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## MAKING GRAPHS

There are several different ways of displaying numerical information on a graph. Bar graphs and line graphs are the two most common forms and cover the graphing needs for this curriculum. A bar graph is used when comparing different sets of numbers associated with non-continuous or discrete independent variables such as sugar and salt (independent variables) into solution. A bar graph might be used to compare the numbers of individuals of different species caught in a net. A line graph is used to express numerical data in which the independent variable (the thing which you changed) is a continuous function, even though you only sampled parts of it. The results (the dependent or response variables) are plotted as points, but the assumption is made that the infinite number of intermediate points possible fall along a line between the points plotted. After plotting the data points you actually measured, you draw a line or curve that best fits those points. An example of a good use of a line graph would be to show the relationship of temperature to dissolved oxygen in water. As temperature increases, dissolved oxygen decreases. Sometimes the points plotted show the range of results as well as the average to indicate how much variability there was among different groups' results.