

Step-by-Step VLOOKUP Instructions

What is VLOOKUP?

According to Excel's formula description, VLOOKUP "looks for a value in the leftmost column of a table, and then returns a value in the same row from a column you specify." In simpler terms, VLOOKUP lets you pull information about selected cells from another excel document, into your current excel document.

The VLOOKUP Formula

The formula for VLOOKUP looks like this (color coded for readability): `=VLOOKUP(lookup_value,table_array,col_index_num,[range_lookup])`
As you can see, the formula is made up of four different parts, separated by commas. Each of the four parts will be explained in detail as we work through an example.

Using VLOOKUP to Match Student IDs & Login Codes to Student Names

This step-by-step tutorial will demonstrate how to match student IDs and login codes to student names. To get started, you will need the following two excel documents:

- 1) The document provided by YouthTruth that contains student IDs and login codes (we'll call this sheet 1).
- 2) A document you've put together that contains student IDs in the leftmost column, and student names (sheet 2).

Sheet 1 contains student IDs and login codes, but is missing student names, which survey proctors will need in order to easily distribute login codes to the correct students. Instead of spending hours manually matching student names to student IDs, we'll use VLOOKUP to pull student names from sheet 2, and automatically populate them in sheet 1.

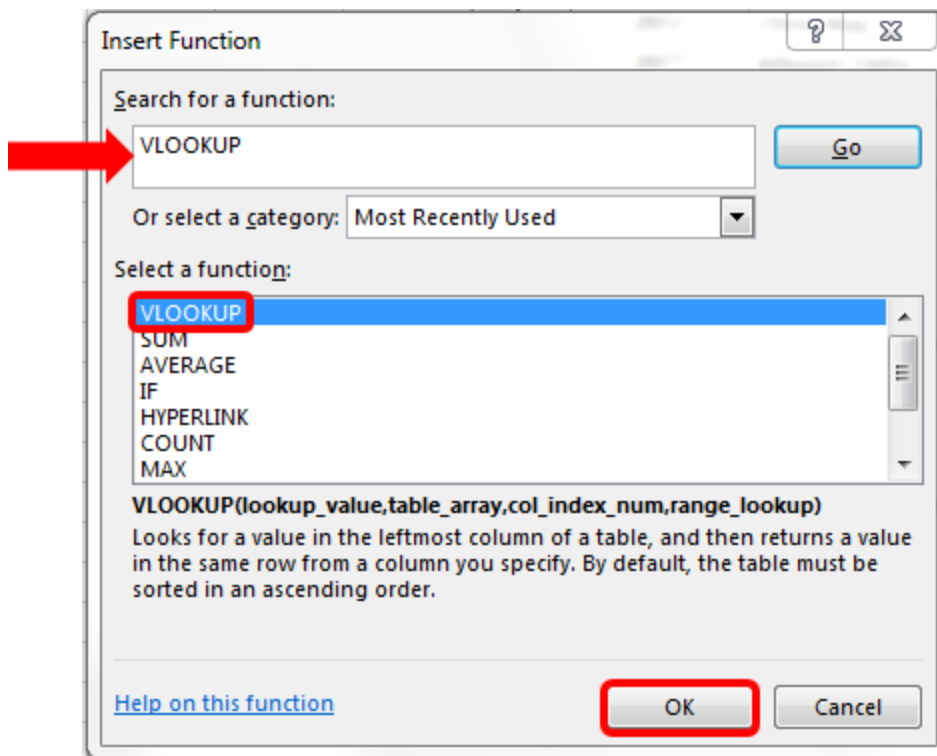
Open both sheet 1 (the YouthTruth excel document that contains student IDs and login codes) and sheet 2 (your excel document that contains student IDs and student names).

The image shows two Excel spreadsheets side-by-side. The left spreadsheet, titled "SHEET 1 Student IDs and Login Codes - Excel", contains a table with two columns: "Student ID" and "Login Code". The right spreadsheet, titled "SHEET 2 Student IDs and Student Names - Excel", contains a table with two columns: "Student ID" and "Student Name".

Student ID	Login Code
2909	t757
2914	h773
2926	q727
2929	b76
2930	n261
2931	y984
2937	t927
2977	e788
3059	w638
3112	p894
3154	k509
3155	j836
3158	h853
3160	g107
3163	e991
3164	v237
3165	q178
3166	a624
3170	w395
3174	d733
3175	x273
3177	z345

Student ID	Student Name
2909	Michael Phelps
2914	Usaine Bolt
2926	Jesse Owens
2929	Carl Lewis
2930	Serena Williams
2931	Mark Spitz
2937	Chris Hoy
2977	Allyson Felix
3059	Jackie Joyner-Kersey
3112	Gabby Douglas
3154	Kerri Walsh Jennings
3155	Justin Gatlin
3158	Greg Louganis
3160	Paavo Nurmi
3163	Nadia Comăneci
3164	Thomas Bach
3165	Larisa Latynina
3166	Lin Dan
3170	Veronica Campbell-Brown
3174	Ryan Lochte
3175	Simone Biles
3177	Tyson Gay

From the Insert Function window that pops up, type 'VLOOKUP' in the 'Search for a function' text box, then click 'Go'. Once VLOOKUP appears in the 'Select a function' text box, select it, then press 'OK'.



Now we'll begin to construct the formula...

Lookup_value

The lookup_value portion of the formula is the information you want to look up somewhere else. In this case, the lookup value is the student ID. The student ID is the common denominator between the two sheets, and is what the function will look to as a guide as we populate sheet 1 with student names from sheet 2.

Click into the 'Lookup_value' text box from the Function Arguments window. Then, in sheet 2, click into the cell containing the first student ID in the list. In this case the cell is A2.

The image shows two Excel spreadsheets side-by-side. The left spreadsheet, titled 'SHEET 1_Student IDs and Login Codes', contains a table with columns 'Student ID' and 'Login Code'. The right spreadsheet, titled 'SHEET 2_Student IDs and Student Names', contains a table with columns 'Student ID' and 'Student Name'. A 'Function Arguments' dialog box for the VLOOKUP function is open over the left spreadsheet. The 'Lookup_value' field is highlighted with a red box and contains the formula 'James.xlsx!Sheet1!\$A\$2'. A red arrow points from this field to cell A2 in the right spreadsheet, which contains the value '2909'. The 'Table_array' field is set to 'James.xlsx!Sheet2!\$A\$2:\$L\$20', 'Col_index_num' is '2', and 'Range_lookup' is checked.

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2909	t757
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2937	t927
2977	e788
3059	w638
3112	p894
3154	k509
3155	j836
3158	h853
3160	g107
3163	e991
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3165	q178
3166	a624
3170	w395
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3175	x273
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Student ID	Student Name
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Table_array

The table_array is the array of cells you want to search within for your lookup value. To select your table array, click into the 'table_array' text box from the Function Arguments window. Then, in sheet 2, simply highlight, or drag through whichever portion of data you would like to retrieve data from. Do not include column heads in your selection.

Important note about the table_array: The column in which you are looking must always be the first column in the array. So in this case, in order for VLOOKUP to work, the student ID column must be positioned to the left of the student name column.

The image shows two Excel spreadsheets. The left spreadsheet, 'SHEET 1_Student IDs and Login Codes', contains a table with columns 'Student ID' and 'Login Code'. The right spreadsheet, 'SHEET 2_Student IDs and Student Names', contains a table with columns 'Student ID' and 'Student Name'. A 'Function Arguments' dialog box for the VLOOKUP function is open, showing the following values:

- Lookup_value: [James.xlsx]Sheet1!\$A\$2 = 2909
- Table_array: [xlsx]Sheet1!\$A\$2:\$B\$23
- Col_index_num: [number]
- Range_lookup: [logical]

The dialog box also includes the following text: 'Looks for a value in the leftmost column of a table, and then returns a value in the same row from a column you specify. By default, the table must be sorted in an ascending order.' and 'Lookup_value is the value to be found in the first column of the table, and can be a value, a reference, or a text string.'

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3163	e991
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3165	q178
3166	a624
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3174	d733
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Student ID	Student Name
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2914	Usaine Bolt
2926	Jesse Owens
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2931	Mark Spitz
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Col_index_num

The col_index_num, is simply the column of data that you would like to be reflected in your returned value. In our example, we are trying to return student names from sheet 2 to sheet 1, so the col_index_num – the column that contains student names – is column number 2.

From the Function Arguments window, click into the 'Col_index-num' text box and type the number '2'.

The image shows two Excel spreadsheets side-by-side. The left spreadsheet, titled 'SHEET 1_Student IDs and Login Codes', contains a table with columns 'Student ID' and 'Login Code'. The right spreadsheet, titled 'SHEET 2_Student IDs and Student Names', contains a table with columns 'Student ID' and 'Student Name'. A 'Function Arguments' dialog box for the VLOOKUP function is open over the left spreadsheet. The dialog box shows the following arguments: 'Lookup_value' is '4ames.xlsx!Sheet1'!\$A\$2', 'Table_array' is 'xlsx!Sheet1'!\$A\$2:\$B\$23', 'Col_index_num' is '2', and 'Range_lookup' is 'Logical'. The formula result is 'Michael Phelps'. The 'Col_index_num' field is highlighted with a red box. The right spreadsheet has red numbers '1' and '2' above the 'Student ID' and 'Student Name' columns respectively.

Student ID	Login Code
2909	t757
2914	h773
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3059	w638
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3160	g107
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3165	q178
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Student ID	Student Name
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2914	Usaine Bolt
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Range_lookup

Range_lookup has two possible values: TRUE or FALSE. By typing in TRUE, you are allowing values to be returned for approximate matches. This is not what we want to use here. Entering FALSE assures that data will only be returned for the exact value of the lookup_value.

From the Function Arguments window, click into the 'Range_lookup' text box and type 'FALSE'. Then click 'OK'.

The left screenshot shows a spreadsheet with a table of Student IDs and Login Codes. A formula bar shows a VLOOKUP formula: `=VLOOKUP('SHEET 2_Student IDs and Student Names.xlsx'!A2,'SHEET 2_Student IDs and Student Names.xlsx'!A2:B23,2,FALSE)`. A 'Function Arguments' dialog box is open, showing the VLOOKUP arguments: Lookup_value: 'SHEET 2_Student IDs and Student Names.xlsx'!\$A\$2, Table_array: 'SHEET 2_Student IDs and Student Names.xlsx'!\$A\$2:\$B\$23, Col_index_num: 2, and Range_lookup: FALSE (highlighted with a red box). The formula result is 'Michael Phelps'.

Student ID	Login Code
2909	t757
2914	h773
2926	q727
2929	b76
2930	n261
2931	y984
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3059	w638
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3165	q178
3166	a624
3170	w395
3174	d733
3175	x273
3177	z345

The right screenshot shows the same spreadsheet with the Student Name column populated with names corresponding to the Student IDs in the table.

Student ID	Student Name
2909	Michael Phelps
2914	Usaine Bolt
2926	Jesse Owens
2929	Carl Lewis
2930	Serena Williams
2931	Mark Spitz
2937	Chris Hoy
2977	Allyson Felix
3059	Jackie Joyner-Kersey
3112	Gabby Douglas
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3163	Nadia Comăneci
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3175	Simone Biles
3177	Tyson Gay

Voila! The first student name is filled into the cell you previously indicated. To copy the formula down, so that the rest of the student names appear, there are two more quick steps to follow...

The screenshot displays the Microsoft Excel interface with the FORMULAS tab selected. The formula bar shows the following VLOOKUP formula in cell C7:

```
=VLOOKUP('[SHEET 2_Student IDs and Student Names.xlsx]Sheet1!$A$2,[SHEET 2_Student IDs and Student Names.xlsx]Sheet1!$A$2:$B$23,2,FALSE)
```

The spreadsheet data is as follows:

Student ID	Login Code	
2909	t757	Michael Phelps
2914	h773	
2926	q727	
2929	b76	
2930	n261	
2931	y984	
2937	t927	
2977	a788	

So that unique values are populated when you copy the formula down, and not the same name over and over, you must check your formula to make sure it doesn't contain an extra dollar sign in the lookup value, as mine does below.

Remember, cell A2 is my lookup value from sheet 2. If it remains in its current format in the formula of '\$A\$2', student Michael Phelps will be copied down the entire column, over and over. In order to get the formula to look for student names in A2, A3, A4, and so on, remove the dollar sign between 'A' and '2' so the lookup value reads '\$A2'.

The screenshot shows the Excel interface with the FORMULAS tab selected. The formula bar contains the following formula: `=VLOOKUP('[SHEET 2_Student IDs and Student Names.xlsx]Sheet1!A2','[SHEET 2_Student IDs and Student Names.xlsx]Sheet1!A2:B23,2,FAL'`. A red arrow points to the `A2` part of the formula, indicating that the column reference should be relative (`$A2`) instead of absolute (`A2`).

Student ID	Login Code	Student Name
2909	t757	Michael Phelps
2914	h773	

Once you've removed the extra dollar sign (if applicable), the last step is to copy the formula down, so that it is applied to your entire list. To do this, drag the bottom right hand corner of the populated cell down the length of your table.

The screenshot shows the Microsoft Excel interface with the following details:

- File Name:** SHEET 1_Student IDs and Login Codes - Excel
- Formulas Tab:** Active, showing options like Define Name, Trace Precedents, Show Formulas, Trace Dependents, Error Checking, Watch Window, and Calculation Options.
- Formula Bar:** Contains the formula: `=VLOOKUP('[SHEET 2_Student IDs and Student Names.xlsx]Sheet1'!$A2,[SHEET 2_Student IDs and Student Names.xlsx]Sheet1'!A2:B23,2,FALSE)`
- Spreadsheet Content:**
 - Row 1: YouthTruth logo
 - Row 2: STUDENT SURVEY
 - Row 3: A WALIDHAI NONPROFIT
 - Row 6: Headers: Student ID, Login Code
 - Row 7: 2909, t757, Michael Phelps (highlighted with a red arrow)
 - Row 8: 2914, h773
 - Row 9: 2926, q727
 - Row 10: 2929, b76
 - Row 11: 2930, n261
 - Row 12: 2931, y984
 - Row 13: 2937, t927
 - Row 14: 2977, e788
 - Row 15: 3059, w638
 - Row 16: 3112, p894
 - Row 17: 3154, k509
 - Row 18: 3155, j836
 - Row 19: 3158, h853
 - Row 20: 3160, g107
 - Row 21: 3163, e991
 - Row 22: 3164, v237
 - Row 23: 3165, q178
 - Row 24: 3166, a624
 - Row 25: 3170, w395
 - Row 26: 3174, d733
 - Row 27: 3175, x273
 - Row 28: 3177, z345

And there you have it! Sheet 1 now contains student IDs, login codes, *and* student names. So as not to confuse the student ID with the login code, you may want to consider deleting the student ID column entirely before handing the list off to the survey proctor(s).

The image displays two side-by-side Excel spreadsheets. The left spreadsheet, titled 'SHEET1_Student IDs and Login Codes', contains a table with three columns: 'Student ID', 'Login Code', and 'Student Name'. A large red 'X' is drawn over the 'Student ID' column, indicating it should be deleted. The right spreadsheet, titled 'SHEET2_Student IDs and Student Names', contains a table with two columns: 'Student ID' and 'Student Name'.

Student ID	Login Code	Student Name
2909	t757	Michael Phelps
2914	h773	Usaine Bolt
2926	q727	Jesse Owens
2929	b76	Carl Lewis
2930	n261	Serena Williams
2931	y984	Mark Spitz
2937	t927	Chris Hoy
2977	e788	Allyson Felix
3059	w638	Jackie Joyner-Kersey
3112	p894	Gabby Douglas
3126	k509	Kerri Walsh Jennings
3128	j836	Justin Gatlin
3154	h853	Greg Louganis
3155	g107	Paavo Nurmi
3158	e991	Nadia Comăneci
3160	v237	Thomas Bach
3163	q178	Larisa Latynina
3164	a624	Lin Dan
3165	w395	Veronica Campbell-Brown
3166	d733	Ryan Lochte
3170	x273	Simone Biles
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