Using Simple VLOOKUP
by Nathaniel Jones (www.itsnatjones.com)

GOAL:
At the end of this tutorial, you will know how to leverage basic functionality of the VLOOKUP function in Microsoft Excel.

This tutorial presumes you, the learner, are fairly familiar with the basic features and functionality of Microsoft Excel. The content herein refers to Excel 2003 and Excel 2007 where identified. Below are brief explanations followed by hands-on examples of working with VLOOKUP.

What is VLOOKUP?
A VLOOKUP means to look up or compare data residing in any given column to the left or right of the cell in which the VLOOKUP formula is entered. A VLOOKUP can be created by selecting a cell and then typing the formula inside the selected cell or in the fx formula bar above the spreadsheet. The VLOOKUP formula may be written as follows: =VLOOKUP(H2,B2:E9,2,FALSE).
It must indicate several parameters, or parts, that indicate what the formula is looking for and referencing. Also, the formula is typed into any cell except those identified as part of the formula. The next section explains each part of a VLOOKUP.

Why use VLOOKUP?
A VLOOKUP would be used if we were looking to find an entry in a spreadsheet phone directory, employee list, or a list of miscellaneous information. The following is a spread and broken down example of the above mentioned VLOOKUP formula:

The formula is typed as follows:
=VLOOKUP(H2,B2:E9,2,FALSE)

This is the formula spread out to get a better look:
=VLOOKUP ( H2 , B2 : E9 , 2 , FALSE )

This is the formula broken down for an easier explanation:
=VLOOKUP ( H2 , B2 : E9 , 2 , FALSE )

To help clarify the example, the formula begins by identifying itself as a VLOOKUP.
The formula follows by saying that it will consider whatever search-word you enter into cell H2.
A search will then be made within the range B2 through E9 for a match to H2. Understand that the B2 through E9 range contains four columns – B, C, D and E...from cell 2, down to cell 9 forming a ‘table’ area. Also understand that here the formula will only search the first column (B) of the searched range for a match to H2.
Once a match is found in column one, the formula then looks for the information from the second column (C) of the ‘table’ where the column one/H2 match is found, and display the information from the second column in the cell where the formula resides. In other words, if the formula is in cell H7, the result will appear in H7.
FALSE indicates the search will return an exact match. If this were set to TRUE, an exact or approximate match will be displayed.

Keep in mind that this kind of formula will return the first matching value in the set of information.
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**Hands-On**

- Open Microsoft Excel. The screenshots below are of Excel 2007. However, the formula will also work with Excel 2003.
- Fill information into the fields to simulate the chart below. Notice the duplicates in the name fields. This is to demonstrate, as mentioned above, the formula selecting the first matching value in the set of information.

![Excel screenshot](image1.png)

- Select cell I2, the field below the field labeled 'First Name will appear below', and enter the following formula:

  ```excel
  =VLOOKUP(H2,B2:E9,2,FALSE)
  ```

  Notice the cell range, as well as the target H2 cell, is highlighted.

![Excel screenshot](image2.png)

- Press ENTER and an entry of #N/A will appear in cell I2. This is because the formula is looking for a value in cell H2. Since there is no value entered in cell H2, Excel is unable to return a result...only the #N/A.

- Enter a name from the Last Name column into cell H2. The corresponding first name will appear in cell I2. This is because the formula now has a reference to use in order to search the set of information (B2 through E9).

  **Note:** As mentioned earlier, there are duplicate last names. In one duplicate case, there is Nathaniel Jones and Nat Jones. If you type Jones into the H2 search cell, the formula will return the first listed Jones to cell I2...in this case, Nathaniel from line 1, not Nat from line 6.

  A modified formula, `=VLOOKUP(H2,B2:E9,3,FALSE)`, can be placed into cell J2. Notice the 2 is changed to a 3 in order to take information from the third column of the referenced set of information. In this case it is the phone number. When a last name is entered into cell H2, not only will the first name be placed in cell I2, the corresponding phone number will be placed into cell J2.

More information about VLOOKUP formulas can be found on the Microsoft website located [here](http://office.microsoft.com/en-us/excel-help/?CTT=97).