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Demo: Creating Comparative Box Plots with Graph Builder

In this video, we show how to create side-by-side, comparative box plots for the Impurity data using Graph Builder. We use these box plots to compare the Impurity values for the different reactors and shifts.

First, we select Graph Builder from the Graph menu.

We drag Impurity to the Y zone, and then drag Reactor to the X zone. JMP creates dot plots for each of the reactors.

You can change the look of the dot plots using the Jitter options under Points. The default jitter for this example is Centered Grid. This enables you to easily see how many observations fall at each value of Impurity for each reactor.

To change the points to box plots, we can click the box plot icon above the graph. Instead, we'll add box plots in addition to the points. To add box plots, we click and drag the box plot icon and drop it over the graph.

The distribution of Impurity values for reactor 3 is higher than the distributions for the other two reactors. You can see this difference in the box plots.

To better see the differences between the reactors, we'll add a line to connect the means for the three reactors. To do this, we click and drag the line icon onto the graph.

You can see that the mean for reactor 3 is higher than the mean for the other two reactors.

Now we'll use box plots to compare the two shifts. We've already created a graph with the elements we like, so we drag Shift next to Reactor to add it to the graph.

The distributions of Impurity values for the two shifts are very similar.

Finally, we'll do a little cleanup. We click Done to close the control panel and deselect Show Legend from the Graph Builder red triangle.

We'll also change the title of the graph to something more descriptive.

Now the graph is ready for saving and sharing.

Close