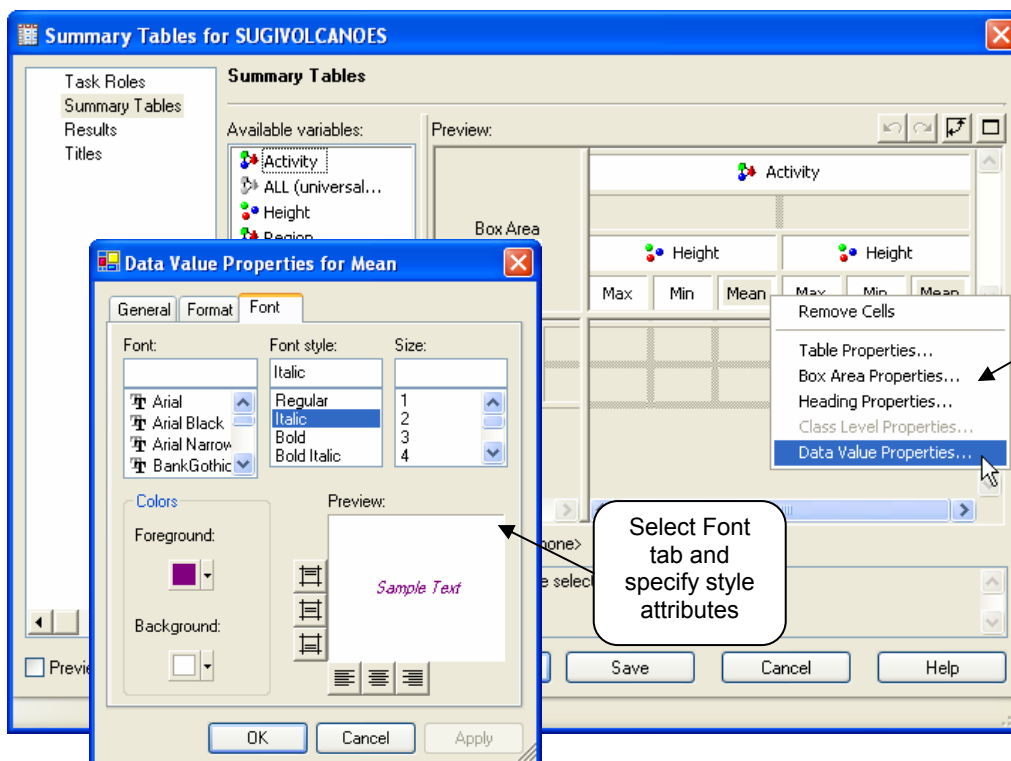
Select a style template

Volcanoes Around the World

<i>Height (in meters)</i>	<i>Active</i>			<i>Extinct</i>		
	<i>Max</i>	<i>Min</i>	<i>Mean</i>	<i>Max</i>	<i>Min</i>	<i>Mean</i>
<i>Region</i>						
<i>Africa</i>	3,470	3,058	3,264	5,199	5,199	5,199
<i>Antarctica</i>	3,794	3,794	3,794	.	.	.
<i>Asia</i>	4,835	354	2,253	.	.	.
<i>Australia/Pacific</i>	4,170	1,222	2,730	1,125	1,125	1,125
<i>Europe</i>	3,350	367	1,681	5,633	251	2,449
<i>North America</i>	5,426	2,549	3,505	.	.	.
<i>South America</i>	5,976	2,708	3,773	6,458	5,321	5,890

CHANGING OTHER STYLE ELEMENTS

In addition to changing the overall style of a report, you can also change the style of almost any part of a report using the Font tab of the various Properties windows.



Right-click, Select a type of Properties

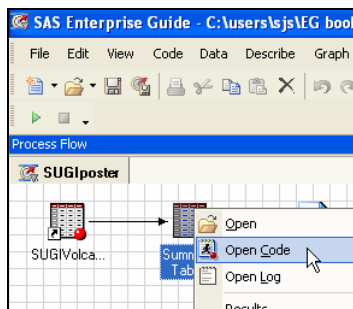
Select Font tab and specify style attributes

Click Run to see your report with the new style attributes.

Height (in meters)	Active			Extinct		
	Max	Min	Mean	Max	Min	Mean
Region						
Africa	3,470	3,058	3,264	5,199	5,199	5,199
Antarctica	3,794	3,794	3,794	.	.	.
Asia	4,835	354	2,253	.	.	.
Australia/Pacific	4,170	1,222	2,730	1,125	1,125	1,125
Europe	3,350	367	1,681	5,633	251	2,449
North America	5,426	2,549	3,505	.	.	.
South America	5,976	2,708	3,773	6,458	5,321	5,890

VIEWING THE SAS CODE

To view the code produced by Summary Tables, right-click the Summary Tables icon and select Open Code. Enterprise Guide will open a Code window containing the complete program including PROC TABULATE. You can edit and save this program for later use in Enterprise Guide or the SAS System.



```

SUGIVolcanoes [Summary Tables] [Code]
/* -----
Run the tabulate procedure
----- */
PROC TABULATE
  DATA=ECLIB000.SUGIVOLCANOES
  FORMAT=COMMA6.0
  ;
  VAR Height;
  CLASS Region / ORDER=UNFORMATTED MISSING;
  CLASS Activity / ORDER=UNFORMATTED;
  TABLE /* Row Dimension */
    Region,
    /* Column Dimension */
    Activity=(LABEL='')*
    Height=(LABEL='')*{
      Max
      Min
      Mean*(STYLE={FONT_WEIGHT=MEDIUM FONT_STYLE=ITALIC FOREGROUND=#800080})
    } /* Table Options */
  / BOX=(LABEL='Height (in meters)') ;
  ;
RUN;
/* -----
End of task code.
----- */

```

CONCLUSION

The Summary Tables task in Enterprise Guide is easy-to-use and gives you access to practically any feature of the TABULATE procedure. It's so easy that even experienced SAS programmers may want to use Summary Tables to generate reports or code for use in SAS programs.

ABOUT THE AUTHORS

Lora Delwiche and Susan Slaughter are the authors of *The Little SAS Book: A Primer* and *The Little SAS Book for Enterprise Guide 3.0*. They are currently writing a book for Enterprise Guide 4, and may be contacted at:

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