



Jefferson Parish Library

# EXCEL PART 3:

TABLES, CONDITIONAL FORMATTING, AND MORE

FUNCTIONS

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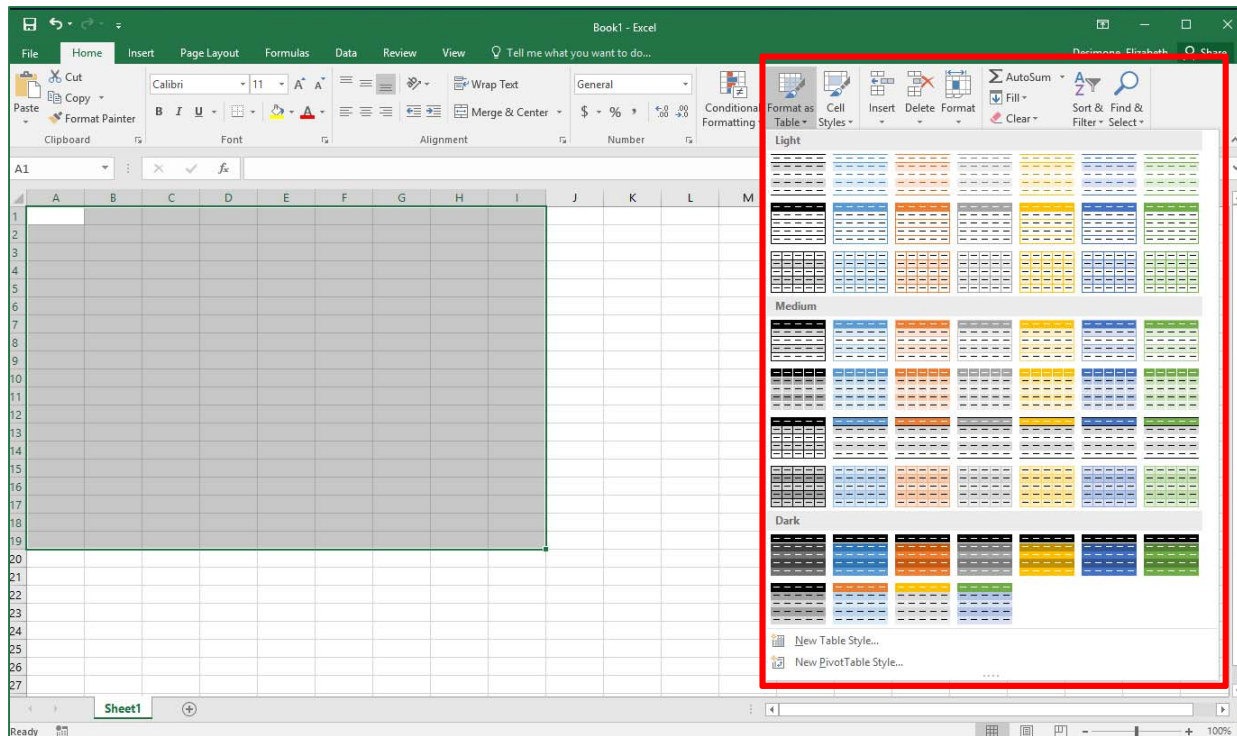
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## In this class you will learn how to:

- Convert data into a table
- Use table features such as Sort & Filter
- Apply conditional formatting
- Insert the COUNT, COUNTIF, and COUNTIFS functions
- Freeze Panes
- Use the VLOOKUP function
- Apply array formulas

# TABLES



## TO CREATE A TABLE FROM SCRATCH

- Click and drag the number of cells you will need in your table.
- Click **Format As Table** in the Home tab.
- Click a table style to select.
- Click **OK** in the dialog box.

# FORMAT AS TABLE

The screenshot shows an Excel spreadsheet with a table of book data. The table has the following columns: Title, Author, Year Published, Imprint, Publisher, Editor, Agent, and Read?. The data is as follows:

Title	Author	Year Published	Imprint	Publisher	Editor	Agent	Read?
The Missing Piece of Charlie O'Reilly	Rebecca K.S. Ansari	2019	Walden Pond Press	HarperCollins	Jordan Brown	Tina Dubois	No
The Lost Girl	Anne Ursu	2019	Walden Pond Press	HarperCollins			No
Sweep	Jonathan Auxier	2018	Amulet Books	Abrams			Yes
The Extremely Inconvenient Adventures of Bronte Mettlestone	Jaclyn Moriarty	2018	Arthur A. Levine	Scholastic	Arthur Levine	Jill Grinberg	Yes
The Incorrigible Children of Ashton Place: The Long-Lost Home	Maryrose Wood	2018	Balzer + Bray	HarperCollins			Yes
Legend of the Lost Causes	McLelland/Sylvester	2018	Henry Holt & Co.	Macmillan			No
The Night Diary	Veera Hiranandani	2018	Penguin Young Readers Group	Penguin Random House	Namrata Tripathi	Sara Crowe	No
Shadow Weaver	MarcyKate Connolly	2018	Sourcebooks Jabberwocky	Sourcebooks, Inc.	Annie Berger	Suzie Townsend	Yes
The Jolly Regina	Kara LaReau	2017	Amulet Books	Abrams	Tamar Brazis	Barry Goldblatt	Yes
Nevermoor	Jessica Townsend	2017	Little, Brown & Co.	Hachette	Alvina Ling	Gemma Cooper	Yes
Orphan Island	Laurel Snyder	2017	Walden Pond Press	HarperCollins	Jordan Brown	Tina Wexler	Yes
Wonderling	Mira Bartok	2017	Candlewick Press			Jennifer Gates	Yes
Pax	Sarah Pennypacker	2016	Balzer + Bray	HarperCollins	Donna Bray	Steven Malk	No
Gertie's Leap to Greatness	Kate Beasley	2016	Farrar, Straus, & Giroux				Yes
Foxheart	Claire LeGrande	2016	Greenwillow Books	HarperCollins			Yes
The Wild Robot	Peter Brown	2016	Little, Brown & Co.	Hachette	Alvina Ling	Paul Rodeen	No
The Thing about Jellyfish	Ali Benjamin	2015	Little, Brown & Co.	Hachette	Andrea Spooner	Mollie Glick	Yes
The Witch's Boy	Kelly Barnhill	2014	Algonquin Young Readers	Algonquin Books of Chapel Hill			Yes
A Snicker of Magic	Natalie Lloyd	2014		Scholastic	Mallory Kass	Suzie Townsend	Yes
The Real Boy	Anne Ursu	2013	Walden Pond Press	HarperCollins			No
Peter Nimble and His Fantastic Eyes	Jonathan Auxier	2011	Amulet Books	Abrams	Tamar Brazis		Yes

## TO CREATE A TABLE USING EXISTING DATA

- Select all data and column headings.
- Click **Home** → **Format as Table**.
- Choose a table style.
- Click **OK** in the dialog box.

# TABLE TOOLS FORMAT TAB

The image shows the Microsoft Excel ribbon for the Table Tools Design tab. The ribbon is divided into several groups: Properties, Tools, External Table Data, Table Style Options, and Table Styles. Red arrows point from text annotations to specific features in the ribbon:

- Convert to Range** (Tools group): Turn from a table back to a normal cell range
- Total Row** (Table Style Options group): Add a Total Row at the bottom of your table
- Header Row** (Table Style Options group): Add a Header Row at the top of your table
- Banded Rows** (Table Style Options group): Alternate shading between rows or columns
- Table Styles** (Table Styles group): Choose a preset table style

# SORT AND FILTER

	Title	Author	Year Published	Imprint	Publisher	Editor	Agent	Read?
1								
2								
3	The Missing Piece of	Rebecca K.S. Ansari	2019	Walden Pond Press	H		Tina Dubois	No
4	The Lost Girl	Anne Ursu	2019	Walden Pond Press	H			No
5	Sweep	Jonathan Auxier	2018	Amulet Books	A			Yes
6	The Extremely Inconvenient Adventures of Bronte Mettlestone	Jaclyn Moriarty	2018	Arthur A. Levine	Sc		Jill Grinberg	Yes
7	The Incorrigeble Children of Ashton Place: The Long-Lost Home	Maryrose Wood	2018	Balzer + Bray	H			Yes
8	Legend of the Lost Causes	McLelland/Sylvester	2018	Henry Holt & Co.	M			No
9	The Night Diary	Veera Hiranandani	2018	Penguin Young Readers Group	Pe		Sara Crowe	No
10	Shadow Weaver	MarcyKate Connolly	2018	Sourcebooks Jabberwocky	Sc		Suzie Townsend	Yes
11	The Jolly Regina	Kara LaReau	2017	Amulet Books	A		Barry Goldblatt	Yes
12	Nevermoor	Jessica Townsend	2017	Little, Brown & Co.	H		Gemma Cooper	Yes
13	Orphan Island	Laurel Snyder	2017	Walden Pond Press	H		Tina Wexler	Yes
14	Wonderling	Mira Bartok	2017		C		Jennifer Gates	Yes
15	Pax	Sarah Pennypacker	2016	Balzer + Bray	H		Steven Malk	No
16	Gertie's Leap to Greatness	Kate Beasley	2016	Farrar, Straus, & Giroux				
17	Foxheart	Claire LeGrande	2016	Greenwillow Books	H			Yes
18	The Wild Robot	Peter Brown	2016	Little, Brown & Co.	Hachette	Alvina Ling	Paul Rodeen	No
19	The Thing about Jellyfish	Alli Benjamin	2015	Little, Brown & Co.	Hachette	Andrea Spooner	Mollie Glick	Yes
20	The Witch's Boy	Kelly Barnhill	2014	Algonquin Young Readers	Algonquin Books of Chapel Hill			
21	A Snicker of Magic	Natalie Lloyd	2014		Scholastic	Mallory Kass	Suzie Townsend	Yes
22	The Real Boy	Anne Ursu	2013	Walden Pond Press	HarperCollins			No
23	Peter Nimble and His Fantastic Eyes	Jonathan Auxier	2011	Amulet Books	Abrams	Tamar Brazis		Yes

Publisher	Editor	Agent
	Sort A to Z	
	Sort Z to A	Tina Dubois
	Sort by Color	
	Clear Filter From "Editor"	
	Filter by Color	Jill Grinberg
	Text Filters	
	Search	
	<input checked="" type="checkbox"/> (Select All)	
	<input checked="" type="checkbox"/> Alvena Ling	Sara Crowe
	<input checked="" type="checkbox"/> Andrea Spooner	Suzie Townsend
	<input checked="" type="checkbox"/> Annie Berger	Barry Goldblatt
	<input checked="" type="checkbox"/> Arthur Levine	Gemma Cooper
	<input checked="" type="checkbox"/> Charlie Kochman	Tina Wexler
	<input checked="" type="checkbox"/> Donna Bray	Jennifer Gates
	<input checked="" type="checkbox"/> Jordan Brown	Steven Malk
	<input checked="" type="checkbox"/> Liz Szabla	
	<input checked="" type="checkbox"/> Mallory Kass	
	OK	Cancel

- Click **"Sort A to Z"** for ascending order.
- Click **"Sort Z to A"** for descending order.

## SORT AND FILTER

Click the pull-down arrow beside the column header.

All of the filtering commands are highlighted (though some are inactive because there is currently no filter in use).

Check or uncheck values and then click OK. Filtered rows have now been left out of the display.

The pull-down arrow beside the column header will show a funnel icon indicating that a filter is in use.

The screenshot shows an Excel spreadsheet with a table of books. The columns are Title, Author, Year Published, Imprint, and Publisher. The 'Author' column has a filter icon (funnel) next to its header. The 'Text Filters' menu is open, showing a list of authors with checkboxes. A red arrow points from the text instructions to the pull-down arrow on the Author column header.

Title	Author	Year Published	Imprint	Publisher
		2019	Walden Pond Press	HarperCollins
		2019	Walden Pond Press	HarperCollins
		2018	Amulet Books	Abrams
		2018	Arthur A. Levine	Scholastic
			+ Bray	HarperCollins
			Holt & Co.	Macmillan
			n Young Readers Group	Penguin Random H
			books Jabberwocky	Sourcebooks, Inc.
			: Books	Abrams
			rown & Co.	Hachette
			n Pond Press	HarperCollins
		2017		Candlewick Press
		2016	Balzer + Bray	HarperCollins
		2016	Farrar, Straus, & Giroux	
		2016	Greenwillow Books	HarperCollins
		2016	Little, Brown & Co.	Hachette
		2015	Little, Brown & Co.	Hachette
		2014	Algonquin Young Readers	Algonquin Books of
		2014		Scholastic
		2013	Walden Pond Press	HarperCollins

# CONDITIONAL FORMATTING

Select a range of data that you want to format with conditional formatting.

Click **Home** → **Conditional Formatting**.

Choose the type of condition you want to apply, then choose the formatting. The formatting will apply only to those cells in your cell range that meet the condition you set.

The screenshot shows an Excel spreadsheet with a table of books. The 'Year Published' column is selected, and the 'Greater Than...' dialog box is open, showing the condition '2015' and the formatting 'Yellow Fill with Dark Yellow Text'. A red arrow points from the text 'Choose the type of condition you want to apply...' to the 'Greater Than...' dialog box.

Title	Author	Year Published	Imprint
The Thing about Jellyfish	Ali Benjamin	2015	Little, Brown & Co.
The Lost Girl	Anne Ursu	2019	Walden Pond Press
The Real Boy	Anne Ursu	2013	Walden Pond Press
Breadcrumbs	Anne Ursu	2011	Walden Pond Press
The Girl who Circumnavigated Fairyland in a Ship of Her Own			
Making	Catherynne Valente	2011	Feiwel and Friends
Foxheart	Claire LeGrande	2016	Greenwillow Books
The Extremely Inconvenient Adventures of Bronte Mettlestone	Jaclyn Moriarty	2018	Art
The Penderwicks	Jeanne Birdsall	2005	Kn
Diary of a Wimpy Kid	Jeff Kinney		Sou
Nevermoor	Jessica Townsend	2017	
Sweep	Jonathan Auxier	2018	Am
Peter Nimble and His Fantastic Eyes	Jonathan Auxier	2011	Am
The Jolly Regina	Kara LaReau	2017	Am
Gertie's Leap to Greatness	Kate Beasley	2016	Farrar, Straus, & Giroux
The Witch's Boy	Kelly Barnhill	2014	Algonquin Young Readers
Orphan Island	Laurel Snyder	2017	Walden Pond Press
Shadow Weaver	MarcyKate Connelly	2018	Sourcebooks, Jabberwocky

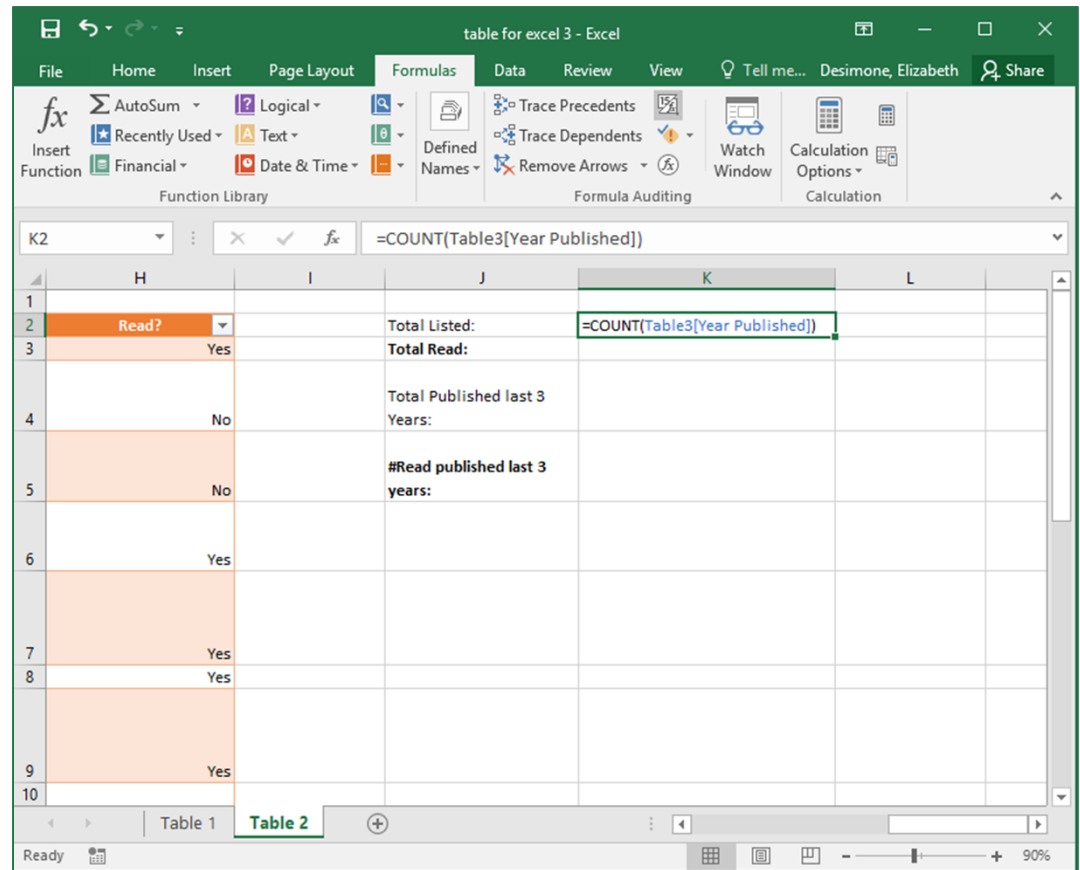


# COUNT

The **COUNT** function counts the number of cells in a range that contain numbers.

You can find the COUNT function in **AutoSum** or **Statistical** in the Formulas tab. Then select the appropriate cell range.

Alternatively, you can type:  
**=COUNT(value1,[value2])**



# COUNTIF

The **COUNTIF** function is a combination of a COUNT and an IF function. It counts the number of cells within a range that meet the given condition.

You can find COUNTIF under the **Statistical** category in the Function Library.

The screenshot shows an Excel spreadsheet with a table and a dialog box. The table has columns H, I, J, and K. The data in the table is as follows:

	H	I	J	K
1				
2	Read?		Total Listed:	=COUNT(Table3[Year Published])
3	Yes		Total Read:	=COUNTIF(Table3[Read?],"Yes")
4	No		Total Published last 3 Years:	=COUNTIF(Table3[Year Published],>2015)
5	No		#Read published last 3 years:	

The Function Arguments dialog box for COUNTIF is open, showing the following details:

- Function: COUNTIF
- Range: H3:H30
- Criteria: "Yes"
- Formula result: 17

The dialog box also includes a description: "Counts the number of cells within a range that meet the given condition. Criteria is the condition in the form of a number, expression, or text that defines which cells will be counted." and buttons for "OK" and "Cancel".

# COUNTIFS

The **COUNTIFS** function counts the number of cells specified by a given set of conditions or criteria. It's like the COUNTIF function, except that you can put in multiple criteria and ranges.

The screenshot shows the Microsoft Excel interface with the 'Formulas' tab selected. The formula bar displays the formula: `=COUNTIFS(Table3[Year Published], ">2015", Table3[Read?], "Yes")`. The spreadsheet below shows a table with columns I, J, and K. Row 5 is highlighted, showing the formula `=COUNTIFS(Table3[Year Published], ">2015", Table3[Read?], "Yes")` in cell K5. A 'Function Arguments' dialog box is open, showing the arguments for the COUNTIFS function: Criteria\_range1: Table3[Year Published], Criteria1: >2015, Criteria\_range2: Table3[Read?], Criteria2: Yes, and the result is 9.

# FREEZE PANES

- Click in the row you want to freeze.
- Click **View** → **Freeze Panes** → **Freeze Panes**.

The top screenshot shows the Excel ribbon with the 'View' tab selected. The 'Freeze Panes' dropdown menu is open, showing three options: 'Freeze Panes', 'Freeze Top Row', and 'Freeze First Column'. The 'Freeze Panes' option is highlighted with a red box. The bottom screenshot shows the same Excel window with the 'Freeze Panes' option selected, and a table of book data is visible below.

Title	Author	Year Published	Imprint	Publisher	Editor	Agent	Read?
The Thing about Jellyfish	Alli Benjamin	2015	Little, Brown & Co.	Hachette			Yes
The Lost Girl							
The Real Boy							
Breadcrumbs							
The Girl who Circumnavigated France in a Ship of Her Own Making							
Foxheart							
The Extremely Inconvenient Adventures of Bronte Mettle							
The Penderwicks							
The Incurable Children of Ashton Place: The Mysterious Howling	Maryrose Wood	2010	Balzer + Bray	HarperCollins	Donna Bray	Elizabeth Kaplan	Yes
Legend of the Lost Causes	McLelland/Sylvester	2018	Henry Holt & Co.	Macmillan			No
Wonderling	Mira Bartok	2017		Candlewick Press		Jennifer Gates	Yes
A Snicker of Magic	Nattalie Lloyd	2014		Scholastic	Mallory Kass	Suzie Townsend	Yes
The Wild Robot	Peter Brown	2016	Little, Brown & Co.	Hachette	Alvina Ling	Paul Rodeen	No
The Missing Piece of Charlie O'Reilly	Rebecca K.S. Ansari	2019	Walden Pond Press	HarperCollins	Jordan Brown	Tina Dubois	No
Pax	Sarah Pennypacker	2016	Balzer + Bray	HarperCollins	Donna Bray	Steven Malk	No
Clementine	Sarah Pennypacker	2006	Hyperion Books for Children	Disney Book Group			No
The Mysterious Benedict Society	Trenton Lee Stewart	2007	Little, Brown & Co.	Hachette			Yes
The Night Diary	Veera Hiranandani	2018	Penguin Young Readers Group	Penguin Random House	Namrata Tripathi	Sara Crowe	No

# VLOOKUP

**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.

2. Select the **table array** by clicking and dragging the column headings.

3. Choose the column you want to pull data from

	A	B	C	D	E	F	G	H
1		English	Math	History	Art	Music	Science	Foreign Language
2	Arya Stark	93	77	61	68	77	66	82
3	Brienne Tarth	89	68	86	65	83	68	73
4	Cersei Lannister	80	72	68	74	74	64	87
5	Daenerys Targaryen	100	70	71	86	68	81	65
6	Davos Seaworth	81	82	68	75	63	76	62
7	Ellaria Sand	80	77	63	99	98	69	88
8	Joffrey Baratheon	100	71	100	92	90	65	62
9	Jon Snow	62	74	85	60	66	84	99
10	Jorah Mormont	61	95	72	60	65	89	64
11	Khal Drogo	92	96	90	95	81	82	96
12	Lysa Arryn	64	87	71	89	95	78	88
13	Meera Reed	96	70	97	79	96	94	82
14	Oberyn Martell	68	88	72	67	70	96	90
15	Olenna Tyrell	98	77	97	81	92	61	71
16	Petyr Baelish	74	80	89	93	99	88	99
17	Samwell Tarly	95	63	97	97	88	76	70
18	Sandor Clegane	80	73	72	93	84	83	78
19	Tyrian Lannister	91	91	87	66	77	73	87
20	Yara Greyjoy	64	63	79	96	74	83	70

1. Pick a value in the leftmost column (lookup value)

4. Indicate if you want an exact match or a best fit.

# VLOOKUP

You can find the VLOOKUP function under Lookup & Reference in the Function Library.

The cell we're looking up in the first column

The table where the data is located

Type in the number of the column (A=1, B=2, etc.) for the data you're pulling

FALSE for an exact match, TRUE for a best fit

Function Arguments

VLOOKUP

Lookup_value	A6	= "Yara Greyjoy"
Table_array	A:D	= {...}
Col_index_num	3	= 3
Range_lookup	FALSE	= FALSE

Formula result = 25

[Help on this function](#)

OK Cancel

=VLOOKUP(A6,A:D,3,FALSE)

## ARRAY FORMULAS

**Array formulas** are formulas that operate on every cell in a selection rather than on a single cell.

To calculate an array formula, hit **Ctrl + Shift + Enter**. This will add brackets to your formula in the Formula Bar.

In this example, we can calculate the total value of our inventory with an array formula.

	A	B	C	D	E	F
1	Stock No.	Quantity	Price			
2	1	548	2.99			
3	2	884	5.99			
4	3	97	29.99			
5	4	365	4.99			
6	5	153	9.99			
7						
8	total	=sum(B2:B6*C2:C6				
9						
10						



# ADDITIONAL RESOURCES

Additional helpful resources can be accessed through our homepage [www.jplibrary.net](http://www.jplibrary.net)

- From the JPL homepage, click on the **Digital Content Tutorials** (blue rectangle) next scroll bar.

- After the course menu opens, click Full Screen at the top of the course menu to view tutorials.

The screenshot shows the Jefferson Parish Library homepage. At the top, there is a navigation menu with links like Home, Locations, Services, Reference, Policies, Library Info, ILL, Catalog, Digital Content, Databases, Childrens/Teens/Adults, Calendars, and Contact Us. Below the navigation is a search bar and a 'Select Language' dropdown. The main content area features a large orange notice about repairs at the East Bank Regional Library, a 'HOW TO RENEW ITEMS' box, and a 'Books by Mail' box. On the right side, there is a vertical sidebar with a blue button labeled 'Digital Content Tutorials'. A red arrow points from this button to the 'Full Screen' button in the second screenshot.

The screenshot shows the 'JPL Digital Content Tutorials' menu. At the top right, there is a 'Full Screen' button with a red arrow pointing to it. Below the button is a list of tutorial categories, each with a right-pointing arrow: 'The Great Job Hunt at JPL', '\*\*Click and Learn JPL Digital Content Apps', '\*\*JPL's Basic Computer Skills Learning Guide', '\*Homework Louisiana (Tutor.com) Tutorial -- Real experts, waiting to help you now', '\*Internet Basics', '\*Joining Cisco Webex Meetings', '\*Learn to Use Your Chromebook', '\*Zoom - Let's learn to use it!', 'Advanced Internet Search Techniques', 'Ancestry Library Edition Tutorial -- Access Billions of Genealogical Records', 'AtoZ World Food', and 'Auto Repair Source - Automotive Information'.



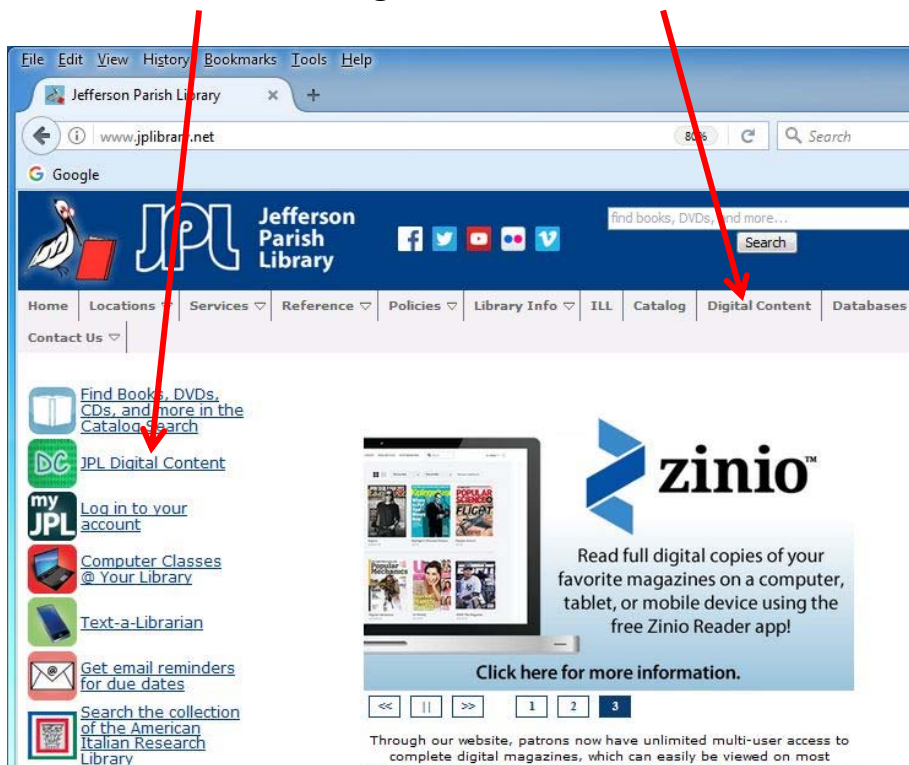


## ADDITIONAL RESOURCES

Additional helpful resources can be accessed through our homepage [www.jplibrary.net](http://www.jplibrary.net)

- From the library's homepage, click on the **JPL Digital Content** link or the **Digital Content** menu tab.

- Then click on the **LinkedIn Learning** icon to access online training using your library card number and pin.



Lynda.com is now LinkedIn Learning.



## ***NOTES***

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