Tableau Superstore – Step-by-Step Activities

1. Calculated Fields – Step by Step

Activity: Profit Margin by Region

Task: Identify which region has the highest profit margin.
Learning Outcome: Learners understand how to create and format a calculated field.

Step 1 – Create the calculation

- Go to **Analysis → Create Calculated Field**.
- Name it: Profit Margin.
- Enter formula:
- [Profit] / [Sales]

Step 2 – Build the view

- Drag **Region** to Rows.
- Drag **Profit Margin** to Columns.
- Tableau builds a bar chart where:
    - Positive bars = profitable regions.
    - Negative bars = regions operating at a loss.

Step 3 – Format

- Right-click **Profit Margin** in the Data Pane → **Default Properties → Number Format → Percentage**.
- (Optional) Add a **Reference Line at 0** to make it clearer which regions are above or below break-even:
    - Right-click the axis → **Add Reference Line** → choose **Constant = 0**.

Activity: Shipping Days by Ship Mode

Task: Find which ship mode is truly fastest on average.
Learning Outcome: Learners practise date calculations and averaging.

Step 1 – Create the calculation

- Go to **Analysis → Create Calculated Field**.
- Name it: Shipping Days.
- Enter formula:
- DATEDIFF('day', [Order Date], [Ship Date])

Step 2 – Build the view

- Drag **Ship Mode** to Rows.
- Drag **Shipping Days** to Columns → Tableau defaults to **AVG**.

2. Trends and Forecast – Step by Step

Activity: Sales Over Time with Trend Line

Task: Describe whether sales are trending up or down.
Learning Outcome: Learners interpret a trend using time-series data.

Step 1 – Build the line chart

- Drag **Order Date** to Columns.
- Right-click → choose **Month (continuous)**.
- Drag **Sales** to Rows.

Step 2 – Add a trend line

- Go to **Analytics Pane**.
- Drag **Trend Line** onto the chart → choose **Linear**.

Activity: Forecasting Sales

Task: What does Tableau predict for the next quarter's sales?
Learning Outcome: Learners explore forecasting tools and predictions.

Step 1 – Add forecast

- With the Sales over Time view open → **Analytics Pane → Forecast** → drop it on the chart.

Step 2 – Adjust options

- Right-click the chart → **Forecast → Forecast Options**.
- Set horizon to **12 months**.

3. Different Visuals – Step by Step

Activity A: Tree Map (Sales by Category and Sub-Category)

Task: Which sub-category contributes the most sales?
Learning Outcome: Learners use a tree map to analyse part-to-whole.

Step 1 – Build the View

1. **Drag Category to Colour**
    - This means each **Category** (Furniture, Office Supplies, Technology) will have a different colour on the tree map.
2. **Drag Sub-Category to Label**
    - Each rectangle will be labelled by its **Sub-Category** (e.g. Chairs, Phones, Storage, etc.).
3. **Drag Sales to Size**
    - The **size of each rectangle** represents the total sales for that Sub-Category.
    - Bigger rectangle = higher sales.
4. **Choose 'Treemap' from Show Me**
    - Click the **Show Me panel** → select **Treemap**.
    - Tableau will rearrange the view so each Sub-Category is a rectangle inside its Category group.

Activity B: Scatter Plot (Sales vs Profit by Region)

Task: Are some products high sales but low/negative profit?
Learning Outcome: Learners detect patterns

Step 1 – Build

- Drag **Sales** to Columns.
- Drag **Profit** to Rows.
- Drag **Region** to Colour.

Step 2 – Add detail

- Drag **Category** to Shape.

Activity C: Pie Chart (Sales by Segment)

Task: Which customer segment is the biggest?
Learning Outcome: Learners create and interpret a simple pie chart.

Step 1 – Build

- Marks → choose **Pie**.
- Drag **Segment** to Colour.
- Drag **Sales** to Angle and Label.

Step 2 – Sort

- Click Sort (descending by Sales) for readability.

4. Filters – Step by Step

Activity: Interactive Filters in a Dashboard

Task: Switch filters to explore changes in sales and profit.
Learning Outcome: Learners create interactivity with filters and Top N lists.

Step 1 – Add filters

- On a worksheet, drag **Region** to Filters → Right-click → **Show Filter**.

- Do the same for **Category**.

Step 2 – Top N filter

- Create a new sheet with **Product Name** and **Sales**.
- In the Filter dialog, use the **Top** tab → **Top 10 by Sales**.

Step 3 – Dashboard

- Create a new dashboard → add your sheets.
- On the bar chart, enable **Use as Filter**.

5. Data Formatting – Step by Step

Step 1 – Check data types

- In the **Data Pane**, confirm:
    - **Order Date / Ship Date** → Date.
    - **Sales / Profit** → Number (Currency).
    - **Discount** → Number (will become %).
    - **Quantity** → Whole Number.
    - **Postal Code** → Text.

Step 2 – Format dates

- Right-click **Order Date** in a view → **Format**.
- Choose **Month-Year** for trends or **Exact Date** for detail.

Step 3 – Format currency

- Right-click **Sales** → **Default Properties → Number Format → Currency (Standard)**.
- Repeat for **Profit**.

Step 4 – Format whole numbers

- Right-click **Quantity** → set as Number with 0 decimals.

6. Aggregate Functions – Step by Step

Activity A: SUM (Total Sales by Region)

Task: Which region has the highest total sales?

- Drag **Region** to Rows.
- Drag **Sales** to Columns → SUM(Sales).

Activity B: AVG (Average Discount by Category)

Task: Which category gets the largest average discount?

- Drag **Category** to Rows.
- Drag **Discount** to Columns → change to **AVG(Discount)**.
- Format as percentage.

Activity C: COUNT vs COUNTD (Orders by Segment)

Task: Compare total vs unique order counts.

- Drag **Segment** to Rows.
- Drag **Order ID** to Columns → set Measure → **COUNT**.
- Duplicate the sheet → change to **COUNTD(Order ID)**.

Activity D: MAX & MIN (Extreme Sales)

Task: Identify the highest and lowest single-order sales values.

- Create a table with **Product Name**.
- Drag **Sales** to Text.
- Use **Sort** or **Quick Table Calc → Rank**.