Recall that you are on a team that is improving the yield of a chemical manufacturing process. The yield for a batch must be > 80%. The categorical variable, **Performance**, has two values, *Accept* and *Reject*. Rejected batches did not have a yield > 80%.

In this practice, you use bar charts and a mosaic plot to explore potential relationships between **Performance** and some of the categorical variables in the data set.

1. Open the file **Chemical Manufacturing.jmp** in the course data folder.

2. Use the **Distribution** platform to create bar charts for **Performance**, **Amine Supplier**, and **Base Supplier**. Click on the bar for *Reject* in the **Performance Graph**. What do you observe?

   Solution:

   More of the rejected batches appear to come from the amine supplier in France and the base supplier Jones Corp.

3. Use **Graph Builder** to create a stacked bar chart for **Performance** and **Toluene Source**. **Hint**: Drag **Performance** to the **X zone** and drag **Toluene Source** to the **Overlay** zone. Then click the bar chart icon, and change the bar style to **Stacked**. What do you observe?

   Solution:

   The performance is the same for both toluene sources.

4. Use **Graph Builder** to create a mosaic plot for **Performance** and **Carbamate Supplier**. **Hint**: Drag **Performance** to the **Y zone** and drag **Carbamate Supplier** to the **X zone**. Then click the mosaic plot icon. What do you learn?

   Solution:

   More of the rejected batches were from the contract carbamate supplier.

5. Use **Graph Builder** to create a mosaic plot for **Performance** and **Vessel Type**. What do you learn?

   Solution:

   The performance is about the same for both values of vessel type.

Hide Solution