# How to Create a Data Table and Pie Chart in Microsoft Excel

First, make sure that a pie chart is the correct type of chart for your data. **Pie charts are best used for cumulative data,** such as your daily schedule broken into hours or minutes, **or comparing different parts of a whole**, such as the breakdown of % or number of students in a class who answered the same when surveyed in a class about their favorite song, tv show or sport.

Log on and **add the Color Printer** to your computer by following the directions posted in the room

A. Create the Data Table

1. Open Microsoft Excel and enter your two headings for your data table:
   - in cell A1 type in what the data is you are measuring (*examples – *Month* rainfall was measured or *Favorite Sport* in class period 4)
   - in cell B1 type in the units of measure of that data (*examples – *Inches of rainfall*, *Number of students* in class 4 with that favorite sport)

2. Resize Column A:
   - Place your pointer in the gray area in between Column A and Column B until a line with an arrow through it appears
   - Drag Column A to the right until it is the size you want

3. If necessary, resize Column B too

4. In Column A, underneath your header (in cell A1), type in all of your data items/times that you recorded measurements for. *examples – *January, February, March, etc.* or *soccer, baseball, football, swimming, etc.*

5. In Column B, underneath your header (in cell B1), type in all of your recorded data measurements for *each* of your data items/times. *examples – *1, 3, 4*, etc. (inches of rain) or *5, 9, 20*, etc. (students in class). Do not type in the units of measure, just the actual values.

6. Highlight all of your data in Column A and B

7. Select **Data > Sort**

8. Select the drop down arrow next to the **Sort by** box, then select the header description (units of measure of recorded data) that you are sorting by (*examples - *# Of Liters, inches of rain,* or *number of students in class*)
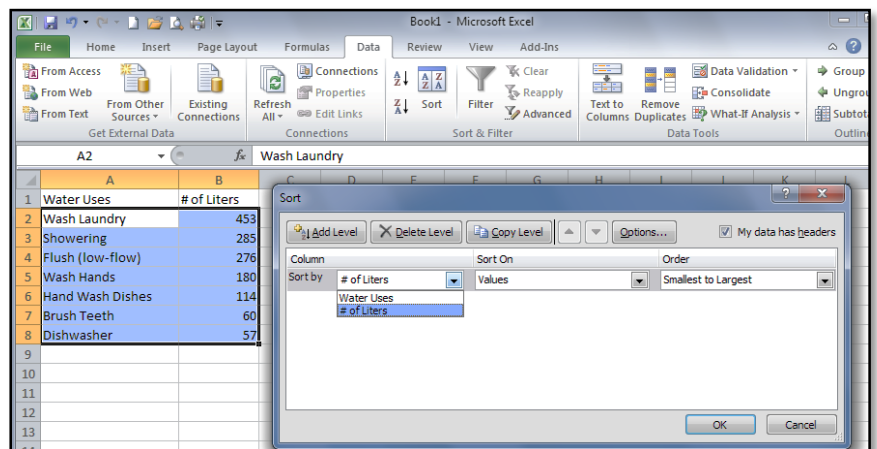
9. In the **Sort On** box, select **Values**

10. In the **Order** box, select **Largest to Smallest**
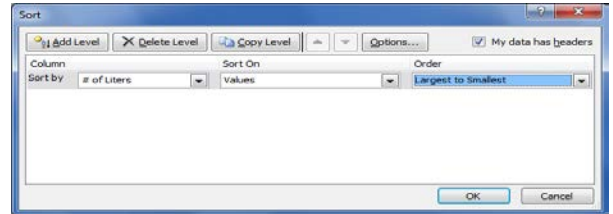
> Note - this will make your pie chart show the biggest pieces of pie first, followed by the smallest pieces of pie. If you'd prefer your pie pieces to be arranged randomly, or alphabetically, then don't sort it this way.

11. Select **OK**

12. With your data still selected in your table:
    - select the **Home** tab
    - select the drop down arrow next to the **Borders** button
   - choose **All Borders**
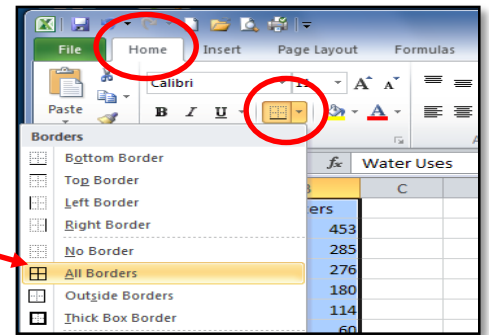
13. **SAVE** and **NAME** the file in the appropriate class folder in your H drive: select the **File** tab **> Save As**. Select **Browse** and navigate to your **H drive**, **current grade**, **current class folder**, type the project name in the **File name** box, select **Save**

B. Create the Pie Chart

1. Highlight all of your data in Column A and B

2. Select the **Insert** tab, then from the CHARTS section, choose **Pie** and select either the **2D** or **3D** pie type
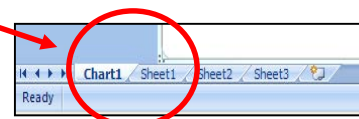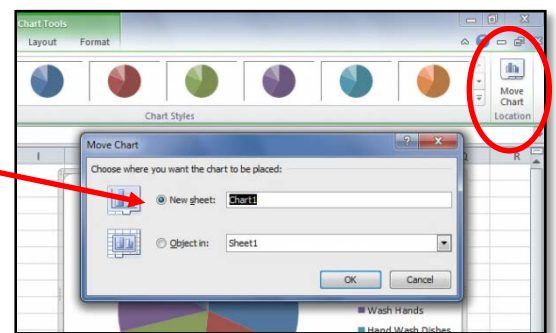
> Your pie chart will appear on your worksheet
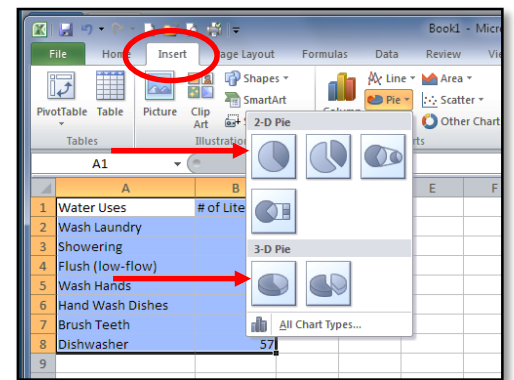
3. Select the **Move Chart Location** button and choose **New sheet** > **OK**

4. Your chart will then appear in a new sheet

> You can move between your data table and pie chart by selecting either the "Chart 1" tab (for your pie chart) or the "Sheet 1" tab (for your data table).

5. Select your chart by clicking in the white space just outside of your pie circle. Little white boxes will appear around the edges of the box around the chart. These are called handles.

6. With your chart selected, choose the **Design** tab > **Quick Layout** > **Layout 6**

> You'll now have a chart title with all the data items/times you recorded measurements for appearing on the right, and the % of each data item will show up in each pie sector
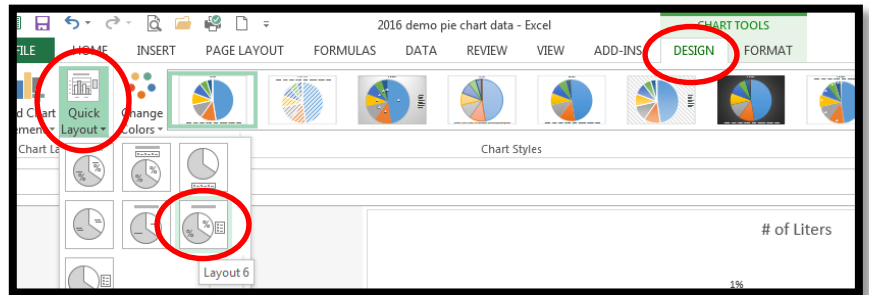
**If you would prefer to have the actual number values of each data item appear in each pie sector, instead of the percentage, continue with steps 7 – 9 below. Otherwise, skip ahead to Step C - Format the Pie Chart.
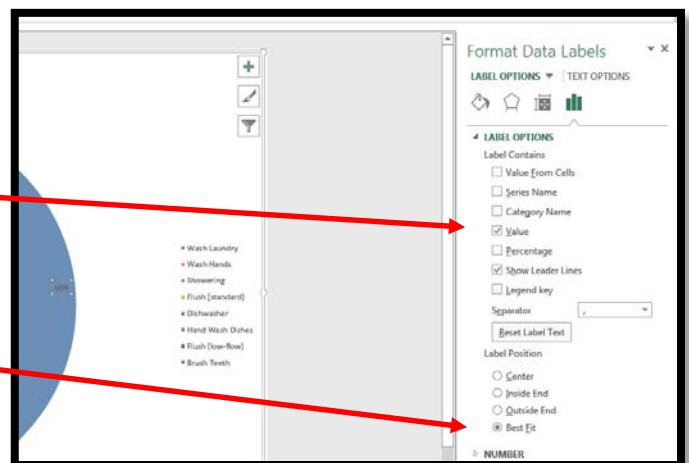
7. From the right side of the chart, select the **CHART ELEMENTS** button (**+**). Then check the box for **Data Labels > More Options**

> You'll now see a FORMAT DATA LABELS menu appear at the right.
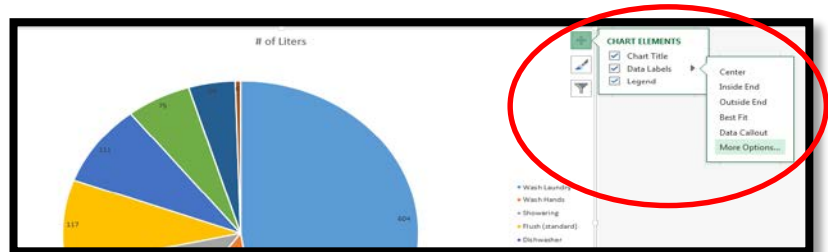
8. From the FORMAT DATA LABELS menu at right, select the check box next to **Value**, and UNCHECK the box next to **Percentage.**

   For LABEL POSITION, you may want to select **Best Fit**

9. **CLOSE (x)** out of the FORMAT DATA LABELS menu. Now, the actual number values will show up on your pie chart, instead of the %

C. Format the Pie chart

1. Select your Chart Title, highlight the text, and rename it to an appropriate name
   *example – *Monthly rainfalls in Fairfield for 2016*, or *Favorite Sports in Mr. Morris' Period 4 class*

2. Change your title to font size 24: RIGHT CLICK on your chart title, select **Font**, choose **Size 24**, select **OK**

3. Change your data values (# or %) in your pie chart to font size 18: RIGHT CLICK on one of the data #s or %s in the pie chart, select **Font**, choose **Size 18**, select **OK**

4. Change your legend fonts (*examples – *January, February, March…* or *soccer, baseball, football, swimming)* to font size 18:
   - click on the legend box to select it, you'll see little white squares on the corners around the box
   - RIGHT CLICK in the legend box
   - select **Font**, choose **Size 18**, select **OK**

5. If you want to change your pie sector colors:

   - click on the pie chart circle to select it, you'll see a little blue circle on each pie sector corner
   - click on ONE of the pie sectors to select just that pie piece. You'll see the blue circles around just that pie sector
   - RIGHT CLICK on that ONE pie sector, select the **Fill button** (paint bucket)
   - Choose the color you'd like the pie sector to be
   - Repeat the above bulleted items for each sector you'd like to change
   - If you choose a dark color for a pie sector, you may need to change the font color inside that pie sector to a light color so it is visible
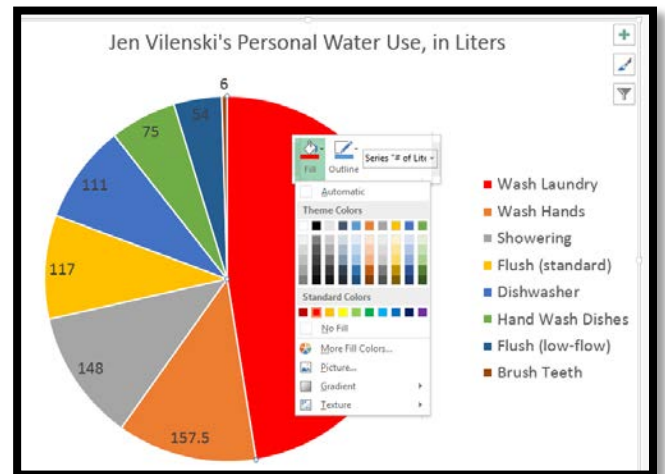
D. Preview, Assess, Print and Save the Pie chart

1. BEFORE you print your chart, complete the self-assessment for this project to ensure you did everything correctly

2. **PRINT** your file: select the **File tab > Print,** make sure that the correct printer shows up in the **Printer** box, **PREVIEW** the chart on the right side of the screen to ensure it looks ok, then select the **Print** button.

3. **SAVE** the document to your **H drive** as you did in step A13. Yay! You're all done!