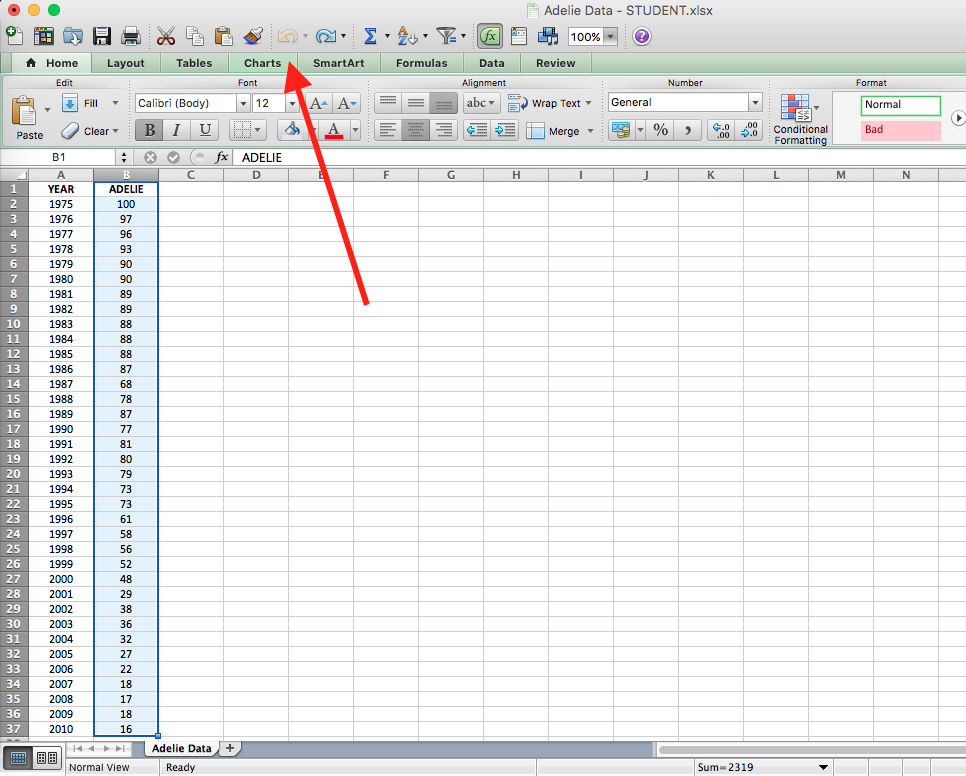
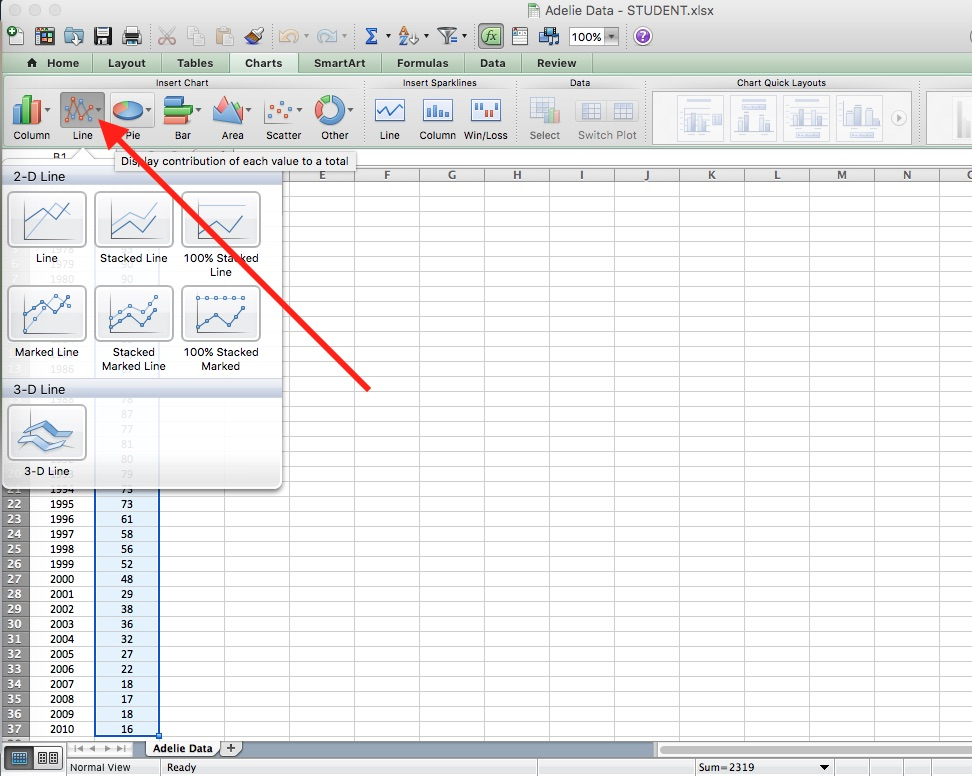
**TUTORIAL FOR PENGUIN DATA USING XCEL SPREADSHEETS**

Open the Adelie Penguin Dataset and generate a graph using the following steps:

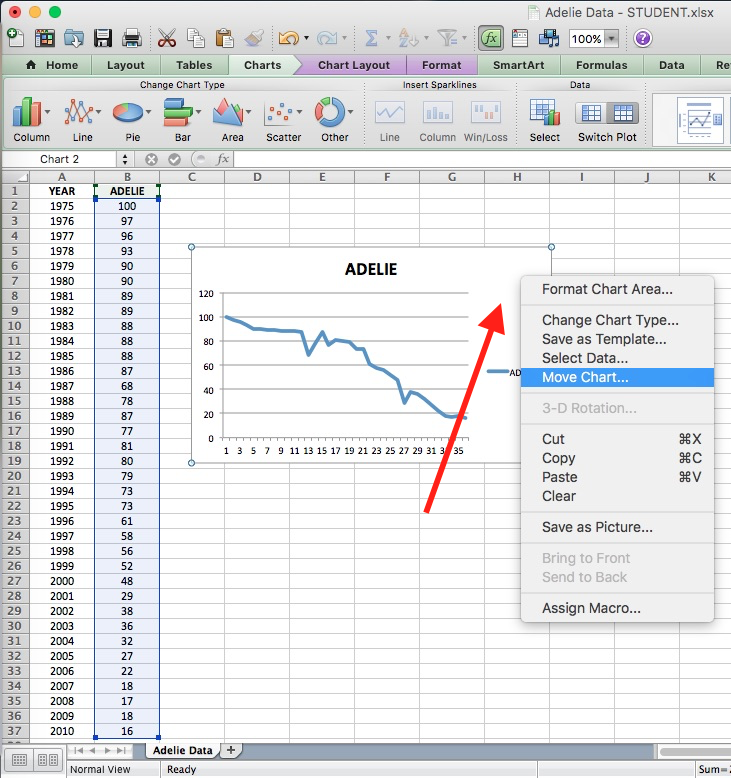
1. Highlight the Adelie column and select CHARTS in the menu bar.



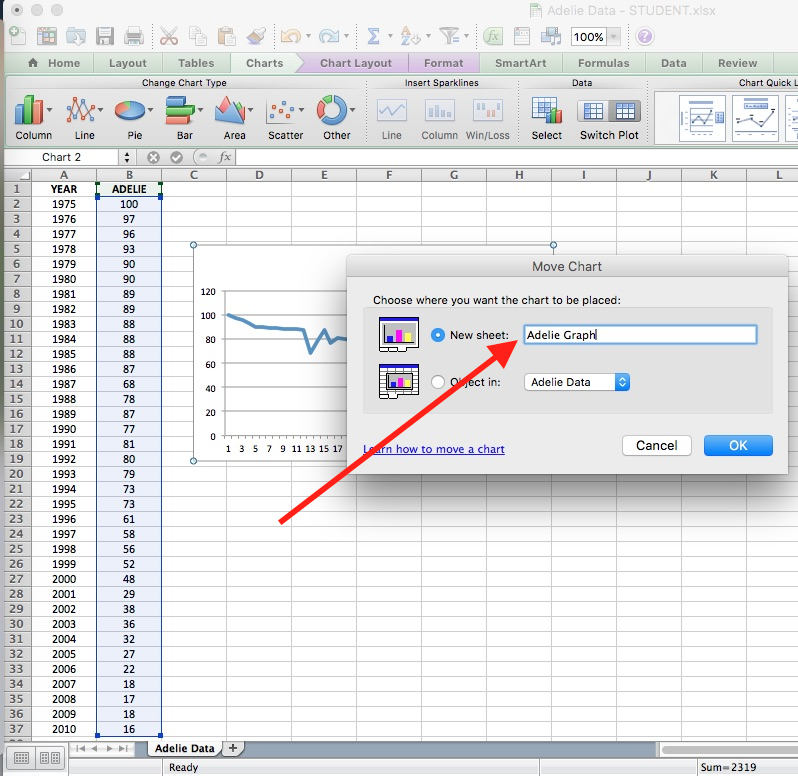
1. Select LINE graph to generate your graph.



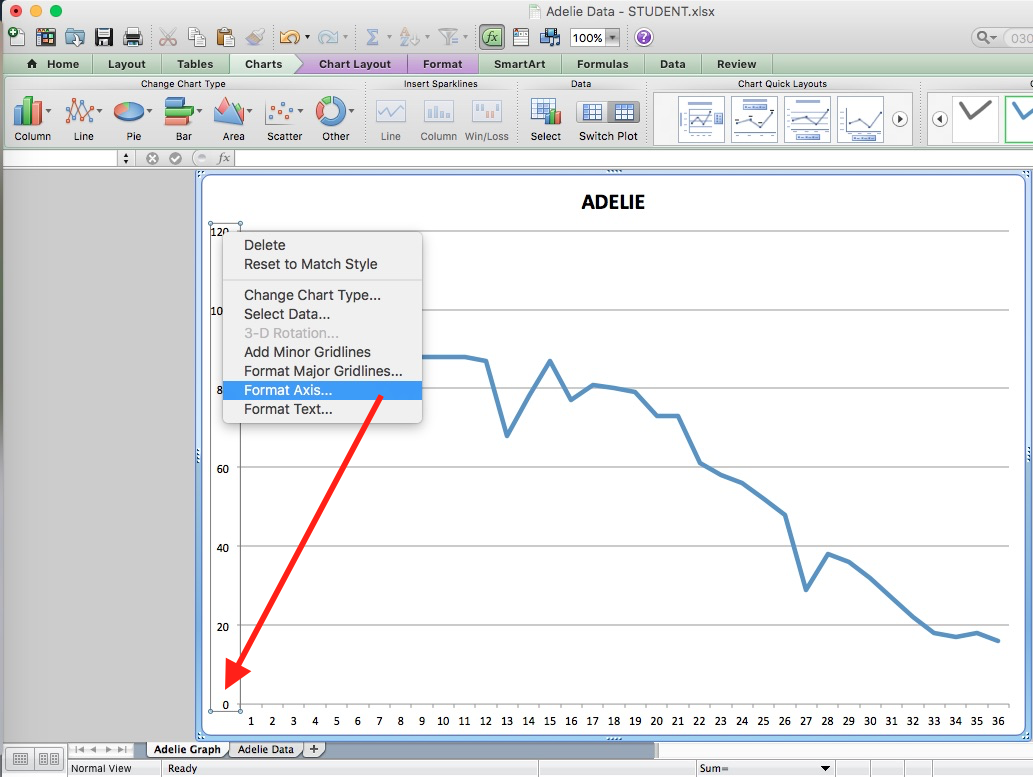
1. **Move your chart**/graph to a new sheet by right-clicking on any blank space within the chart margin and selecting **Move Chart**:



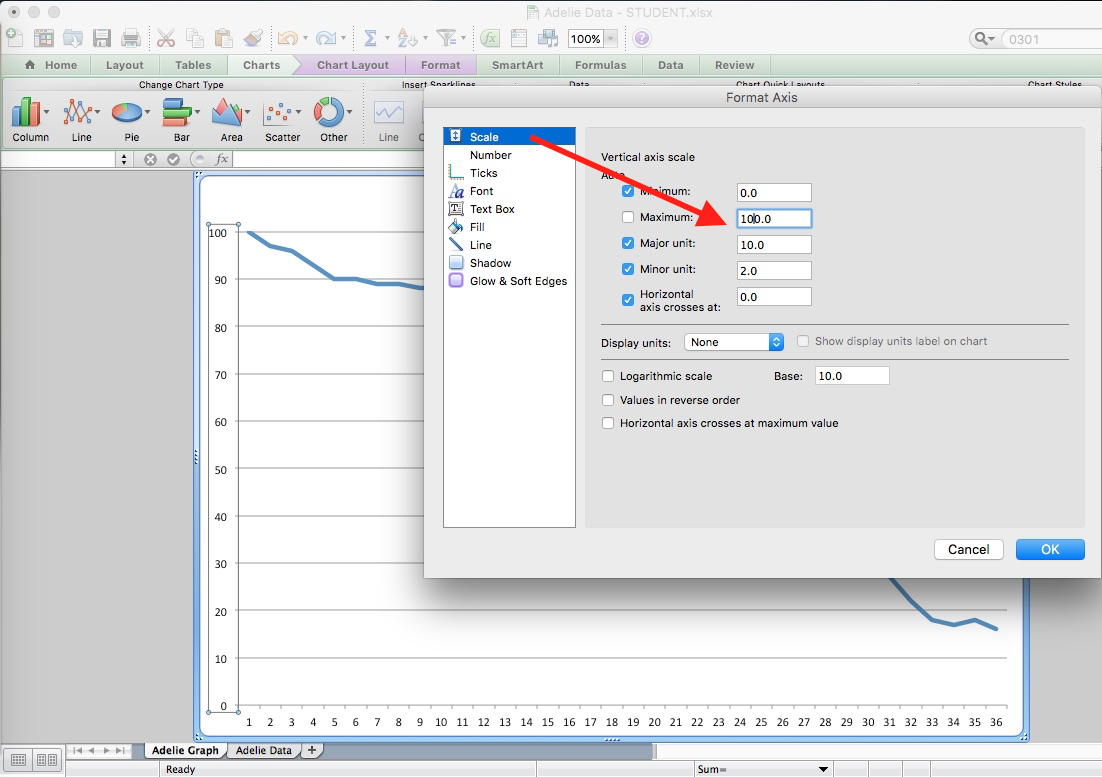
1. Select



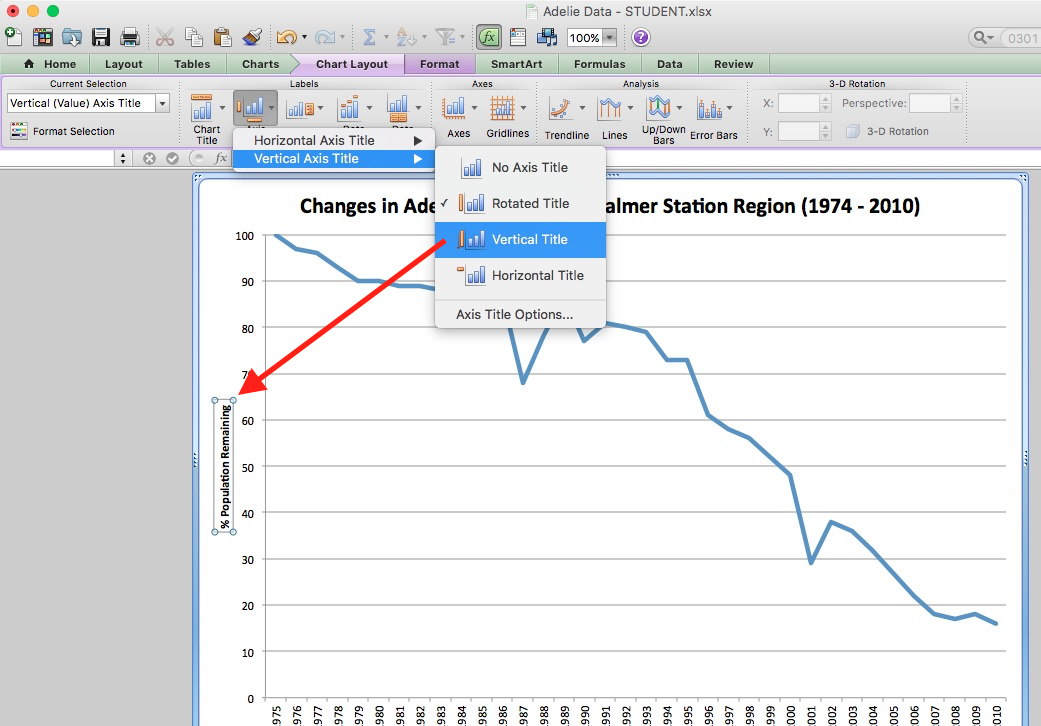
1. Correct the scale on the Y-axis (if necessary) for a range of **0 to 100** by right-clicking on the Y-axis and selecting **Format Axis**:



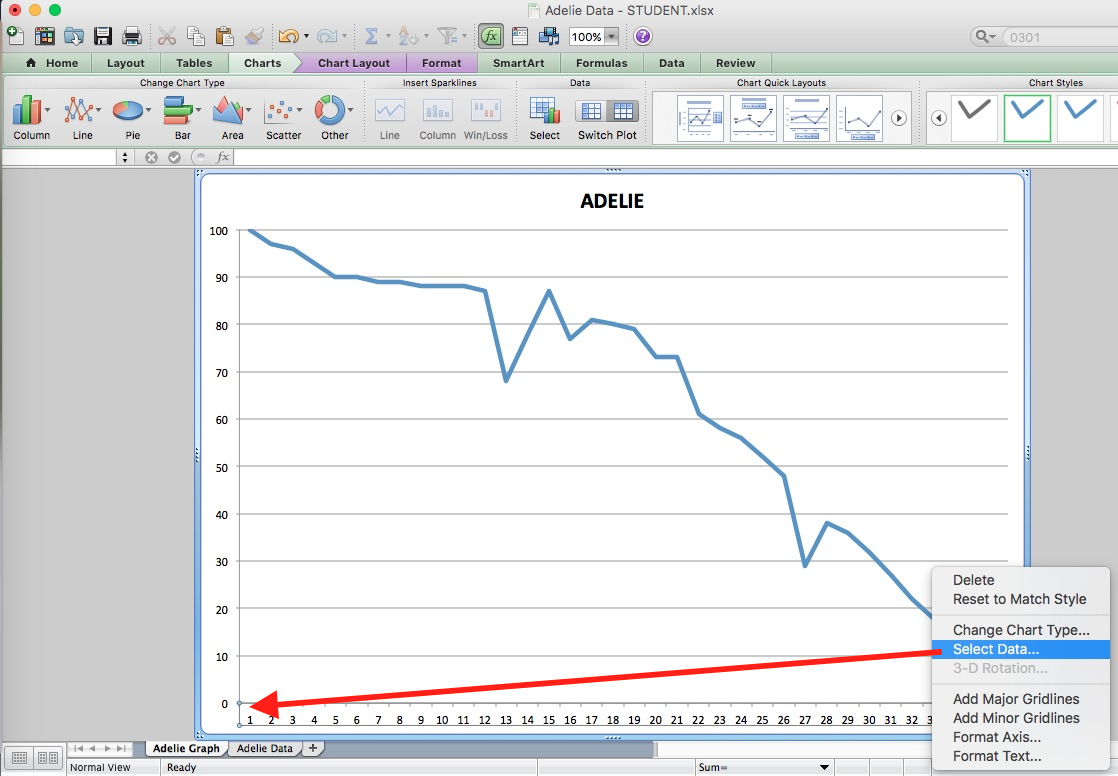
1. (Optional) If Scale is not set to 0 – 100, change as shown below):



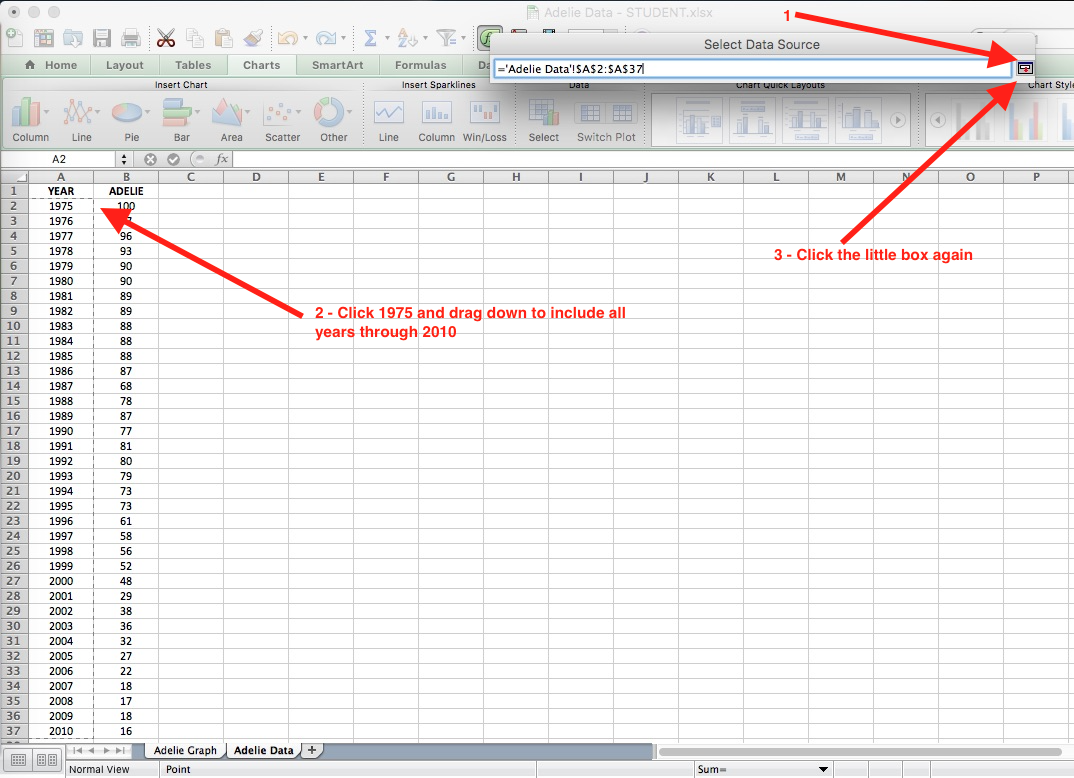
1. Label the Y-axis by selecting **Axis Titles**… **Vertical Title**… and then typing the Y-axis label in the textbox:



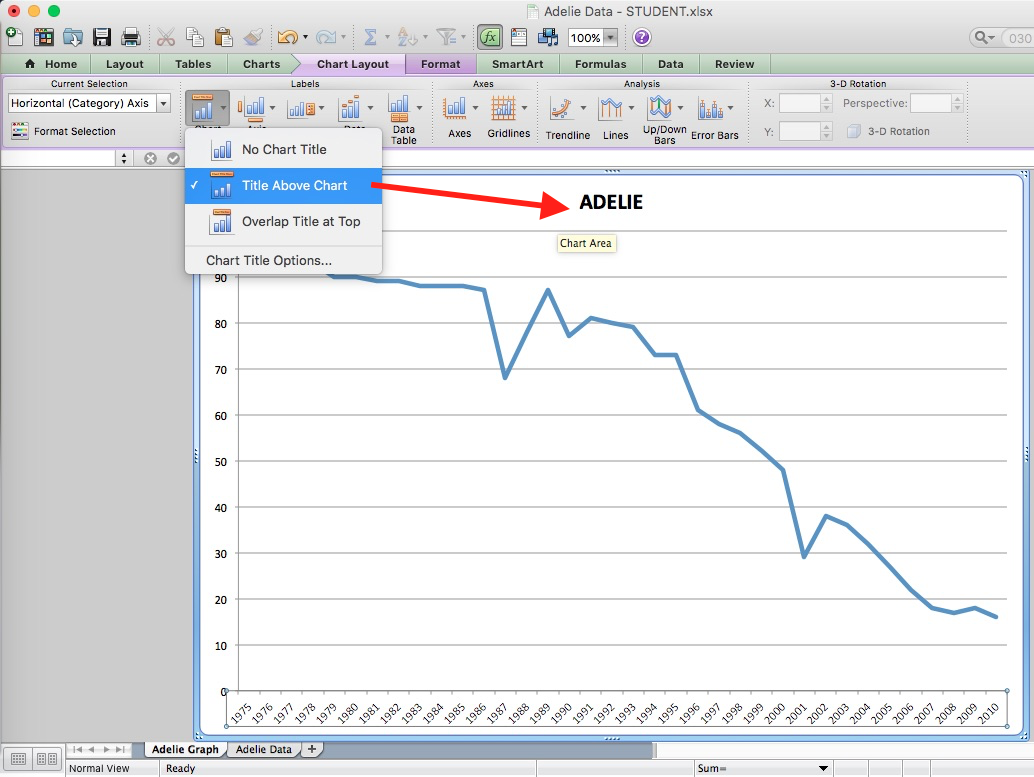
1. Change the X-axis data to include the **YEAR** by right-clicking on the X-axis and selecting **Select Data** from the pop-up menu:



1. Set the Date Range using the 3 steps shown in the figure below:



1. Change the Chart Title by selecting Chart Title, then Title Above Chart. Type the chart title in the textbox: (**Changes in Adelie Population in Palmer Station Region (1974 - 2010)**



\*\*\*Use the directions provided for the Adelie Penguin Data Set to complete charts for each penguin species.

DATA SOURCE: Ducklow, H. W., K. Baker, D. G. Martinson, Q. L.B., R. M. Ross, R. C. Smith, S. E. Stammerjohn, M. Vernet, and W. R. Fraser. 2007. Marine pelagic ecosystems: the West Antarctic Peninsula. Philosophical Transactions of the Royal Society of London 362:67-94. <https://lternet.edu/node/157> .