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## Before you begin: Access Library in the Education sandbox

The Education sandbox is a shared, cloud-based environment to help you learn about and experiment with MicroStrategy Web and Library.

Use the Education sandbox to complete various report and dossier exercises. Complete the steps below to access the sandbox.

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### Access Library in the Education sandbox

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- 1 In your browser, navigate to **education.microstrategy.com/MicroStrategy/servlet/mstrWeb**.
- 2 Log in to the sandbox with your **MicroStrategy Account** credentials.  
**Open the Tutorial project**
- 3 The MicroStrategy landing page opens. Click the **MicroStrategy Tutorial** project.



#### MicroStrategy Tutorial

MicroStrategy Tutorial project and application set designed to illustrate the platform's rich functionality. The theme is an Electronics, Books, Movies and Music store. Employees, Inventory, Finance, Product Sales and Suppliers are analyzed.  
**Server name** ENV-218880LAIOUSE1

The MicroStrategy Tutorial home page opens.

- 4 Click **Go to MicroStrategy Library**.
- 5 If prompted, enter your **MicroStrategy Account** credentials, and then click **Log in with Identity**.

Your Library home page displays.

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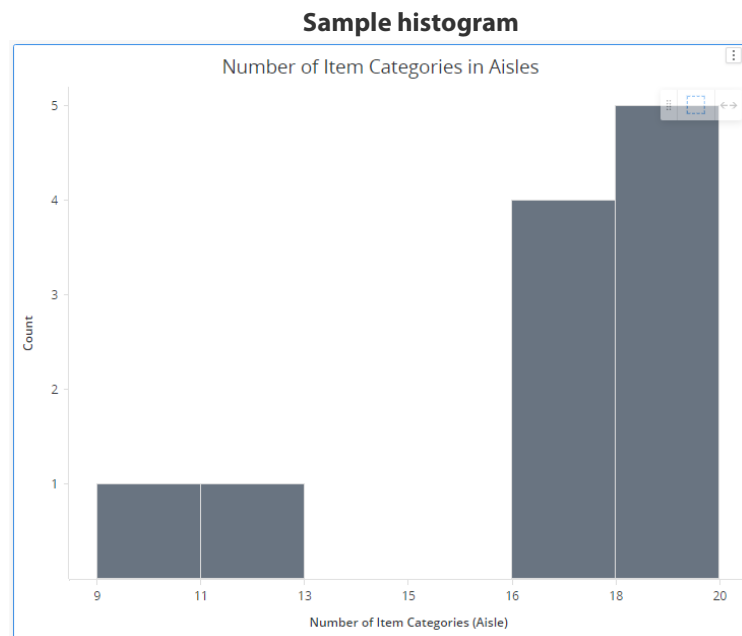
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## Exercise: Create a histogram

As a store manager, you have been researching the optimal number of item categories an aisle should contain. You've read that 10 item categories can lead to the most sales and want to see if most of your aisles are close to containing 10 item categories.

Create a histogram to understand the spread of your aisles in various ranges of item category amounts. This can help you determine if you need to readjust the number of item categories in most of your aisles, or if most of your aisles contain an optimal number of item categories.

Your completed histogram looks like the image below.



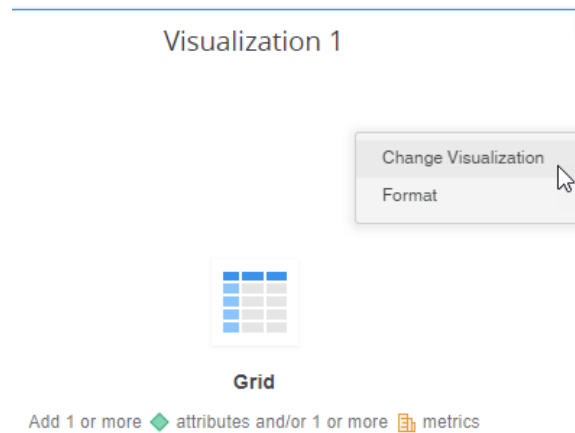
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### Create a histogram

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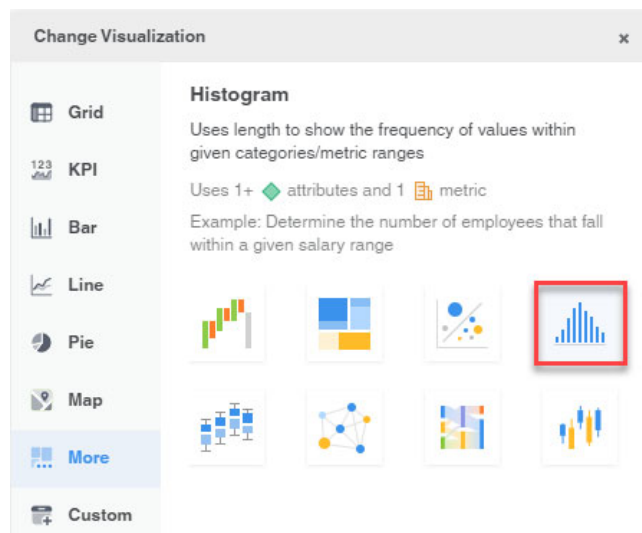
- 1 In the Education sandbox Library, open the **Visualization Types** dossier in Edit mode, if not already there. For a reminder on how to do this, see *Exercise: Access Library in the Education sandbox*, and *Exercise: Add the Visualization Types dossier to MicroStrategy Library*.
  - 2 In the Contents panel on the left, in the **Data Distribution** chapter, click the **Histogram** page.
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- 3 By default, a new page displays a blank grid visualization on the canvas. To change the visualization to a histogram, right-click inside the visualization, and select **Change Visualization**.




The Change Visualization window opens, displaying the Visualization Gallery.

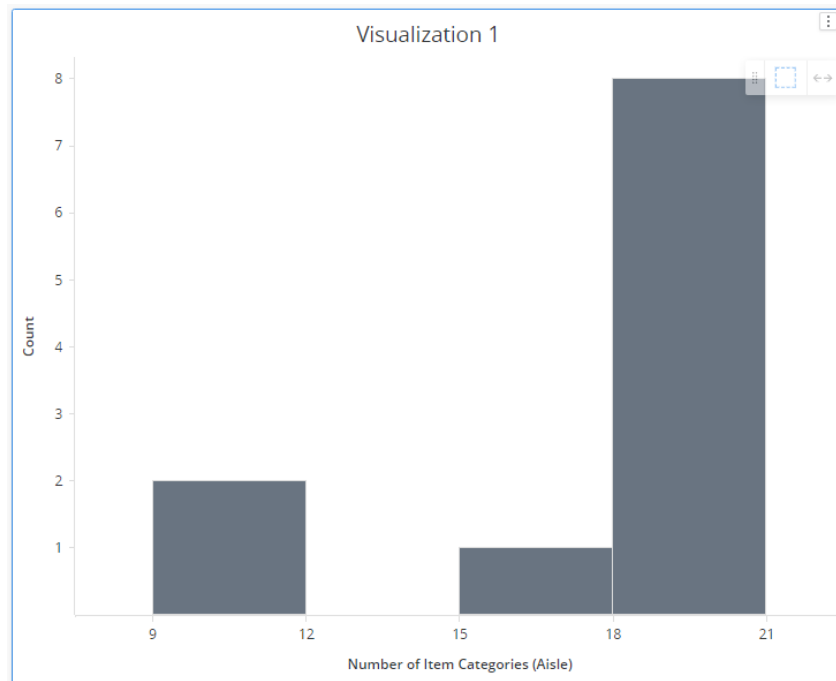
- 4 In the Visualization Gallery, point to **More**, and then click the **Histogram** icon.



The dossier canvas displays a blank histogram visualization.

- 5 The data you need for this analysis is stored in the Store Details dataset. In the Datasets panel, click the arrow icon ► to the left of the **Store Details** dataset to expand it, if it isn't already. The dataset's attributes and metrics display.
- 6 To focus on the objects in the Store Details dataset rather than the other datasets, collapse any other datasets that are expanded by clicking the arrow icon ▼ to the left of the dataset name.
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- 7 Click the **Editor** icon  to display the Editor panel, if not already displayed.
  - 8 From the **Store Details** dataset, double-click the **Number of Item Categories** metric to add it to the **Metrics** drop zone in the Editor panel.
  - 9 Double-click the **Aisle** attribute to add it to the **Aggregate By** drop zone in the Editor panel.



The histogram displays, as shown above. The Number of Item Categories metric values are grouped into ranges, or bins, and are displayed on the horizontal axis.

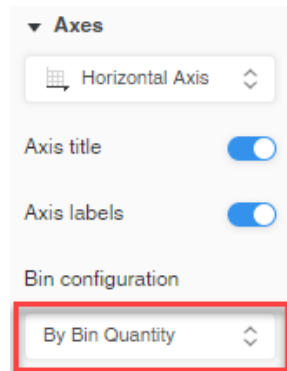
Each bin is represented by a bar in the visualization. The height of the bar represents the number of aisles that fall into each bin. For example, you can see that there are 8 aisles that contain 18-21 item categories.

### Adjust the number of bins

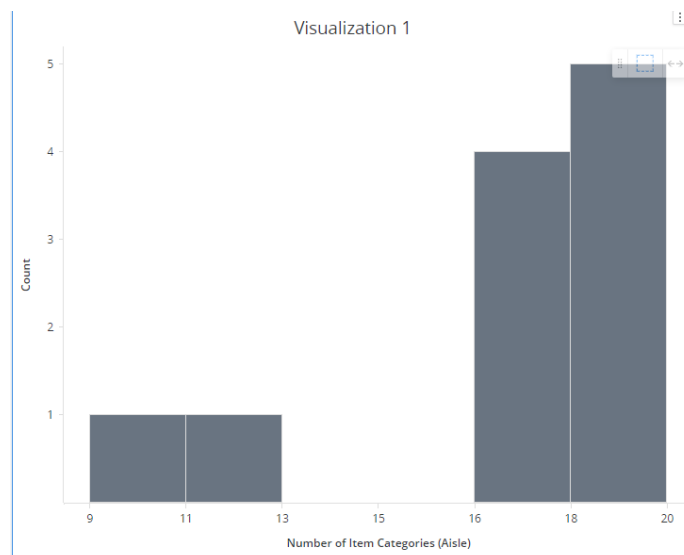
Your data only contains 11 aisles. With 8 of the 11 aisles in one bin, it is hard to gather detailed information on the spread of your data. Add more bins to make the bin ranges smaller and break up the bin containing 8 aisles.

- 10 Click the **Format** icon  to display the Format panel.
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- 11** Expand **Axes**, and in the Bin Configuration drop-down list, select **By Bin Quantity**.



- 12** In the **Bin Qty** box, enter **6**.



The histogram now displays 6 bins on the horizontal axis. The 18-21 item categories bin contains the most aisles (5). With most aisles in bins representing a higher number of item categories, your histogram displays a slight left, or negative, skew.

- 13** Rename the visualization by double-clicking the **Visualization 1** title and typing **Number of Item Categories in Aisles**. Your histogram should look like *Sample histogram*.
- 14** Click **Save** in the upper right of the dossier toolbar.
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### Analyze the histogram

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- 1 Think through the types of analysis that a histogram is useful for and how its characteristics might impact the ease of analysis, by using it to answer the following questions:
  - How quickly can you determine if most aisles have the optimal number of item categories, 10?
  - Is it easy to determine if the aisles are evenly distributed across the range of values for the number of item categories?
  - Might it help your analysis to further adjust the range of values that each bar corresponds to? If so, how?