

# Fields in Looker how to guide

34 Steps    [View most recent version on Tango.us](#) 

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Created by

Medrik Minassian

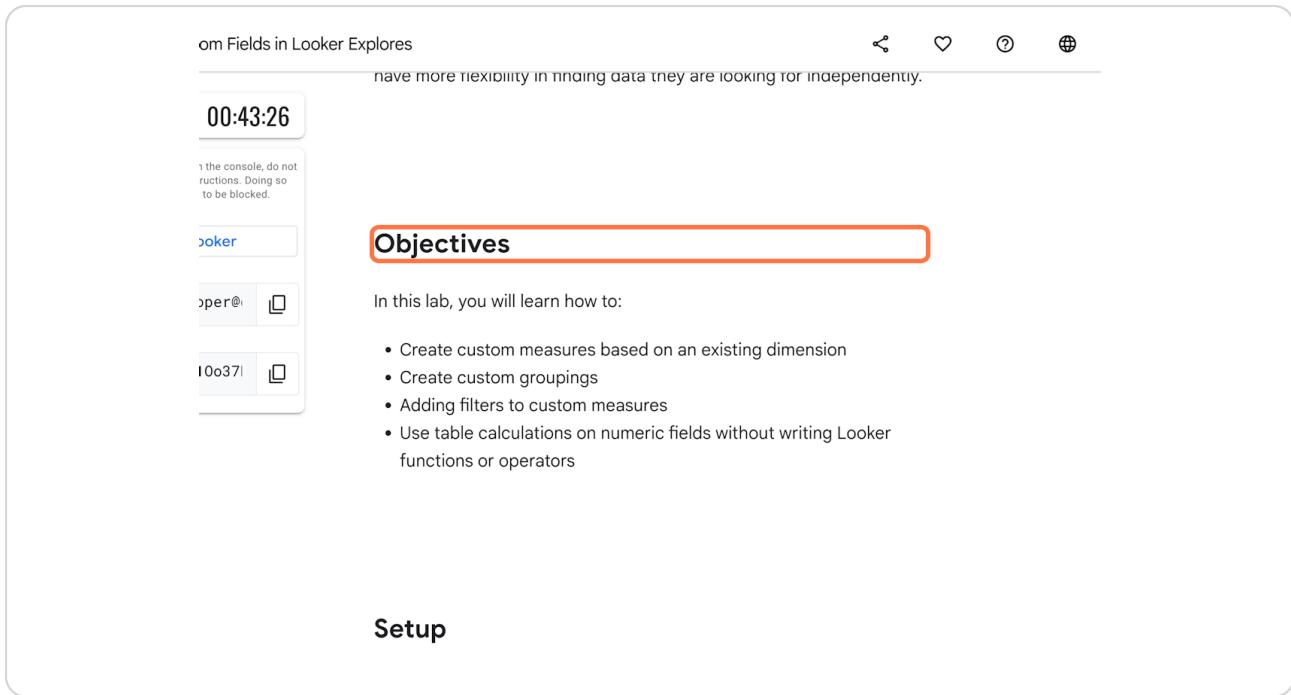
Creation Date

February 7, 2024

Last Updated

February 7, 2024

## STEP 1

Click on Objectives

om Fields in Looker Explorers  
have more flexibility in finding data they are looking for independently.

00:43:26

In the console, do not  
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Looker

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100371

**Objectives**

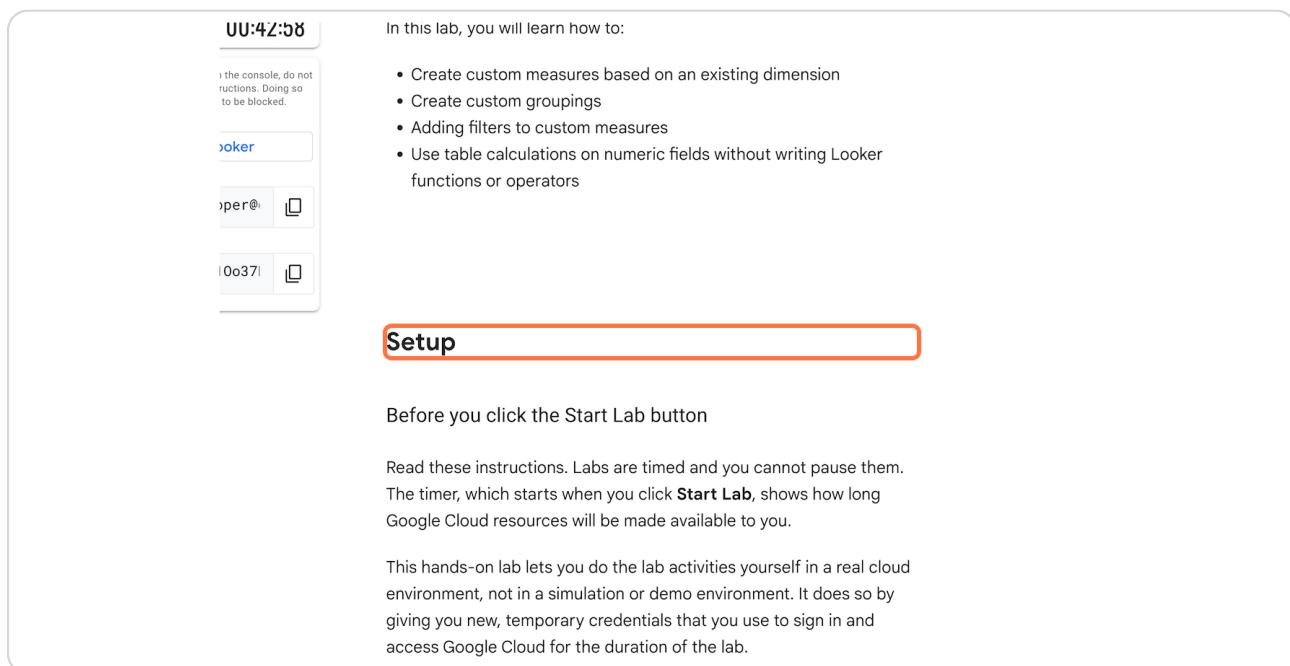
In this lab, you will learn how to:

- Create custom measures based on an existing dimension
- Create custom groupings
- Adding filters to custom measures
- Use table calculations on numeric fields without writing Looker functions or operators

**Setup**

## STEP 2

### Click on Setup



In this lab, you will learn how to:

- Create custom measures based on an existing dimension
- Create custom groupings
- Adding filters to custom measures
- Use table calculations on numeric fields without writing Looker functions or operators

**Setup**

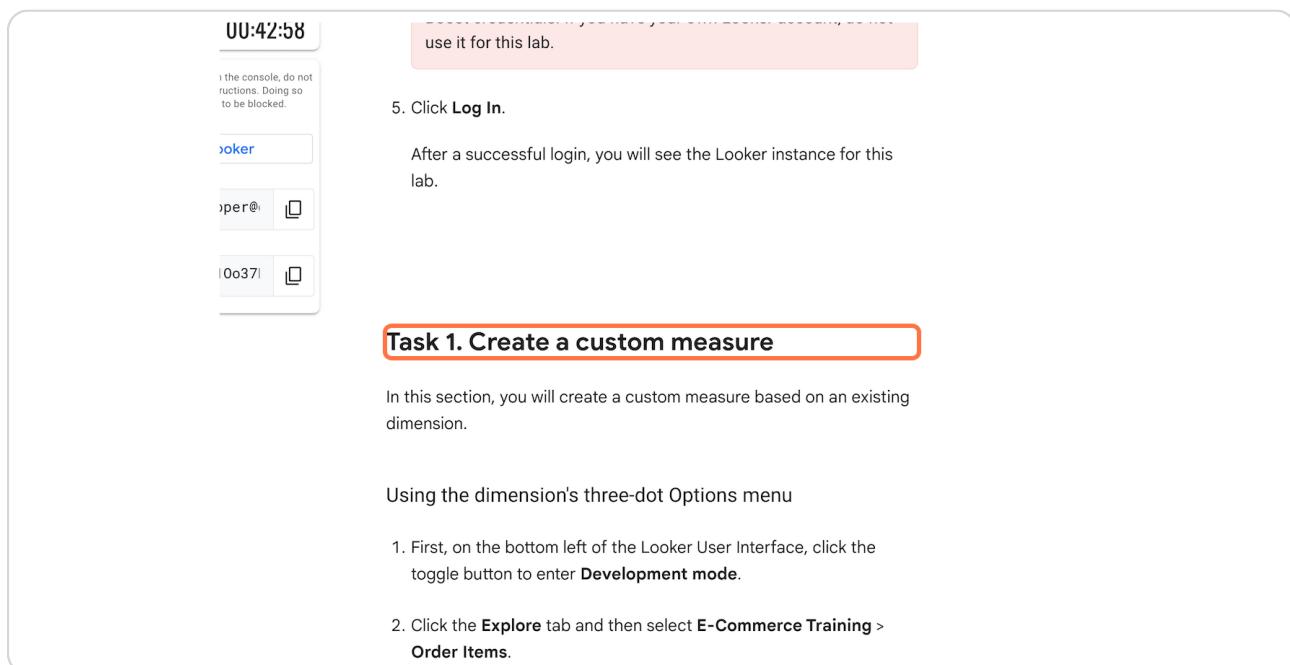
Before you click the Start Lab button

Read these instructions. Labs are timed and you cannot pause them. The timer, which starts when you click **Start Lab**, shows how long Google Cloud resources will be made available to you.

This hands-on lab lets you do the lab activities yourself in a real cloud environment, not in a simulation or demo environment. It does so by giving you new, temporary credentials that you use to sign in and access Google Cloud for the duration of the lab.

## STEP 3

### Click on Task 1. Create a custom measure



use it for this lab.

5. Click **Log In**.

After a successful login, you will see the Looker instance for this lab.

**Task 1. Create a custom measure**

In this section, you will create a custom measure based on an existing dimension.

Using the dimension's three-dot Options menu

1. First, on the bottom left of the Looker User Interface, click the toggle button to enter **Development mode**.
2. Click the **Explore** tab and then select **E-Commerce Training > Order Items**.

## STEP 4

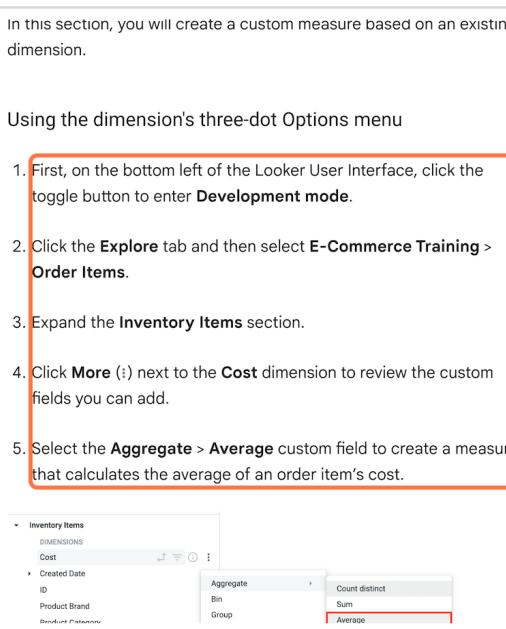
Click on First, on the bottom left of the Looker User Interface, click the toggle button to enter Development mode....

:42:58

In this section, you will create a custom measure based on an existing dimension.

Using the dimension's three-dot Options menu

1. First, on the bottom left of the Looker User Interface, click the toggle button to enter **Development mode**.
2. Click the **Explore** tab and then select **E-Commerce Training > Order Items**.
3. Expand the **Inventory Items** section.
4. Click **More (i)** next to the **Cost** dimension to review the custom fields you can add.
5. Select the **Aggregate > Average** custom field to create a measure that calculates the average of an order item's cost.

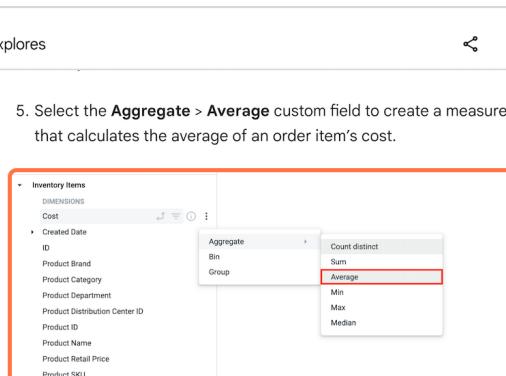


## STEP 5

Click on Expanded More dropdown menu with Average option highlighted in the Aggregate submenu

00:42:27

5. Select the **Aggregate > Average** custom field to create a measure that calculates the average of an order item's cost.



The suggested functions vary based on the type of dimension you've chosen (such as number, text, and date). If you select **count**, a **count distinct** is executed in the generated SQL. Your new field is automatically added to the query.

6. Expand the **Custom Fields** section to see your new field.
7. As with other fields, you can click a custom field's name to add or remove it from a query. You can also hover over the field to reveal

## STEP 6

Click on arrow\_back...

The screenshot shows the Looker interface with a dropdown menu open over a list of dimensions. The menu is titled 'Aggregate' and includes options: Count distinct, Sum, Average (which is highlighted with a red border), Min, Max, and Median. The background shows a sidebar with 'Inventory Items' and a main area with 'Order Items'.

## STEP 7

Click on Average of Cost custom field with more options displayed

The screenshot shows the Looker interface with the 'Custom Fields' section expanded. A specific field, 'Average of Cost', is selected and highlighted with a red border. The interface also shows sections for 'Filters', 'Visualization', 'Data', 'Results', and 'SQL'. Below the interface, there is explanatory text about using the Custom Fields section and instructions for creating a custom measure.

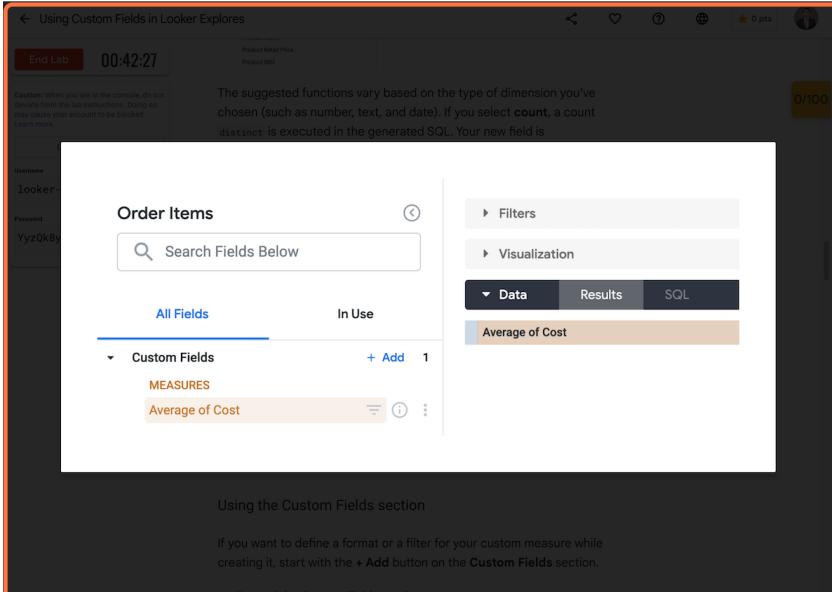
Using the Custom Fields section

If you want to define a format or a filter for your custom measure while creating it, start with the **+ Add** button on the Custom Fields section.

1. Expand the Custom Fields section.

## STEP 8

Click on arrow\_back...



The suggested functions vary based on the type of dimension you've chosen (such as number, text, and date); if you select count, a count distinct is executed in the generated SQL. Your new field is

Order Items

Search Fields Below

All Fields In Use

Custom Fields + Add 1

MEASURES Average of Cost

Filters Visualization Data Results SQL

Average of Cost

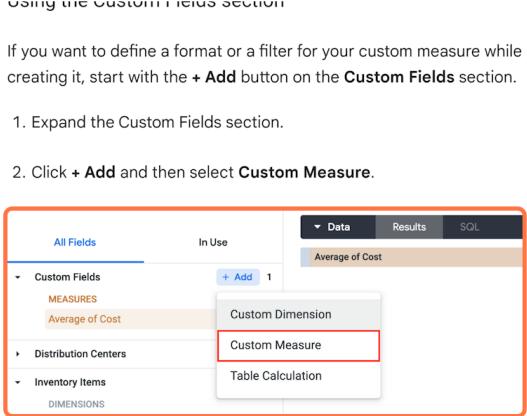
Using the Custom Fields section

If you want to define a format or a filter for your custom measure while creating it, start with the + Add button on the Custom Fields section.

1. Expand the Custom Fields section.

## STEP 9

Click on Expanded Add dropdown menu with Custom Measure option highlighted



Using the Custom Fields section

If you want to define a format or a filter for your custom measure while creating it, start with the + Add button on the Custom Fields section.

1. Expand the Custom Fields section.

2. Click + Add and then select **Custom Measure**.

3. Set the **Field to measure** to Inventory Items > Cost.

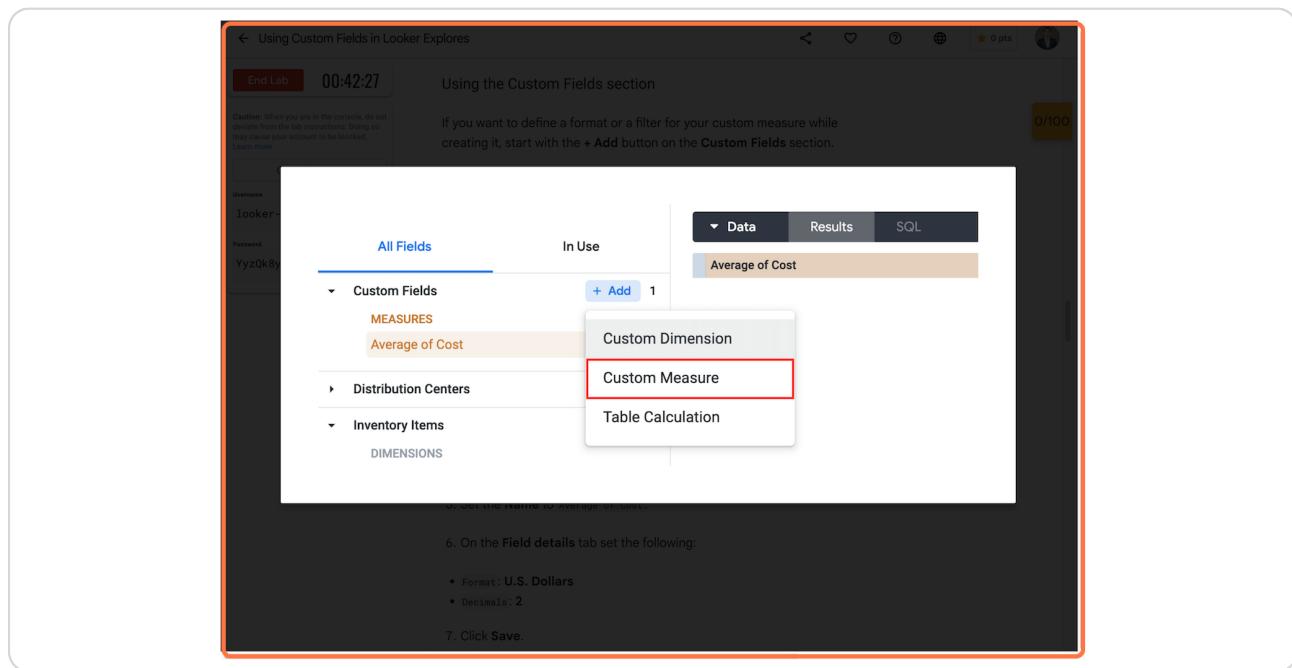
4. Set the **Measure type** to Average.

5. Set the **Name** to Average of Cost.

6. On the **Field details** tab set the following:

## STEP 10

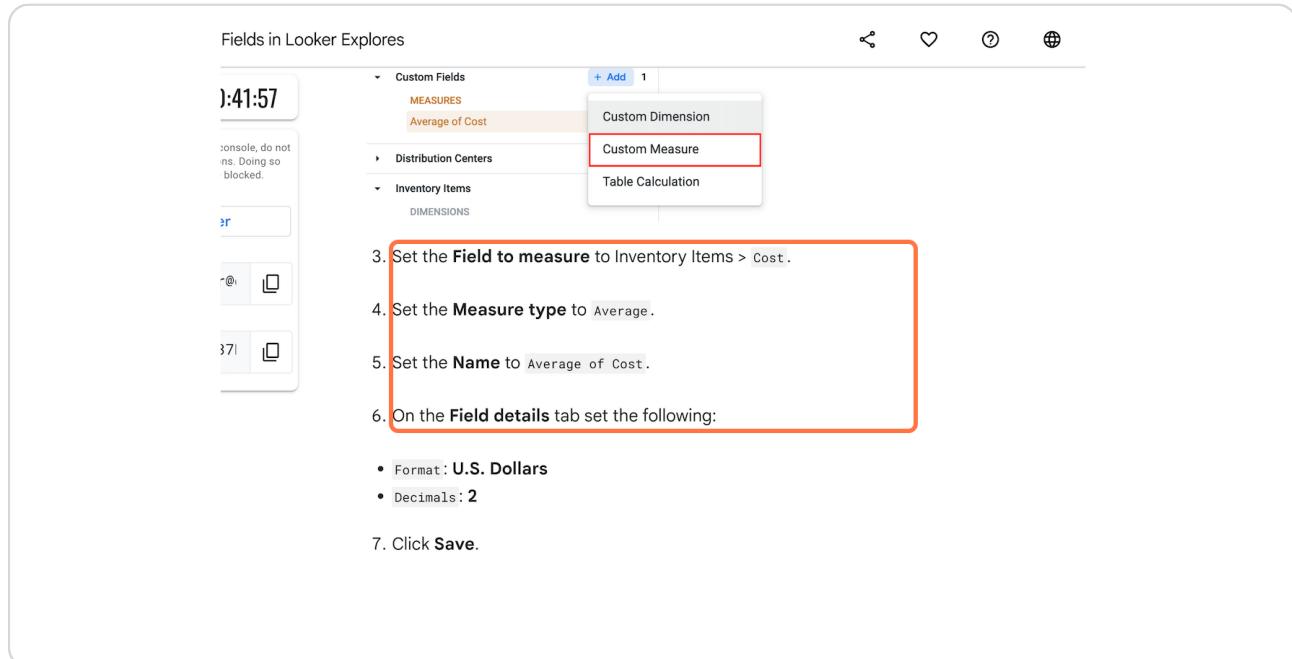
Click on arrow\_back...



The screenshot shows the Looker interface with a red border around the main content area. At the top, it says "Using Custom Fields in Looker Explorers" and "Using the Custom Fields section". Below this, there's a warning about creating custom measures. On the left, there's a sidebar with "Username: looker" and "Password: Yyz0k8". The main area has tabs "Data", "Results", and "SQL", with "Results" selected. A sub-menu is open over the "Average of Cost" measure, showing options: "Custom Dimension", "Custom Measure" (which is highlighted with a red box), and "Table Calculation". Below the menu, instructions say: "6. On the Field details tab set the following:" followed by a list: "• Format: U.S. Dollars" and "• Decimals: 2". At the bottom, it says "7. Click Save."

## STEP 11

Click on Set the Field to measure to Inventory Items > Cost....



The screenshot shows the Looker interface with a red border around the main content area. At the top, it says "Fields in Looker Explorers" and has a timer "1:41:57". Below this, there's a warning about creating custom measures. On the left, there's a sidebar with "console, do not log in. Doing so will block the session." The main area has a "Custom Fields" section with a "MEASURES" tab. Under "MEASURES", "Average of Cost" is listed. A context menu is open over "Average of Cost", showing options: "Custom Dimension", "Custom Measure" (which is highlighted with a red box), and "Table Calculation". Below the menu, a large red box encloses the following steps: "3. Set the Field to measure to Inventory Items > Cost.", "4. Set the Measure type to Average.", "5. Set the Name to Average of Cost.", and "6. On the Field details tab set the following:". Inside this red box, it says: "• Format: U.S. Dollars" and "• Decimals: 2". At the bottom, it says "7. Click Save."

## STEP 12

### Click on Format



5. Set the **Name** to Average of Cost.

6. On the **Field details** tab set the

- **Format:** U.S. Dollars
- **Decimals:** 2

7. Click **Save**.

## STEP 13

### Click on Decimals



5. Set the **Name** to Average of Cost.

6. On the **Field details** tab set the

- **Format:** U.S. Dollars
- **Decimals:** 2

7. Click **Save**.

## STEP 14

### Click on Click Save.

3. Set the **Field to measure** to Inventory Items > Cost.

4. Set the **Measure type** to Average.

5. Set the **Name** to Average of Cost.

6. On the **Field details** tab set the following:

- Format: U.S. Dollars
- Decimals: 2

7. Click Save.

#### Task 2. Create a custom grouping

The **Group** custom field type lets you create ad hoc custom groups for dimensions and custom dimensions without needing to use logical functions in Looker expressions or needing to develop CASE WHEN logic in sql parameters or type: case fields.

## STEP 15

### Click on Task 2. Create a custom grouping

7. Click Save.

**Task 2. Create a custom grouping**

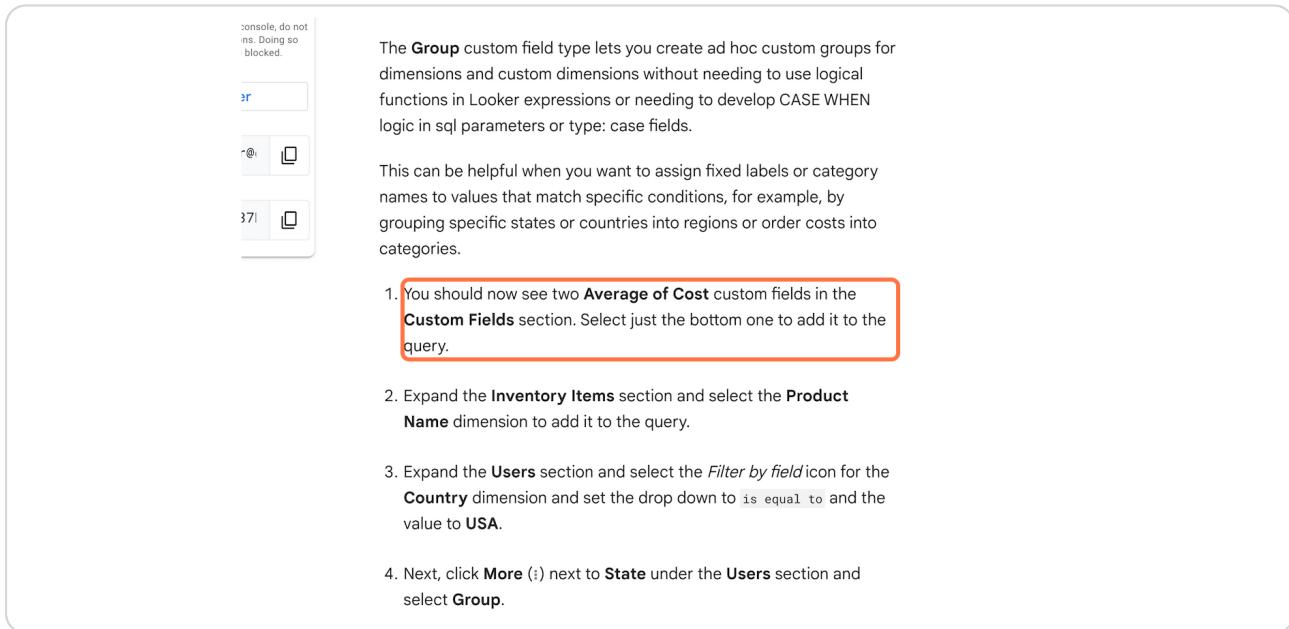
The **Group** custom field type lets you create ad hoc custom groups for dimensions and custom dimensions without needing to use logical functions in Looker expressions or needing to develop CASE WHEN logic in sql parameters or type: case fields.

This can be helpful when you want to assign fixed labels or category names to values that match specific conditions, for example, by grouping specific states or countries into regions or order costs into categories.

1. You should now see two **Average of Cost** custom fields in the **Custom Fields** section. Select just the bottom one to add it to the query.

## STEP 16

**Click on You should now see two Average of Cost custom fields in the Custom Fields section. Select just the bottom one to add it to the query.**



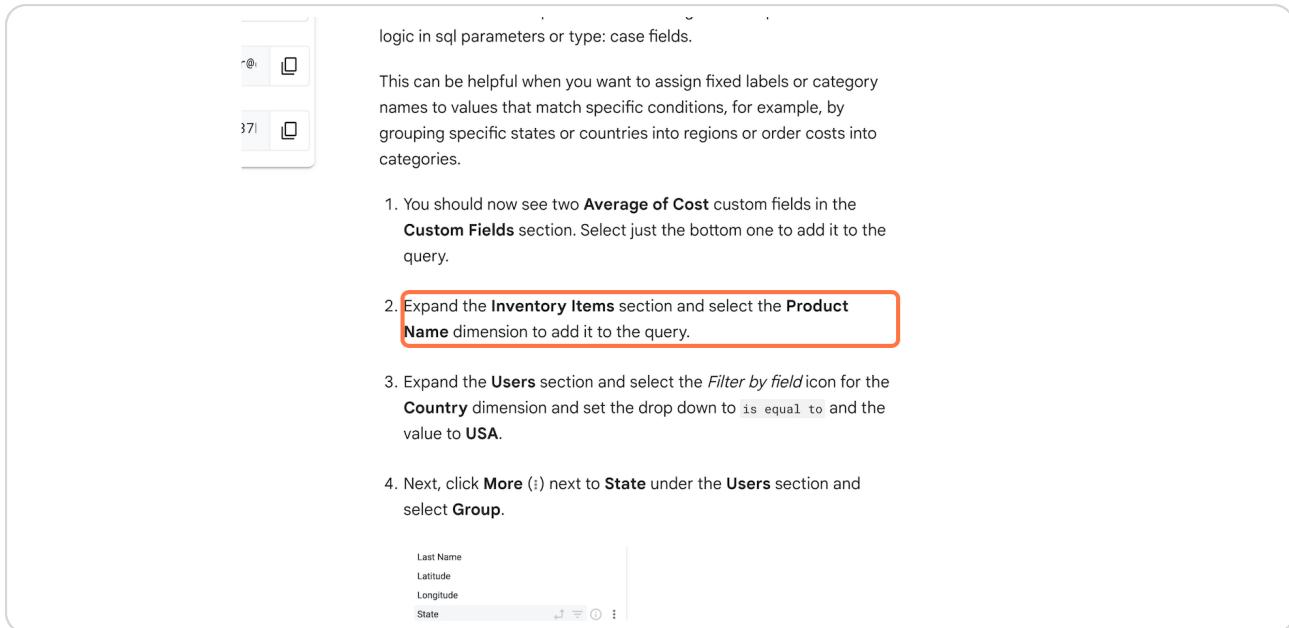
The Group custom field type lets you create ad hoc custom groups for dimensions and custom dimensions without needing to use logical functions in Looker expressions or needing to develop CASE WHEN logic in sql parameters or type: case fields.

This can be helpful when you want to assign fixed labels or category names to values that match specific conditions, for example, by grouping specific states or countries into regions or order costs into categories.

1. You should now see two **Average of Cost** custom fields in the **Custom Fields** section. Select just the bottom one to add it to the query.
2. Expand the **Inventory Items** section and select the **Product Name** dimension to add it to the query.
3. Expand the **Users** section and select the *Filter by field* icon for the **Country** dimension and set the drop down to **is equal to** and the value to **USA**.
4. Next, click **More (:**) next to **State** under the **Users** section and select **Group**.

## STEP 17

**Click on Expand the Inventory Items section and select the Product Name dimension to add it to the query.**



logic in sql parameters or type: case fields.

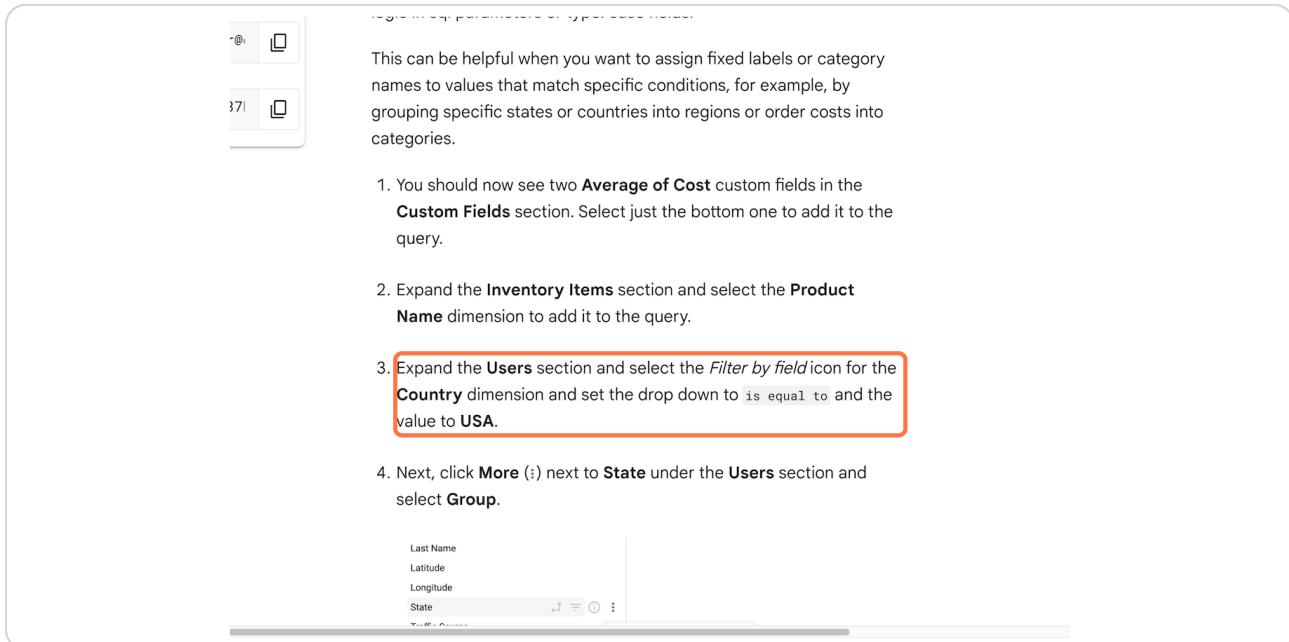
This can be helpful when you want to assign fixed labels or category names to values that match specific conditions, for example, by grouping specific states or countries into regions or order costs into categories.

1. You should now see two **Average of Cost** custom fields in the **Custom Fields** section. Select just the bottom one to add it to the query.
2. Expand the **Inventory Items** section and select the **Product Name** dimension to add it to the query.
3. Expand the **Users** section and select the *Filter by field* icon for the **Country** dimension and set the drop down to **is equal to** and the value to **USA**.
4. Next, click **More (:**) next to **State** under the **Users** section and select **Group**.

Last Name
Latitude
Longitude
State

## STEP 18

**Click on Expand the Users section and select the Filter by field icon for the Country dimension and set the drop down to is equal to and the value to USA.**



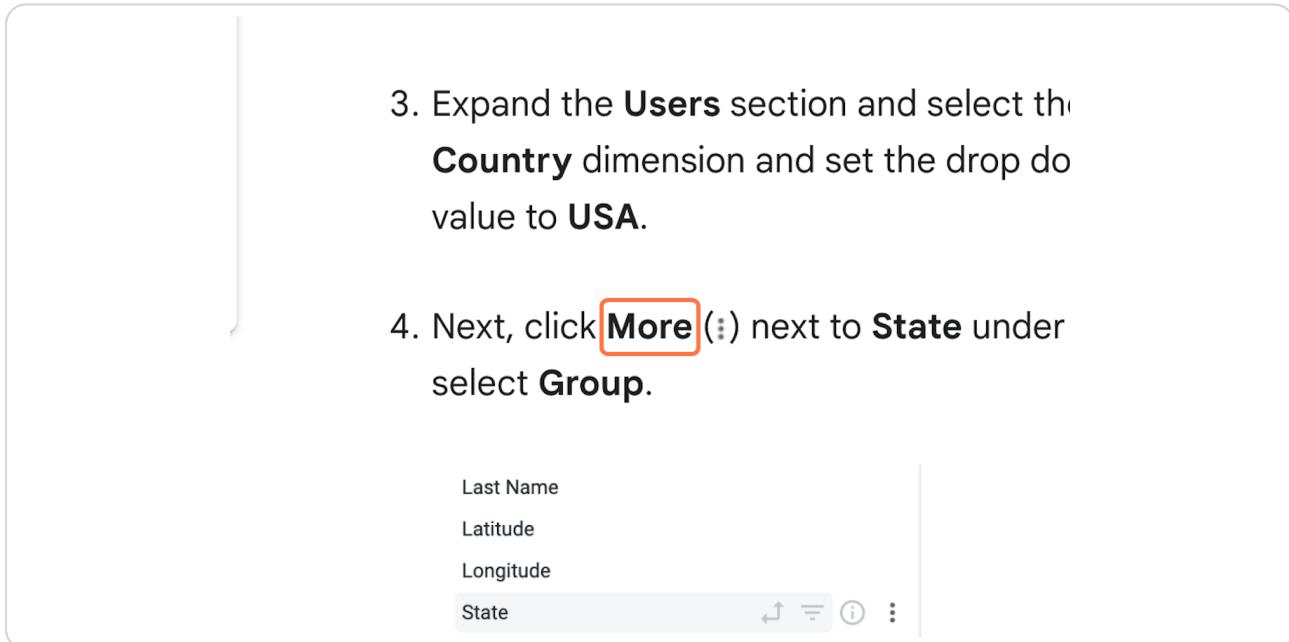
This can be helpful when you want to assign fixed labels or category names to values that match specific conditions, for example, by grouping specific states or countries into regions or order costs into categories.

1. You should now see two **Average of Cost** custom fields in the **Custom Fields** section. Select just the bottom one to add it to the query.
2. Expand the **Inventory Items** section and select the **Product Name** dimension to add it to the query.
3. Expand the **Users** section and select the **Filter by field** icon for the **Country** dimension and set the drop down to **is equal to** and the value to **USA**.
4. Next, click **More (:**) next to **State** under the **Users** section and select **Group**.

Last Name  
Latitude  
Longitude  
State

## STEP 19

**Click on More**

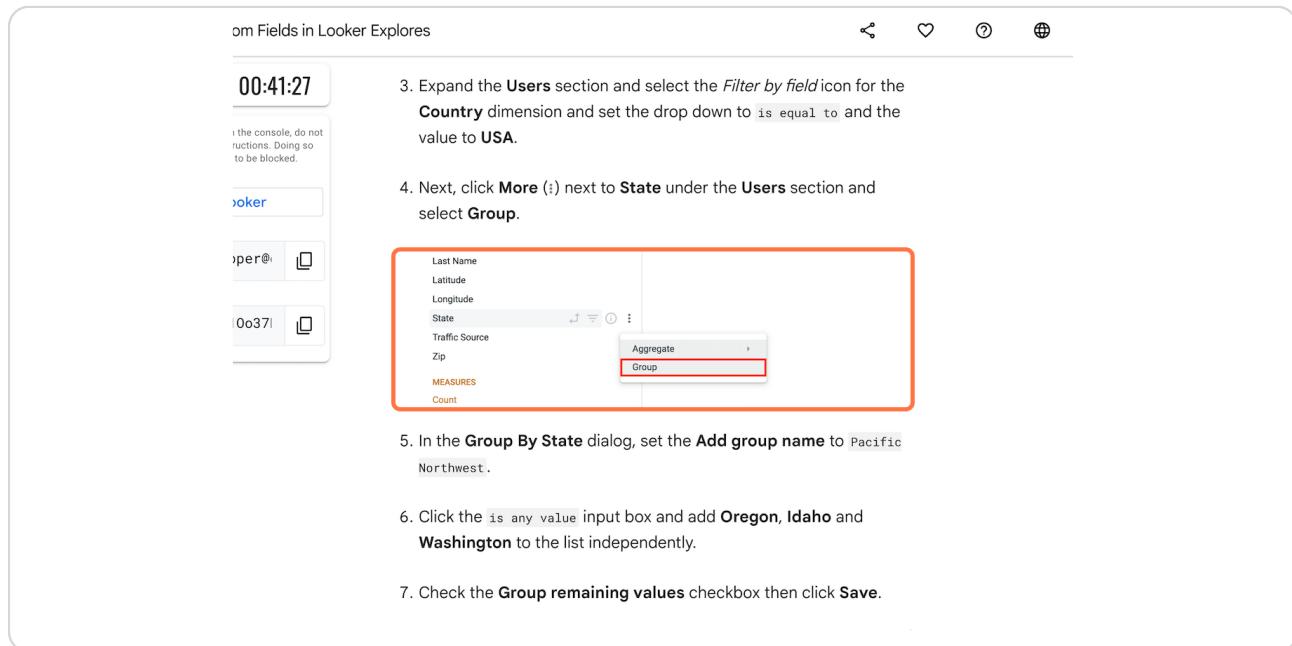


3. Expand the **Users** section and select the **Country** dimension and set the drop down to **USA**.
4. Next, click **More (:**) next to **State** under the **Users** section and select **Group**.

Last Name  
Latitude  
Longitude  
State

## STEP 20

### Click on Expanded More dropdown menu for State with Group option highlighted

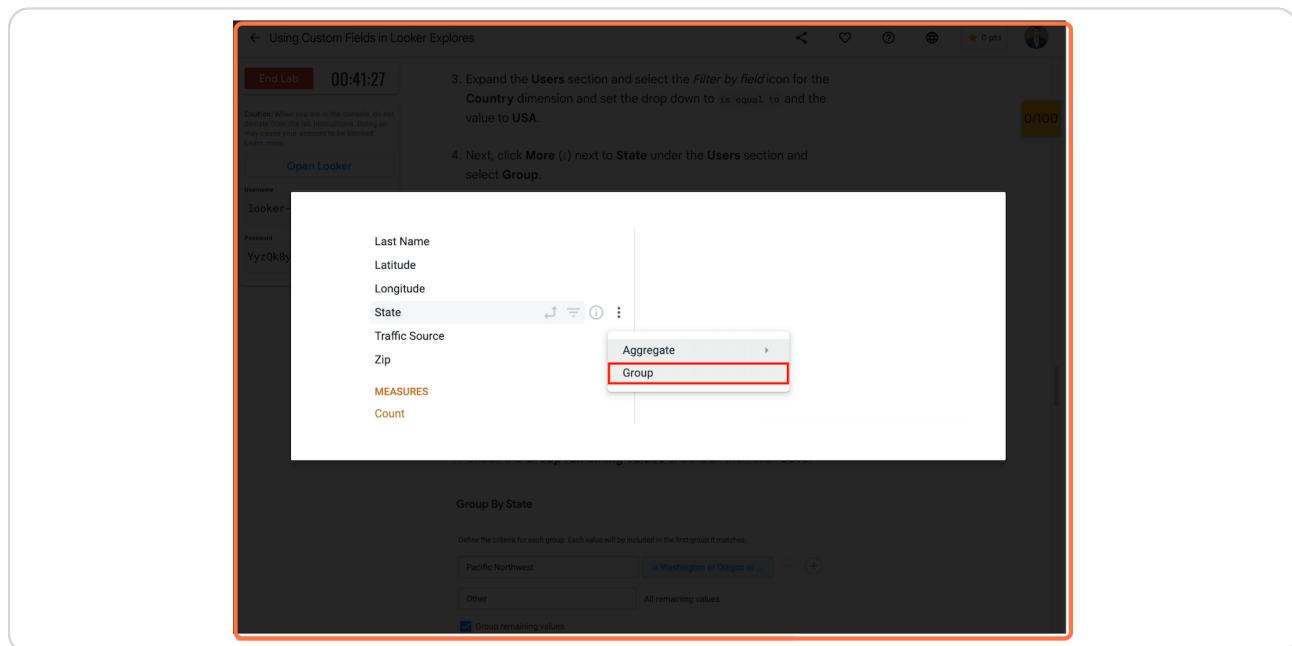


The screenshot shows the Looker interface with a sidebar on the left containing fields like 'Last Name', 'Latitude', 'Longitude', 'State', 'Traffic Source', 'Zip', and a 'MEASURES' section with 'Count'. A dropdown menu is open over the 'State' field, showing options 'Aggregate' and 'Group'. The 'Group' option is highlighted with a red rectangle. The main pane displays numbered steps for a task:

3. Expand the **Users** section and select the *Filter by field* icon for the **Country** dimension and set the drop down to **is equal to** and the value to **USA**.
4. Next, click **More (⋮)** next to **State** under the **Users** section and select **Group**.
5. In the **Group By State** dialog, set the **Add group name** to **Pacific Northwest**.
6. Click the **is any value** input box and add **Oregon**, **Idaho** and **Washington** to the list independently.
7. Check the **Group remaining values** checkbox then click **Save**.

## STEP 21

### Click on arrow\_back...



The screenshot shows the Looker interface with a sidebar on the left containing fields like 'Last Name', 'Latitude', 'Longitude', 'State', 'Traffic Source', 'Zip', and a 'MEASURES' section with 'Count'. A dropdown menu is open over the 'State' field, showing options 'Aggregate' and 'Group'. The 'Group' option is highlighted with a red rectangle. The main pane displays numbered steps for a task:

3. Expand the **Users** section and select the *Filter by field* icon for the **Country** dimension and set the drop down to **is equal to** and the value to **USA**.
4. Next, click **More (⋮)** next to **State** under the **Users** section and select **Group**.
5. In the **Group By State** dialog, set the **Add group name** to **Pacific Northwest**.
6. Click the **is any value** input box and add **Oregon**, **Idaho** and **Washington** to the list independently.
7. Check the **Group remaining values** checkbox then click **Save**.

Below the steps, the 'Group By State' dialog is shown with the 'Pacific Northwest' group defined and the 'Group remaining values' checkbox checked.

## STEP 22

Click on In the Group By State dialog, set the Add group name to Pacific Northwest....

The screenshot shows a 'Select Group' interface with various fields like Last Name, Latitude, Longitude, State, Traffic Source, Zip, and Count. A dropdown menu for 'Aggregate' is open, with 'Group' selected. Below the interface, a red box highlights the following steps:

5. In the **Group By State** dialog, set the **Add group name** to **Pacific Northwest**.
6. Click the **is any value** input box and add **Oregon, Idaho** and **Washington** to the list independently.
7. Check the **Group remaining values** checkbox then click **Save**.

Below this, the 'Group By State' dialog is shown with two groups defined: 'Pacific Northwest' and 'Other'. The 'Group remaining values' checkbox is checked.

## STEP 23

Click on Group By State dialog box

The screenshot shows the 'Group By State' dialog box with the following configuration:

- Group 1: 'Pacific Northwest' (input box: 'is Washington or Oregon or ...')
- Group 2: 'Other' (input box: 'All remaining values')
- Checkboxes: 'Group remaining values' (checked), 'Field name' (set to 'State Groups'), and '+ Add description'.

A red box highlights the 'Group remaining values' checkbox. Below the dialog, a step is listed:

6. Click the **is any value** input box and add **Oregon, Idaho** and **Washington** to the list independently.
7. Check the **Group remaining values** checkbox then click **Save**.

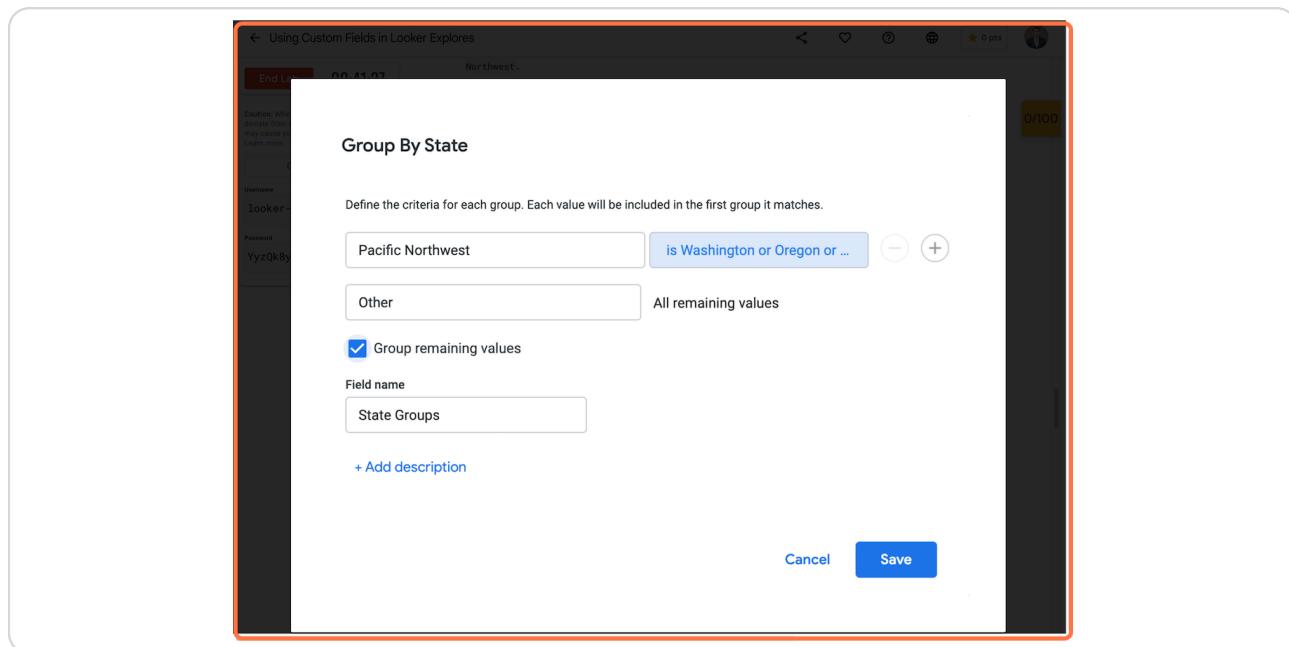
At the bottom, another step is listed:

8. Select the newly create **State Groups** custom field to add it to the Explore and click **Run** in the top right of the page.

The result will be a view of the average cost of various product names.

## STEP 24

Click on arrow\_back...



## STEP 25

Click on The result will be a view of the average cost of various product names grouped by Pacific Northwest and Other.

The screenshot shows the configuration of the 'State Groups' custom field. The 'Field name' is 'State Groups'. Below it is a '+ Add description' link. On the right are 'Cancel' and 'Save' buttons. To the left, there is a note: 'I the console, do not ructions. Doing so to be blocked.' Below the field name, there is another note: '8. Select the newly create State Groups custom field to add it to the Explore and click Run in the top right of the page.' A callout box contains the text: 'The result will be a view of the average cost of various product names grouped by Pacific Northwest and Other.'

**Task 3. Adding a filter to a custom measure**

Now that you have a view of the average cost of various product names grouped by Pacific Northwest and Other, say you wanted to only view products with an average cost greater than \$200 (USD).

## STEP 26

### Click on Task 3. Adding a filter to a custom measure

om Fields in Looker Explorers

00:40:57

Task 3. Adding a filter to a custom measure

Now that you have a view of the average cost of various product names grouped by Pacific Northwest and Other, say you wanted to only view products with an average cost greater than \$200 (USD).

To enhance the current view do the following:

- Under the **Custom Fields** section select the *Filter by field* icon for the bottom `Average of Cost` under **Measures**.

All Fields In Use

Custom Fields + Add 2

DIMENSIONS State Groups

MEASURES Average of Cost

Average of Cost

Average of Cost

Distribution Centers Filter by field

Visualization Data Results SQL

Inventory Items Product Name

## STEP 27

### Click on Custom Fields section with Filter by field icon highlighted

00:40:57

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ructions. Doing so  
to be blocked.

ooker

oper@i

10o37|

Now that you have a view of the average cost of various product names grouped by Pacific Northwest and Other, say you wanted to only view products with an average cost greater than \$200 (USD).

To enhance the current view do the following:

- Under the **Custom Fields** section select the *Filter by field* icon for the bottom `Average of Cost` under **Measures**.

All Fields In Use

Custom Fields + Add 2

DIMENSIONS State Groups

MEASURES Average of Cost

Average of Cost

Distribution Centers Filter by field

Visualization Data Results SQL

Inventory Items Product Name

- Set the drop down to `is greater than` and set its value to **200**.
- Re-run the query by clicking on the **Run** button in the top right of the page to view the results.

You will now see a filtered view with only the average of cost products greater than \$200 (USD).

## STEP 28

Click on arrow\_back...

Using Custom Fields in Looker Explorers

End Lab 00:40:57

Caution: When you are in the console, do not leave it for long periods of time. Doing so may cause your account to be locked.

Now that you have a view of the average cost of various product names grouped by Pacific Northwest and Other, say you wanted to only view products with an average cost greater than \$200 (USD).

To enhance the current view do the following:

Username: looker  
Password: Yyzok8

All Fields In Use

Custom Fields + Add 2

DIMENSIONS State Groups

MEASURES Average of Cost

Average of Cost

Distribution Centers Filter by field

Visualization Data Results SQL

Inventory Items Product Name

You will now see a filtered view with only the average of cost products greater than \$200 (USD).

Click *Check my progress* to verify the objective.

Create a custom measure

Check my progress

## STEP 29

Click on highlight

2. Set the drop down to `is greater than` and set its value to **200**.

3. Re-run the query by clicking on the **Run** button in the top right of the page to view the results.

You will now see a filtered view with only the average of cost products greater than \$200 (USD).

Click *Check my progress* to verify the objective.

Create a custom measure

Check my progress

### Task 4. Using table calculations

Say you wanted to understand the count of orders for each item in the view from the last section. To filter the view further you could add the

## STEP 30

### Click on Task 4. Using table calculations

The screenshot shows a Looker interface with a timer at 00:40:57. A progress bar indicates completion. The main content area features a task card titled "Task 4. Using table calculations". The task description explains how to understand the count of orders for each item in the view by adding the Order Count measure and using the Percentage of Column quick calculation. Below the description is a numbered list of steps:

1. Under **Order Items** section, click **Order Count** to add it to the view.
2. In the data view, click **Settings (i)** on the **Order Count** column.
3. Click **Calculations > % of column**.

## STEP 31

### Click on Under Order Items section, click Order Count to add it to the view....

The screenshot shows a Looker interface with a timer at 00:40:27. A task card titled "Task 4. Using table calculations" is displayed. The task description is identical to the one in Step 30. Below the description is a numbered list of steps, with the third step highlighted by a red box:

1. Under **Order Items** section, click **Order Count** to add it to the view.
2. In the data view, click **Settings (i)** on the **Order Count** column.
3. Click **Calculations > % of column**.

A data visualization is shown below the task card. A context menu is open over the "Order Items Order Count" column, specifically over the "% of column" option, which is highlighted with a red box. The menu options include Remove, Filter, Calculations (with sub-options Create filtered measure, % change from previous, Rank of column, Running total), Hide from visualization, Copy values, and Go to LookML.

## STEP 32

**Click on Expanded settings dropdown menu with the % of column option highlighted in the Calculations submenu**

field created earlier in this lab.

1. Under **Order Items** section, click **Order Count** to add it to the view.

2. In the data view, click **Settings (i)** on the **Order Count** column.

3. Click **Calculations > % of column**.

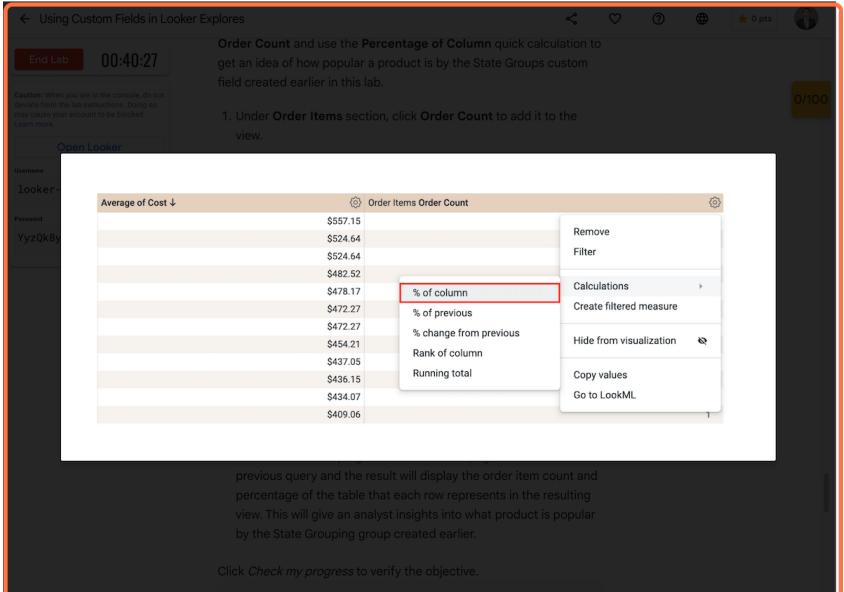


A new table calculation column with the percentage of Order Count should be populated into the Explore.

4. Click **Run** at the top right hand side of the page. This will re-run the previous query and the result will display the order item count and percentage of the table that each row represents in the resulting view. This will give an analyst insights into what product is popular by the State Grouping group created earlier.

## STEP 33

**Click on arrow\_back...**



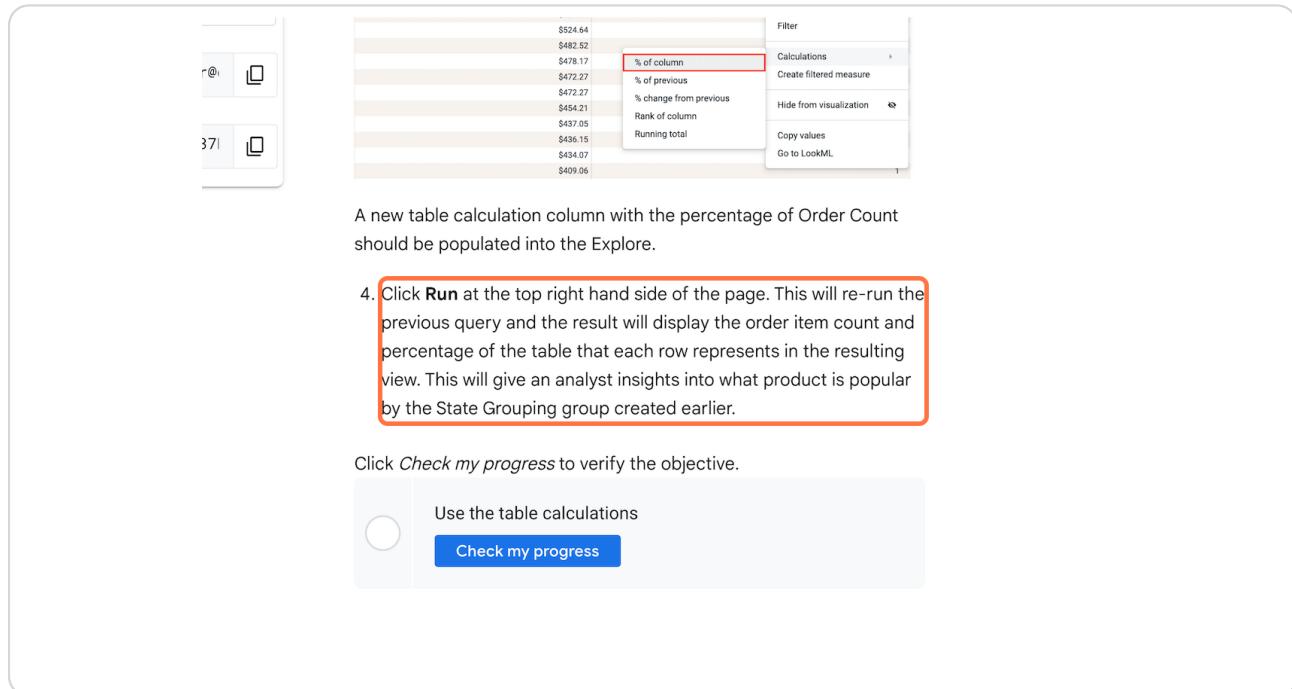
previous query and the result will display the order item count and percentage of the table that each row represents in the resulting view. This will give an analyst insights into what product is popular by the State Grouping group created earlier.

Click *Check my progress* to verify the objective.

Use the table calculations

## STEP 34

**Click on Click Run at the top right hand side of the page. This will re-run the previous query and the result will display the order item count and percentage of the table that each row represents in the resulting view. This will give an analyst insights into what product is popular...**



A new table calculation column with the percentage of Order Count should be populated into the Explore.

4. Click **Run** at the top right hand side of the page. This will re-run the previous query and the result will display the order item count and percentage of the table that each row represents in the resulting view. This will give an analyst insights into what product is popular by the State Grouping group created earlier.

Click *Check my progress* to verify the objective.

Use the table calculations  
**Check my progress**

# Tango

Never miss a step again. Visit [Tango.us](https://Tango.us)