

<b>LESSON TYPE:</b>	<i>Instructions/tips:</i> Use this template for core lessons in your program. Do not use for intro/summary lessons or summative assessment lessons.
<b>CORE CURRICULUM LESSON</b>	<i>Do not overwrite any blue text in the template.</i>
<b>SELF-GRADED FORMAT</b>	
<b>LESSON TITLE</b>	<p><i>Instructions/tips:</i> Refer to program outline.</p> <p><b>Filtering Data</b></p>
<b>LEARNING OBJECTIVE</b>	<p><i>Instructions/tips:</i> The learning objective should:</p> <ol style="list-style-type: none"> <li>1) Match the program outline, and</li> <li>2) Be measurable, specific, and observable.</li> </ol> <p>In completing this lesson, you will be able to filter spreadsheet data to identify information on business reports.</p>
<b>OVERVIEW</b>	<p><i>Instructions/tips:</i> One high-level paragraph (25-75 words) on what the lesson will cover and why it is important that the learner knows it. It should provide a bird's eye view of what the student will learn; connect the learning objective to the specific skills, topics, or tools the student will practice or use; and/or help contextualize the lesson within the module, course, or program. This section should not contain any assessable content. Note that this field cannot support any special text formatting, citations, links, etc.</p> <p>This lesson will teach you how to sort and filter data in a spreadsheet, which are essential skills for frontline leaders. Sorting and filtering data helps you to quickly find and organize information, identify patterns and trends, and make informed decisions. These tools are beneficial when dealing with large amounts of data and can improve efficiency and provide valuable insights that may have otherwise gone unnoticed.</p>
	<p><i>Instructions/tips:</i> As a guide, if it is the first time a new term is introduced, you should define it here. In the finished lesson, the definition will pop up over the term when a student hovers their mouse over it. Please list key terms in the order in which they appear in the lesson.</p> <p><b>[Insert content in the format here. If none, insert "N/A"]</b></p>
<b>KEY TERMS</b>	<ul style="list-style-type: none"> <li>• Cell: The intersection of a column and row (such as A1, B2, or C3)</li> <li>• Sort: arrange content in a particular order</li> <li>• Filter: show only relevant information and hide irrelevant information</li> <li>• Formulas: Expressions that perform calculations or data manipulations on cells or ranges</li> </ul>

	<ul style="list-style-type: none"> <li>Condition: the rule for a formula that must be followed</li> </ul>
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LESSON BODY (CONTENT FIELD IN CONTENTFUL)	
<p><i>Instructions/tips:</i></p> <ul style="list-style-type: none"> <li>Below is the lesson body. As you add content to the lesson body, remember that you can use media, inline knowledge checks, lists, tables, special text formatting, and links. Examples of how to indicate these in the manuscript are provided below.</li> <li>Rely on headers and sub-headers to break up information. See header and sub-header formatting below.</li> <li>Word count should be 700-1500 words; the sweet spot for learning retention is shorter.</li> <li>Use examples to illustrate concepts, and always make sure to connect a concept with the "why" it is relevant to working in the field.</li> </ul>	

## Introduction

Knowing how to sort and filter information in a spreadsheet is important for anyone who works with data, including frontline leaders. As a frontline leader, you will use these tools to quickly find and organize information, see patterns and trends, and make informed decisions. Sorting and filtering data is especially useful for handling large amounts of data, as it saves time and enables you to quickly find the information you need. By learning these skills, you can improve your efficiency, use data better, and gain insights that may have been less obvious otherwise. In this lesson, you will learn how to sort data by topic and filter data to only see the information that is important to the work you are doing.

VIDEO	
<i>Instructions/tips:</i> SMEs/IDs fill out the video title. Media producer populates link when ready.	
Vid eo titl e	<b>Demo: Filtering Data</b>
Vid eo link (fro m Kal tur a)	<a href="https://cdnapisec.kaltura.com/p/2315191/sp/231519100/embedIframeJs/uiconf_id/45331192/partner_id/2315191?iframeembed=true&amp;playerId=kaltura_player_1685125904&amp;entry_id=1_cijamx93">https://cdnapisec.kaltura.com/p/2315191/sp/231519100/embedIframeJs/uiconf_id/45331192/partner_id/2315191?iframeembed=true&amp;playerId=kaltura_player_1685125904&amp;entry_id=1_cijamx93</a>

## Sorting Data

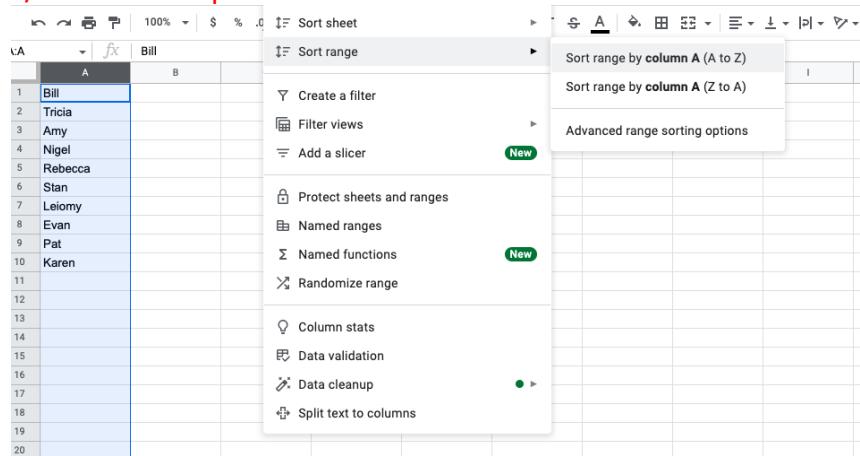
Being able to sort data in a spreadsheet is one of the most basic yet most essential skills for a frontline leader. Being able to sort data by one measurement, such as price, location, or time can save you a lot of time and will enable you to make decisions more quickly. For this lesson, we will be using Google Sheets to sort data, but the information will be the same for Excel.

### Sorting one column of data

1. Determine which column of data you wish to sort and click the column letter to highlight that column.
2. Click on the 'data' menu at the top of the navigation bar. There you will have two options to sort at the top: "sort sheet" and "sort range". Since you are only sorting by the range of Column A, hover over the option "sort range".
3. Now, you will see two options: to "sort ascending (A to Z)" or "descending (Z to A)". If your data contains numbers, ascending will sort them from smallest to largest, and descending will sort them from largest to smallest. Select your preference to see your data sorted in the way that you want.

Go-by image: screenshots of simple data sorting showing steps 1-3 (Slide 1)

[https://docs.google.com/presentation/d/11SGHXaUzS3V4yOWLsnhyZq1\\_SBhmbkoITS0BEREh8ik/edit#slide=id.p](https://docs.google.com/presentation/d/11SGHXaUzS3V4yOWLsnhyZq1_SBhmbkoITS0BEREh8ik/edit#slide=id.p)



Click on the 'data' menu, select 'sort range' and 'sort range by column A' (A to Z)

IMAGE	
<i>Instructions/tips:</i> Add the image screenshot (as seen above) for reference and the information below.	
Link to image	<a href="#">081_FL-3-1-5_Screenshot_Datasorting_Go-by.jpg</a>
Image filename	[Insert image filename.] Example: [158_UI-1-1-01_CustomGif_Sonos-website]
<i>Note for tech editor:</i> The filename will be the best way to locate the image in Contentful.	

Go-by image: screenshot of step 3 (Slide 2)

[https://docs.google.com/presentation/d/11SGHXaUzS3V4yOWLsnhyZq1\\_SBhmbkoITS0BEREh8ik/edit#slide=id.p](https://docs.google.com/presentation/d/11SGHXaUzS3V4yOWLsnhyZq1_SBhmbkoITS0BEREh8ik/edit#slide=id.p)

A:A	A	B
1	Amy	
2	Bill	
3	Evan	
4	Karen	
5	Leiomy	
6	Nigel	
7	Pat	
8	Rebecca	
9	Stan	
10	Tricia	
11		
12		
13		

The sorted results

IMAGE

*Instructions/tips:* Add the image screenshot (as seen above) for reference and the information below.

Link to image [\[082\\_FL-3-1-5\\_Screenshot\\_Sorteddataresults\\_Go-by.jpg\]](#) Example: [Link to image](#)

Image filename [\[Insert image filename.\]](#) Example: [\[158\\_UI-1-1-01\\_CustomGif\\_Sonos-website\]](#)

*Note for tech editor:* The filename will be the best way to locate the image in Contentful.

## Sorting a spreadsheet by one column of data

Now that you have an idea of what sorting can do, let's apply it to a spreadsheet that you will most likely encounter in your daily work as a frontline leader. Suppose you have been given a spreadsheet with inventory data. You wish to sort the data by which products you should add to your next inventory order. In column F, the data indicating which items you need to order and their quantity, have been provided.

Go-by image: sample spreadsheet of inventory data (spreadsheet) (Slide 3)

[https://docs.google.com/presentation/d/11SGHXaUzS3V4yOWLsnhyZq1\\_SBhmbkoITS0BEREh8ik/edit#slide=id.p](https://docs.google.com/presentation/d/11SGHXaUzS3V4yOWLsnhyZq1_SBhmbkoITS0BEREh8ik/edit#slide=id.p)

	A	B	C	D	E	F	G	H	I
1	Anywhere Retail Store		Quantity	On Order	Max Quantity	Order Needs	Quantity + Order	Stock Status	Order Status
2	Item ID	Item						1 Out of stock	9 On order
4	1	book	1	2	5	2	3	In Stock	On Order
5	2	chair	7	8	8	0	15	In Stock	On Order
6	3	table	12	20	30	0	32	In Stock	On Order
7	4	lamp	2	3	7	2	5	In Stock	On Order
8	5	pencil	18	5	50	27	23	In Stock	On Order
9	6	pen	20	20	50	10	40	In Stock	On Order
10	7	printer	1	0	1	0	1	In Stock	None
11	8	computer	0	4	8	4	4	Out of Stock	On Order
12	9	keyboard	7	6	7	0	13	In Stock	On Order
13	10	mouse	3	2	3	0	5	In Stock	On Order

1. Select the column number indicating the column you wish to sort by (in this case, column F).
2. Click on the 'data' menu at the top of the navigation bar. Hover over the option "sort sheet".
3. Now, we want to see the biggest numbers first. This will show us which items we need to order. So, click "sort sheet by column G (Z to A)".

IMAGE

*Instructions/tips:* Add the image screenshot (as seen above) for reference and the information below.

<i>Link to image</i>	<a href="#">083 FL-3-1-5 Screenshot_Inventorydataspreadsheet_Go-by.jpg</a>
<i>Image filename</i>	[Insert image filename.] Example: [158_UI-1-1-01_CustomGif_Sonos-website]
<i>Note for tech editor:</i> The filename will be the best way to locate the image in Contentful.	

### Go-by image: screenshot of sort range option (Slide 4)

[https://docs.google.com/presentation/d/11SGHXaUzS3V4yOWLsnhyZq1\\_SBhmbkoITS0BEREh8ik/edit#slide=id.p](https://docs.google.com/presentation/d/11SGHXaUzS3V4yOWLsnhyZq1_SBhmbkoITS0BEREh8ik/edit#slide=id.p)

Item ID	Item	Order Status	Location Code
1	book	In Stock	On Order
2	chair	In Stock	On Order
3	table	In Stock	On Order
4	lamp	In Stock	On Order
5	pencil	In Stock	On Order
6	pen	In Stock	None
7	printer	Out of Stock	On Order
8	computer	In Stock	On Order
9	keyboard	In Stock	On Order
10	mouse	In Stock	On Order

Click on the 'data' menu, select 'sort range' and 'sort range by column F' (Z to A)

Now, we can see the items that we need to order are pencils, pens, computers, books, and lamps. They have been placed at the top of the range, making it easier for us to determine what must be added to the order.

IMAGE	
<i>Instructions/tips:</i> Add the image screenshot (as seen above) for reference and the information below.	
<i>Link to image</i>	<a href="#">[084 FL-3-1-5 Screenshot_Sortrangeoption_Go-by.jpg]</a> Example: <a href="#">Link to image</a>
<i>Image filename</i>	[Insert image filename.] Example: [158_UI-1-1-01_CustomGif_Sonos-website]
<i>Note for tech editor:</i> The filename will be the best way to locate the image in Contentful.	

### Go-by image: screenshot of sorted range (Slide 5)

[https://docs.google.com/presentation/d/11SGHXaUzS3V4yOWLsnhyZq1\\_SBhmbkoITS0BEREh8ik/edit#slide=id.p](https://docs.google.com/presentation/d/11SGHXaUzS3V4yOWLsnhyZq1_SBhmbkoITS0BEREh8ik/edit#slide=id.p)

	A	B	C	D	E	F	G	H	I	J
1	Anywhere Retail Store		Quantity	On Order	Max Quantity	Order Needs	Quantity + Order	Stock Status	Order Status	Location Code
2	Item ID	Item								
4	5	pencil	18	5	50	27	23	In Stock	On Order	
5	6	pen	20	20	50	10	40	In Stock	On Order	
6	8	computer	0	4	8	4	4	Out of Stock	On Order	
7	1	book	1	2	5	2	3	In Stock	On Order	
8	4	lamp	2	3	7	2	5	In Stock	On Order	
9	2	chair	7	8	8	0	15	In Stock	On Order	
10	3	table	12	20	30	0	32	In Stock	On Order	
11	7	printer	1	0	1	0	1	In Stock	None	
12	9	keyboard	7	6	7	0	13	In Stock	On Order	
13	10	mouse	3	2	3	0	5	In Stock	On Order	
14										

The sorted results

Remember, if you make an error, it's ok! Just go to "edit" and click "undo", or click **ctrl+x** on a PC or **command+x** on a Mac to undo and try again.

IMAGE	
<i>Instructions/tips:</i> Add the image screenshot (as seen above) for reference and the information below.	
Link to image	[085_FL-3-1-5_Screenshot_sortedrangeresults.jpg] Example: <a href="#">Link to image</a>
Image filename	[Insert image filename.] Example: [158_UI-1-1-01_CustomGif_Sonos-website]
<i>Note for tech editor:</i> The filename will be the best way to locate the image in Contentful.	

INLINE KNOWLEDGE CHECK	
<i>Instructions/tips:</i> Copy/paste this table to add any inline knowledge check to the lesson. Include multiple knowledge checks per lesson (approximately 1 per section, or 1 per key idea that needs to be reinforced). Recommended question types can be reviewed in the resources below this template.	
Question	How can you sort a set of numbers from lowest to highest?
Option A	Select the column and sort A to Z
Option B	Select the column and sort Z to A
Option C	Select the spreadsheet and filter by Z to A
Distractor Rationale	<p><i>Instructions/tips:</i> This text will be displayed when a student submits any incorrect answer or does not attempt the question. This text is the same for every incorrect answer, so do not include the words "Correct" or "Incorrect."</p> <p>Selecting to sort a column or range from A to Z will sort words alphabetically and numbers from lowest to highest.</p>
<i>Note for tech editor:</i> Add Learnosity Activity ID and Item ID added to outline and Contentful.	

## Filtering Data

Now that you feel more comfortable navigating spreadsheets let's move on to probably the most useful tool in your spreadsheet- being able to filter data. This is a vital tool to master because it allows you to focus on specific data that is relevant to your decision-making. This may include identifying customer

trends for marketing purposes, displaying items needed to adequately resupply inventory, or even analyzing team member's performance in selling to see who may need additional support. Unlike sorting, filtering hides irrelevant data.

### Filtering by a single data point

To continue with the inventory example, you want to know what is out of stock so you can prioritize that in your next order. This means that we will be filtering the data using column H to see what items are out of stock.

Go-by image: screenshot of spreadsheet (Slide 6)

[https://docs.google.com/presentation/d/11SGHXaUzS3V4yOWLsnhyZq1\\_SBhmbkoITS0BErEh8ik/edit#slide=id.p](https://docs.google.com/presentation/d/11SGHXaUzS3V4yOWLsnhyZq1_SBhmbkoITS0BErEh8ik/edit#slide=id.p)

	A	B	C	D	E	F	G	H	I	J
1	Anywhere Retail Store		Quantity	On Order	Max Quantity	Order Needs	Quantity + Order	Stock Status	Order Status	Location Code
2	Item ID	Item								
4	1	book	1	2	5	2	3	In Stock	On Order	
5	2	chair	7	8	8	0	15	In Stock	On Order	
6	3	table	12	20	30	0	32	In Stock	On Order	
7	4	lamp	2	3	7	2	5	In Stock	On Order	
8	5	pencil	18	5	50	27	23	In Stock	On Order	
9	6	pen	20	20	50	10	40	In Stock	On Order	
10	7	printer	1	0	1	0	1	In Stock	None	
11	8	computer	0	4	8	4	4	Out of Stock	On Order	
12	9	keyboard	7	6	7	0	13	In Stock	On Order	
13	10	mouse	3	2	3	0	5	In Stock	On Order	
14	11	stapler	12	7	15	0	19	In Stock	On Order	
15	12	highlighter	75	45	75	0	120	In Stock	On Order	
16	13	paper clip	0	42	50	8	42	Out of Stock	On Order	
17	14	extension cord	9	14	53	30	23	In Stock	On Order	
18	15	monitor	23	21	23	0	44	In Stock	On Order	
19	16	correction tape	6	5	12	1	11	In Stock	On Order	
20	17	marker	15	5	25	5	20	In Stock	On Order	
21	18	bookshelf	0	12	15	3	12	Out of Stock	On Order	
22	19	folder	55	3	60	2	58	In Stock	On Order	
23	20	bookmark	3	0	5	2	3	In Stock	None	

1. Highlight column H
2. Click on the “data” menu at the top of the navigation bar. Select “create a filter”.

IMAGE	
<i>Instructions/tips:</i> Add the image screenshot (as seen above) for reference and the information below.	
Link to image	[086_FL-3-1-5_Screenshot_Singlepointdata_Go-by.jpg] Example: <a href="#">Link to image</a>
Image filename	[Insert image filename.] Example: [158_UI-1-1-01_CustomGif_Sonos-website]
<i>Note for tech editor:</i> The filename will be the best way to locate the image in Contentful.	

Go-by image: screenshot of filtering function (Slide 7)

[https://docs.google.com/presentation/d/11SGHXaUzS3V4yOWLsnhyZq1\\_SBhmbkoITS0BErEh8ik/edit#slide=id.p](https://docs.google.com/presentation/d/11SGHXaUzS3V4yOWLsnhyZq1_SBhmbkoITS0BErEh8ik/edit#slide=id.p)

Anywhere Retail Store		
Item ID	Item	Quantity
1	book	
2	chair	
3	table	
4	lamp	
5	pencil	
6	pen	
7	printer	
8	computer	
9	keyboard	
10	mouse	
11	stapler	
12	highlighter	
13	paper clip	

Click on the 'data' menu, select 'create a filter'

- Now, you will see that next to "Stock Status", there are 3 lines indicating a menu bar. This is where we will choose our filter.

IMAGE	
<i>Instructions/tips: Add the image screenshot (as seen above) for reference and the information below.</i>	
Link to image	[087_FL-3-1-5_Screenshot_Filteringfunction_Go-by.jpg] Example: <a href="#">Link to image</a>
Image filename	[Insert image filename.] Example: [158_UI-1-1-01_CustomGif_Sonos-website]
<i>Note for tech editor: The filename will be the best way to locate the image in Contentful.</i>	

4.

Go-by image: screenshot of filter selections (Slide 8)

[https://docs.google.com/presentation/d/11SGHXaUzS3V4yOWLsnhyZq1\\_SBhmbkoITS0BErEh8ik/edit#slide=id.p](https://docs.google.com/presentation/d/11SGHXaUzS3V4yOWLsnhyZq1_SBhmbkoITS0BErEh8ik/edit#slide=id.p)

Quantity	Stock Status	Order Status
		On Order
		None
		On Order
		None
		On Order
		On Order
		On Order
		None

Now that the filter function is available in column H, click the button to see the items you can filter by.

- At the bottom of the list, our data points are shown. We have a few options here. We can click filter by color, as we know the out-of-stock items are in red. We can filter by values, meaning which cells contain the words “out of stock”, or we can filter by the values that Google Sheets has predetermined at the bottom. Let’s filter by what Google Sheets has predetermined are our data points. Unclick “blanks” and “in stock” because we only want to see what is out of stock. Then, click “ok”.
- Now, you can see the filtered view of your data. Now, you can focus on only what is out of stock.

IMAGE	
<i>Instructions/tips:</i> Add the image screenshot (as seen above) for reference and the information below.	
Link to image	[088_FL-3-1-5_Screenshot_Filterselections_Go-by.jpg] Example: <a href="#">Link to image</a>
Image filename	[Insert image filename.] Example: [158_UI-1-1-01_CustomGif_Sonos-website]
<i>Note for tech editor:</i> The filename will be the best way to locate the image in Contentful.	

Go-by image: screenshot of filtered items (Slide 9)

[https://docs.google.com/presentation/d/11SGHXaUzS3V4yOWLsnhyZq1\\_SBhmbkoITSOBEREh8ik/edit#slide=id.p](https://docs.google.com/presentation/d/11SGHXaUzS3V4yOWLsnhyZq1_SBhmbkoITSOBEREh8ik/edit#slide=id.p)

	A	B	C	D	E	F	G	H	I	J
1	Anywhere Retail Store	Quantity	On Order	Max Quantity	Order Needs	Quantity + Order	Stock Status	Order Status	Location Code	
11	8	computer	0	4	8	4	4	Out of Stock	On Order	
16	13	paper clip	0	42	50	8	42	Out of Stock	On Order	
21	18	bookshelf	0	12	15	3	12	Out of Stock	On Order	

Now, you can see your filtered results, with the other results hidden.

IMAGE	
<i>Instructions/tips:</i> Add the image screenshot (as seen above) for reference and the information below.	
Link to image	[089_FL-3-1-5_Screenshot_Filtereddata_Go-by.jpg] Example: <a href="#">Link to image</a>
Image filename	[Insert image filename.] Example: [158_UI-1-1-01_CustomGif_Sonos-website]
<i>Note for tech editor:</i> The filename will be the best way to locate the image in Contentful.	

INLINE KNOWLEDGE CHECK	
<i>Instructions/tips:</i> Copy/paste this table to add any inline knowledge check to the lesson. Include multiple knowledge checks per lesson (approximately 1 per section, or 1 per key idea that needs to be reinforced). Recommended question types can be reviewed in the resources below this template.	
Question	What is one feature you can do with the filter, but not the sort function?
Option A	Focus on relevant information
Option B	Exclude irrelevant information
Option C	Automate population of spreadsheet data

<p><i>Distractor Rationale</i></p>	<p><i>Instructions/tips: This text will be displayed when a student submits any incorrect answer or does not attempt the question. This text is the same for every incorrect answer, so do not include the words "Correct" or "Incorrect."</i></p>
	<p><b>Unlike the sort feature, the filter feature allows you to exclude irrelevant information, allowing you to focus on the most important data for the task you are doing.</b></p>

*Note for tech editor: Add Learnosity Activity ID and Item ID added to outline and Contentful.*

## Filtering by multiple data points

Now that we can see how useful filtering is, let's apply more than one filter to get an even more specific look at our data. In this case, we will have to write out the formula ourselves, as the preset function only works for one set of data.

In this new example, we are looking at a spreadsheet with the sales and profits of items sold at a national restaurant. The bistros are organized by region. We need to see which items are costing the store money, so that we might replace them with a more profitable item in the future. For this example, we will be entering our formula in cell H5.

Go-by image: screenshot of sales and profits spreadsheet (Slide 10)

[https://docs.google.com/presentation/d/11SGHXaUzS3V4yOWLsnhyZq1\\_SBhmbkoITS0BErEh8ik/edit#slide=id.p](https://docs.google.com/presentation/d/11SGHXaUzS3V4yOWLsnhyZq1_SBhmbkoITS0BErEh8ik/edit#slide=id.p)

	A	B	C	D	E	F	G	H	I	J	K
1	Anytown Bistro and Cafe										
4	Division	Region	Type	Sales	Profit		Region	Type	Sales	Profit	
5	F&B	North	coffee	927	612						
6	F&B	South	egg sandwich	8,042	5,227						
7	F&B	East	muffin	4,469	2,726						
8	F&B	East	orange juice	497	-383						
9	F&B	South	coffee	7,148	4,360						
10	F&B	West	scone	0	0						
11	F&B	East	egg sandwich	993	794						
12	F&B	North	candy	9,267	6,858						
13	F&B	West	milkshake	0	-45						
14	F&B	East	cupcake	1,490	939						
15	F&B	West	candy	5,108	3,576						
16	F&B	East	candy	15,890	11,918						
17	F&B	South	candy	5,361	3,270						
18	F&B	East	bottled water	3,972	2,661						
19	F&B	Central	candy	4,378	3,196						
20	F&B	North	milkshake	9,731	6,422						
21	F&B	West	cupcake	0	0						
22	F&B	South	lemon loaf	447	-121						
23	F&B	East	tea	2,979	2,056						
24	F&B	North	tea	2,317	1,390						
25	F&B	North	gift cards	2,317	1,807						
26	F&B	West	bottled water	0	0						
27	F&B	North	egg sandwich	1,390	959						
28	F&B	South	orange juice	4,468	2,860						
29	F&B	West	orange juice	12,771	8,429						
30	F&B	South	tea	894	563						
31	F&B	Central	coffee	7,443	4,689						
32	F&B	South	cupcake	6,701	4,892						
33	F&B	West	lemon loaf	2,554	1,737						
34	F&B	South	gift cards	1,340	1,005						
35	F&B	West	tea	8,514	6,726						
36	F&B	North	lemon loaf	1,853	1,482						

IMAGE

*Instructions/tips:* Add the image screenshot (as seen above) for reference and the information below.

Link to image	[090_FL-3-1-5_Screenshot_Salesandprofitsspreadsheet_Go-by.jpg] Example: <a href="#">Link to image</a>
Image filename	[Insert image filename.] Example: [158_UI-1-1-01_CustomGif_Sonos-website]
<i>Note for tech editor:</i> The filename will be the best way to locate the image in Contentful.	

Here, we want to only see items for which the sales are greater than or equal to zero, *and* the profit is less than zero. So. we are going to filter our data within columns D and E. In this case, we need to use a **formula** to sort our data. All filtering formulas will begin with **=FILTER()**. The first step we must include in our filter is to define our range. We want to be able to see the region, type of product, sales, and profit for each item that matches our criteria, so we will select those columns as our range:

**=filter(B5:E**

Now, let's continue with our first condition: The sales must be greater than or equal to zero, so we will use the greater than sign **>** and the equal sign **=** to show that the D column must be greater than or equal to zero. We will separate the parts of our formula with commas and continue to build our filter:

**=filter(B5:E, D5:D>=0**

Now, for our second condition, our profits must be less than zero, so we will use the less than sign **<** to denote this, and then close out our formula with a closed parenthesis).

**=filter(B5:B, D5:D>=0, E5:E<0)**

**Go-by image: screenshot of spreadsheet with filter formula (Slide 11)**

[https://docs.google.com/presentation/d/11SGHXaUzS3V4yOWLsnhyZq1\\_SBhmbkoITS0BErEh8ik/edit#slide=id.p](https://docs.google.com/presentation/d/11SGHXaUzS3V4yOWLsnhyZq1_SBhmbkoITS0BErEh8ik/edit#slide=id.p)

Anytown Bistro and Cafe					=filter(B5:E, D5:D>=0, E5:E<0)			
Division	Region	Type	Sales	Profit	Region	Type	Sales	Profit
F&B	North	coffee	927	612				
F&B	South	egg sandwich	8,042	5,227				
F&B	East	muffin	4,469	2,726				
F&B	East	orange juice	497	-383				
F&B	South	coffee	7,148	4,360				
F&B	West	scone	0	0				
F&B	East	egg sandwich	993	794				
F&B	North	candy	9,267	6,858				
F&B	West	milkshake	0	-45				
F&B	East	cupcake	1,490	939				
F&B	West	candy	5,108	3,576				
F&B	East	candy	15,890	11,918				
F&B	South	candy	5,361	3,270				
F&B	East	bottled water	3,972	2,661				
F&B	Central	candy	4,378	3,196				
F&B	North	milkshake	9,731	6,422				
F&B	West	cupcake	0	0				
F&B	South	lemon loaf	447	-121				
F&B	East	tea	2,979	2,056				
F&B	North	tea	2,317	1,390				
F&B	North	gift cards	2,317	1,807				

The filter formula is placed where we want the data to appear.

IMAGE	
<i>Instructions/tips:</i> Add the image screenshot (as seen above) for reference and the information below.	
Link to image	[091_FL-3-1-5_Screenshot_Filterformula_Go-by.jpg] Example: <a href="#">Link to image</a>
Image filename	[Insert image filename.] Example: [158_UI-1-1-01_CustomGif_Sonos-website]
<i>Note for tech editor:</i> The filename will be the best way to locate the image in Contentful.	

When we hit the enter button, our formula will stay in the formula bar at the top, but the data we want will appear:

### Go-by image: screenshot of filtered data (Slide 12)

[https://docs.google.com/presentation/d/11SGHXaUzS3V4yOWLsnhyZq1\\_SBhmbkoITS0BERh8ik/edit#slide=id.p](https://docs.google.com/presentation/d/11SGHXaUzS3V4yOWLsnhyZq1_SBhmbkoITS0BERh8ik/edit#slide=id.p)

Anytown Bistro and Cafe											
	A	B	C	D	E	F	G	H	I	J	K
1	Division	Region	Type	Sales	Profit	Region	Type	Sales	Profit		
5	F&B	North	coffee	927	612	East	orange juice	497	-383		
6	F&B	South	egg sandwich	8,042	5,227	West	milkshake	0	-45		
7	F&B	East	muffin	4,469	2,726	South	lemon loaf	447	-121		
8	F&B	East	orange juice	497	-383	North	bottled water	927	-14		
9	F&B	South	coffee	7,148	4,360	West	muffin	0	-575		
10	F&B	West	scone	0	0						
11	F&B	East	egg sandwich	993	794						
12	F&B	North	candy	9,267	6,858						
13	F&B	West	milkshake	0	-45						
14	F&B	East	cupcake	1,490	939						
15	F&B	West	candy	5,108	3,576						
16	F&B	East	candy	15,890	11,918						
17	F&B	South	candy	5,361	3,270						
18	F&B	East	bottled water	3,972	2,661						
19	F&B	Central	candy	4,378	3,196						
20	F&B	North	milkshake	9,731	6,422						
21	F&B	West	cupcake	0	0						
22	F&B	South	lemon loaf	447	-121						
23	F&B	East	tea	2,979	2,056						
24	F&B	North	tea	2,317	1,390						
25	F&B	North	gift cards	2,317	1,807						
26	F&B	West	bottled water	0	0						
27	F&B	North	egg sandwich	1,390	959						
28	F&B	South	orange juice	4,468	2,860						
29	F&B	West	orange juice	12,771	8,429						
30	F&B	South	tea	994	563						

Filtered results are displayed.

IMAGE	
<i>Instructions/tips:</i> Add the image screenshot (as seen above) for reference and the information below.	
Link to image	[092_FL-3-1-5_Screenshot_Filtereddataresults_Go-by.jpg] Example: <a href="#">Link to image</a>
Image filename	[Insert image filename.] Example: [158_UI-1-1-01_CustomGif_Sonos-website]
<i>Note for tech editor:</i> The filename will be the best way to locate the image in Contentful.	

Now, we can see which items are causing our store to lost profit. Now, we can help our regional managers make more informed decision the next time it is time to complete a food order.

## Conclusion

In conclusion, knowing how to sort and filter data in a spreadsheet is vital when working in frontline industries. These tools will enable you to quickly find and organize information, identify patterns and trends, and make informed decisions. Sorting and filtering data will be particularly useful for you when dealing with large amounts of data, as it saves time and helps you quickly find the information you need. Improving your understanding of these basics can lead to increased efficiency, smarter use of data, and gaining insights that could potentially help your organization succeed.

## Additional Resources

- [Sort and Filter Your Data](#) (Google Docs Help Page)
- Resource Name <linked> (Resource type)
- Resource Name <linked> (Resource type)

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### END-OF-LESSON KNOWLEDGE CHECK (SELF-GRADED FORMAT) (ASSESSMENT COMPONENT IN CONTENTFUL)

*Instructions/tips:* Below is the end-of-lesson “assessment” content. For core lessons, an autograded knowledge check is recommended. This template has the self-graded format knowledge check.

**Self-graded format:** This format usually requires the student to create some type of artifact or deliverable, and it should include a self-graded checklist and/or an example submission so the student can assess their own work. There’s example content for this format at the end of this template.

- Checklists are binary (yes/no statements); the correct answer should always be yes.
- Example submissions are added as files/images and annotated for what works/doesn’t work.
- Add demo videos or images as needed. Any images must also be logged in the art log.

**Notes for tech editor:** Checklists can be built in Learnosity as Choice Matrix questions. Example submissions, demo videos, or images are likely added to the Contentful assessment instructions.

TYPE	Autograded
FORMAT	Self-graded
INSTRUCTIONS (ASSESSMENT INSTRUCTIONS IN CONTENTFUL)	<p><i>Instructions/tips:</i> Note that you will have summarized what was covered in the lesson in the Conclusion, and that should not be repeated here. Add instructions only in the following cases:</p> <ul style="list-style-type: none"><li>• If the student would not otherwise understand how to proceed</li><li>• To provide specific steps (enumerated or bulleted) on how to complete or context for the whole assessment</li><li>• To provide a file, demo video, or exemplar needed to complete the assessment successfully</li></ul>

	<p>Spreadsheet: <a href="#">3.1.5 Assessment</a></p> <p>You are the store manager for BimBam Quik Mart. Using the spreadsheet provided, you will need to filter the information on the spreadsheet to show the following information:</p> <ul style="list-style-type: none"> <li>• Customers who have purchased more than 5 items, and</li> <li>• Customers who have made a purchase of more than \$50.00</li> </ul> <p>You will use the cell H5 to filter your data.</p> <p>When filtering your data remember to:</p> <ul style="list-style-type: none"> <li>• Place your formula in the correct cell</li> <li>• Set the range for your data in the filter formula</li> <li>• Include both conditions in your formula</li> </ul>
--	---

*Note for tech editor: Add Learnosity Activity ID and Item ID added to outline and Contentful.*

**Answer: =filter(A5:E, D5:D>5, E5:E>50)**

CHOICE MATRIX QUESTION		
<i>Note for tech editor: Add this boilerplate submission info above the checklist in Learnosity</i>	When you're ready, fill out the self-graded checklist below to evaluate your work and confirm that you have completed the exercise.	
<i>Checklist</i>	<i>Instructions/tips: Add your yes/no questions under the criteria column below. Remember that the correct answer should be yes.</i>	
<i>Note for tech editor: Build the entire table below in Learnosity using a Choice Matrix Question format.</i>		
Criteria	Yes	No
Did I place my formula in the correct cell?	[Correct]	[Incorrect]
Did I set the range to filter the data?	[Correct]	[Incorrect]
Did I include both conditions in my formula?	[Correct]	[Incorrect]
Did I find out how many customers have purchased more than 5 items?	[Correct]	[Incorrect]
Did I find out how many customers have made a purchase of more than \$50.00?	[Correct]	[Incorrect]

**[END OF MANUSCRIPT]**

## REFERENCE: ADDITIONAL INFORMATION AND RESOURCES

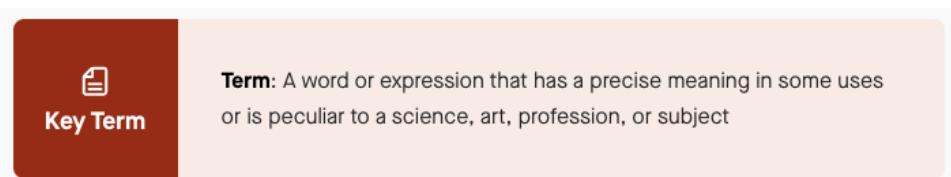
### Links and resources

- [Sample program](#)
- [Multiple-choice questions: Best practices](#)
- [Recommended question formats](#)
- [Info on formative and summative assessments](#)

### Formatting and styles

Refer to [Special fields and formatting templates](#) for examples of all special fields and text formatting allowed in lessons.

- For blockquotes and tips, insert content on a new line, with “BLOCKQUOTE:” or “TIP:” at the start of the line.
- For notes, insert content on a new line, with “Note:” at the start of the line.
- To add a “key terms card” (below): insert “KEY TERM CARD: [term]: [definition]” on a new line. More information is provided in the link above.



- Ordered and unordered lists, tables, and hyperlinks can be accommodated. Insert these as you would in any Word document.

### KCs, Images, Videos (extra tables to copy above)

INLINE KNOWLEDGE CHECK	
Question	[Insert question here.]
Option A	[Insert possible answer here. <b>Highlight and bold if correct.</b> ]
Option B	[Insert possible answer here. <b>Highlight and bold if correct.</b> ]
Option C	[Insert possible answer here. <b>Highlight and bold if correct.</b> ]
Option D	[Insert possible answer here. <b>Highlight and bold if correct.</b> ]
Distractor Rationale	[Insert DR here.]
<i>Note for tech editor: Add Learnosity Activity ID and Item ID added to outline and Contentful.</i>	

IMAGE	
Link to image	[Insert link to the image.]
Image filename	[Insert image filename.]
Description/alt text	[Insert image description/alt text.]

VIDEO	
Video title	[Insert video title, and <b>highlight/bold</b> .]
Video link (from Kaltura)	[Insert video link. Leave this boilerplate here until video link is ready.]

### EXAMPLE: Self-Graded Format

TYPE	Auto graded
FORMAT	Self-graded
INSTRUCTIONS  (ASSESSMENT INSTRUCTIONS IN CONTENTFUL)	<p><i>Instructions/tips:</i> Most often used for self-graded format. Note that you will have summarized what was covered in the lesson in the Conclusion, and that should not be repeated here. Add instructions only in the following cases:</p> <ul style="list-style-type: none"> <li>• If the student would not otherwise understand how to proceed</li> <li>• To provide specific steps (enumerated or bulleted) on how to complete or context for the whole assessment</li> <li>• To provide a file, demo video, or exemplar needed to complete the assessment successfully.</li> </ul> <p>Your team at the Social Network is working hard to deliver a new mobile experience for a mobile food ordering app. The design lead said there were some issues with a recent design and asked if you could fix the layout, as there are a lot of spacing issues that need resolved. Your task is to apply spacing best practices to the example image below and improve the layout.</p> <p><b>Instructions:</b></p> <ul style="list-style-type: none"> <li>• In Figma, <a href="#">use this file</a> to fix the spacing and alignment issues. Your Figma file includes all of the elements you need to layout your design.</li> <li>• Make sure there is a grid system and create a balanced layout similar to the example.</li> <li>• Use spacing best practices discussed in this lesson and make sure all of the elements of your design are well spaced and aligned.</li> <li>• There is an example of a completed file within the file. You can use this to check spacing, measurements, etc.</li> </ul>
<p><i>Note for tech editor:</i> Add Learnosity Activity ID and Item ID added to outline and Contentful.</p>	

CHOICE MATRIX QUESTION	
<i>Note for tech editor:</i> Add this boilerplate submission info above the checklist in Learnosity	When you're ready, fill out the self-graded checklist below to evaluate your work and confirm that you have completed the exercise.

<i>Checklist</i>	<i>Instructions/tips:</i> Add your yes/no questions under the criteria column below. Remember that the correct answer should be yes.	
<i>Note for tech editor:</i> Build the entire table below in Learnosity using a Choice Matrix Question format.		
Criteria	Yes	No
Does my design follow spacing best practices?	[Correct]	[Incorrect]
Does my design include navigation?	[Correct]	[Incorrect]
Does my design include a heading?	[Correct]	[Incorrect]
Does my design include a sub-header?	[Correct]	[Incorrect]
Does my design include an image?	[Correct]	[Incorrect]
Does my design include a Quantity button?	[Correct]	[Incorrect]
Does my design include description text?	[Correct]	[Incorrect]
Does my design include an Add to Cart Button?	[Correct]	[Incorrect]

*Example submission*



## Hamburger

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