

Intro to Tableau – 1-Hour Lesson Plan (PowerPoint Outline)

Slide 1: Title Slide

- **Title:** Introduction to Tableau
 - **Subtitle:** Turning Data into Insights
 - **Instructor:** [Your Name]
 - **Agenda:** Basics, Interface, Data, Visuals, Dashboards
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Slide 2: What is Tableau?

- A **data visualization** and **business intelligence** tool.
 - Helps users connect, analyze, and present data visually.
 - Used by analysts, marketers, and decision-makers.
 - **Goal:** Make data easy to explore and explain.
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Slide 3: Tableau Ecosystem

- **Tableau Public:** Free, online, public sharing (extracts only)
 - **Tableau Desktop:** Full version (supports live and extracts)
 - **Tableau Server / Online:** Collaboration and private sharing
 - **Tableau Prep:** Data cleaning & preparation tool
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Slide 4: File Types to Know

File Type	Description
.twb	Workbook only (no data)
.twbx	Packaged workbook (includes data)
.hyper	Extract file (snapshot of data)
.tds / .tdsx	Data source definition (with/without extract)

Slide 5: Live vs Extract Connections

- **Live Connection:** Data updates automatically; needs database access.
- **Extract:** Snapshot of data stored locally as `.hyper` file.
- Tableau Public **only supports extracts**.
- ⚠ Common error: "Workbooks saved to Tableau Public must use extracts."

Slide 6: Tableau Interface Tour

- **Data Pane:** Dimensions & Measures
- **Shelves:** Columns, Rows, Filters, Pages, Marks (Color, Size, Label)
- **Show Me:** Suggested chart types
- **Tabs:** Data Source, Sheets, Dashboards, Stories

Include screenshot of Tableau UI (annotated with labels).

Slide 7: Dimensions vs Measures

Type	Meaning	Example
Dimensions	Categorical data	Region, Product, Category
Measures	Quantitative data	Sales, Profit, Quantity

- Dimensions define *what*, measures define *how much*.
 - Show demo: drag [Region] to Columns and [Sales] to Rows.
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Slide 8: Basic Visualizations

- **Bar Chart:** Compare categories.
- **Line Chart:** Show trends over time.
- **Map:** Geographic insights.
- **Scatter Plot:** Correlation.
- **Tree Map:** Category proportions.

Use an example dataset like *Adidas US Sales* for demos.

Slide 9: Filters, Sorting, and Grouping

- **Filters:** Narrow down what data is displayed.
 - **Sorting:** Order values ascending/descending.
 - **Grouping:** Combine similar categories (e.g., NY + New York).
 - Tip: Use *Top N filter* to focus on key performers.
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Slide 10: Calculated Fields

- Add new metrics based on existing fields.
- **Examples:**
- Profit Ratio = $\text{SUM}([\text{Profit}]) / \text{SUM}([\text{Sales}])$
- IF [Profit] > 0 THEN "Positive" ELSE "Negative" END

- Demo: Create and use a calculated field.
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Slide 11: Building Dashboards

- Combine multiple sheets into one view.
 - Add interactive filters (dropdowns or highlight actions).
 - Arrange charts for storytelling.
 - Use *floating* vs *tiled* layout options.
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Slide 12: Storytelling in Tableau

- **Story:** Sequence of dashboards (like a slide deck).
 - Each story point = one insight.
 - Great for presentations and reports.
 - Demo: Create a simple story with 3 dashboards.
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Slide 13: Publishing and Sharing

- **Public:** Free, but data is visible to everyone.
 - **Server / Online:** Private sharing for organizations.
 - **Export:** To PDF, image, or PowerPoint.
 - Reminder: *Public requires extract format!*
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Slide 14: Common Beginner Mistakes

- Forgetting to use extracts in Tableau Public.
 - Misusing dimensions/measures (e.g., numbers as strings).
 - Double aggregation (averaging averages).
 - Confusing `.twb` vs `.twbx`.
 - Not cleaning data before import.
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Slide 15: Wrap-Up & Q&A

- **Key Takeaways:**
 - Tableau = visual analytics + storytelling.
 - Extracts are crucial for Tableau Public.
 - Learn to structure data properly.
 - **Next Steps:**
 - Try creating a dashboard using sample data.
 - Explore Tableau Public Gallery for inspiration.
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Bonus: Class Demo Ideas

- Import the *Superstore* dataset.
- Create a Sales by Region bar chart.
- Add a Profit over Time line chart.
- Combine into a dashboard.
- Publish to Tableau Public (show extract step).