

Demo: Switching Columns in an Analysis

In this video, we use the Impurity data to show how to add markers, colors, and legends to your graphs using two platforms, Graph Builder and Scatterplot Matrix.

We'll start by creating a scatterplot using Graph Builder. To do this, we select Graph Builder from the Graph menu.

We drag Impurity to the Y zone, and then drag Temp to the X zone.

JMP creates a scatterplot, with a smoother drawn through the points. We click the smoother icon to remove the smoother and can see that the relationship between Impurity and Temp is positive and linear.

You can color the points based on the value in a column. For example, let's say we want to color the points based on values of the variable Outcome.

We drag Outcome to the Color zone. The points are colored based on their outcome, and the interactive legend enables you to select the points in each outcome category.

When you right-click the legend for Outcome, you can change the colors, the markers, the marker sizes, and the transparency of the markers. We'll use the default colors but change the markers. This makes it easier to distinguish the points in the graph.

To see the values of the variables for a point, you can position the cursor over the point to see a hover label. You can also pin this hover label so that it always appears on the graph. We'll pin the label for this one unusual observation. We can right-click to make other changes, and drag the label to a better position. These customizations apply only to this analysis.

If you want to permanently change the colors and markers, for every analysis, you can set the row state. To do this, we select Color or Mark by Column from the Rows menu. We select Outcome from the columns list.

There are many options for colors and markers. We'll click Reverse Scale to color Pass as blue and Fail as red. We'll select Paired markers. This applies a hollow marker for Pass and solid marker for Fail.

When we click OK, you see these colored markers in the row states in the data table.

For now, we will clear these row states. To do this, we select Clear Row States from the Rows menu.

Finally, we show how to add a row legend to an analysis. First, we'll create a new analysis. This time, we'll create a scatterplot matrix. To do this, we select Scatterplot Matrix from the Graph menu. We'll create a square scatterplot matrix for the continuous variables, Impurity through Reaction Time.

To add a row legend, we right-click in any scatterplot and select Row Legend. This opens the same dialog you saw earlier.

We select Outcome, reverse the scale, and change the markers as we did before. When we click OK, you see that these markers are again applied as row states. There is also a legend in the analysis window. This enables you to interact with the legend and the markers.

When we click Pass and Fail in the legend, we can see where these batches fall within each of the scatterplots. Batches that failed tend to have higher values of Temp and Catalyst Conc.