This dataset is from the Department of Health, from the state of South Dakota. Here, we can see a sorted list of all counties’ births from the year 2000 to 2015. After sorting the entire dataset, by the year 2000, the top six counties are Minnehaha, Pennington, Brown, Codington, Lincoln, and Oglala Lakota (formerly known as Shannon County). I have sorted the data for you already.

PICTURE 1:
Highlight the six counties (as listed above, Minnehaha to Oglala Lakota,) – all values within the cells and headings with county labels (by name).

To create the line graph:

Go to “Insert” Tab at Top of Window (on toolbar) → Line graph icon/click Y → Select graph desired (regular line graph, stacked line graph, etc.)
Make the graph as big as the screen or window to see it better.

**PICTURE 3:**

[Image of a graph with multiple lines representing different categories and years, with labels on the axes.]
Click the left numerical range, or the vertical axis, once. Then “right click” and go down to “format axis.”

PICTURE 4:
You can alter your numerical boundaries by choosing two specific items: “Bounds” and “Units.”

**Bounds**: Choose Minimum (Min.) of 0, and Maximum (Max) from 3,500 down to 3,200 because it will fit data better and allows you to see data point differences better.

**Units**: Choose Major from 500 down to 400, and Minor at “automatic adjust.” This is done to make dividing the numerical sections mathematically even, and then no data trend line goes over the top horizontal line.

**PICTURE 5:**

![Chart and Format Axis window](image-url)
Some simple final touches:

1) “Chart Title:” Single click after selecting the chart (it outlines its boundaries). → Highlight text and retype the title: “South Dakota Births per Year: Top Six Counties, 2000-2015.”
2) Extra Chart Glamour: With chart selected, choose Chart Tools → Design → You gain an ability to choose a “fancier” design via a preset chart formatting, already completed via EXCEL.

**PICTURE 7:**

[Image of a chart showing South Dakota Births by Year: Top Six Counties, 2000-2015]

**Link to Microsoft Office Blogs for Chart Design:** [https://blogs.office.com/2012/05/30/our-eight-best-tutorials-on-excel-charts/](https://blogs.office.com/2012/05/30/our-eight-best-tutorials-on-excel-charts/)

**YouTube Video Tutorial for Line Graph Making:** [https://www.youtube.com/watch?v=9X0WTOqlmCI](https://www.youtube.com/watch?v=9X0WTOqlmCI)
To Create a Pie Graph:

Highlight the top six counties’ values under “2000” heading.

PICTURE 1:
While holding CTRL ("Control"), highlight names of top six counties.

PICTURE 2:
1) Click Insert (tab) → Select Pie Chart icon → Scroll down to 2-D pie chart.
2) Then scale to screen/window to make bigger, like the line graph step

PICTURE 3:
Looking at **different automatic chart formats**, EXCEL automatically calculates the percentage of total (of the six counties’ crude birth rate) on the pie chart. See Style 3, which is this example.

**PICTURE 4:**
Change the font size of the legend, because it is small. Right click on the legend (after it is outlined by a text box style line), and then scroll down to “Font,” where you can alter the size of the text. Increase to size 12.

PICTURE 5:
Change the “chart title” to “Pie Graph Showing Comparison of Births in Top 6 Counties in 2000.”

PICTURE 6:

YouTube video for Creating a Pie Chart: https://www.youtube.com/watch?v=BQqQmxwp5GU