

# Using Filters in Excel 2010

When working on a worksheet with many rows of data, it can be difficult to view and analyse the data easily. This note describes how to use filters to control what you see.

## What are filters?

Filtering is a quick and easy way to find and work with a subset of data in an Excel range. Filters enable you to quickly find all the entries for a particular item, e.g. an employee name or a product, in a large worksheet.

Filters allow you to select just the data you need, and to hide any data that is not relevant to your search. For example you might want to find the students with the highest grade, or the records for a specific department. You can also create your own filters, such as figures within a specific range or above a particular amount.

Unlike sorting, filtering does not rearrange your data, it simply hides the rows you don't want. This will allow you to then edit, format, chart and print your filtered data as you wish.

## Preparing to filter

Ensure the data in your worksheet is neat and tidy and you will find filtering easy. Use the following guidelines to prepare your data:

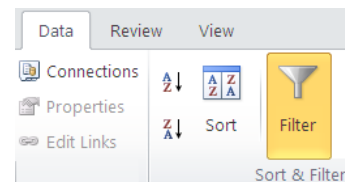
- Use headings**            The top row of each column should have a heading.
- Don't mix the data**    The data in a column should all be the same type – don't mix text and numbers.
- Don't interrupt**        Don't have blank rows or columns. Individual blank cells are OK.
- Keep separate**        The data to be filtered should be in its own worksheet. If not, separate it from other data with a blank row or column.

## Filtering with AutoFilter

The **AutoFilter** feature in Excel provides a quick way of creating a filter.

### Filtering Text

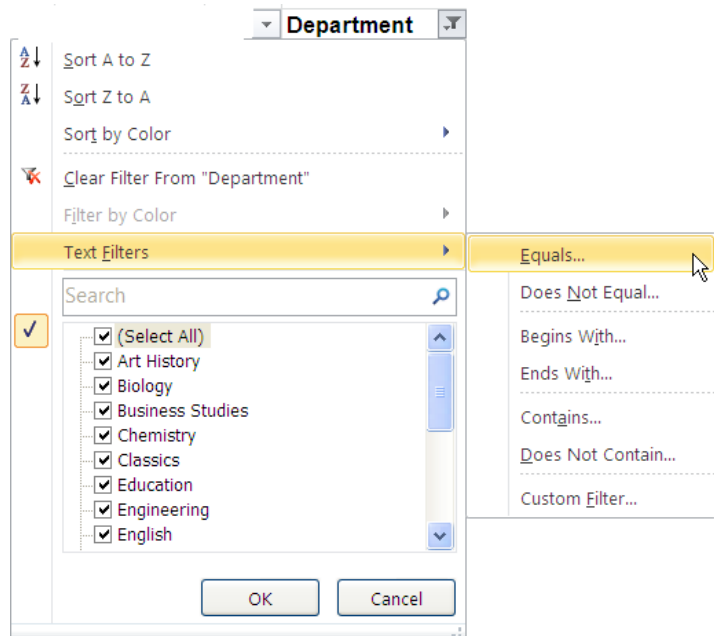
To use AutoFilter, click in a cell containing a text data item. Then, on the **Data** tab, select **Filter**.



Filter arrows will appear next to each column heading:

No	First Name	Last Name	Date of Birth	A	Department	Program of Study
1	Roger	Wilson	12/01/1988	23.4	Medicine	PhD
2	Mary	Driscoll	23/02/1988	23.3	Biology	BSc
3	Kate	Fu	02/02/1988	23.4	Chemistry	MSc

- To begin filtering, click on the down arrow next to the column heading. Excel displays a list of options as well as all the items in the column.
- To see the data for just one item either:
  - remove the ticks from the items you do not wish to see, or
  - choose **Text Filters, Equals** and type the text item for which you want to see the data in the box that appears.
- All the other rows on the worksheet will be hidden.

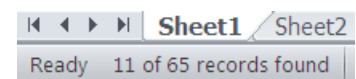


**Note:** Remember if you have a blank row or column in your worksheet AutoFilter will not process the data beyond it.

You can continue to refine your data by filtering on other columns.

3	Department	⌵
5	Biology	
8	Physics	

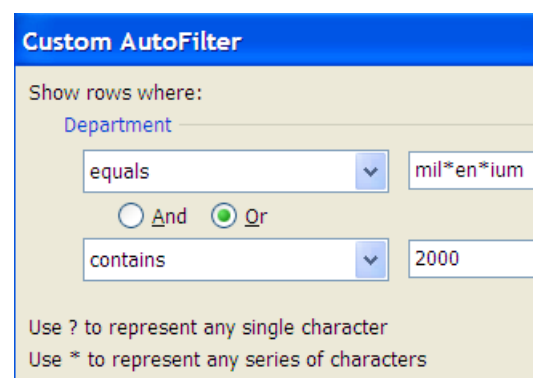
Where you have applied a filter, the row numbers will appear in blue and the drop down arrow will change to a filter symbol. You will also see the number of records found in the status bar at the bottom of the screen.



## Filtering options and custom filters

The text filtering menu allows you to set more than one condition and provides a range of filtering options: **Equals, Begins With, Contains** etc.

You can **customise the filter**, combining various options, and filtering using various criteria, as shown in the screen shot.



In addition you can add multiple filter criteria and use:

- the **And** function where the results returned meet both criteria, or
- the **Or** function where the results returned meet either criteria.

To create a more powerful filter use **wildcards**. The wildcard character \* can be used as a substitute for a series of any characters, and the question mark ? can be used as a substitute for any one character within the criteria.

For example, when looking for the word **millennium** the wild character can be used to type **mil\*en\*ium** in the search box. This will ensure all instances of the word are returned allowing for various misspellings that can occur.

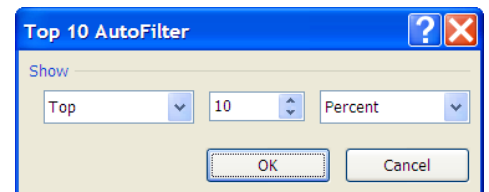
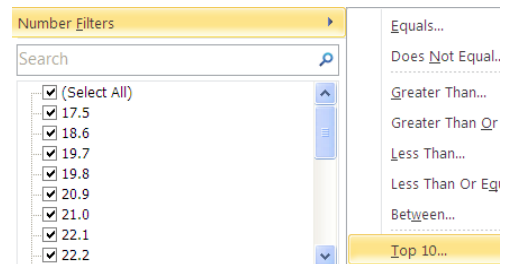


If you actually want to filter on the characters ? or \*, precede them with a tilde ~. For example to search for the character string 'Age?' enter **Age~?**.

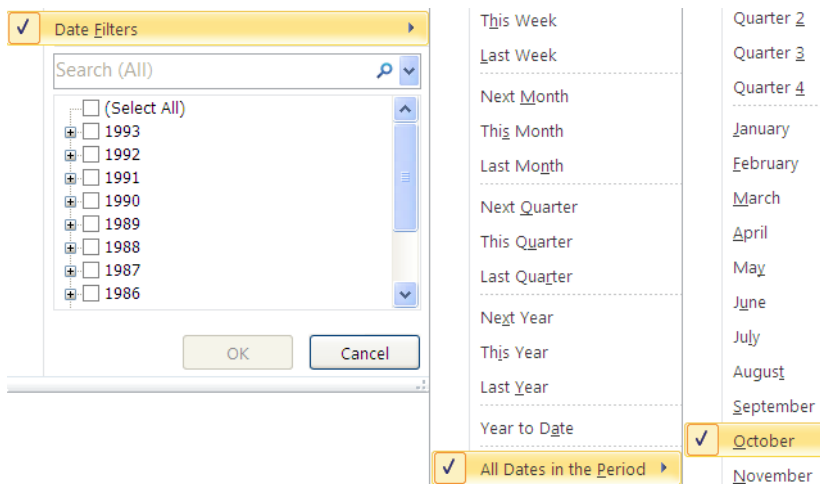
## Filtering numbers: searching for the 'Top 10'

Searching for the **Top 10** is available when **filtering a column of numbers**. This option does more than its name suggests. With it you can actually find the top or bottom 1 to 500 items. You can also filter by percentage of total rows in a column.

- From the **Number Filters** menu click on **Top 10...**
- Select **Top** or **Bottom**. the number of items you want to display, and **Items** or **Percent**
- Click **OK**

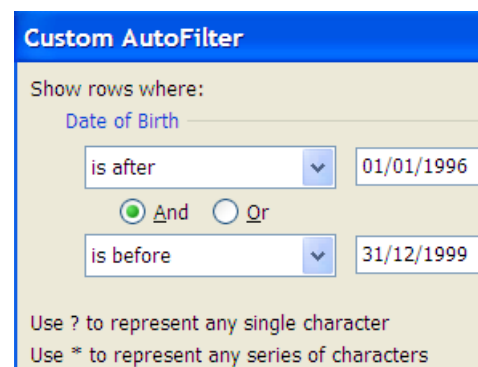


## Filtering dates



Excel provides many options for filtering a column of dates. For example you can select **all this or last year's dates**, or **all dates that occurred in October**.

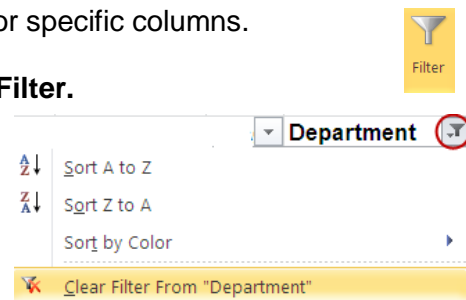
In addition you still have the option to custom filter dates. The example illustrates the use of the '**And**' function to filter a range of or dates.



## Removing a filter

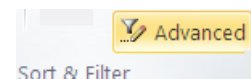
AutoFilter can be turned off completely, or just turned off for specific columns.

- To turn it off completely, go the **Data** tab and click **Filter**.
- To remove it for a specific column, click the autofilter symbol at the top of the column and select **Clear Filter From *Name of Column*** from the menu



## Creating advanced filters

The **Advanced Filter** command enables you to filter on complex criteria and specify which records to include in the query results.



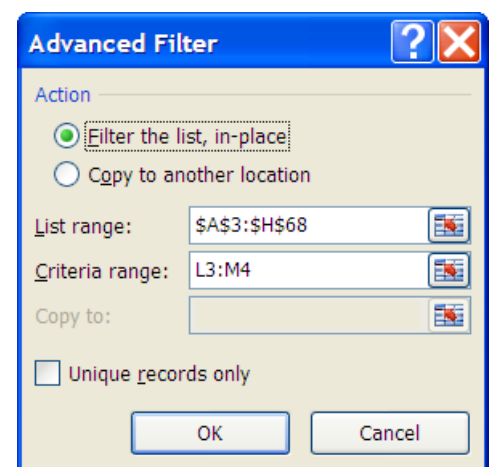
To use **Advanced Filter** you first need to type your criteria into a range on the worksheet. This range is then used as the source for the complex criteria.

To use the advanced filter:

Copy the column labels you want to use as criteria from the list and paste them into a blank area of the worksheet. Ensure that there is at least one empty row between your criteria range and the list to be filtered. The column labels must be exactly the same as in the list, therefore it is better to **copy and paste** rather than type them in.

- Enter the criteria values. In the example these are **Chemistry** and **<22**

	A	C	E	F	G	H
1	<b>Students</b>					
2					<b>Department</b>	<b>Age</b>
3					Chemistry	< 22
4						
5	<b>No</b>	<b>Last Name</b>	<b>Age</b>	<b>Department</b>	<b>Program of</b>	<b>Fee</b>
6	1	Wilson	23.4	Medicine	PhD	1,125.50
7	2	Driscoll	23.3	Biology	BSc	1,850.00



- Click in the list to be filtered, click the **Data** tab and choose **Advanced** from the **Sort and Filter** group to display the **Advanced Filter** dialog box.
- Click in the **Criteria range** and type the range.
- Click **OK**. Only the records matching the criteria will be displayed.



To find text values that share characters try the following techniques:

- To find rows with a text value that begins with the characters, type the characters you want **without** an equals sign, e.g. Dav would find David, Davis and Davidson.
- Wildcard characters can be also be used e.g. **sm?th** finds **smith** and **smyth** and **\*east** finds **northeast** and **southeast**.