Power BI vs Tableau: Key Differences

Quick reference handout for students

Area	Power BI	Tableau
Primary strength	End-to-end BI platform (data prep + modeling + reporting)	Best-in-class visual exploration and interactive dashboards
Typical learning curve	Easier for beginners, especially Excel users	Steeper initially, especially for advanced calculations and dashboarding conventions
Data modeling	Strong semantic model with relationships; star schema best practices	Supports relationships and joins; typically less 'semantic model-first' than Power BI
Calculation language	DAX (measures, time intelligence; strong with model-driven analytics)	Calculated Fields + LOD expressions (strong for level-of-detail logic)
Data preparation	Power Query (built-in ETL; repeatable transformations)	Tableau Prep (separate product); basic prep also possible in Desktop
Performance approach	In-memory VertiPaq engine; strong with a well-designed model	Fast for exploration; performance depends on extracts/Hyper and workbook design
Integration ecosystem	Deep Microsoft ecosystem (Excel, Teams, SharePoint, Azure, SQL Server)	Broad connector support; strong in mixed-tool environments
Governance & enterprise	Strong with Power BI Service / Fabric; RLS/OLS; deployment pipelines	Strong with Tableau Server/Cloud; permissions and governance controls
Collaboration & sharing	Apps/workspaces in Power BI Service; tight M365 sharing	Projects/sites in Tableau Server/Cloud; interactive sharing
Cost model (typical)	Often lower entry cost, especially with Microsoft licensing	Often higher per-user pricing depending on roles (Creator/Explorer/Viewer)
Custom visuals	Marketplace + Deneb/Vega-Lite options; many enterprise visuals	Extensions + strong native formatting; flexible visualization control
Best fit	Teams wanting standardized reporting, modeling, and Microsoft integration	Teams prioritizing exploratory analysis, visual storytelling, and interactivity

Tip: If your class is Power BI-first, introduce Tableau as an exploration/storytelling complement; if your class is Tableau-first, emphasize Power BI's semantic model and DAX for governed reporting.