

VBk Practical Mathematics and Microsoft Excel Course

Menus & VLOOKUP



WINCHESTER
COLLEGE

Menus are a useful feature in Excel if you want a user to choose an input from a finite set of responses. These responses may need to be spelled correctly, as they may well link (via VLOOKUP) to a table which will automatically populate other cells. Hence a menu rather than a 'free text field' is a very good idea.

Select the **Data Validation** button and choose **List** from the range of options

The screenshot shows the Microsoft Excel interface with the 'Data' tab selected. The 'Data Validation' button in the 'Data Tools' group is highlighted with a red arrow. The spreadsheet contains a table of boarding houses with the following data:

House code	Formal name	Popular name	Housemaster	Housemaster's email	Telephone number
I	Turner's	Hopper's	Chris Good	cjg@wincoll.ac.uk	+44 (0) 1962 621 309
F	Hawkin's	Chawkers	James Hodgins	jeh@wincoll.ac.uk	+44 (0) 1962 621 306
A	Chernocke House	Furley's	James Fox	jrf@wincoll.ac.uk	+44 (0) 1962 621 301
H	Bramston's	Trant's	John Cullerne	jpc@wincoll.ac.uk	+44 (0) 1962 621 308
D	Fearon's	Kenny's	Matthew Winter	mjw@wincoll.ac.uk	+44 (0) 1962 621 304
K	Kingsgate House	Beloe's	Mark Romans	mr@wincoll.ac.uk	+44 (0) 1962 621 300
E	Morshead's	Fred			+44 (0) 1962 621 305
X	College	Coll			+44 (0) 1962 621 295
C	Du Boulay's	Coo			+44 (0) 1962 621 303
B	Moberly's	Toy			+44 (0) 1962 621 302
G	Sergeant's	Phil			+44 (0) 1962 621 307
-	-	-			

The 'Data Validation' dialog box is open, showing the 'Settings' tab. The 'Allow:' dropdown menu is set to 'List'. The 'Ignore blank' checkbox is checked. The 'Apply these changes to all other cells with the same settings' checkbox is unchecked. The 'List' option is selected in the dropdown menu.

Select a cell which you want to be a menu item.

The screenshot shows the Microsoft Excel interface with the 'Data' tab selected. A table of boarding houses is visible, with columns for House code, Formal name, Popular name, Housemaster, Housemaster's email, and Telephone. A Data Validation dialog box is open, showing the 'Settings' tab. The 'Allow' dropdown is set to 'List', and the 'Source' field contains the formula '=Houses & Ages!\$B\$5:\$B\$16'. A red box highlights this formula, with arrows pointing to the source field in the dialog and a cell in the worksheet.

House code	Formal name	Popular name	Housemaster	Housemaster's email	Telephone
I	Turner's	Hopper's	Chris Good	cjg@wincoll.ac.uk	+44 (0) 19
F	Hawkin's	Chawkers	James Hodgins	jeh@wincoll.ac.uk	+44 (0) 19
A	Chernocke House	Furley's	James Fox	jrf@wincoll.ac.uk	+44 (0) 19
H	Bramston's	Trant's	John Cullerne	jpc@wincoll.ac.uk	+44 (0) 19
D	Fearon's	Kenny's	Matthew Winter	mjw@wincoll.ac.uk	+44 (0) 19
K	Kingsgate House	Beloe's	Mark Romans	mr@wincoll.ac.uk	+44 (0) 19
E	Morshead's	Fred			+44 (0) 19
X	College	Coll			+44 (0) 19
C	Du Boulay's	Coo			+44 (0) 19
B	Moberly's	Toy			+44 (0) 19
G	Sergeant's	Phil			+44 (0) 19
-	-	-			+44 (0) 19

The Data Validation dialog box shows the following settings:

- Settings tab selected
- Allow: List
- Data: between
- Source: ='Houses & Ages!\$B\$5:\$B\$16'
- Ignore blank:
- In-cell dropdown:
- Apply these changes to all other cells with the same settings:

The formula '=Houses & Ages!\$B\$5:\$B\$16' is highlighted in a red box, with arrows pointing to the source field in the dialog and a cell in the worksheet.

If the **List** option is selected, you will be asked for the **Source** of the table which constitutes the menu options. You can type this or use the button on the right of the box to drag and select cells.

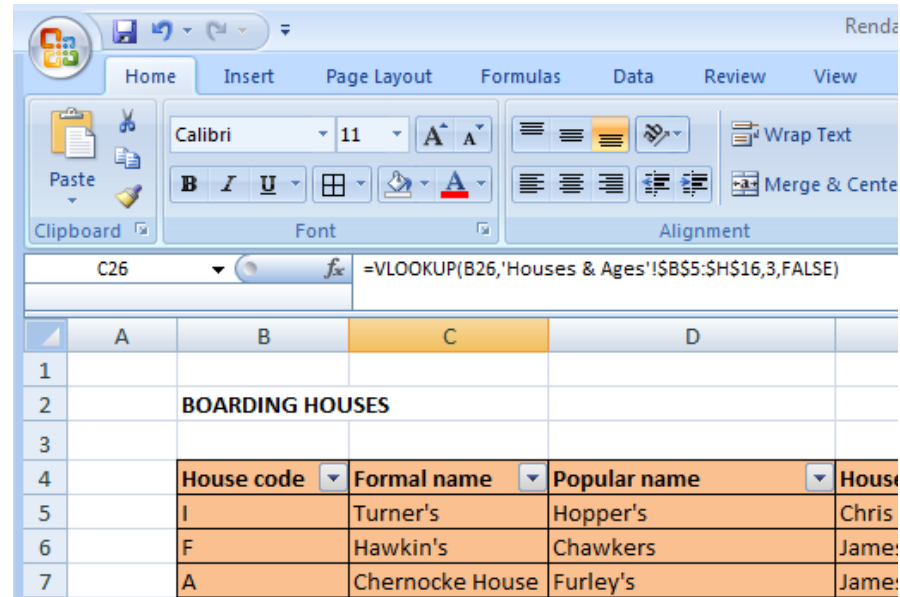
The name in '...' is the name of the worksheet. The code **\$B\$5:\$B\$16** defines a fixed array between cells **B5** and **B16**. The dollar sign forces this *not* to change if another menu cell is added somewhere else.

= 'Houses & Ages'!\$B\$5:\$B\$16

House code

- A
- D
- E
- X
- C
- A
- D
- K
- E
- X
- C
- B
- G
-

Cells can be copied to create a table. Clicking on each cell will bring up a menu, from which the user can make a selection.



Now let's use **VLOOKUP** to automatically populate cells depending on the menu item chosen.

In this example the code is:

= VLOOKUP(B26,'Houses & Ages'!\$B\$5:\$H\$16,3,FALSE)

This means: " based on data table B5 to H16 in worksheet 'Houses & Ages', give me column 3 of this *array* which is an *exact match* to the column 1 entry, which corresponds to the content of cell B26."

For VLOOKUP to work, column 1 of the VLOOKUP array must be correspond to the menu items.

Age categories	Birth dates
Junior	born after 1.9.98
Intermediate	born after 1.9.97 but before 1.9.98
Senior	born on or before 1.9.97
-	-

House code	Popular name	Housemaster
A	Furley's	
D		
E		

	A	B	C	D	E
1					
2		BOARDING HOUSES			
3					
4		House code	Formal name	Popular name	Housemaster
5		I	Turner's	Hopper's	Chris Good
6		F	Hawkin's	Chawkers	James Hodgins
7		A	Chernocke House	Furley's	James Fox
8		H	Bramston's	Trant's	John Cullerne
9		D	Fearon's	Kenny's	Matthew Winter
10		K	Kingsgate House	Beloe's	Mark Romans
11		E	Morshead's	Freddie's	Jamie McManus
12		X	College	College	Ian Fraser
13		C	Du Boulay's	Cook's	Liam Taylor
14		B	Moberly's	Toye's	Patrick Herring
15		G	Sergeant's	Phil's	David Yeomans
16		-	-	-	-
17					
18					
19		Age categories	Birth dates		
20		Junior	born after 1.9.98		
21		Intermediate	born after 1.9.97 but before 1.9.98		
22		Senior	born on or before 1.9.97		
23		-	-		
24					
25		House code	Popular name	Housemaster	
26		A	Furley's	James Fox	
27		D	Kenny's	Matthew Winter	
28		E	Freddie's	Jamie McManus	
29		X	College	Ian Fraser	
30		C	Cook's	Liam Taylor	
31		A	Furley's	James Fox	
32		A	Furley's	James Fox	
33		A	Furley's	James Fox	
34					
35					

Copy and paste the **VLOOKUP** cell to automatically populate a table.

Note the \$ sign is omitted from the first argument of VLOOKUP. This means **B26** will automatically become **B30** as the cells are 'replicated down' or pasted.

= VLOOKUP(**B26**, 'Houses & Ages'!
\$B\$5:\$H\$16, 4, FALSE)

= VLOOKUP(**B30**, 'Houses & Ages'!
\$B\$5:\$H\$16, 4, FALSE)

If **TRUE** is chosen, the match will be the *nearest*, but perhaps not an exact match. Use with caution!