**Olympic medal data – activity questions**

## Part A: Sorting and filtering

**As you sort and filter the data, compare your results with the person next to you!**

1. When you begin this activity, the sheet is sorted by Rank. Select all the columns, and sort the data alphabetically by country name instead.
2. Try sorting the data by each medal category (Gold, Silver, Bronze, total). Can you work out which category the Rank number is based on?
3. Use filters to display:
	1. Countries that won no gold medals
	2. Countries that won a total of 1 medal
	3. The top ten ranked countries (hint: your filter condition should look for a rank of less than or equal to 10)
4. Switch to the sheet “Analysing the data” for parts B, C, and D below.

## Part B: New functions

1. Use the COUNTIF function to count how many countries won fewer than 10 medals in each category.

Tip: If the data is sorted according to the number of each type of medal, you can verify your answer by counting them yourself! Make sure to select only the columns containing data, and not the whole sheet.

1. Use the COUNTIF function to count how many countries won exactly 10 medals in each category.
2. Use the COUNTIF function to count how many countries won more than 20 medals in each category.
3. Use the AVERAGE function to find the average number of medals won in each category.
	1. Try to format your answers as whole numbers or numbers with one or two decimal places only
	2. Think about what this tells you and whether or not it is useful information. What about the average number won by the top 10, or the top 5 countries in the table?
4. In the Result column, use the IF function to display the text “Hooray!” if the total number of medals is greater than 10 or “Too low” otherwise.

## Part C: Revision exercises

1. Use the MAX and MIN functions to find:
	1. The largest number of medals won in each category
	2. The smallest number of medals won in each category

Tip: If the data is sorted according to the number of each type of medal, you can easily verify your answer!

1. Use the SUM function to find the total number of medals won in each category. Would you expect the totals to be the same for gold, silver, and bronze? Is that the case, according to the data? Why do you think this might be?
2. Create a bar chart showing the number of gold medals won by the top ten countries.

## Explorer tasks

### Functions

* Investigate the COUNT function and how it is different from COUNTA and COUNTIF
* Create a document that stores all of the functions and formulas you know

### Charts

* Add more series to your chart so that it also shows the number of bronze and silver medals won by the top ten countries.
* Find and try out the ‘stacked’ option for your chart, and see if you can understand it.

This resource is available online at [ncce.io/sprs-5-a2-hd](http://ncce.io/sprs-5-a2-hd). Resources are regularly updated — please check that you are using the latest version.

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