

Graphing with Google - Step by Step

1. Highlight

Highlight the data that you want to include...

For the top image, I clicked in the "year" box and held down while going over to the next column and down to row 6.

Please highlight "Year" and "Beak depth" all the way down to the bottom. To do this, you can also just click on the "A" and hold down the button over to the "B"

Medium ground finch				Cactus finch			
Year	Beak depth	Beak length	Beak width	Year	Beak depth	Beak length	Beak width
1973	9.48	10.76	8.69	1973	9.28	14.55	8.57
1974	9.42	10.72	8.66	1974	9.21	14.57	8.58
1975	9.19	10.57	8.55	1975	8.94	14.14	8.37
1976	9.23	10.64	8.58	1976	9.06	14.41	8.52
1977	9.35	10.73	8.63	1977	9.14	14.55	8.6
1978	9.74	11.04	8.86	1978	9.35	14.52	8.7
1979	9.78	11.07	8.73	1979	9.26	14.48	8.62
1980	9.81	11.11	8.9	1980	9.31	14.61	8.68
1981	9.75	11.04	8.89	1981	9.23	14.44	8.63

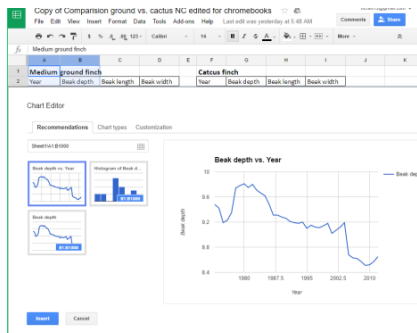
CA NGSS Roll Out #4: 3.3 6-8 Integrated Learning Sequence

Graphing with Google - Step by Step

2. Insert Chart

If you do not see the "Chart" button on the toolbar, you can click on "Insert" then on "Chart".

You should see the image below when you are finished.



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Graphing with Google - Step by Step

3. Choose Scatter

Click on the "Chart types" tab.

Scroll down and select "Scatter".

Chart Editor

Recommendations
Chart types
Customization

Sheet1!A1:B1000


Aggregate column A

Switch rows / columns


Use row 1 as headers

Use column A as labels


Pie



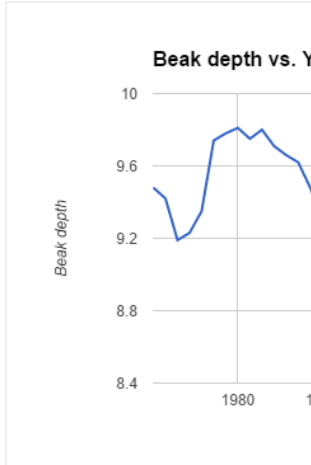
Scatter



Map



Beak depth vs. Y



Insert
Cancel

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Graphing with Google - Step by Step

4. Customize

Click on the "Customization" tab.

Scroll down to "Axis". While it is on the Horizontal axis, type in the minimum and maximum [1970 - 2015].

Change "Axis" to "Left Vertical". Type in the minimum and maximum [8.4 - 10].

Click "insert".

Chart Editor

Recommendations
Chart types
Customization

Axis Horizontal

Title **B** *I* 12 ■

Year

Axis labels **B** *I* 12 ■

Slant labels Auto

Treat labels as text

Min 1970 Max 2015

Allow bounds to hide data

Beak depth

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Graphing Finch Data with Google or Excel

Graphing with Excel - Step by Step

Note: This aligns with Excel ver. 15.29, other versions are very similar.

1. Highlight

Highlight the data that you want to include...

For the top image, I clicked in the "year" box and held down while going over to the next column and down to row 6.

Please highlight "Year" and "Beak depth" all the way down to the bottom. To do this, you can also just click on the "A" and hold down the button over to "B"

Medium ground finch (population averages)				Cactus finch (population averages)			
Year	Beak depth (mm)	Beak length (mm)	Beak width (mm)	Year	Beak depth (mm)	Beak length (mm)	Beak width (mm)
1973	9.48	10.76	8.69	1973	9.28	9.21	8.57
1974	9.42	10.72	8.66	1974	9.21	14.57	8.58
1975	9.19	10.57	8.55	1975	8.94	14.14	8.37
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1977	9.35	10.73	8.63	1977	9.14	14.55	8.6
1978	9.74	11.04	8.86	1978	9.35	14.52	8.7
1979	9.78	11.07	8.73	1979	9.26	14.48	8.62
1980	9.81	11.11	8.9	1980	9.31	14.61	8.68
1981	9.75	11.04	8.89	1981	9.23		

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Graphing with Excel - Step by Step

2. Insert Chart and X Y (scatter)

If you do not see the "Chart" button on the toolbar, you can click on "Insert" then on "Chart".

You should see the image to the right when you are finished.

CA NGSS Roll Out #4: 3.3 6-8 Integrated Learning Sequence

Graphing Finch Data with Google or Excel

Graphing with Excel - Step by Step

3. Choose Quick Layout

Click on the "Quick Layout" and Select the first one. (This adds axis titles)

The screenshot shows the Excel interface with the 'Quick Layout' gallery open. The first layout is selected. Below it, a line chart is displayed with the title 'Beak depth (mm)'. The x-axis is labeled 'Axis Title' and the y-axis is labeled 'Axis Title'. The chart shows data points for years from 1970 to 2010.

Year	Beak depth (mm)	Beak length (mm)	Beak width (mm)
1973	9.48	10.76	8.69
1974	9.42	10.72	
1975	9.19	10.57	
1976	9.23	10.64	
1977	9.35	10.73	
1978	9.74	11.04	
1979	9.78	11.07	
1980	9.81	11.11	
1981	9.75	11.04	
1982	9.8	11.06	
1983	9.71	11.03	
1984	9.66		
1985	9.62		
1986	9.48		
1987	9.31		
1988	9.31		
1989	9.28		

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Graphing with Excel - Step by Step

4. Select Chart Design

Click on the "Chart Design" and select the 4th design.

This adds a grid line for increments of single years.

Note: The graph chart with look very "squished" at this point.

The screenshot shows the Excel interface with the 'Chart Design' gallery open. The 4th design is selected. Below it, a line chart is displayed with a grid. The x-axis is labeled 'AXIS TITLE' and the y-axis is labeled 'AXIS TITLE'. The chart shows data points for years from 1970 to 2015.

Year	Beak depth (mm)	Beak length (mm)	Beak width (mm)
1973	9.48	10.76	8.69
1974	9.42	10.72	
1975	9.19	10.57	
1976	9.23	10.64	
1977	9.35	10.73	
1978	9.74	11.04	
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1980	9.81	11.11	
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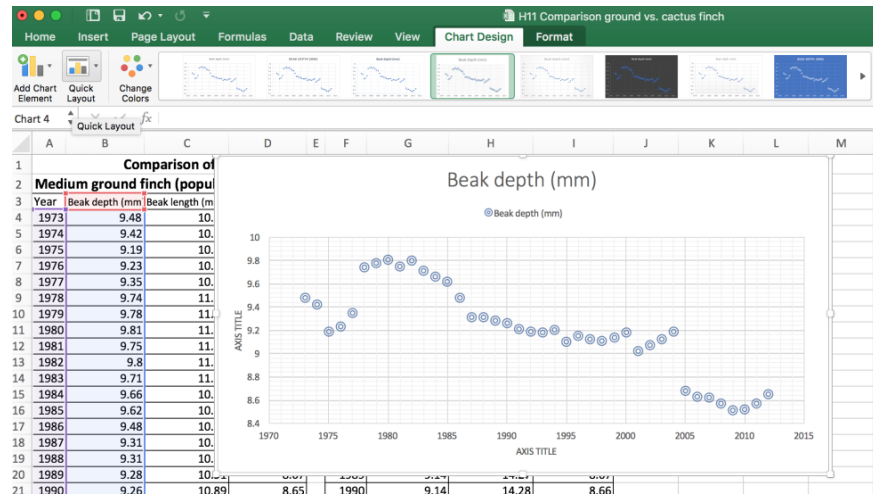
Graphing Finch Data with Google or Excel

Graphing with Excel - Step by Step

5. Move Graph

The graph will show up on top of your data. Click on the graph and drag it to the right so that it is next to your data instead.

You can also resize the graph.



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Graphing with Excel - Step by Step

Try your own graphs!

Your job now is to try to make two different graphs. *hint* if you want to use two columns of data that are not next to each other, you will need to highlight one, then press “Ctrl”, then highlight the other.

You can try to graph 3 columns at the same time, or use the same data and pick a different type of graph, or change the minimum and maximum... just play with this graphing capability of Excel.

You need a total of 3 graphs by the end of the period. If you finish early, your job is to walk around and help others.

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