Global temperatures by month consists of the land average, land max average, land min average, land ocean average, and a level of uncertainty for each of the temperatures from 1850 - 2015. When viewing the global temperature multi-plot chart, the plot lines do look like they are trending upwards over time, so it is reasonable to look at this and be able to say that the temperatures are trending in a positive upwards direction. However, to take a look from a different point of view, we created scatter plots with linear regression lines, and these plots confirmed what we were seeing in the multi-plot chart, but we are better able to see the structure and positive trend of the individual temperature data points alongside the linear regression line. The global temperature charts together show the upward trending temperatures part of our hypothesis. You can click on any of the scatter plots to get a closer view, and you can see that all the linear regression lines have a positive upward trend, most of the values are close to and on either side of the line, the data points shift upwards onto one side of the line at the end, and it is easy to see the connection to the multi-line plot.

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This scatter plot shows minimum temperatures, and a linear regression line with a positive trend. Data points lie on each side, fairly close, no outliers. Ultimately, data points shift up and onto one side of the line.

This scatter plot of land average temperatures shows the familiar grouping of data points around the regression line, but the upward turn of the data points is more pronounced than in the minimum temperatures chart.

This scatter plot has the maximum average temperatures within the same period as all the charts. The linear regression line is closer in appearance to the land average and land ocean average lines than to the land minimum line.

This scatter plot has the land ocean average temperatures with a positive linear regression line, and the main takeaway is that the regression lines are similar, moving in the same direction, and have roughly the same appearance.