

## 1: Charts & Graphs | Content Creation | Design

*Which Chart or Graph Do I Use? - Tableau Software.*

The only way to do that is to choose the right chart for your data. Creating the Right Charts The U. Government provides volumes of data to the public for absolutely free. One of the most valuable pieces of information for digging through cultural and social facts is the Census. This is a nice, small subset of data that allows for simple charting. A dashboard allows you to present your most important data in an easy-to-digest format. This guide will help you create presentations with a professional look and concise content. Read More and dashboards Leftronic: Usually these are values that have been categorized in some way. The most common subset for a column chart is one set of data broken up into categories. In this case, you can go with 2-D or 3-D column. Doing that is easy enough. Obviously people in the Northeast have major plumbing and heating problems! But how bad is that compared to the rest of the country? Bar charts are the same as column charts, but the categories appear horizontally rather than vertically. This time, highlight all the data. Now click Insert in the menu just like you did before, and this time click on the dropdown for bar charts, just to the right of the column charts dropdown. You now have a bar chart comparison of reported problems by renters for geographic regions across the U. I had to edit the title as shown. You do this simply by clicking on the title itself and typing a new title, at least in Office â€” in other versions you may need to click Advanced Edit. As you can see, column charts and bar charts are a really cool way to either compare categorized data for one data set, or compare categorized data across multiple data sets. For example, the regional chart above shows quite clearly that plumbing issues are much worse in the South and Northeast, while the South struggles a lot more than anyone else with property upkeep. For example, a University may use a pie chart to show a breakdown of the racial demographics of its student population. Using our data above, you might use a pie chart to breakdown Northeast renter problems by repair issue. Again, this is another good chart to use when you are starting out with already categorized data. Line Charts Moving on to line charts requires a new set of data because line charts and other similar chart types tend to be time-dependent. This means, you are usually but not always charting a data point over the progression of time. Ultimately, for a line chart you only need an X and a Y value. In the example below, X will be time and Y will be population, but you could just as easily chart the productivity of your company Y as the number of bonuses paid goes up X. Highlighting the year and the total population columns, and then clicking on Insert from the menu and choosing a line chart graph results in a line chart showing up in your spreadsheet. Right click on the chart and choose Select Data Source. Make sure the Year is unselected. At just a glance, you can see that the population of the U. This is the kind of thing line charts are made to show. The difference is subtle, but when you need to show things like how many trees have been clear cut from to versus to , the area chart really shines. Using the population data above, you can compare the male versus female population growth from through You could also represent the same data using a stacked area chart also available in the charts section under the Insert menu. This chart can be thought of as a line graph and a pie chart combined into one. You can see the percentage breakdown of the categorized data as that data changes over time. What I learned from interviews was that online dating is equally painful for men and for women, but for very different reasons. Read More for guys as it is! Bubble Chart This can also be represented even better in the form of a bubble chart. In the example above, if you included the name of the movies as the X-axis labels, you could identify that of all of the movies that teens went to, which specific movies attracted a larger teen female audience. This three dimensional chart lets you plot two series of data points across several dimensions. It can be complex to use, but with the right data points two series with a clear relationship , the visualization can be quite impressive. The 3-D version of the chart looks like a topographic map, which makes sense because such a map is a plot of altitude and distance from any given point. Similarly, you can use this map to do things like chart the magnitude of a disease outbreak against age and time the person has been sick. In the end, visuals will capture and convince your audience. Here are the tools that will help you turn your data into something great. This is best used when the two data series are subcategories of a larger category of data. A good example of this is the data sets used earlier in this article,

## NEW! WHEN DO I USE WHICH CHART TYPE? pdf

plotting male and female population per year. The value of this graph really comes from having the right data and the right goal that you want to achieve visually with that data. Choosing the Right Graph That is really the point of all of this. Some charts will make your point much more clearly than others. Knowing what chart will accomplish that is half the battle. The other half is figuring out exactly how to arrange your data and format the chart how you like.

### 2: Combining Different Chart Types into a Single Excel Chart

*Area charts will fill up the area below the line, so the best use for this type of chart is for presenting accumulative value changes over time, like item stock, number of employees, or a savings account.*

Introduction to Combination Charts Excel offers a wide range of chart types: You can even mix different types on a single chart by assigning different chart types to different series on the chart. These mixtures are called Combination Charts, and Excel provides a small number of these on the Custom Types tab of the Chart Type dialog box. You can create your own combination charts with a wider variety of combinations, by applying the Chart Type menu command to selected series in your chart, not on the chart as a whole. This gives you much more flexibility over the types and formats you can use in your charts. Roll Your Own Combination Chart, shown below, describes this in detail. The other links below show imaginative charts and effects you can obtain using combination charts. I was trying to show some things to my boss and our customers. The chart compares the performance of two models of our product, with two serial numbers of each model. Model 2 pretty much exceeds the target of 1. The two samples from the Model 1 parts, which received "Special" treatment did not display a noticeable difference compared to the standard samples. This combo chart consists of five stacked bar series showing the actual performance data Special, AB, etc. The serial numbers along the vertical axis are linked to a dummy series along the axis, shown in my Vertical Category Axis example. The labels can be independently formatted, unlike standard axis labels; coloring the labels to match the series and the legend entries speeds comprehension by those busy executive types. The vertical red target line and the horizontal black line separating Model 1 from Model 2 are real-life examples of Adding a Horizontal or Vertical Line to a Column or Line Chart. The vertical line was done with an error bar, the horizontal line by connecting two hidden points. Not bad, five series to chart the actual data, and four more to help display it in better context. Also note the vertical gridlines: A nice white background keeps it crisp. Where are those fancy fill patterns and gradients? Do the extra work to make the chart simple to understand, and leave the fancy colors to the marketing folks. Roll Your Own Combination Chart. Excel offers a very small number of combination charts from the Custom Charts tab of the Chart Wizard: Column-Area and a few Line-Column varieties. But these are limited, with only a few series permitted, and you have to arrange the series in the right order on your worksheet. But how do you combine a line chart and a bar chart, all on the same chart? The trick is to combine bar chart and XY scatter chart, then clean up the axes. Stock Charts with Added Series. A common problem people have is adding an extra series to a stock chart. It would be very helpful to add a market index, for example, or another moving value to a stock chart to see how the stock price moves with respect to another factor. This can be done, but you need to follow a few extra steps. Box and Whisker charts Box Plots are commonly used in the display of statistical analyses. Unfortunately, Microsoft Excel does not have a built in Box and Whisker chart type. You can create your own custom Box and Whisker charts, using stacked bar or column charts and error bars, in combination with line or XY scatter chart series to show additional data. The procedures in these tutorials have been updated to show how to add additional series means of other populations, perhaps, or sets of target values. This page also links to a utility which can be used to generate Box and Whisker charts directly from population data. The Box Plot utility has recently been upgraded to provide more professional output, to correct treatment of outliers in horizontally oriented charts, to run tenfold faster, and to fix a few small bugs. The utility was previously updated to provide additional chart styles, and to correct problems experienced by some non-US users. Combine Clustered Columns with Clustered Lines. When you create a combination chart with clustered columns and lines, the lines do not cluster the way the columns do. The markers for the line series all line up over the middle of the cluster of columns they represent. Clustered and Stacked Column and Bar Charts. Excel offers clustered column charts and stacked column charts among its standard options. How do you combine a stacked column chart with a clustered column chart? Through careful arrangement of the data in your worksheet, you can make a stacked column chart that looks like a clustered-stacked column chart. I show how it is done with illustrated step-by-step instructions. Advanced Gantt Charts in Microsoft Excel. Gantt charts are useful tools in program

management, which help to show graphically when tasks must start and finish, and which tasks are underway at any given time. Gantt charts help in scheduling of the many tasks in a program, and in identifying potential resource issues in the schedule. A simple Gantt chart is merely a floating bar chart, that is, a stacked bar chart in which the first series is formatted to be invisible. The second series of bars are stacked on the first, but these bars appear to float in the middle of the chart, because the first series is formatted to be invisible. This example shows horizontal task bars that are split to show the percent completed, milestone markers at the end of each task bar indicating whether the task has been finished, and one or more vertical lines indicating particular dates along the axis. How do you add a horizontal or vertical line to a column or line chart, to show a target value, or the series average? The method involves adding a new series, applying it to the secondary axes, and making the secondary axes disappear. A variation uses an error bar for the straight line, rather than the connecting line between two points.

### 3: Chart - Wikipedia

*Building a chart in Excel in and of itself is not a terribly difficult thing to do. The hard part is getting your mind around which types of chart to use in which situation. Excel has 11 major chart types with variations on each type. For most business dashboards and reports, you will only need a.*

Charts are an easy way to make a dry, dull spreadsheet a little more engaging. However, familiar pie charts and scatter graphs can only go so far. We show you how to prepare your data in Excel and import the charts into PowerPoint for a lively presentation. Read More out there, and Excel introduces a few new types of charts for users to utilize. We only need one column of data. Excel will group this into sensible bins, but we can adjust the boundaries manually later on. Select all your data and head to the Insert tab, then find the Charts section. Our data has been sorted into three bins: This is fine, but I would prefer to fine-tune things for myself. To do so, I need to right-click the X-axis and click Format Axis. There are several different ways to adjust the bins, and the right option will depend on your data. This makes it particularly useful in the context of quality control. To create a Pareto chart, we need to select all the data and head to the Charts section of the Insert tab. This produces a chart that looks like this. As you can see, our columns are in descending order, but the line tracks a running total. This allows us to see that if we eliminated the problems of forgetting about the fruit, storing it incorrectly, and buying bad fruit at the store, we could eliminate 90 percent of wastage. Box and Whisker Charts Box and whisker charts are useful when you want to show the spread of a particular set of data. This is only a small portion of the data – box and whisker charts tend to work best when you have a lot of information Search Excel Spreadsheets Faster: As you can see below, our chart looks OK, but there are a few tweaks we can make to present our data more efficiently. We can amend this by right-clicking the Y-axis and selecting Format Axis. This uses the space more efficiently, which allows the chart to offer a more perceptible comparison. This version of our chart makes it easier to pick up on details like the basketball team having the smallest range of ages, or the baseball team having the most extreme outliers. This is a good time to make any aesthetic tweaks to your chart. Treemaps Treemaps are useful when you want to see a proportional overview of a particular data set. First, we need to select our data. Next, open the Insert tab. This will produce a chart like the one below. As you can see, our profits have been laid out in the subcategories we dictated. This makes it easy to see whether weekdays are more profitable than weekends, whether sandwiches provide a better return than side orders, and which sandwiches are most popular, all from the same chart. Again, now is the time to make any aesthetic tweaks to your treemap. Sunburst Charts Sunburst charts are also good at comparing sets of data, but they represent proportions in a slightly different way. Select all your data and head to the Insert tab. Waterfall Charts Waterfall charts are great when you want to track a running total. As your total increases or decreases, bars will represent the difference, which makes this type of chart particularly useful for financial visualizations. There are a couple of things to note about this data. You need to stipulate your losses as negative integers, which you can do by surrounding them with a bracket. However, if you want to make your data easy to edit by linking the cells together e. Navigate to the Charts section and use the Insert Waterfall or Stock chart drop-down to select the Waterfall chart. They should be touching the baseline. Doing this for both bars results in the chart below. Now we can see the effect that the decreases have on our running total. Know Your Excel Charts! Excel makes it easy to turn your data into slick visualizations. Charts are a great way to visualize numbers. We show you how to create charts in Microsoft Excel and when to best use what kind. A Pareto chart serves a very different purpose to a sunburst chart, and a waterfall chart has very different applications to a box and whisker chart. Always consider your data first, then pick a chart. Read More , but you need to make the decisions. Do you have a tip for other users looking to improve their visualizations? Or are you in need of assistance with setting up a particular type of chart? Either way, why not join the conversation in the comments section below? Nomadic Photo Studio via Shutterstock.

### 4: Data Visualization – How to Pick the Right Chart Type?

*Moving on to line charts requires a new set of data because line charts and other similar chart types tend to be time-dependent. This means, you are usually (but not always) charting a data point over the progression of time.*

Contact Menu Join 62, marketing managers who get our best digital marketing insights, strategies and tips delivered straight to their inbox. Many designers are handed documents which contain tables of snore-inducing information with the expectation that they shine it up a bit—something akin to Extreme Makeover: The solution is to visualize this information in an attractive format by employing charts and graphs. Some people may be under the impression that charts are just as boring as tabular data, but just like anything, charts can be designed with tact and taste. Charts are most useful for packaging overwhelming information into a simple and easy to use format for comparisons and for discerning trends in a dataset. As a real-world example of proper chart usage, we need to look no further than the ubiquitous Google Analytics. Google Analytics showing browser usage for Design Instruct. Can you imagine if — instead of charting website statistics — Google Analytics simply spit out raw numbers in tabular or list format? Types of Charts While writing this section, I realized how powerful a graphic is as a way to convey information. Here are some popular types of charts and graphs for data visualization. Pie Chart A pie chart circle graph is a circular chart that is divided into sections to illustrate proportion. Bar Chart A bar chart bar graph is a chart with either horizontally or vertically-arranged rectangular bars—the lengths of which are proportional to the values that they represent. Scatter Plot A scatter plot displays data as a collection of points. Each point on the chart is plotted with two variables on the horizontal and vertical axes. Design Elements of a Chart When designing a chart, there are typically four main parts that you can customize although not every type of chart uses each at once. The chart title should accurately describe what the chart is meant to depict. It should be large enough to be easily readable, but not too large or too distracting. In other words, it should do its job and then get out of the way. Legends are generally placed beneath the data, but not always. The colors of the items within the legend should correspond to the data on the chart. Depending on the type of chart in use, the data can take many different forms. It can be 2D, 3D or textured for example. The axes and tick marks should sort of fade into the background but be easy to read when needed. Gathering Data Sometimes data is handed to you in a tidy table format. To make the post a little more appealing, I put together a bar graph detailing which promotion techniques were used the most. Bar graph depicting favorite promotion techniques of popular design blogs. To do this, I had to gather my own data, place it into a table and then turn it into a chart. The first thing I did was create a new spreadsheet. In the second column, I added 1 to the number of mentions each promotion technique garnered during the interviews. It turns out that 16 interviewees mentioned Twitter, so to the right of Twitter in my spreadsheet I simply put 1. I continued to do this for each mention of a promotion technique until I was completely through every response. This of course is just one simple example of gathering and organizing data. Creating a Chart There is a handful of good programs you can use to create sleek-looking charts. The three big ones are Illustrator, Numbers and Excel. I personally prefer using Numbers because it offers slick features such as 3D charts and textures that can be mapped to graph sections. Creating a chart in Adobe Illustrator is nice as well because it offers complete flexibility. Creating a Chart in Illustrator: Now you can click on the Graph Tool, which opens a window full of options. This is where you can begin to customize the look and feel of your graph by choosing a chart type. Hit OK and then select the Graph Tool and click and drag in your open document to position and size the graph. Creating a Chart in Numbers: From here, a pop-up menu appears and it will allow you to select from 11 different chart types plus eight 3D variations. You can grab a corner of the chart with your mouse to adjust the width, height and how much data is displayed. Creating a Chart in Excel: Create Your Own Not every chart has to be created for you by a program. Information graphics, or infographics, are basically charts on steroids and often incorporate standard charts with additional creative output and flair. Tips and Ideas for Better Charts There are a few nice ways to spice up your charts and set them apart from the pack. Wood or metal grains look particularly nice. Use Depth Adding depth to make a chart look three-dimensional is always nice but can impact readability, so make sure

not to go overboard here.

### 5: Using Excel to Create a Chart or Graph at Internet 4 Classrooms

*The problem is that there are so many chart types, styles, and methods of presenting data that it can be confusing and difficult to pick the right one.*

These chart types include line charts, bar charts, candlestick charts, and point and figure charts. **Line Charts** Line charts are the most basic type of chart because it represents only the closing prices over a set period. The line is formed by connecting the closing prices for each period over the timeframe. **Figure 11** "Line Chart Example" Source: The chart is made up of a series of vertical lines that represent the price range for a given period with a horizontal dash on each side that represents the open and closing prices. The opening price is the horizontal dash on the left side of the horizontal line and the closing price is located on the right side of the line. If the opening price is lower than the closing price, the line is often shaded black to represent a rising period. The opposite is true for a falling period, which is represented by a red shade. **Figure 12** "Bar Chart Example" Source: The difference is a wider bar or rectangle that represents the difference between the opening and closing prices. Falling periods will typically have a red or black candlestick body, while rising periods will have a white or clear candlestick body. Days where the open and closing prices are the same will not have any wide body or rectangle at all. **Figure 13** "Candlestick Chart Example" Source: These charts also try to eliminate the skewing effect that time has on chart analysis. For further reading, see **Point and Figure Charting**. The Xs represent upward price trends and the Os represent downward price trends. There are also numbers and letters in the chart that represent months and given investors a rough idea of dates. Each box on the chart represents the price scale, which adjusts depending on the price of the stock: The reversal criteria represents how much the price has to move away from the higher or low in the price to create a new trend, or in other words, how much the price has to move in order for a column of Xs to become a column of Os, or vice versa. When the price trend has moved from one trend to another, it shifts to the right, signaling a trend change. **Conclusion** Charts are the most fundamental aspect of technical analysis. Now that we have a clear idea of how charts are constructed, we can move on to the different types of chart patterns.

### 6: Do You Know When to Use Tables vs. Charts? - Infogram

*If you are finding it hard to pick the right chart type for your type of data, refer to chart chooser [www.enganchecubano.com](http://www.enganchecubano.com) from the center of the chart chooser diagram and take the route that best matches your data type.*

Share Tweet Share Share Making sense of facts, numbers, and measurements is a form of art – the art of data visualization. There is a load of data in the sea of noise. To turn your numbers into knowledge, your job is not only to separate noise from the data, but also to present it the right way. Many of us come from the "PowerPoint generation" – this is where the roots of our understanding of data visualization and presentation lie. Unfortunately, it is far from anything related to good, and I stand before you as guilty myself. PowerPoint could be the most powerful tool on your computer. Countless innovations fail because their champions use PowerPoint the way Microsoft wants them to, instead of the right way. Data Visualization Best Practices There are four basic presentation types that you can use to present your data: Comparison Distribution Relationship Unless you are a statistician or a data-analyst, you are most likely using only the two, most commonly used types of data analysis: Selecting the Right Chart To determine which chart is best suited for each of those presentation types, first you must answer a few questions: How many variables do you want to show in a single chart? One, two, three, many? How many items data points will you display for each variable? Only a few or many? Will you display values over a period of time, or among items or groups? Bar charts are good for comparisons, while line charts work better for trends. Scatter plot charts are good for relationships and distributions, but pie charts should be used only for simple compositions – never for comparisons or distributions. There is a chart selection diagram created by Dr. Andrew Abela that should help you pick the right chart for your data type. You can download the PDF version here: Tables Tables are essentially the source for all the charts. They are best used for comparison, composition, or relationship analysis when there are only few variables and data points. It would not make much sense to create a chart if the data can be easily interpreted from the table. You need to compare or look up individual values. You require precise values. Values involve multiple units of measure. The data has to communicate quantitative information, but not trends. Use charts when the data presentation: Is used to convey a message that is contained in the shape of the data. Is used to show a relationship between many values. For example, if you want to show the rate of change, like sudden drop of temperature, it is best to use a chart that shows the slope of a line because rate of change is not easily grasped from a table. Column Charts The column chart is probably the most used chart type. With column charts you could compare values for different categories or compare value changes over a period of time for a single category. Best practices for column charts Use column charts for comparison if the number of categories is quite small – up to five, but not more than seven categories. If one of your data dimensions is time – including years, quarters, months, weeks, days, or hours – you should always set time dimension on the horizontal axis. In charts, time should always run from left to right, never from top to bottom. Our eyes are very sensitive to the height of columns, and we can draw inaccurate conclusions when those bars are truncated. Avoid using pattern lines or fills. Use border only for highlights. Only use column charts to show trends if there are a reasonably-low number of data points less than 20 and if every data point has a clearly-visible value. Column Histograms Histogram is a common variation of column charts used to present distribution and relationships of a single variable over a set of categories. A good example of a histogram would be a distribution of grades on a school exam or the sizes of pumpkins, divided by size group, in a pumpkin festival. Stacked Column Charts Use stacked column charts to show a composition. Do not use too many composition items not more than three or four and make sure the composing parts are relatively similar in size. It can get messy very quickly. Before moving to the next chart type, I wanted to show you a good example of how to improve the effectiveness of your column chart by simplifying it. If you have long category names, it is best to use bar charts because they give more space for long text. You should also use bar charts, instead of column charts, when the number of categories is greater than seven but not more than fifteen or for displaying a set with negative numbers. A typical use of bar charts

would be visitor traffic from top referral websites. Referring sites are usually more than five to seven sites and website names are quite long, so those should be better horizontally graphed. Another example could be sales performance by sales representatives. Again, names can be quite long, and there might be more than seven sales reps. Bar Histogram Charts Just like column charts, bar charts can be used to present histograms. A good histogram example is a population distribution by the age and sex. Remember those Christmas-tree graphs? Stacked bars are not good for comparison or relationship analysis. The only common baseline is along the left axis of the chart, so you can only reliably compare values in the first series and for the sum of all series. We used to draw those on blackboards in school. Line charts are among the most frequently used chart types. Use lines when you have a continuous data set. These are best suited for trend-based visualizations of data over a period of time, when the number of data points is very high more than With line charts, the emphasis is on the continuation or the flow of the values a trend , but there is still some support for single value comparisons, using data markers only with less than 20 data points. A line chart is also a good alternative to column charts when the chart is small. Timeline Charts The timeline chart is a variation of line charts. Obviously, any line chart that shows values over a period of time is a timeline chart. The only difference is in functionality – most timeline charts will let you zoom in and out and compress or stretch the time axis to see more details or overall trends. The most common examples of a time-line chart might be: For line charts, the axis may not start from zero if the intended message of the chart is the rate of change or overall trend, not exact values or comparison. In line charts, time should always run from left to right. Do not skip values for consistent data intervals presenting trend information, for example, certain days with zero values. Remove guidelines to emphasize the trend, rate of change, and to reduce distraction. Use a proper aspect ratio to show important information and avoid dramatic slope effects. For the best perception, aim for a degree slope. Area charts will fill up the area below the line, so the best use for this type of chart is for presenting accumulative value changes over time, like item stock, number of employees, or a savings account. Do not use area charts to present fluctuating values, like the stock market or prices changes. Stacked Area Stacked area charts are best used to show changes in composition over time. A good example would be the changes of market share among top players or revenue shares by product line over a period of time. Stacked area charts might be colorful and fun, but you should use them with caution, because they can quickly become a mess. Not in data visualization, though. These charts are among the most frequently used and also misused charts. The one on the right is a good example of a terrible, useless pie chart - too many components, very similar values. A pie chart typically represents numbers in percentages, used to visualize a part to whole relationship or a composition. Pie charts are not meant to compare individual sections to each other or to represent exact values you should use a bar chart for that. When possible, avoid pie charts and donuts. I mean, like, never! You might think that you could use a stacked donut to present composition, while allowing some comparison with an emphasis on composition , but it would perform badly for both. Use stacked column charts instead. Make sure that the total sum of all segments equals percent. Ideally, there should be only two categories, like men and women visiting your website, or only one category, like a market share of your company, compared to the whole market. Scatter Charts Scatter charts are primarily used for correlation and distribution analysis. Scatter charts can also show the data distribution or clustering trends and help you spot anomalies or outliers. A good example of scatter charts would be a chart showing marketing spending vs. Bubble Charts A bubble chart is a great option if you need to add another dimension to a scatter plot chart. Scatter plots compare two values, but you can add bubble size as the third variable and thus enable comparison. If the bubbles are very similar in size, use labels. A good example of a bubble chart would be a graph showing marketing expenditures vs. A standard scatter plot might show a positive correlation for marketing costs and revenue obviously , when a bubble chart could reveal that an increase in marketing costs is chewing on profits. Use Scatter and Bubble charts to: Present patterns in large sets of data, linear or non-linear trends, correlations, clusters, or outliers.

## 7: Technical Analysis: Chart Types

*Excel 's many new features include six new chart types. We'll go over three of them here and talk about how they could be used with your data.*

We added the sample workbook used to create the charts, which you can download [here](#). Read on to see how you can take advantage of these new charts and then try each one out by installing the Office Preview. You can download the sample data used to create these charts [here](#).

**Waterfall**—visualizing financial statements with ease Most business owners seek to better understand their finances in order to ensure their success. Profit and loss statements can help explain the bottom line of your business. However, quickly understanding and communicating your gains, losses and balances by viewing financial statements can be challenging. With a Waterfall chart, you can quickly illustrate the line items in your financial data and get a clear picture of how each item is impacting your bottom line. The example below shows the income statement for a bookstore. A Waterfall chart provides a simple visual of the running total of your financial data, identifies the contributions and provides clear subtotals, giving you a ready-to-present financial report in a few clicks. Learn more about the Waterfall chart.

**Histogram**—exploring and analyzing a distribution For a bookstore owner, it is important to continuously find new ways to attract customers. Stocking books with both high-end and low-end prices can help appeal to a wider range of readers. Commonly used in statistics, a histogram automatically displays the frequencies within a distribution. In this example, the horizontal axis represents the book price. Here we see that this bookstore has a good distribution of books, both high-end and low-end. Excel now makes it is easy for you create the Histogram chart. After creating the chart, use the intuitive options to change the bin ranges to dig deeper into the data. Learn more about the Histogram chart.

**Pareto**—finding the largest impact Continuing with the bookstore example, the owner now wants to focus on quality control by reducing the number of returned books. Each day, a number of books are returned and tabulated for various reasons—maybe the book is a defect or the customer bought the wrong book. The Pareto chart will help the bookstore owner to see the most common reasons customers return books. Using the Pareto chart, you can automatically sort the frequency of the most prevalent issues the bar graph and then show the additive contributions of each issue as you move along the horizontal axis the line graph. In the example below, each column represents a reason for a book return. The line graph shows how each column, or issue, contributes to the overall total of returned books. From the orange Pareto line in the chart, we see that this means defects contributed to 40 percent of all book returns. By improving on just the top three reasons for returns—defects, incorrect pricing and wrong products—the bookstore owner can address over 80 percent of the returns! The Pareto chart allows you to prioritize the improvements you want to make in the bookstore to address the most critical issues. Learn more about the Pareto chart.

For deeper analysis, this chart goes further by providing key insights about the distribution in one view, including range, quartiles, mean and outliers. And you get all of this information with a few clicks. In this example, we are able to compare the price distribution of books by genre.

**Treemap**—analyzing across hierarchies in one view For the bookstore owner, it is very useful to know which book genres provide the largest source of revenue. But what if you could easily identify the largest revenue generators for each level of genre categorization — in one view? The Treemap chart is an ideal visualization for this purpose because it provides a hierarchical view of your data and an easy way to compare different levels of categorization. In this example, we can see each sub-genre grouped to its parent genre automatically, by color and proximity. The size of each node, marking a sub-genre, represents the total revenue of all books under that category. With Treemap, large datasets with innate groupings can be effectively visualized in a simple way. Treemap draws the big picture, so you can draw comparisons between similar or competing products. Learn more about the Treemap chart.

**Sunburst**—revealing every level of your hierarchy While using a Treemap chart is ideal for comparing the relative sizes of groups, the Sunburst chart shows the full hierarchy of the groups to provide deeper analysis capabilities. The visual layout is intuitively natural for finding how each slice is broken down to the most basic contribution. The Sunburst is versatile, displaying any number of levels for any category. Learn more about the Sunburst chart. These six new chart

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types provide a rich new set of storytelling tools in Excel, Word and PowerPoint that enable you to do more with your data. Additionally, each chart can be customized to fit your specific needs with the intuitive design tools you are already familiar with in Excel. Use these features to change style and layout of the chart, add chart elements, like legends and data labels and fine-tune the fonts, colors and effects. After the release of Office , expect to see even more innovative chart types added to Excel through your Office subscription. As part of the modern Office experiences, we are committed to providing the best in class visualizations for data analysis and storytelling. Get started today by installing the Office preview and then apply these new chart types to your own data.

### 8: Introducing new and modern chart types now available in Office Preview - Microsoft Blog

*Use these features to change style and layout of the chart, add chart elements, like legends and data labels and fine-tune the fonts, colors and effects. After the release of Office , expect to see even more innovative chart types added to Excel through your Office subscription.*

A column chart typically displays categories along the horizontal category axis and values along the vertical value axis, as shown in this chart: Types of column charts Clustered column and 3-D clustered column A clustered column chart shows values in 2-D columns. Use this chart when you have categories that represent: Ranges of values for example, item counts. Specific scale arrangements for example, a Likert scale with entries like Strongly agree, Agree, Neutral, Disagree, Strongly disagree. Names that are not in any specific order for example, item names, geographic names, or the names of people. Use this chart when you have multiple data series and you want to emphasize the total. Use this chart when you have two or more data series and you want to emphasize the contributions to the whole, especially if the total is the same for each category. Use this chart when you want to compare data across both categories and data series. In a line chart, category data is distributed evenly along the horizontal axis, and all value data is distributed evenly along the vertical axis. If there are many categories or the values are approximate, use a line chart without markers. A 3-D line chart has horizontal, vertical, and depth axes that you can change. Line charts work best when you have multiple data series in your chart—“if you have only one data series, consider using a scatter chart instead. Stacked line charts sum the data, which might not be the result you want. It might not be easy to see that the lines are stacked, so consider using a different line chart type or a stacked area chart instead. Pie charts show the size of items in one data series, proportional to the sum of the items. The data points in a pie chart are shown as a percentage of the whole pie. Consider using a pie chart when: You have only one data series. None of the values in your data are negative. Almost none of the values in your data are zero values. You have no more than seven categories, all of which represent parts of the whole pie. You can pull out slices of a pie chart manually to emphasize the slices. Like a pie chart, a doughnut chart shows the relationship of parts to a whole, but it can contain more than one data series. You may want to use a stacked column charts or Stacked bar chart instead. Bar charts illustrate comparisons among individual items. In a bar chart, the categories are typically organized along the vertical axis, and the values along the horizontal axis. Consider using a bar chart when: The axis labels are long. The values that are shown are durations. Area charts can be used to plot change over time and draw attention to the total value across a trend. By showing the sum of the plotted values, an area chart also shows the relationship of parts to a whole. As a rule, consider using a line chart instead of a non-stacked area chart, because data from one series can be hidden behind data from another series. A 3-D stacked area chart does the same, but it shows areas in 3-D format without using a depth axis. Place the x values in one row or column, and then enter the corresponding y values in the adjacent rows or columns. A scatter chart has two value axes: It combines x and y values into single data points and shows them in irregular intervals, or clusters. Scatter charts are typically used for showing and comparing numeric values, like scientific, statistical, and engineering data. Consider using a scatter chart when: You want to change the scale of the horizontal axis. You want to make that axis a logarithmic scale. Values for horizontal axis are not evenly spaced. There are many data points on the horizontal axis. You want to adjust the independent axis scales of a scatter chart to reveal more information about data that includes pairs or grouped sets of values. You want to show similarities between large sets of data instead of differences between data points. You want to compare many data points without regard to time—the more data that you include in a scatter chart, the better the comparisons you can make. Smooth lines can be shown with or without markers. Use a smooth line without markers if there are many data points. Straight lines can be shown with or without markers. Much like a scatter chart, a bubble chart adds a third column to specify the size of the bubbles it shows to represent the data points in the data series. The third value specifies the size of the bubble marker. As the name implies, stock charts can show fluctuations in stock prices. However, this chart can also show fluctuations in other data, like daily rainfall or annual temperatures. Make sure you organize your data in the

right order to create a stock chart. For example, to create a simple high-low-close stock chart, arrange your data with High, Low, and Close entered as column headings, in that order. It measures volume by using two value axes: This chart is useful when you want to find optimum combinations between two sets of data. As in a topographic map, colors and patterns indicate areas that are in the same range of values. You can create a surface chart when both categories and data series are numeric values. It is typically used to show relationships between large amounts of data that may otherwise be difficult to see. Color bands in a surface chart do not represent the data series; they indicate the difference between the values. This chart shows only the lines. In a contour chart, color bands represent specific ranges of values. The lines in a contour chart connect interpolated points of equal value. Without color bands on the surface, a wireframe chart shows only the lines. You may want to use a 3-D surface chart instead. Radar charts compare the aggregate values of several data series. Treemap chart Office and newer versions only The treemap chart provides a hierarchical view of your data and an easy way to compare different levels of categorization. The treemap chart displays categories by color and proximity and can easily show lots of data which would be difficult with other chart types. The treemap chart can be plotted when empty blank cells exist within the hierarchal structure and treemap charts are good for comparing proportions within the hierarchy. There are no chart sub-types for treemap charts. Sunburst chart Office and newer versions only The sunburst chart is ideal for displaying hierarchical data and can be plotted when empty blank cells exist within the hierarchal structure. Each level of the hierarchy is represented by one ring or circle with the innermost circle as the top of the hierarchy. A sunburst chart without any hierarchical data one level of categories , looks similar to a doughnut chart. However, a sunburst chart with multiple levels of categories shows how the outer rings relate to the inner rings. The sunburst chart is most effective at showing how one ring is broken into its contributing pieces. There are no chart sub-types for sunburst charts. Data plotted in a histogram chart shows the frequencies within a distribution. Each column of the chart is called a bin, which can be changed to further analyze your data. Box and Whisker charts Office and newer versions only A box and whisker chart shows distribution of data into quartiles, highlighting the mean and outliers. These lines indicate variability outside the upper and lower quartiles, and any point outside those lines or whiskers is considered an outlier. Use this chart type when there are multiple data sets which relate to each other in some way. There are no chart sub-types for box and whisker charts. Waterfall charts Office and newer versions only A waterfall chart shows a running total of your financial data as values are added or subtracted. The columns are color coded so you can quickly tell positive from negative numbers. There are no chart sub-types for waterfall charts. Funnel charts Office and newer versions only Funnel charts show values across multiple stages in a process. Combo charts combine two or more chart types to make the data easy to understand, especially when the data is widely varied. Shown with a secondary axis, this chart is even easier to read. In this example, we used a column chart to show the number of homes sold between January and June and then used a line chart to make it easier for readers to quickly identify the average sales price by month. Map chart Excel only You can use a Map Chart to compare values and show categories across geographical regions. For example, Countries by Population uses values. The values represent the total population in each country, with each portrayed using a gradient spectrum of two colors. The color for each region is dictated by where along the spectrum its value falls with respect to the others. In the following example, Countries by Category, the categories are displayed using a standard legend to show groups or affiliations. Each data point is represented by an entirely different color. Change a chart type If you have already have a chart, but you just want to change its type: Select the chart, click the Design tab, and click Change Chart Type. Choose a new chart type in the Change Chart Type box.

### 9: Available chart types in Office - Office Support

*When smaller changes exist, line graphs are better to use than bar graphs. Line graphs can also be used to compare changes over the same period of time for more than one group a Pie Chart.*

Sometimes all you need is a table! Today we are going to focus on what tables are, the right time to use them, and when you should opt for a graph instead. What is a Table? A table is structured for organizing and displaying information, with data arranged in columns and rows. Information is displayed as text, using words and numbers, and grid lines may be present or not. Sometimes it is best to remove the grid lines to ensure your table is easy to read and effective at communicating your message. Tables make it easy to compare pairs of related values e. Tables are not exclusively used to display quantitative information! Whenever you have more than one set of values that have a direct relationship, you may use a table to organize the data. For example, people often use tables to display meeting agendas with certain times, topics, locations, and speakers. Tables have been used for centuries. They are easily understood and almost everybody can read them. Learn More about Tables When to Use a Table There are multiple reasons you might be driven to select a table, over a graph, as the right way to visualize your data. Are you, or others, planning to use the table to look up one or more particular values? Or maybe the information will be used to examine a set of quantitative values as a whole to spot patterns. If so, a table might be right for you. Designing Tables and Graphs to Enlighten â€” Second Edition , the times when a table makes the most sense: The display will be used to look up individual values. It will be used to compare individual values but not entire series of values to one another. Precise values are required. The quantitative information to be communicated involves more than one unit of measure. Both summary and detail values are included. The table below is fairly complex because it displays quantitative values that are simultaneously associated with multiple sets of categorical items. In this case, we are looking at sales dollars and particular salespeople. Embed the interactive tables you make with Infogram to help your viewer sort the data and draw better conclusions faster. For example, you can sort numbers highest to lowest and names alphabetically. Graphs When deciding to use a graph or a table to communicate your data-driven message, always ask yourself how the information will be used. Graphs are essentially a visual display of quantitative information along two axes. Visuals are used as a way for our brains to quickly understand information, which is a powerful tool if used correctly. Graphs can show a large amount of data quickly in a way that is easy to process, without distracting people with a bunch of numbers. According to Stephen Few, graphs reveal more than a collection of individual values. Because of their visual nature, they show the overall shape of your data. This is when you should use graphs instead of tables: The message is contained in the shape of the values e. The display will be used to reveal relationships among whole sets of values. The bar chart below is a fictional visual representation of Influenza cases last year. When debating table vs. Think about the utility of your visual and let that help drive your decision-making. Ready to make a table with Infogram? Get data visualization tips every week: New features, special offers, and exciting news about the world of data visualization.

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