In this practice, you create histograms, box plots, and summary statistics for the White Polymer case study data using the **Distribution** platform.

Yield is the KPI (Key Performance Indicator), and the two primary output characteristics of the polymer specified by the molding plant are as follows:

- **Melt Flow Index** (**MFI**): Specifications are 192 and 198, and the target is 195.
- **Color Index** (**CI**): The lower specification is 80.

1. Open the file **CrisisTeamData.jmp** from the course data folder. This file contains historical data, collected by a previous team.

2. Use the **Analyze**, **Distribution** platform to create histograms, box plots, and summary statistics for **Yield**, **MFI**, and **CI**.

3. What are the mean and the median of **Yield**?

   Solution:

   The mean of **Yield** is 0.927 (or 92.7%), and the median is 96.56%.

4. Why is there a difference between the mean and median of **Yield**?

   Solution:

   The distribution is left-skewed, so the median is larger than the mean.

5. What is the median of **MFI**?

   Solution:

   The median of **MFI** is 198.6.

6. Compare the median of **MFI** to the specifications for **MFI**.

   Solution:

   The upper spec for **MFI** is 198. The median is above the upper spec.

7. What is the first quartile of **CI**?

   Solution:

The first quartile for **CI** is 79.39.

8. Compare the first quartile to the lower specification for **CI**.

Solution:

The lower specification for **CI** is 80. The first quartile is very close to 80. This means that nearly 25% of the **CI** values fall below the lower spec.

Hide Solution