

Excel

Database functions

Objectives – Week 3

By the end of this session you will be able to :-

- Move around a worksheet
- Recognise cell references
- Sort data alphabetically
- Insert rows and columns
- Delete rows and columns
- Use the Convert Text to Columns wizard
- Use Autofilter
- Add a header and footer to worksheets
- Set print areas
- Print Worksheets

Looking at Excel as a Database

Although Excel is mainly used for financial purposes it can be used to hold data in a similar manner to a database. It is particularly useful for holding data for a mail merge or data that requires some sorting, however it does not have the reporting capabilities of Access.

You have been asked to send letters to 10 students from 1010 tutor group.

Open the workbook named 1010 on the R: drive in the Excel folder. This workbook contains address details for the tutor group 1010 that I have exported from SIMS.net.

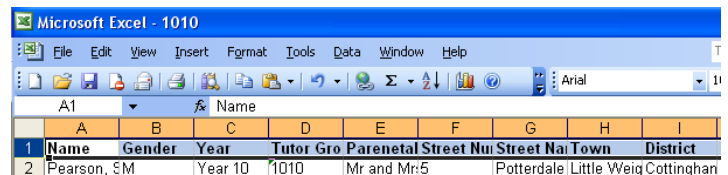
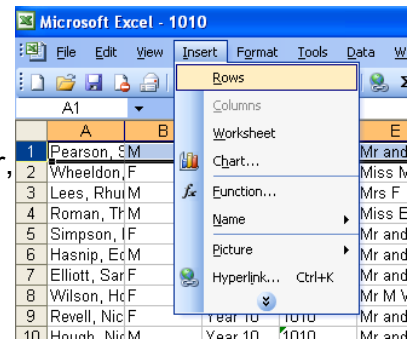
Moving around the worksheet

- Use the arrow keys on the keyboard
- Use your mouse pointer (a white cross) to move to the cell required
- Use the horizontal and vertical scrollbars

Inserting Rows

Column headings are required so that when you print out the data it is clear or, if you use it for a mail merge, the columns can be picked up as the merge fields.

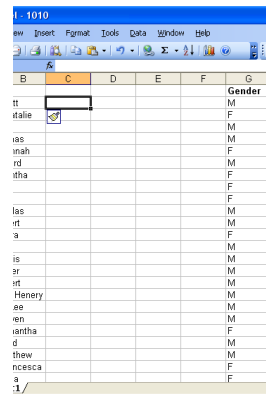
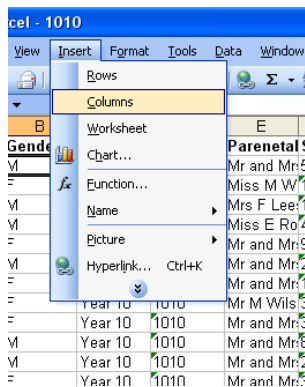
- To insert a new row above row 1, put your cursor into any cell in row 1 and select Insert > Row from the menu bar. This will insert a new row above the active row (row 1).
- You can now add headings to each column (Name, Gender, Year, Tutor Group, Parental Addressee, Street Number, Street Name, Town, District, Postcode)
- Click into the row heading at the left of row 1 so that whole row becomes highlighted and click on the bold icon in the formatting toolbar to make the headings bold, alternatively you can press Ctrl and B once the row is highlighted.



Using the Convert Text to Columns Wizard

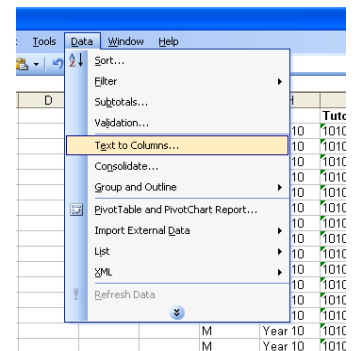
You have probably noticed that the students' forenames and surnames are in one column. It's a good idea to separate them into separate columns, especially for mail merge, otherwise the names will be back to front! We can get Excel to split the data from column A into more than one column, but unless we insert columns first the data in subsequent columns will be overwritten.

- To insert a new column to the right of column A, put your cursor in any cell in column B, and select Insert > Columns from the menu bar. This will insert a column before the active column.
- Repeat the process until you have inserted 5 columns (Its always best to insert more columns than you need and delete the extra ones later).



You are now ready to split the students' names into separate columns.

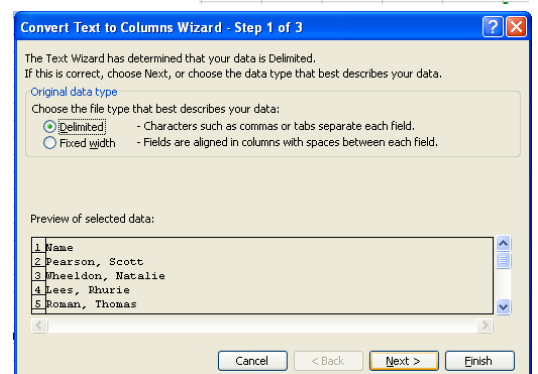
- Click into the column heading at the top of column A so that the whole of column A becomes highlighted.
- Select Data > Text to Columns from the menu bar



The Convert Text to Columns Wizard will appear

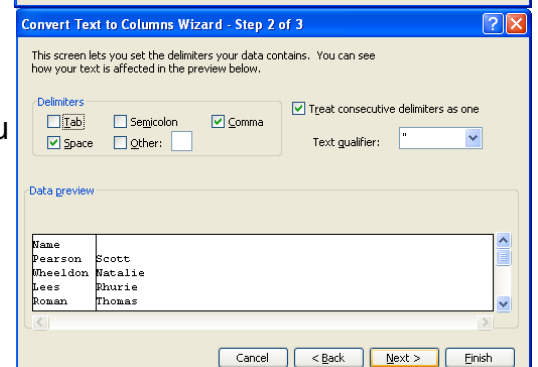
Step 1

- Check that the 'Delimited' option is highlighted as are characters are separated by commas and spaces
- Click on Next



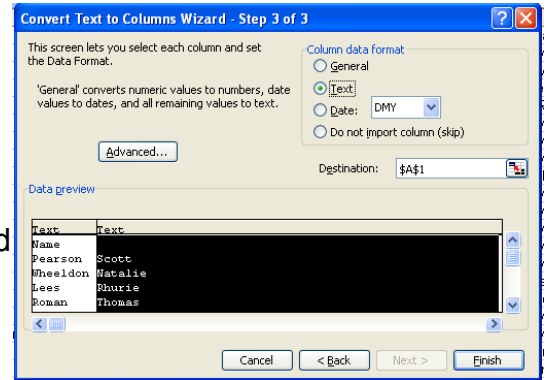
Step 2

- Put ticks into the Comma and Space boxes and you will see the data split into 4 columns.
- Click on Next.



Step 3

- You can now set the data format that your column contains or decide not to import columns.
- You need to change the data type of columns 1 and 2 to text.
- Click on finish.



Now you can label the new columns:-

- Name columns A and B (Surname, Forename).
- Delete the blank columns – highlight all four blank columns and select Edit > Delete.

	A	B	C	D	E	F	G	H	I
1	Surname	Forename					Gender	Year	Tutor
2	Pearson	Scott					M	Year 10	1010
3	Wheeldon	Natalie					F	Year 10	1010
4	Lees	Rhurie					M	Year 10	1010
5	Roman	Thomas					M	Year 10	1010
6	Simpson	Hannah					F	Year 10	1010
7	Hasnip	Edward					M	Year 10	1010
8	Elliott	Samantha					F	Year 10	1010
9	Wilson	Hollie					F	Year 10	1010
10	Revell	Nicole					F	Year 10	1010
11	Hough	Nicholas					M	Year 10	1010
12	Russell	Robert					M	Year 10	1010
13	Holness	Laura					F	Year 10	1010
14	Garner	Mark					M	Year 10	1010
15	Coates	Dennis					M	Year 10	1010
16	Cressey	Oliver					M	Year 10	1010
17	Hodson	Robert					M	Year 10	1010
18	Brocklehurst	Henery					M	Year 10	1010
19	Carmichael	Lee					M	Year 10	1010
20	Gibbons	Steven					M	Year 10	1010
21	Howson	Samantha					F	Year 10	1010
22	Hussain	Syed					M	Year 10	1010
23	Herberth	Matthew					M	Year 10	1010
24	Freeman	Francesca					F	Year 10	1010
25	Parker	Katrina					F	Year 10	1010

For presentation purposes it would now be a good idea to resize the columns so you can see all the text contained within them.

- Click in the grey box at the top left of the worksheet to highlight the whole worksheet.
- Move your cursor to the line between columns A and B, so you get the resize cursor.
- Double click and your columns will resize to fit the data contained within them.

Your table should look like this:-

	A	B	C	D	E	F	G	H
1	Surname	Forename	Gender	Year	Tutor Group	Parenatal Adresse	Street Number	Street Name
2	Pearson	Scott	M	Year 10	1010	Mr and Mrs M Pearson	5	Potterdale Drive
3	Wheeldon	Natalie	F	Year 10	1010	Miss M Wheeldon	15	Nunnery Walk
4	Lees	Rhurie	M	Year 10	1010	Mrs F Lees	11	Trinity Grove
5	Roman	Thomas	M	Year 10	1010	Miss E Roman	45	Fairfield
6	Simpson	Hannah	F	Year 10	1010	Mr and Mrs S Simpson	9A	Westfield Park
7	Hasnip	Edward	M	Year 10	1010	Mr and Mrs P Hasnip	20	Lowerdale
8	Elliott	Samantha	F	Year 10	1010	Mr and Mrs M Elliott	1	Jobsons Road
9	Wilson	Hollie	F	Year 10	1010	Mr M Wilson and Miss A Smith	38	Welton Old Road
10	Revell	Nicole	F	Year 10	1010	Mr and Mrs C Revell	39	East Dale Road
11	Hough	Nicholas	M	Year 10	1010	Mr and Mrs L Hough	88	Plantation Drive
12	Russell	Robert	M	Year 10	1010	Mr and Mrs D Russell	25	Park Road
13	Holness	Laura	F	Year 10	1010	Mr and Mrs R Holness	35	Common Lane
14	Garner	Mark	M	Year 10	1010	Mr and Mrs P Garner	19	Melton Bottom
15	Coates	Dennis	M	Year 10	1010	Mr R Coates	30	Northdale Park
16	Cressey	Oliver	M	Year 10	1010	Mrs L Cressey	62	Market Place
17	Hodson	Robert	M	Year 10	1010	Mr and Mrs R Hodson	50	Southfield Drive
18	Brocklehurst	Henery	M	Year 10	1010	Mr and Mrs G Brocklehurst	40	Humber Road
19	Carmichael	Lee	M	Year 10	1010	Mr L Carmichael	2	Holly Hill
20	Gibbons	Steven	M	Year 10	1010	Mrs S Granger	33	Husthwaite Road
21	Howson	Samantha	F	Year 10	1010	Mr and Mrs D Howson	60	Lowerdale
22	Hussain	Syed	M	Year 10	1010	Dr and Mrs S Muzaffar	16	Stockbridge Road
23	Herberth	Matthew	M	Year 10	1010	Ms H Cooper		Keel House
24	Freeman	Francesca	F	Year 10	1010	Mr and Mrs A Freeman	12	Covington
25	Parker	Katrina	F	Year 10	1010	Mrs Parker	79	Springfield Avenue

Using the Autofilter

You have been given a list of ten students from the tutor group to send letters to. In order to only send letters to those students you need to delete the others. The easiest way to do this is to indicate on the worksheet which students details you want to keep and delete the others using Autofilter.

- Insert a blank column before column A.
- Using the list of students below put a Y into the new column (now called column A) for each student listed.
 - Robert Russell
 - Robert Hodson
 - Syed Hussain
 - Katrina Parker
 - Henery Brocklehurst
 - Shauna Briggs
 - Francesca Freeman
 - Sophie Mann
 - Samantha Howson
 - Edward Hasnip
- Highlight the whole worksheet
- Select Data > Filter > Autofilter from the menu bar
- Arrow boxes will appear in the heading row of each column.

	A	B	C
1		Surname	Forename
2		arson	Scott
3		heeldon	Natalie
4		es	Rhurie
5		man	Thomas
6		mpson	Hannah
7	y	snip	Edward
8		tott	Samantha
9		Wilson	Hollie
10		Revell	Nicole
11		Hough	Nicholas
12	y	Russell	Robert
13		Holness	Laura
14		Gamer	Mark
15		Coates	Dennis
16		Cressey	Oliver
17	y	Hodson	Robert
18	v	Brocklehurst	Henery

- In column A click on the arrow and highlight Y to indicate that you want to view only the students with a Y in column A. You will see that the arrow is now blue which indicates there is a filter being used in this column.
- You will see only the ten students you wish to send letters to.
- Click on the arrow in column A again and this time select Blanks.

- You will now see the students you do not wish to send letters to.
- Highlight the rows by clicking and dragging in the column where the row numbers are.
- Select Edit > Delete Row from the menu bar to delete the details of the students you do not want to send letters to.
- Change the filter in column A to All
- Save the file to your desktop as “Student Letters”

	A	B	C	D	E	F	G
1		Surname	Forename	Gender	Year	Tutor Group	Parental Address
7	y	Hasnip	Edward	M	Year 10	1010	Mr and Mrs P Hasnip
12	y	Russell	Robert	M	Year 10	1010	Mr and Mrs D Russell
17	y	Hodson	Robert	M	Year 10	1010	Mr and Mrs R Hodson
18	y	Brocklehurst	Henery	M	Year 10	1010	Mr and Mrs G Brocklehurst
21	y	Howson	Samantha	F	Year 10	1010	Mr and Mrs D Howson
22	y	Hussain	Syed	M	Year 10	1010	Dr and Mrs S Muzaffar
24	y	Freeman	Francesca	F	Year 10	1010	Mr and Mrs A Freeman
25	y	Parker	Katrina	F	Year 10	1010	Mrs Parker
26	y	Mann	Sophie	F	Year 10	1010	Mr and Mrs J Mann
29	y	Briggs	Shauna	F	Year 10	1010	Mr and Mrs T Briggs

Finishing touches and printing the worksheet

You will now see the details of the ten students required so you can use this for your mail merge.

Copying Text

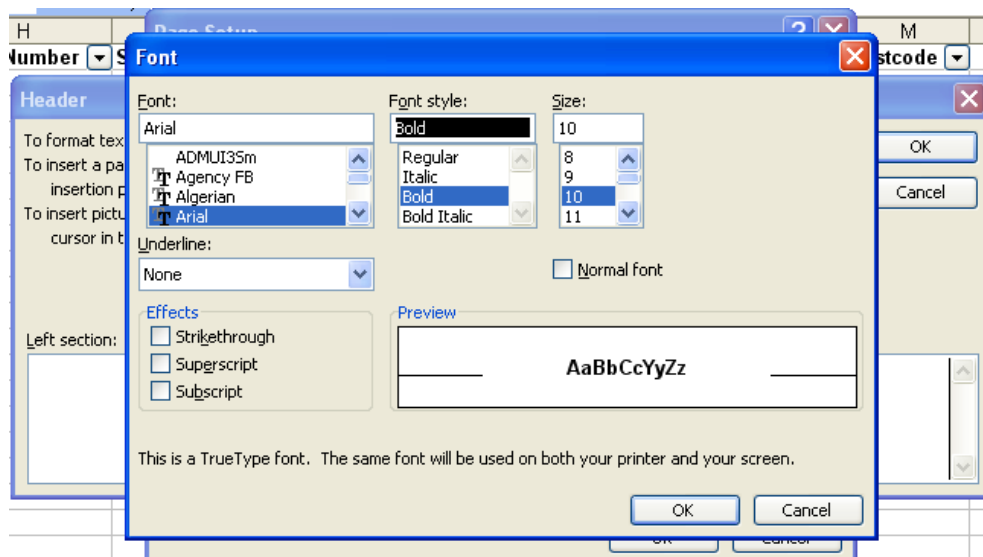
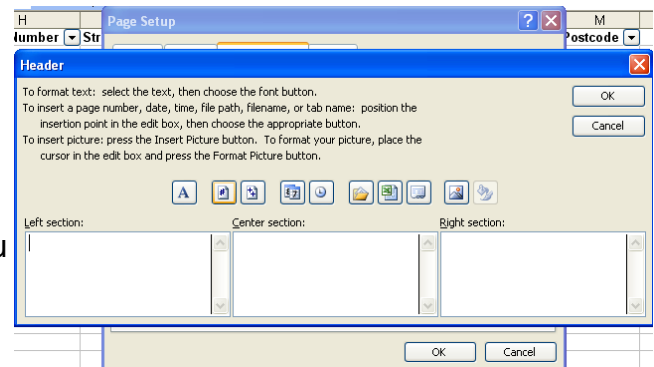
Looking in the County column you will see inconsistencies in the name used. To copy East Riding of Yorkshire into all the cells in the County column:-

- Click into the first row that contains East Riding of Yorkshire
- Move the cursor to the bottom right of the cell (the cursor will change from an empty white cross into a solid black cross)
- Hold down the left mouse button
- Drag the mouse down to the last cell you want East Riding of Yorkshire to appear in

Adding a Header and footer

Before printing a worksheet it is good practice to add a title in the header area.

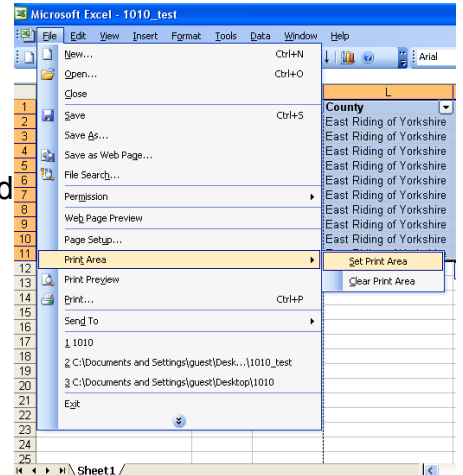
- Select View > Header and Footer from the menu bar.
- Click on Custom Header
- Click on the centre screen
- Type in the title “Students from 1010 for Mail Merge”
- Make the text bold by using your mouse to highlight the text
- Click on the font icon (A) and select Bold (you could also change the font and size here too)
- Press OK 3 times



Printing the Worksheet

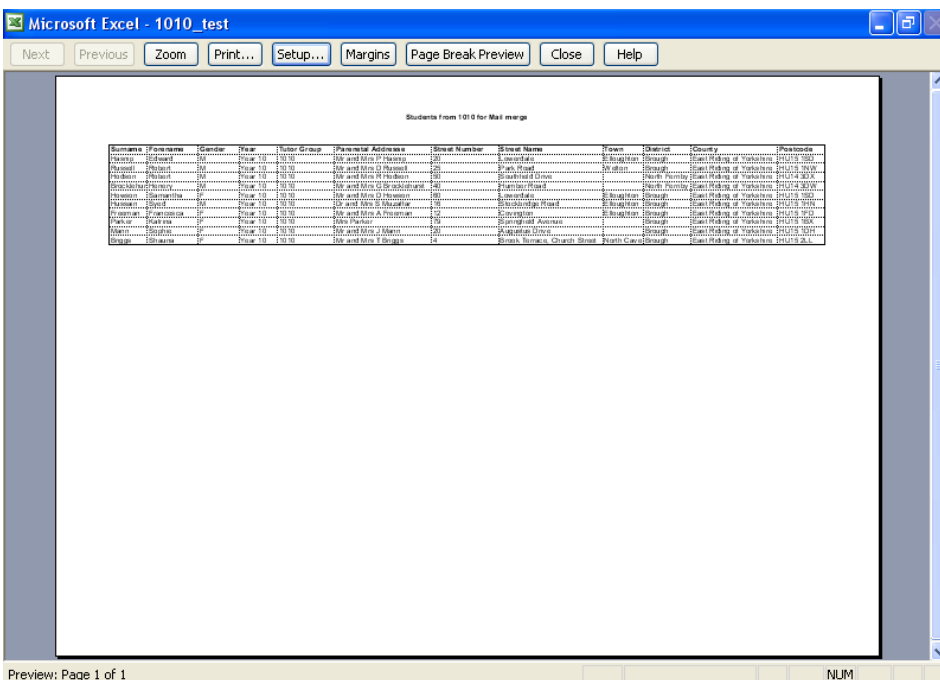
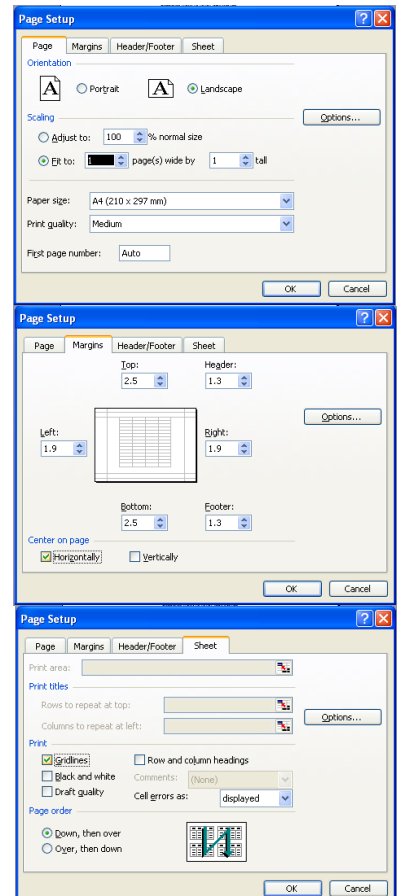
Before clicking on the Print icon you need to set the print area of the worksheet to be printed and look at the Print Preview to check the data fits to the number of pages you require.

- Click your mouse into the top left most cell to be printed (B1)
- Hold down the left mouse button
- Drag diagonally to the bottom right most cell to be printed (K11)
- Release the left button
- Select File > Print Area > Set Print Area from the menu bar
- Select File > Print Preview from the menu bar



Look at the preview. You will see that the worksheet is currently split onto two pages. To tidy it up:-

- Click on the Setup option
- On the Page tab change the orientation to Landscape and in scaling put a tick in Fit to 1 Page wide by 1 Page tall
- On the Margins tab click in the Centre on Page Horizontally box
- On the Sheet tab click in the gridlines box
- Click OK
- Your print preview should look like this:-



If you are happy with it you can click on Print to print a copy.

Close the worksheet.

Sorting Data

You can easily sort data into ascending or descending order. There are two ways to do it depending on your data.

If you want to sort your data into ascending or descending order by the far left column only you can use the sort icons on the toolbar.

To do this:-

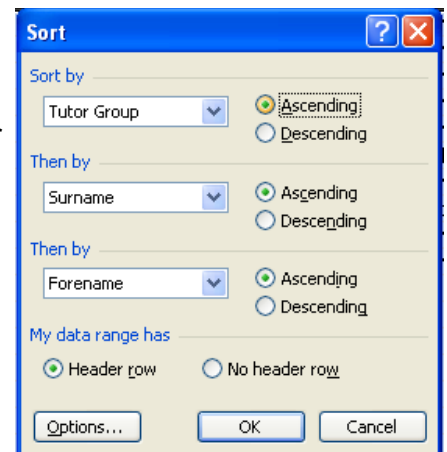
- Highlight all your data
- Click on the ascending or descending icon
- Your data will sort accordingly

NB: If you do not highlight all the columns containing data your sort will not work properly.

I think the best way to sort your data is to use the Data > Sort function from the menu bar, as this gives you more control and more options for your sorts.

To do this:-

- Select Data > Sort from the menu bar
- The Sort box will appear
- This box allows you to sort by up to three columns in either ascending or descending order
- To set your sort order(s) click on the grey box in the first Sort By box and select the field you wish to sort by
- Click in the ascending or descending box as appropriate
- You can repeat these steps for two more fields if you require
- When you have set all the sorts you require click OK
- In my example I have sorted first by Tutor Group, then by Surname and then Forename
- To remove the selected sort, select Data > Sort from the menu bar
- In each box where a sort is set select None to blank the sort field
- Click on OK
- Your data will revert to its original format



Excel Practice 1

Open the worksheet named 10BE4

Using the functions we have covered today complete the following exercise:-

- Add bold column headings to the worksheets
- Ensure that each student only has one Forename
- Sort the data by Tutor Group, Surname, Forename (look back over the handout if you need a reminder)
- Ensure all columns are wide enough to show all the text they contain
- Add a Header in bold "Students in 10B/E4"
- Add a date to the footer
- Add gridlines to the sheet
- Ensure all the text fits on one page
- Centre the text horizontally on the page
- Print out the sheet in full
- Print out the students in Tutor Group 1010
- Print out the students in Tutor Groups 1010 and 1007 together on one list (hint Custom AutoFilter)

Excel Practice 2

Open the worksheet named Attendance

Using the functions we have covered today complete the following exercise:-

- Add the following bold column headings:-
Admission No, Surname, Forename, DOB, Reg Group, Address 1, Address 2, Address 3, Address 4, Tel No, Date Letter sent
- Ensure that each student has only one forename
- Sort the students by Surname then by forename
- Delete **Claire Tucker** and **Tessa Chamberlain** from the worksheet
- Add a column after "Reg Group" and name it "English Group"
- Add 10B/E4 as all students English Group (if you can not remember the quick way to do this, ask!)
- Ensure the columns are wide to show all the text they containing
- Add a header in bold "Attendance Letters"
- Add a date footer to the right section
- Add gridlines to the sheet
- Ensure all the text fits on one page (landscape)
- Centre the text horizontally
- Print out the sheet in full