

FS ICT Guidance Document – Using VLOOKUP

Summary: VLOOKUP is a function within Microsoft Excel that allows you to search a table of data to find appropriate information. For example, in a school or college students will have ID numbers, names and a range of other data. It can be organised in Excel so that if a student number is supplied, it will be able to search through the table of given data and find the appropriate information required such as name or tutor. The table of data might be in the same worksheet as the user input or it might be on a separate worksheet.

VLOOKUP allows you to search a table that is set up vertically, so the data is arranged in columns and each column holds only one kind of data. For example, there would be a separate column of data for each of name and tutor.

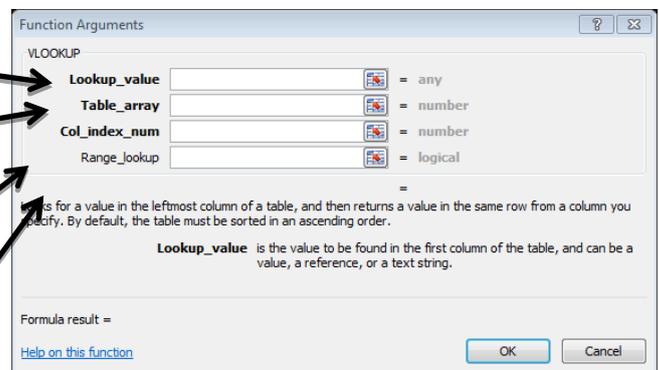
The VLOOKUP function is formatted like this: =VLOOKUP(lookup_value, table_array, col_index_num, range_lookup)

The lookup_value is the same as the user input (value). The function uses this value in its search. So if you are searching by student ID, the lookup_value is the cell that contains that value.

The table_array is the area of cells where the table is located. This table contains the column that you are searching on as well as the columns containing the values you need to find.

The col_index_num refers to the column of data that contains the value you want. It is referred to as 2, 3 etc according to which column contains the appropriate values.

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Range_lookup is a TRUE or FALSE value. If you set this to TRUE, the function will give you the closest match to the lookup_value. If it is set to FALSE, an exact match must be found or the worksheet cell will show #N/A. If you use this, the column containing the lookup_value must be sorted in ascending order.

Section B

You must not use the internet from this point onwards.

Task 2 – Services

Solutions for IT Novices charges its customers for the cost of services provided.

The file **NovicesL2** contains three worksheets.

- (a) Open the worksheet **Invoice** in the file **NovicesL2**.

Enter your name, candidate number and centre number in the footer.

Complete the columns for **Description** and **Rate** by using the vlookup function and the information in the **Services** worksheet.

The Mark Scheme shows how the marks are awarded. From this you can see that even if the VLOOKUP is not completely functional, candidates can still gain marks for attempting to use the function or a formula to complete either part of the data required for the invoice.

Functional Skills Level 2, May 2012, Section B, Task 2 shows how a question using VLOOKUP might be set. In this question, candidates were asked to use the function to complete columns in an invoice so it showed a description of the service and the rate to be charged.

Section B			
Q	Answer	Additional Guidance	Mark
2 (a)	Must be a formula view for any marks for 2(a)		
1	Award 3 marks for 1 of	Appropriate use of lookup function in at least one cell in Description and/or Cost column	3
2	=VLOOKUP(A14,Services!A3:C10,2)		
3	=VLOOKUP(A14,Services!A3:C10,2,0) =VLOOKUP(A14,Services!\$A\$3:\$C\$10,2) =VLOOKUP(A14,Services!\$A\$3:\$C\$10,2,0) in cell B14 OR =VLOOKUP(A14,Services!A3:C10,3) =VLOOKUP(A14,Services!A3:C10,3,0) =VLOOKUP(A14,Services!\$A\$3:\$C\$10,3) =VLOOKUP(A14,Services!\$A\$3:\$C\$10,3,0) in cell D14		
	Award 2 marks for Attempted use of Lookup function to complete Description and/or Cost column	Must have at least =VLOOKUP(A14,Services! or similar	
	Award 1 mark for Attempted use of a formula to complete Description and/or Cost column	Allow any formula which has a cell reference related to the table on Services worksheet e.g. =Services!B3	

Example A: This example shows how the **table_array** is in the same worksheet as the table in which the value is required. In this case, the VLOOKUP function in **D2** is looking for the value in cell **C2** in the table that contains the **House Code** and **House Team (the table_array)**. The value required is in the second column of this **table_array** so the function shows **2** as the **col_index_number**. This example of VLOOKUP does not use the TRUE/FALSE since it is not required.

	A	B	C	D	E	F	G
1	Lastname	Firstname	House Code	House Team		House Code	House Team
2	Jones	Sally	S1	Jupiter		M1	Mars
3	Harrod	Fred	S1			M2	Mercury
4	King	Terry	V1			S1	Jupiter
5	Harris	Pat	M2			S2	Saturn
6	Dowd	Donald	S2			V1	Venus
7	Perkins	Peter	M2				
8	Neale	Nerys	V1				
9	Pritchard	Steve	S1				
10	Wells	Mike	M1				

The worksheet shows that the VLOOKUP function has entered Jupiter in **D3** for the first record which is the correct House Team for the **House Code** of **S1** (shown in cell **C2**).

Example B: This example shows how the **table_array** is in a different worksheet from the table in which the values are required. In this case, the VLOOKUP function in **C2** is looking for the value in cell **B2** in the table that contains the **Brand Code**, **Brand** and **Price (the table_array)**. The value required is in the second column of this table so the first VLOOKUP function shows **2** as the **col_index_number**. The function returns the correct value of **Newton** in **C2**, Screenshot 1.

	A	B	C	D	E
1	Chocolate Bar	Brand Code	Brand	Price	
2	Candy Cool	B3	Newton		
3	Zumba Hot	B4			
4	Sea Salt	B2			
5	Ginger Goo	B1			
6	Almond Moon	B3			
7	White Silk	B4			
8	Dark Sea	B3			
9	Nut Dream	B1			
10					

Screenshot 2 shows the second VLOOKUP function, which uses the same criteria, but is looking for the value in column **3**, the **col_index_number**. The function correctly returns the value of **£1.25** in **D2**.

	A	B	C	D	E
1	Chocolate Bar	Brand Code	Brand	Price	
2	Candy Cool	B3	Newton	£1.25	
3	Zumba Hot	B4			
4	Sea Salt	B2			
5	Ginger Goo	B1			
6	Almond Moon	B3			
7	White Silk	B4			
8	Dark Sea	B3			
9	Nut Dream	B1			
10					

	A	B	C
1	Code	Brand	Price
2	B1	Westbury	£1.50
3	B2	Tressel	£2.00
4	B3	Newton	£1.25
5	B4	Sadler	£0.90
6			

This shows the **table_array**, stored in a second worksheet labelled **Brand_Price**, where the **Brand** can be seen in **col_index_number** 2 and the **Price** can be seen in **col_index_number** 3.

This example of VLOOKUP does not use the TRUE/FALSE since it is not required.