

Microsoft Excel - Guided Notes

Microsoft Excel is a spreadsheet application designed to perform basic and complex mathematical computations and functions. In addition to performing arithmetic operations, Excel allows users to create graphical displays of data, forms and pivot tables. It is also routinely used to sort information and assist users in identifying data trends. (www.reference.com)

Why do we use visual analysis?

- Easy to learn
- Excel is a common program and readily available
- Easy to disseminate
- Quickly shows the patterns and trends
- Can manipulate data in real time
- Provides a clear communication tool (for other staff, participants, families)

Three Stages with Excel (for our purpose)

1. Creating the Excel Template
 - Let the data sheet guide you, keep variables aligned, be concise
 - Left to right, top to bottom
 - Use new tabs within one spreadsheet when necessary
2. Data Entry
 - Have a plan
 - Are you highlighting or checking the top of the form when entered?
 - How often will you enter data?
 - Organize data sheets before entry- maybe by date?
 - Double check your work (including spelling, spacing, format)
3. Data Analysis
 - Mathematical Computations
 - Graphical Representation

Five Step Self-Checklist

	YES fluently	YES with help	NO
Can you accurately enter data to allow for comprehensive analysis in Excel?			
Can you perform simple math calculations and enter basic formulas in Excel?			
Can you create a Pivot Table?			
Can you create a chart or graph from raw data set and/or Pivot Table in Excel?			
Can you enhance the table/chart/graph in Excel for final presentation?			

Today's Date: _____

ENTERING DATA INTO EXCEL

- **Data Validation**
 - Only 1 entry can be selected per cell
 - May need to add additional columns to capture “other” or “multiple”
 - No other text can be entered into cell when data validation is active
 - Be mindful of spacing requirements, spelling, etc... before entering data
 - Select Column > Data > Data Validation > Allow: List > Enter source options separated by commas and no spaces > OK
- **Sorting**
 - Select Data > Data > Sort > Determine “Sort By” Levels > OK
- **Formatting Cells**
 - Right click in a cell and select “format cell”
 - Or, highlight what you want to format (e.g. row or column) and then right click and “format cell”
- **Freezing Cells**
 - Helpful when you have a lot of data that carries over multiple rows and columns
 - Go to “View” then “Freeze Panes” and select what option you want
- **Adjust Width and Height of Cells**
 - Double click on the line separating the column (or row)
 - “wrap text” on the home tab

BASIC MATH CALCULATIONS AND FORMULAS

5 Ways to Enter Formulas:

1. Manually
2. Insert Function button
3. Select a function from a group (Formulas tab)
4. The Recently Used button
5. Auto functions under the AutoSum button

Enter an example of the following functions:

1. **Average:** =AVERAGE(B2:B29)
2. **Add/Sum:** =SUM(B2:B29)
3. **Subtract:** =28-B2

True or False? Circle the correct answer.

- Formulas only work with numbers. **T or F**
- Rows and columns can have formulas. **T or F**
- Excel templates can have formulas pre-populated before data entry. **T or F**
- You must memorize formulas. **T or F**

PIVOT TABLES

Watch video: <https://exceljet.net/plc/why-pivot-tables>

True or False? Circle the correct response.

- Pivot Tables are fast and interactive. **T or F**
- Pivot Tables contain formulas. **T or F**
- Pivot Tables increase errors. **T or F**
- Pivot Tables are fun. **T or F**

Parts of a Pivot Table:

Pivot Table Report:

-Where data will show after adding fields (top right) to layout (bottom right)

Pivot Table Field List:

-Where you grab fields from and add to the layout (below)

Pivot Table Layout:

-Area where you drag and drop the fields from your list (above) to display on your report (left)

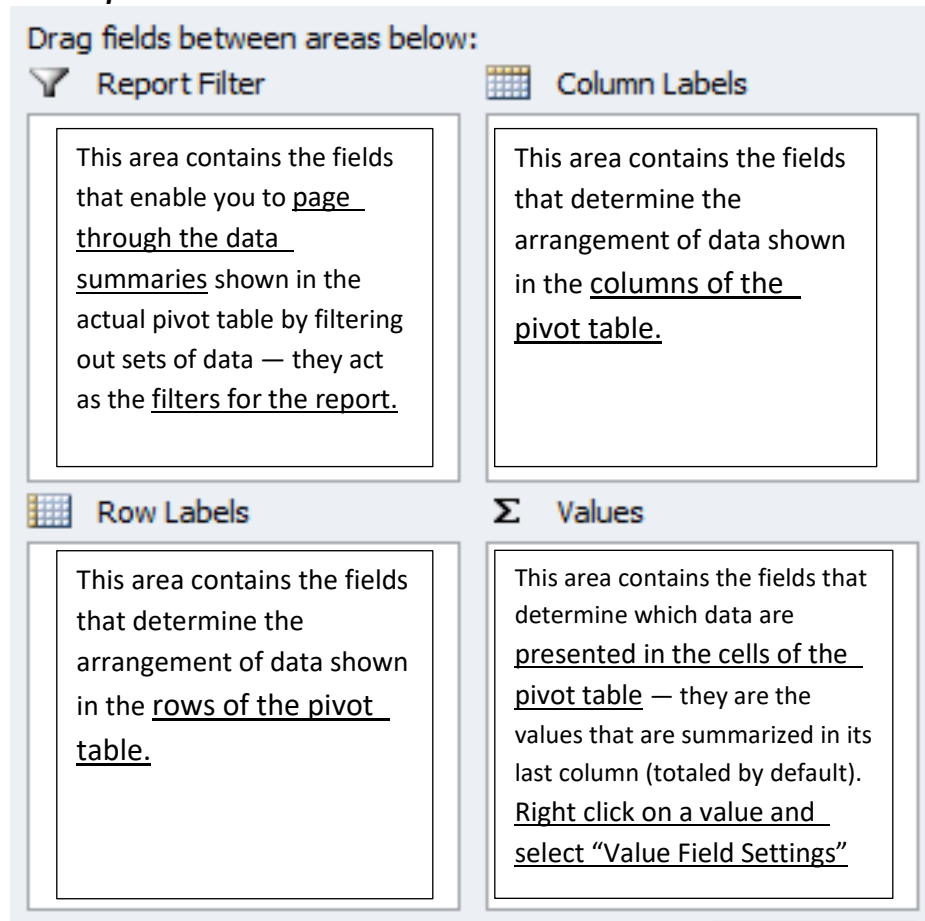
Where to begin:

- A good pivot table starts with a good raw data set.
- Take your time to pay attention to detail!
- No skipped rows, no skipped columns
- Use single words or short phrases
- All columns need a title (single words or short phrases)
- All columns must be formatted the same
 - If it is a number, only use numbers (qualifiers should be in column title- e.g. minutes, hours)
 - If it is a date, the dates should be formatted the same
 - If it is text, be mindful of extra spaces or characters
- First and Last names should be in separate columns
- Additional comments/sentences may be entered on raw data but will not be able to “pivot”

True or False? Circle the correct response.

- The tips mentioned under “Where to Begin” are all best practices when using Excel. **T or F**
- Triple checking your data entries are important. **T or F**

Pivot Table Layout- *The Drop Zone*



CREATE A GRAPH

Good Graphic Representations and their use

- Compare variables- bar and pie graphs
- Show change over time- line graphs

Select which of the following sources can be used to learn how to create graphs:

- ☐ Excel Help ☐ Google ☐ YouTube ☐ MyODP.com ☐ Technology/Apps ☐ ASERT website
☐ Your neighbor ☐ Your spouse ☐ Your child ☐ Bureau of Autism Sources

ENHANCEMENTS FOR FINAL PRESENTATION

- To add labels, titles, etc..., Click on graph, then “chart tools” will appear at the top
- To change axis intervals, Click on axis and then right click (once graph is created), and select “format axis”
 - Minimum and Maximum are the start and end of the axis on your graph
 - Major unit is the interval within the range (by 5s, 10s, 5%, 10%, etc...)
- Ask yourself- what is my goal for the data?
 - Do you need to connect the dots for the team?
 - Is it important for the team to come to their own conclusions?
 - Buy-in
 - Resistant team
 - Pointing to things the team is doing
- Will the data be shared with people outside of the team?