

Charts in Microsoft Excel

Types of Charts

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Charts in Excel

Graphics are easier to grasp than boring numbers and texts, so Charts are **valuable tools for Data Visualisation**.

Charts represent data graphically, making it easier for anyone to interpret it within seconds. Various Chart in Excel, such as List of Column Chart, Bar Chart, Area Chart, Line Chart, Surface Chart, Scatter Chart, Pie Chart, Stock Chart, Bubble Chart, and Radar Chart helps in communicating valuable insights when there are large volumes of data.

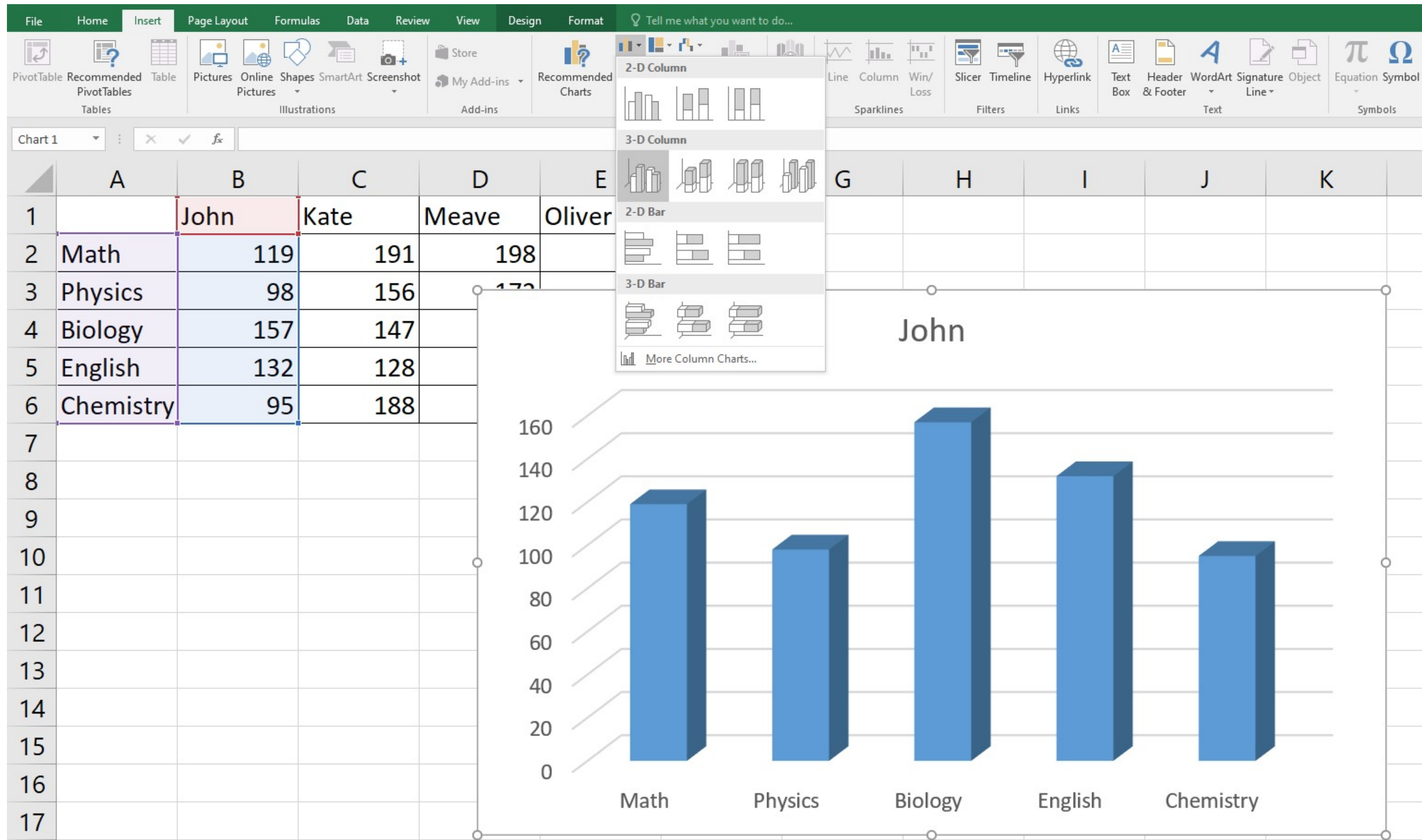
Column Chart in Excel

Column Chart uses vertical bars to represent data in a comparative manner. The bars in this chart compare data points. One set of data segmented into categories is the most typical subset used to show through Column Charts.

Once you select the data, click insert at the top of the Excel sheet. Now, you will see all the Types of Charts available. You can choose either a 2D or 3D column from these.

Column Chart does not show automatic labels. You have to put in these by clicking on the + sign beside the chart. Now make sure Axis Titles are selected and select only Primary Vertical.

Column Chart in Excel



Column Chart - Example

- Open Excel
- Enter the data from the sample data table above
- Your workbook should now look as follows

The screenshot shows an Excel spreadsheet with the following data:

	A	B	C	D	E	F
1		2012	2013	2014	2015	
2	Desktop Computers	20	12	13	12	
3	Laptops	34	45	40	39	
4	Monitors	12	10	17	15	
5	Printers	78	13	90	14	
6						
7	Items sold					
8						

Annotations in the image:

- A red box highlights the item names in column A (rows 2-5).
- An orange oval highlights the years in row 1 (columns B-E).
- A blue oval highlights the sales volume data in columns B-E (rows 2-5).
- An orange arrow points from the text "Sales Year" to the year headers in row 1.
- A blue arrow points from the text "Sales volumes" to the data cells in the blue oval.
- A red arrow points from the text "Items sold" to the item names in column A.

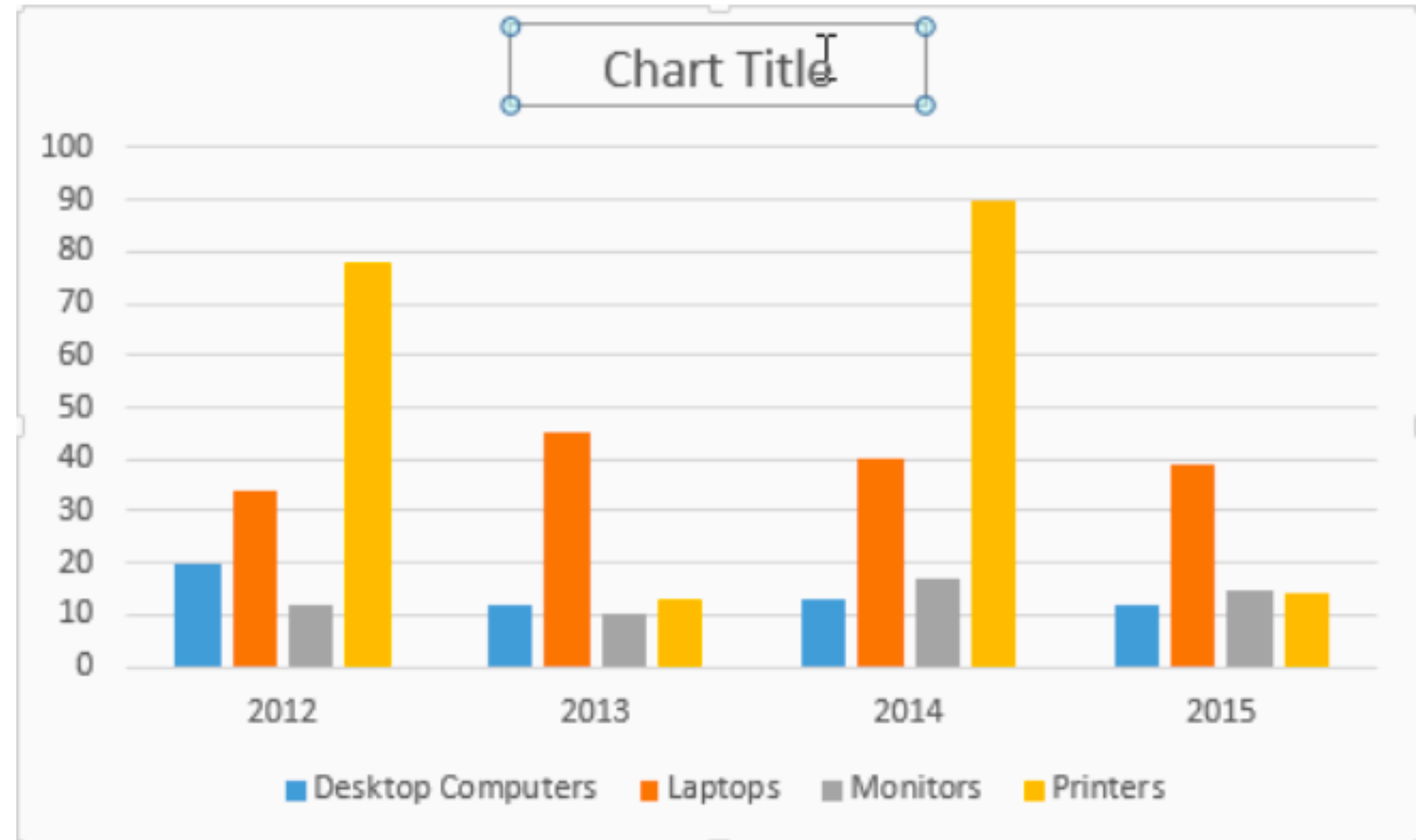
Column Chart - Example

1. Highlight the data
2. Click on INSERT tab
3. Click on Column chart drop down button
4. Select chart type

	A	B	C	D	E	F	G	K	L
1		2012	2013	2014	2015				
2	Desktop Computers	20	12	13	12				
3	Laptops	34	45	40	39				
4	Monitors	12	10	17	15				
5	Printers	78	13	90	14				

Column Chart - Example

- Select the data you want to represent in graph
- Click on INSERT tab from the ribbon
- Click on the Column chart drop down button
- Select the chart type you want



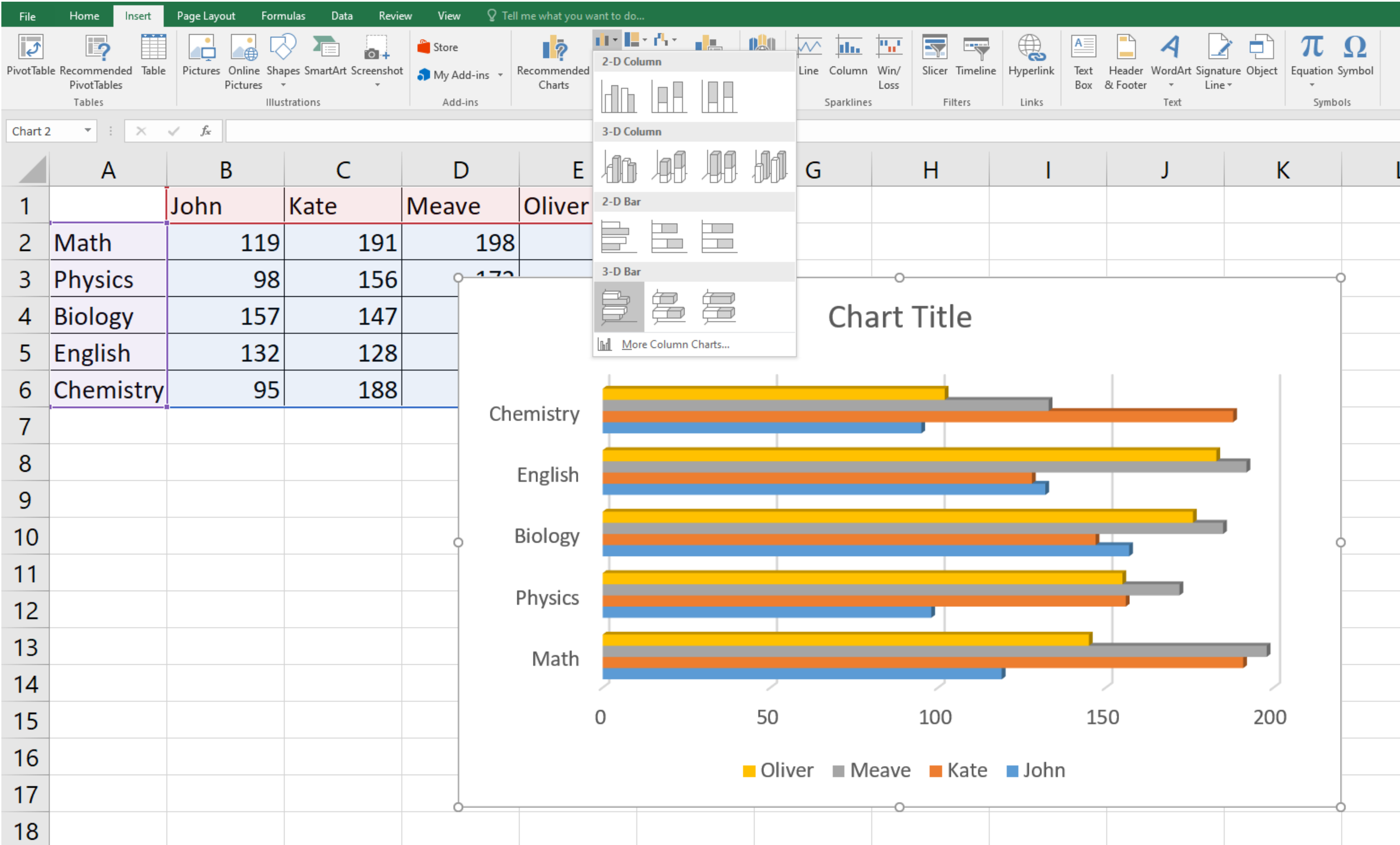
NDOLA TRUST SCHOOL (2020)

Bar Chart in Excel

The Bar Chart is similar to the Column Chart. The only difference is that in the Bar Chart, **the bars are horizontal** instead of vertical.

Column Charts and Bar Charts are fantastic methods to compare categorised data inside a single data collection or between different data sets.

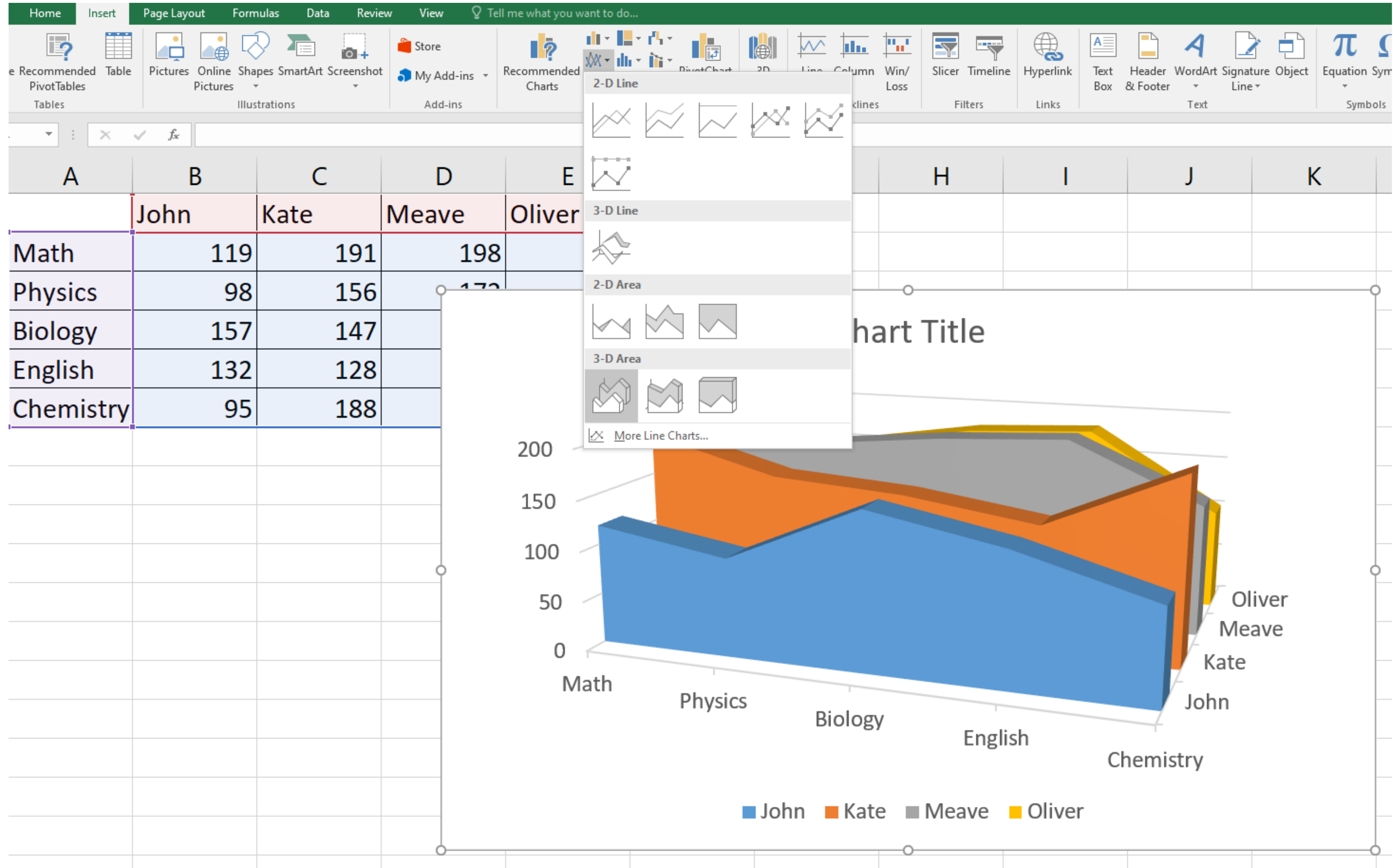
Bar Chart in Excel



Area Chart in Excel

- Area Charts can be used **to show the ups and downs of a given set of data.**
- This Chart is usually **used to indicate business growth.**
- To show data in the area chart, select the entire data and click on insert. Then, click on the Area Chart icon in the charts section and select the 3D area chart. Data can be shown in the 2D format, even in an Area Chart.

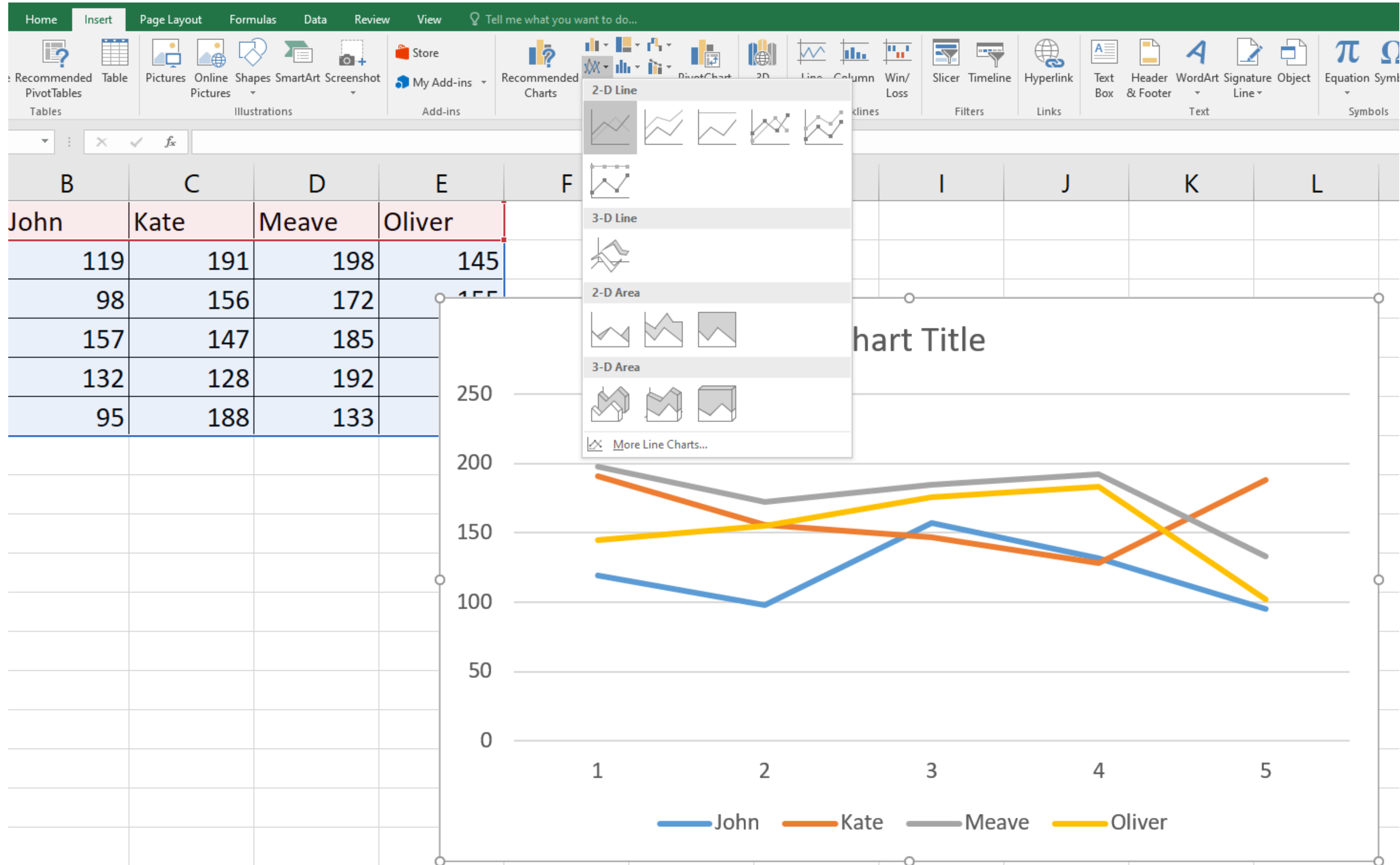
Area Chart in Excel



Line Chart in Excel

- The best use of Line Charts is to **display trends**.
- Using this graph, you may quickly examine the ups and downs in your data.
- Lines connect data points in this graph.

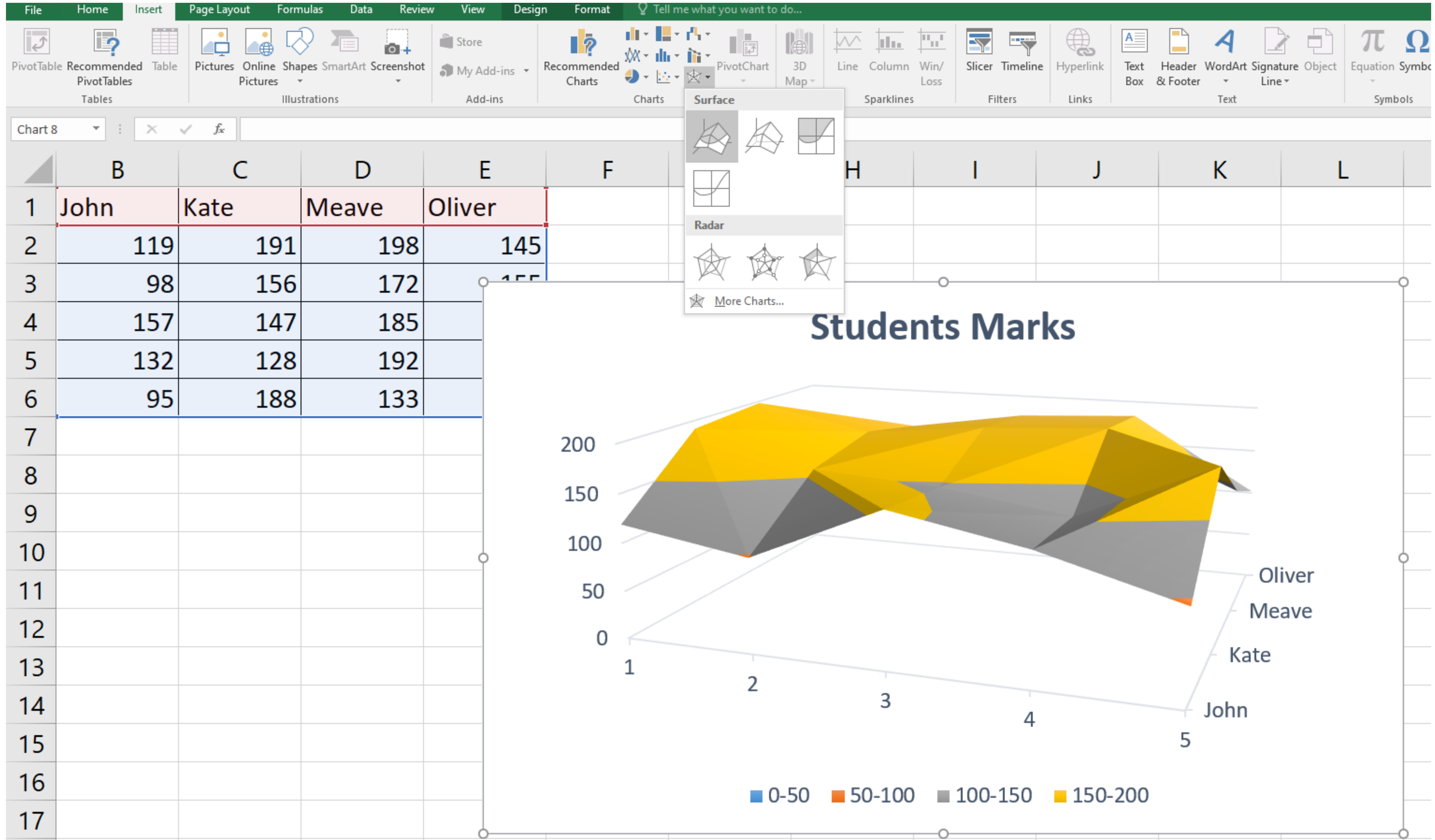
Line Chart in Excel



Surface Chart in Excel

- A Surface Chart can be **helpful when determining the best combinations of two sets of data**. For instance, a topographic map, patterns and colours identify regions within the same value range.
- While making a Surface Chart, **make sure the data series and the categories are both numerical values**.
- A Surface Chart **offers a 3D landscape to represent your data**. You can use the Surface Chart for large **Data** sets to **display all of them at once**.
- To display your data in Surface Chart format, go to insert and click on Surface Charts.

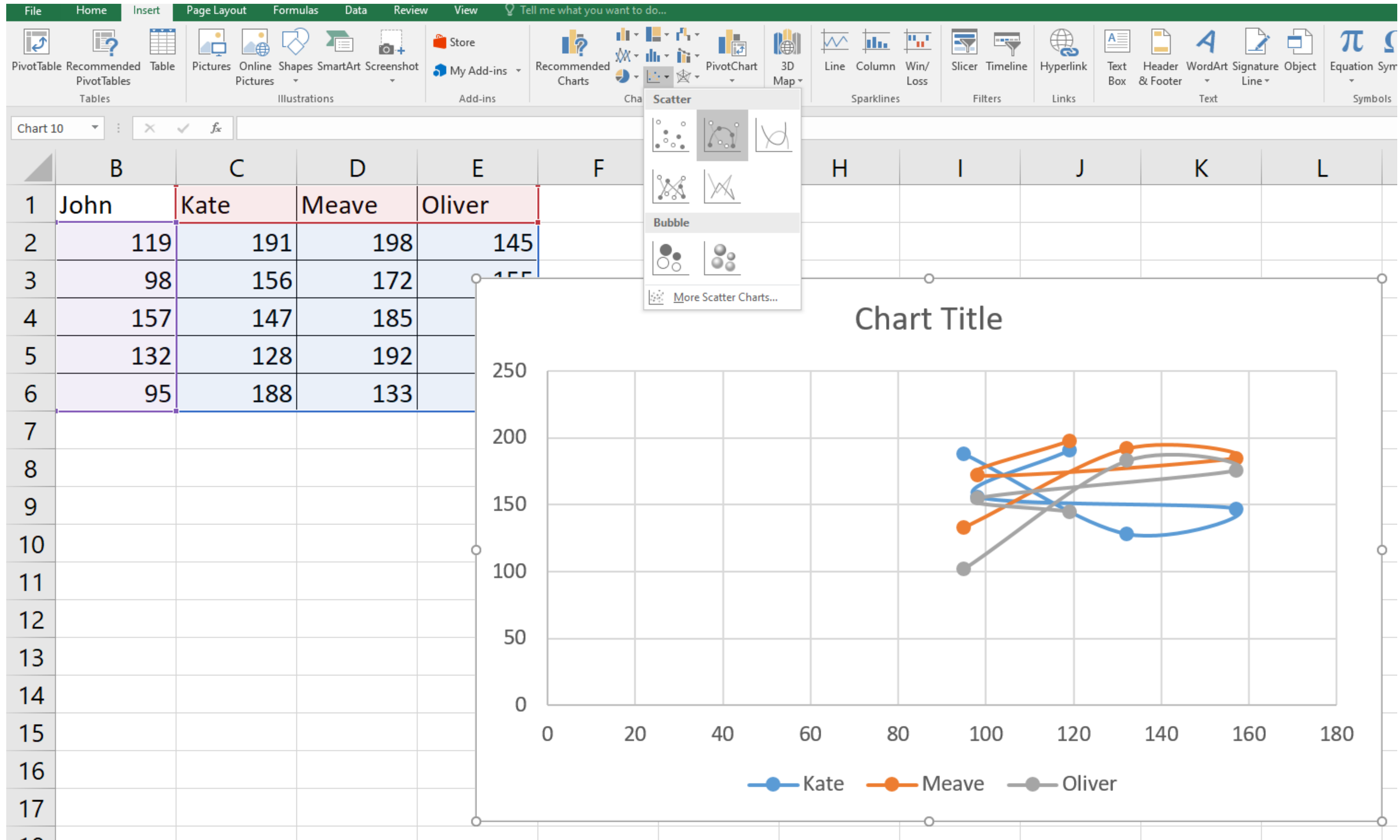
Surface Chart in Excel



Scatter Chart in Excel

- Scatter Chart is used to **plot data on the coordinates.**
- To use a Scatter Chart, go to insert and select Scatter Chart.

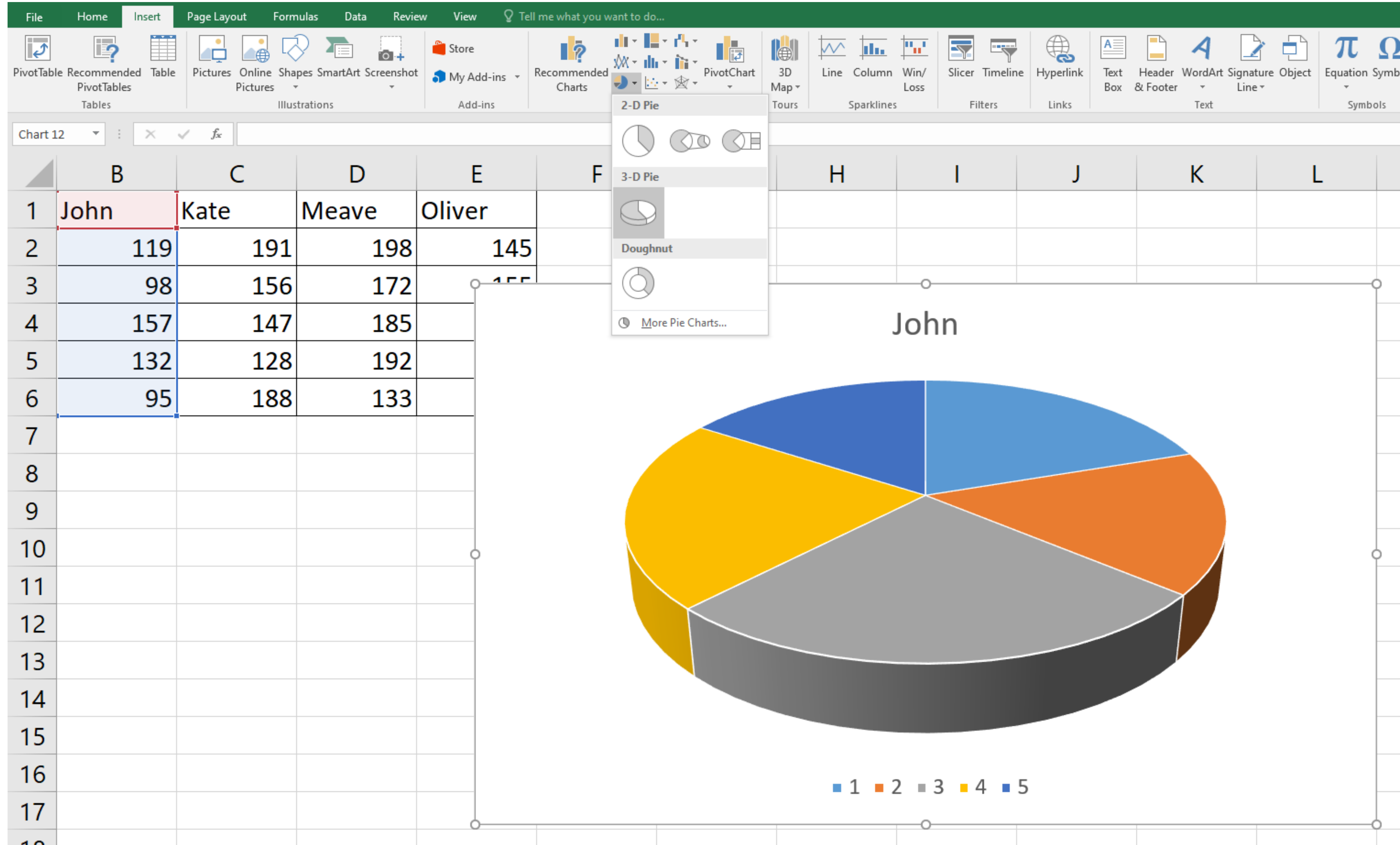
Scatter Chart in Excel



Pie Chart in Excel

- Pie Charts are named so because these look like a pie. They work best **when you need to illustrate how much of a larger, dominating category is occupied by more specific subcategories.**
- In a Pie Chart, the data points are **shown as a percentage** of the entire pie.

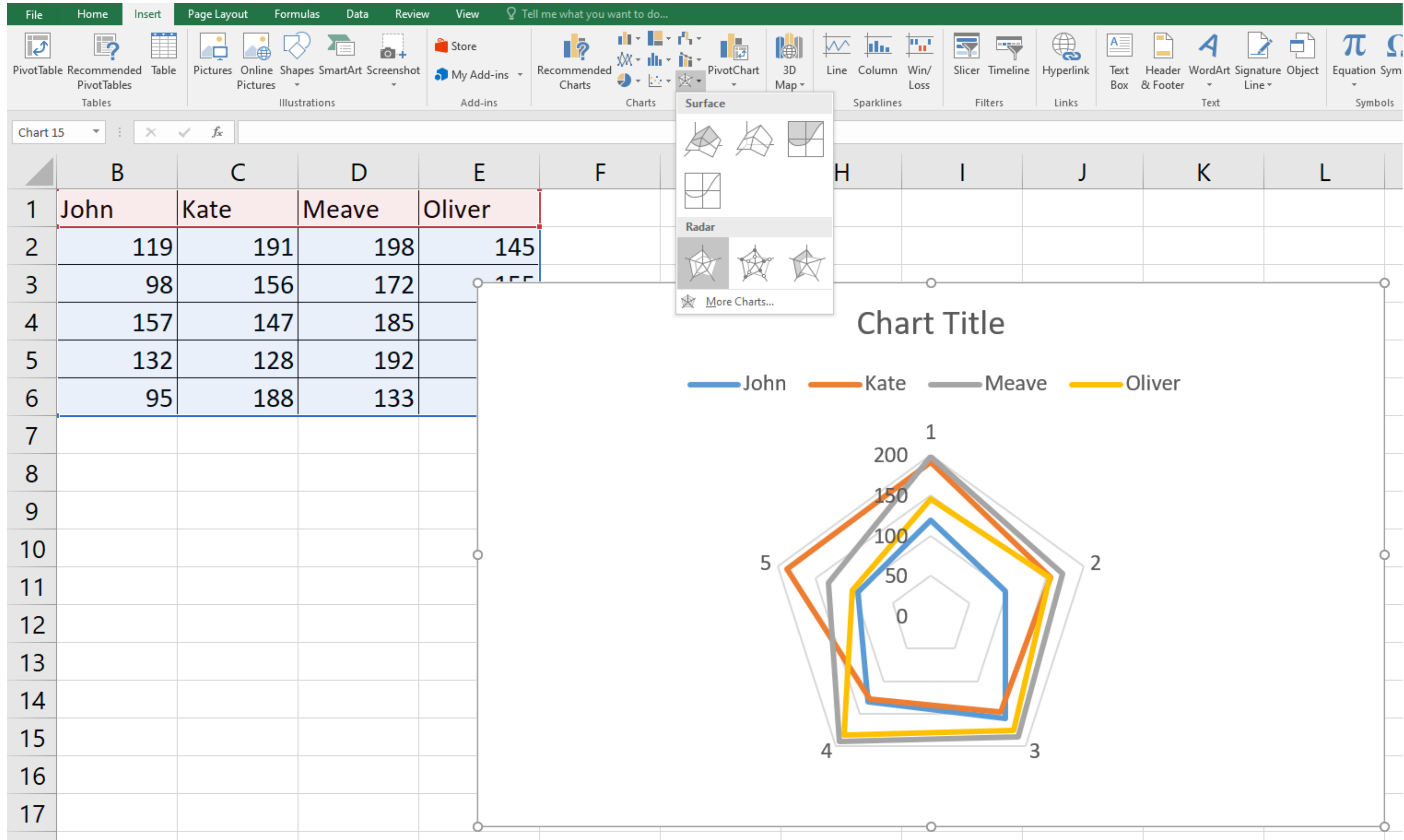
Pie Chart in Excel



Radar Chart in Excel

- Radar Chart is also known as a **Web Chart**.
- The **aggregate values of various data series can be compared** using Radar Charts.
- Go to insert and select Radar Chart to display your data

Radar Chart in Excel



Doughnut Chart in Excel

- A Doughnut Chart represents **the size of items in a data series proportional to the sum of the items**. It is similar to a Pie Chart; however, the Doughnut Chart **comprises of more than one data series**.
- A Doughnut Chart is only **used when there are multiple data series, but no more than seven categories**.
- Also, the **values of the cells should not be negative** and almost **none of the data series must be zero**.

The Chart will represent data in the form of rings, where each ring displays a data series.

To create a Doughnut Chart using Excel sheet.

1) Step one is to enter the data in the rows and columns on the workbook

2) Next, select the data

3) Now, click on the Insert tab, and from the Charts group click on the Pie Chart option on the ribbon. Here, you will find the Doughnut Chart option also

4) Just click on the doughnut Icon and you will have a Doughnut Chart prepared for you

Doughnut Chart in Excel

The screenshot shows the Microsoft Excel interface with the 'Insert' tab selected. The 'Pie' chart icon is highlighted, and a dropdown menu is open, showing '2-D Pie' and 'Doughnut' options. The 'Doughnut' option is selected. Below the menu, a doughnut chart titled 'Student Marks' is displayed. The chart is a multi-layered doughnut chart with five segments representing different subjects: Maths (blue), Physics (orange), Biology (grey), English (yellow), and Chemistry (dark blue). The legend below the chart identifies the colors for each subject.

	A	B	C	D	E
1		John	Kate	Meave	Oliver
2	Maths	119	191	198	145
3	Physics	98	256	172	155
4	Biology	157	147	185	176
5	English	132	128	192	183
6	Chemistry	95	188	133	102

Combo Chart in Excel

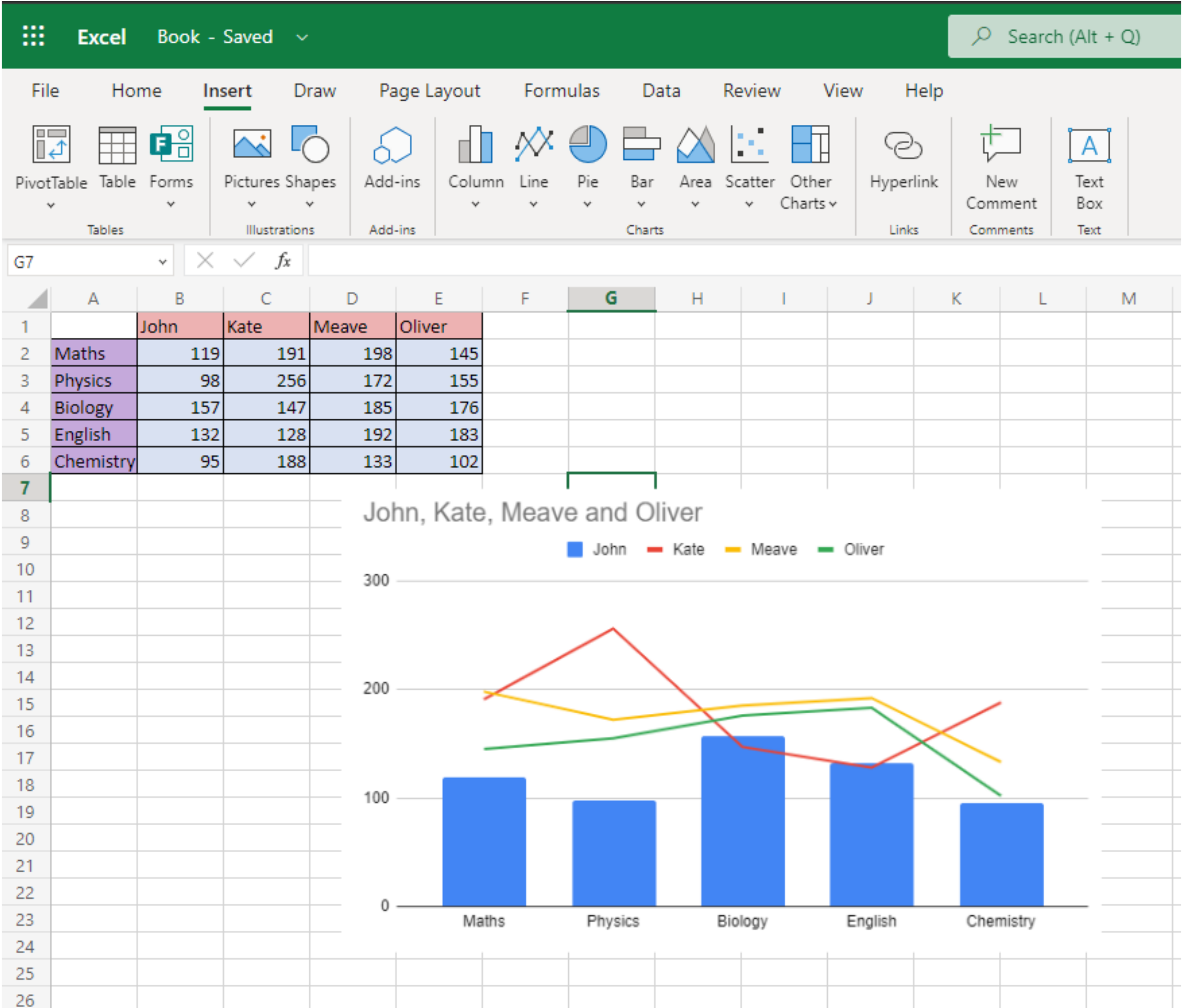
Combo Chart means **combining two or more Types of Charts** together to make the data understandable.

It has a **secondary axis** that makes the data even more easy to read and understand.

Combo Charts are **used when the data varies extensively across various data series** or there is a mixed type of data.

To create a Combo Chart, click on Insert Tab, then go to Charts option and select Combo Chart ribbon from the group.

Combo Chart in Excel



Summary

Column Chart	A Column Chart should be used when you want to compare multiple values across categories.
Bar Chart	Bar Chart is also used when you want to compare values across categories; however, this Chart represents values in a horizontal bar.
Area Chart	An Area Chart is used to show a change among various datasets.
Line Chart	It must be used to show trends over a period of time.

Summary

Surface Chart	Choose a Surface Chart when you need to analyse the ideal combination between data sets.
Scatter Chart	If you want to show similarities among different datasets or compare data points regardless of the time, use Scatter Charts.
Pie Chart	Use a Pie Chart to quantify the data values and display them as percentage.
Radar Chart	It is used to compare multiple values relative multiple categories.

Summary

Doughnut Chart	Doughnut Chart is used when you want to represent multiple data series that total up to a 100 per cent.
Combo Chart	Combo Charts are used when you have mixed type of data across data series

Source:<https://www.theknowledgeacademy.com/>

A

	A	B	C	D	E	F	G	H	I
1	BARBECUES & MORE								
2	Sales Report								
3									
4									
5	Sales	Jan	Feb	Mar	Apr	May	Jun	Total	
6	Barbecues	1,050,254	1,547,000	1,488,369	1,050,305	1,547,051	1,488,420	8,171,399	
7	Outdoor Settings	1,524,294	1,685,548	1,599,854	1,524,345	1,685,599	1,599,905	9,619,545	
8	Pools	3,521,487	2,985,448	2,741,221	3,521,538	2,985,499	2,741,272	18,496,465	
9	Rotundas	2,531,225	2,621,889	2,453,999	2,531,276	2,621,940	2,454,050	15,214,379	
10									
11	Total Sales	8,627,260	8,839,885	8,283,443	8,627,464	8,840,089	8,283,647	51,501,788	
12									
13									
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25									
26									
27									

Sales

20,000,000
15,000,000
10,000,000
5,000,000
-

1 2 3 4 5 6

■ Series1 ■ Series2 ■ Series3 ■ Series4 ■ Series5 ■ Series6

Practice Example 1

Practice Example 2

B

