

JMP® Introductory Lab Activities

Activity 1: Working With Data



Data Set: Popular Kids, from DASL (the Data and Story Library)

Summary

In this lab you will learn how to get data off the Internet, create a JMP data table, and do some basic graphical analysis with JMP using Chart from the Graph menu. (Note: Throughout these activities, you'll see menus written in shorthand notation, **Graph > Chart**).

You will also create a report, which will have tables and graphs from JMP, along with your commentary and interpretation (required output and discussion is in italics).

Getting Data Into JMP® From the Web

First you need to learn how to get data into JMP. You can open Excel spreadsheets, or copy and paste data into JMP. In this activity, we'll create a data table from data on the Internet.

Open JMP. Click on the **New Data Table** button in the JMP Starter to open a new data table (or select **File > New > Data Table**).

You also need to open your Web browser. The data set you are going to use is from DASL, the Data and Story Library. To find it, go to lib.stat.cmu.edu/DASL/. You'll see seven buttons. Click on **List all topics**. Select **Education**, scroll down, and click on the link for **Students' Goals Story**. Read the story that describes the data set you will be using. Click on the data file name, **Popular Kids**, to open the data. The data is from surveys of 478 students in grades four to six from Michigan.

Highlight to select all of the data, including the headings (click before **Gender** and drag to the end of the last row of data.) After you have all the data selected, **copy** it. **Paste** the data into the JMP data table using **Paste With Column Names** from the **Edit** menu (make sure no cells are highlighted in the JMP data table when you paste).

You should now have copied all of the data into JMP.

Working With JMP® Data Tables

To save the data table, select **File > Save As**. Give the file a name (such as **Popular Kids**), and indicate where you'd like the file saved. Note that JMP data tables have a .jmp extension.

To make the data table easier to use, you may want to make a few modifications. First, resize the data table window by clicking and dragging a corner of the window, or use the **Maximize Window** button.

It would also be helpful to have all the columns visible on the screen. You can resize the columns by placing your cursor over the column line. When it changes into a double-sided arrow (\leftrightarrow), you can change the width of the column by dragging the column line. Resize all 11 columns so that all 11 variables can be seen at one time.

Notice that there are 11 columns, and that the last four columns give a numerical rank of the variable listed (1 = most important, 4 = least important).

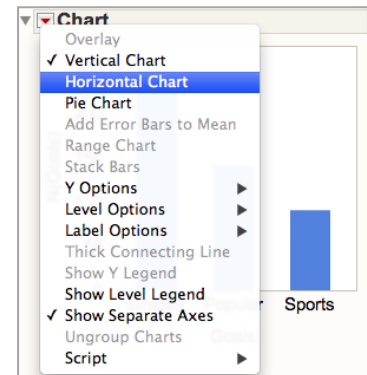
Creating Graphs in JMP®

In the story that goes with these data there was a pie chart of responses to the question, "What would you most like to do at school?" To make your own charts, select **Chart** from the **Graph** menu. In the dialog window, click on **Goals** from **Select columns**. Click the **Statistics** button, and select **N** from the **Statistics** menu. Click **OK**.

A Chart window will appear showing a bar graph of the percentage of student subjects who said their goal was grades, popularity or sports.

Click on the **red triangle** next to **Chart** to see options that will allow you to alter the display.


For example, you can change the direction of the bar graph from vertical to horizontal.



Copying and Pasting JMP® Output Into a Report

Create a report with a header, graph title and the bar chart.

To print your JMP output in a report format, open the program you use for writing reports. Put an appropriate heading on your report. A good heading might be "Students' Goals."

Go back to the JMP Chart window. Click on the **selection** tool  on your toolbar (if the toolbar does not appear, click the **Alt** key to display it). Then, click to highlight the content you'd like to copy (click above the graph to select everything in the window). **Copy** the graph (use **Edit > Copy** or **Control-C**), return to the program where you'd like to paste the content, and select **Paste**. Add a title – "Vertical Bar Graph of Goals."

Go back to the Chart window in JMP and click on the red triangle to change the graph to a **Pie Chart**.

Copy and paste the pie chart into your report. Add a title to this graph.

Describe what these graphs (the bar chart and the pie chart) show you about the goals of the student subjects.

Which graph do you prefer? Why?

Using an appropriate display, make a graph and display of **Grade, Age** or **Urban/Rural**.

Copy and past this output into your report.

Describe what your graph shows you.

Note: For all activities, proofread your report, and make any needed changes. Save the report – use a file name like “YourName_Activity X.”