

# How to Make a Line Graph with Phase Lines in Excel 2007

Performance Aid

## Purpose

The purpose of this document is to provide you with instructions to reference as you create a line graph in Excel 2007. It will provide you with step-by-step directions that will take you through entering your data, making a graph, adding phase lines, making your graph look professional, and inserting it into a document.

## Entering your data

1. Use three columns
  - a. The first column is for your horizontal x-axis
    - i. Write in **dates** or **sessions** here
      1. A “session” is just a fancy name for an observation period
  - b. The second column is your **collected data**
    - i. Place in this column your
      1. **frequency** count
      2. **time** (for duration and latency)
      3. **level** measurement (make sure to give each level a number)
        - a. These can be either **totals** or **averages** per session
  - c. Finally, the third column is for **phase changes**
    - i. You won't need to know this for this current assignment, but after you implement your intervention, this will come in handy. So remember it!
    - ii. When entering in a phase change – make sure that the two cells to the left are empty
    - iii. Also, make sure that the number that is entered in for a phase change is equal to the highest score that you would like on your vertical y-axis

Enter your data in  
frequency, time, or  
levels here

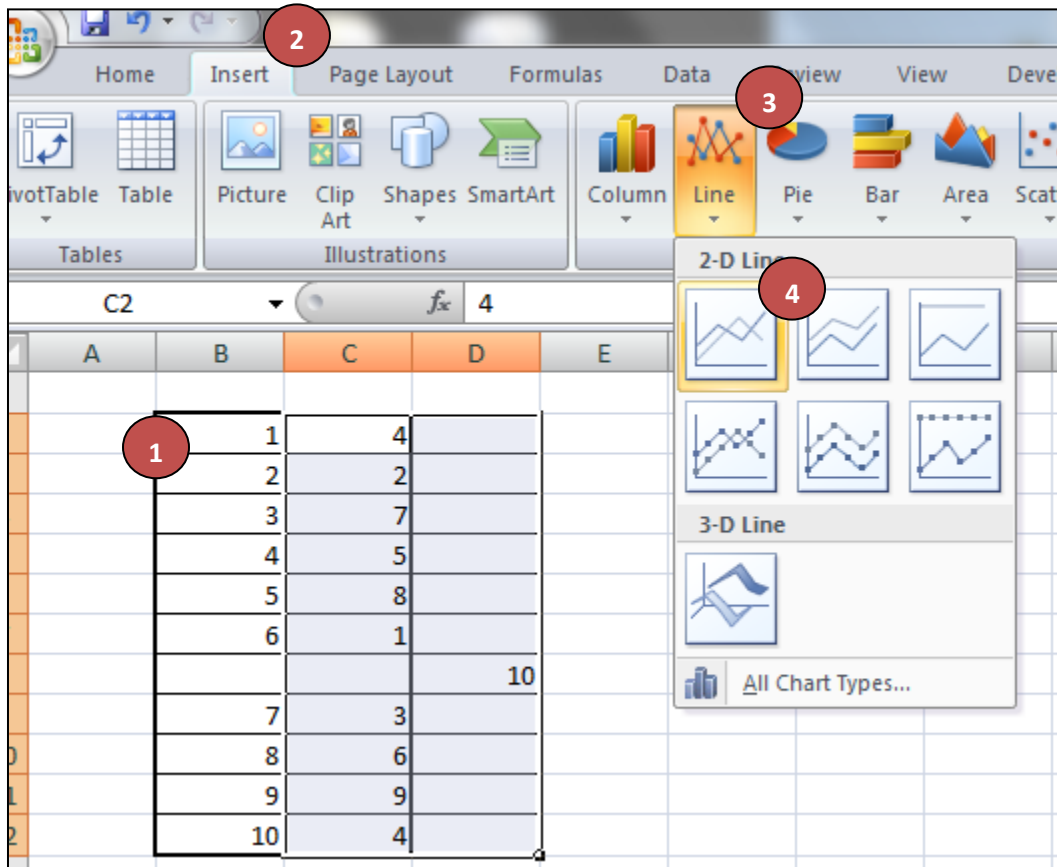
Enter your *dates* or  
*sessions* here

	B	C	D
1		4	
2		2	
3		7	
4		5	
5		8	
6		1	
			10
7		3	
8		6	
9		9	
10		4	

If you need a phase change, make sure that the left two cells are empty, and that the value entered in this column is equal to the highest score that you would like to view on your vertical y-axis

## Graphing the data

1. To graph your data – highlight the **right two** columns by:
  - a. Clicking in the **top-left cell**,
  - b. Pressing and holding the **Shift** key on your keyboard, and
  - c. Clicking in the **bottom-right cell**
2. Now that you have your data selected, click on the **Insert** tab at the top of the Ribbon
3. Then click on **Line**
4. Then click on the **first 2-D line graph button** that appears underneath that
5. Presto! You have a graph

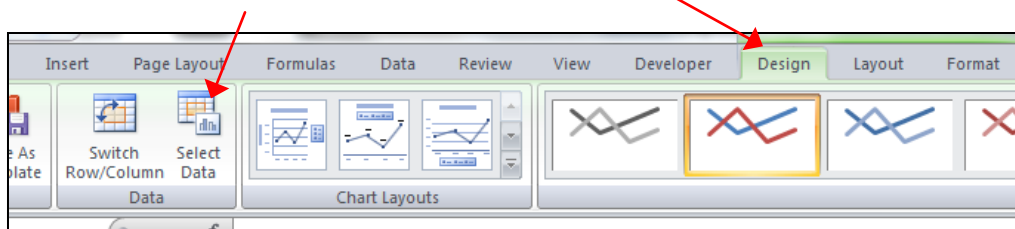


## Modifying your graph

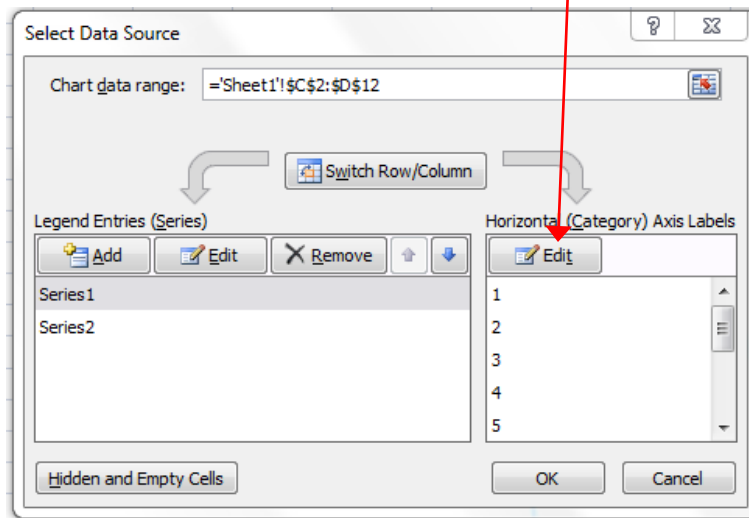
Now that you have your graph, you'll have to modify it a little...

### Adding your horizontal axis labels

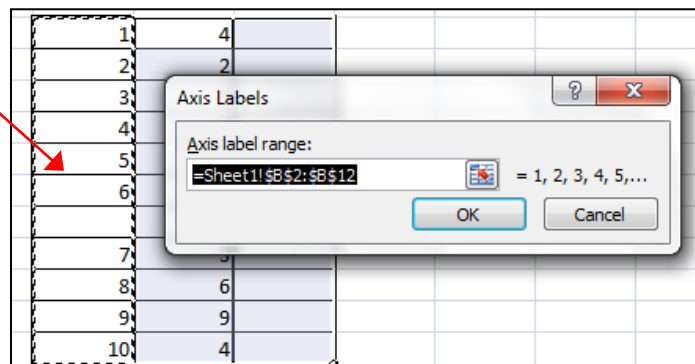
1. First, we need to add in our sessions, so click on the **Design** tab on the Ribbon and then click on **Select Data**



2. After doing that, a pop-up window appears – click on **Edit** on the right



3. Then another window pops up, **select your first column** and press OK
  - a. Click on the **top cell** of that column
  - b. Press and hold the **Shift** key on your keyboard, and
  - c. Click on the **bottom cell** of that column
    - i. The entire selection should have a dashed line moving around it if you did it correctly
  - d. Then click OK,

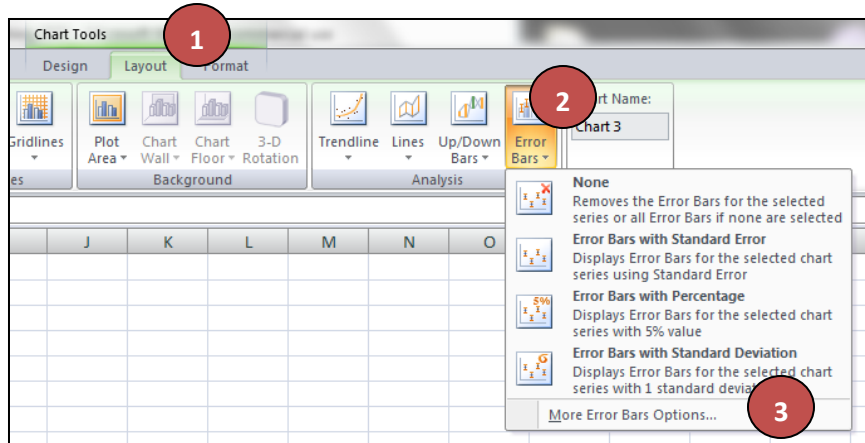


4. Finally Click OK on the original pop-up window

Adding a phase line

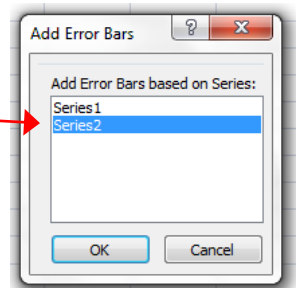
To add a phase line, follow the steps below

1. Click on the **Layout** tab on the Ribbon, and
2. then **Error Bars**,
3. then click on the bottom of the listing where it says **More Error Bar Options**

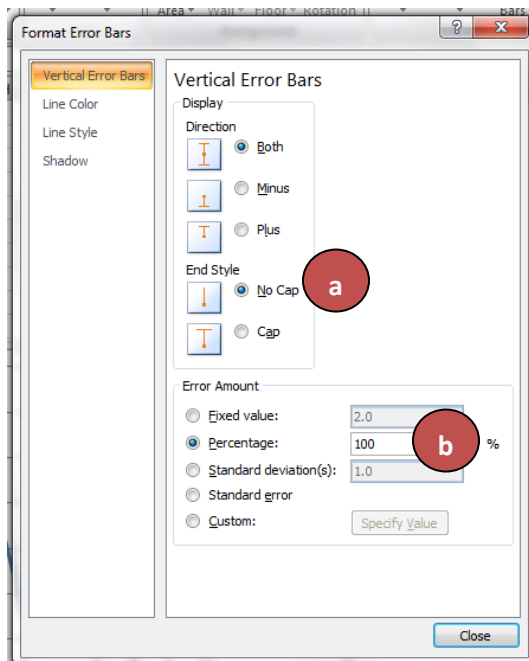


A small window will pop up asking you which Series you want the bars added to.

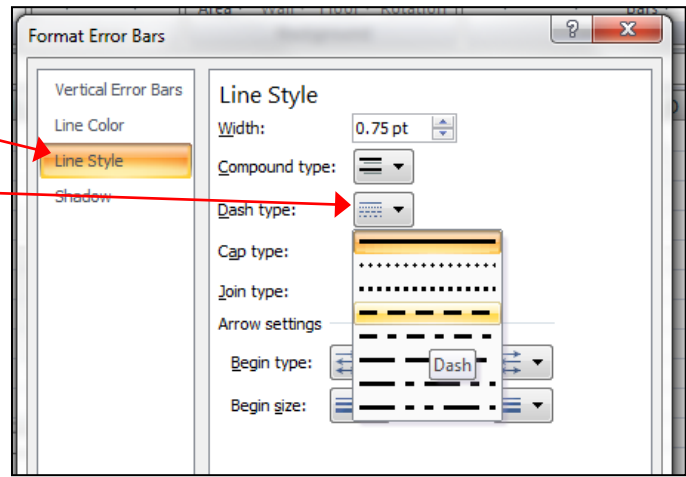
Select the 2<sup>nd</sup> one on the list and press OK



4. After doing this, a pop-up will appear,
  - a. Select **No Cap**, and
  - b. Under Error Amount, select **Percentage** and write in **100** as your percentage



5. Then go to the left of this pop-up, and click on **Line Style**
  - a. Select the **fourth option down** under **dash type**

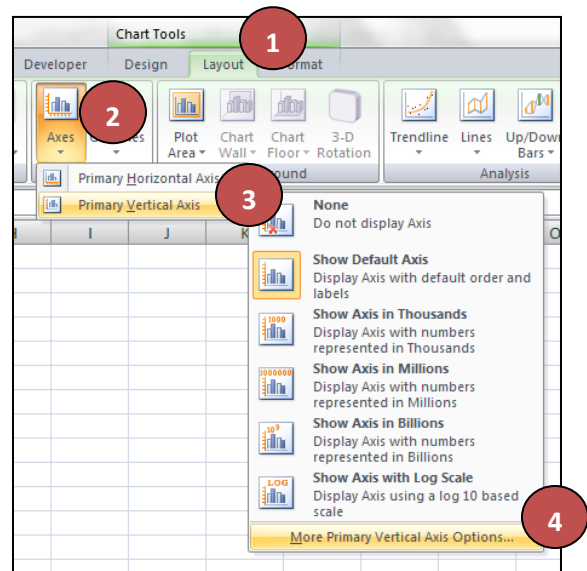


6. Click **Close** at the bottom right of the pop-up window, and Viola! You now have error bars!

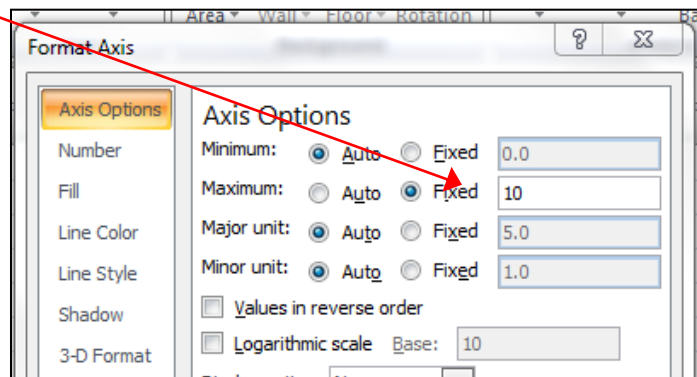
### Adjusting your vertical axis

Now that you've made your error bars, you may need to adjust your Y-axis so that it isn't too large for the graph

1. To do this, click on the **Layout** tab on the Ribbon again,
2. then **Axes**,
3. then **Primary Vertical Axis**,
4. then **More Primary Vertical Axis Options**



5. A pop-up window will appear
  - a. Locate where it says **Maximum**,
  - b. select **Fixed**, and
  - c. enter in the number that you would like to be the top score on your vertical Y-axis
    - i. *This should match the number that you entered for each phase change in your phase change column*

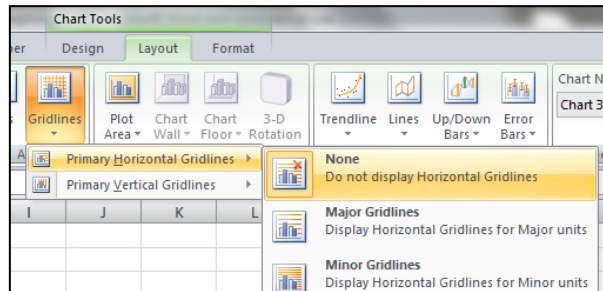


## Finishing Touches

Now that you have your graph basically the way that you want it, there are a few touches that need to be done to make this graph spectacular (*and more aligned with ABA practice*)

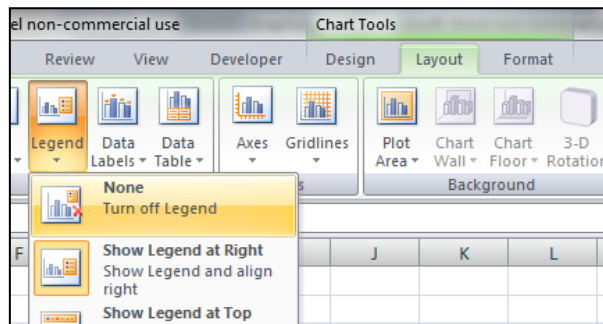
### Gridlines

1. First, get rid of your gridlines by selecting **Layout** in the Ribbon,
2. then **Gridlines**,
3. then **Primary Horizontal Gridlines**,
4. then **None**



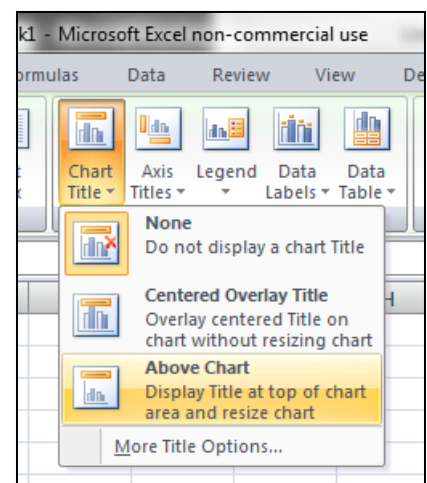
### Legend

1. Then get rid of your legend by selecting **Layout** in the Ribbon,
2. then **Legend**
3. then **None**



### Chart Title

1. Finally, add a chart title by selecting **Layout** in the Ribbon,
2. then **Chart Title**
3. then **Above Chart**
4. then type in your desired title in the box that appeared in the graph



### Inserting the graph into a document

1. To insert the graph into a document, simply **right-click**,
2. select **Copy**, and
3. then **Paste** into your document