SECOND TERM
WEEKLY LESSON NOTES
WEEK 8

Week Ending:		DAY:		Subject: Computing	
Duration: 60mins				Strand: Productivity Software	
Class: B9		Class Size:		Sub Strand: Introduction To Electronic Spreadsheet	
Content Standard: B9.2.4.1. Demonstrate How to Use Spreadsheet (Advanced Operations)		Indicator: B9.2.4.1.3 Demonstrate the use of data tables, pivot tables, charts and pivot charts			Lesson: 1 of 2
Performance Indicator: Learners can learn the basics of using pivot tables and charts to analyze and visualize data effectively.				Core Competencies: CC8.2: CP6.1	
New words	Rows, Columns, Values, Summary, Pivot chart				
Reference: Computing Curriculum Pg. 49					

Activities For Learning & Assessment	Resources	Progression
Starter (5mins) Begin the lesson with an interactive activity to introduce the concept of data analysis. Activity: "Data Sorting Challenge" Provide learners with a small dataset related to a familiar topic (e.g., student grades, sports statistics, etc.). Ask learners to manually sort and organize the data to find specific information (e.g., highest grade, most goals scored, etc.). Discuss the challenges and time-consuming aspects of manual data analysis. Share performance indicators and introduce the lesson. **Main (35mins)** Define what a pivot table is and explain its purpose in data analysis. Demonstrate how to create a simple pivot table using a sample dataset.	Pictures and videos Computers with MS Excel installed	Learning the basics of using pivot tables and charts to analyze and visualize data effectively.

Discuss the different components of a pivot table (rows, columns, values) and their significance in summarizing data.

Provide learners with a sample dataset relevant to their interests or curriculum.

Guide learners through the process of creating a pivot table on their own.

Encourage them to experiment with different fields and settings to observe how the pivot table changes.

Explain the purpose of pivot charts and how they complement pivot tables in data visualization.

Demonstrate how to create a pivot chart from a pivot table.
Discuss the types of charts available (bar charts, pie charts, etc.) and their applications.

Assessment
1. Compared to simply looking at raw data, how does using a pivot table help you analyze trends and patterns in your data more effectively?
2. Explain the main difference between dragging a field to the "Rows" area and the "Values" area of a pivot table. What information does each position provide?
3. Imagine you have data on student exam scores and want to understand how scores differ based on subject and gender. How would you set up your pivot table and chart to analyze this information?

Reflection (10mins)
Use peer discussion and effective questioning to find out from learners what they have learnt during the lesson.

Take feedback from learners and summarize the lesson.

Homework/Project Work/Community Engagement Suggestions
- Suppose you want to focus on students who scored above a certain threshold in your pivot table. How can you use the filtering feature to achieve this?
- In addition to scores, your data also includes teacher names. How could you use slicers in your pivot table to compare score distributions across different teachers?

- When might using conditional formatting on your raw data be a preferred alternative to creating a pivot table and chart for visualizing data trends? Explain the advantages and limitations of this approach.

Cross-Curriculum Links/Cross-Cutting Issues

None

Potential Misconceptions/Student Learning Difficulties

None

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Content Standard: B9.2.4.1. Demonstrate How to Use Spreadsheet (Advanced Operations)		Indicator: B9.2.4.1.3 Demonstrate the use of data tables, pivot tables, charts and pivot charts			Lesson: 1 of 2
Performance Indicator: Learners can insert a pivot chart to display gender distribution and understand how to use the sort and filter features in a pivot table.				Core Competencies: CC8.2: CP6.1	
New words	Sort, Filter, Data analysis, Visualization, Insights				
Reference: Computing Curriculum Pg. 49					

Activities For Learning & Assessment	Resources	Progression
Starter (5mins) Begin the lesson with an engaging activity to introduce the concept of data sorting and filtering. Activity: "Class Survey Analysis" Ask learners to think about a hypothetical class survey where learners were asked about their favorite subjects. Provide a small dataset with columns like "Student Name," "Favorite Subject," and "Gender." Instruct learners to manually organize and sort the data to find insights like the most popular subject among males and females. Discuss the challenges and potential errors in manual sorting. Share performance indicators and introduce the lesson. **Main (35mins)** Review the basics of pivot tables from the previous lesson. Provide a dataset containing student names and genders.	Pictures and videos Computers with MS Excel installed	Inserting a pivot chart to display gender distribution and understand how to use the sort and filter features in a pivot table.

Demonstrate how to create a pivot table to summarize the number of males and females in the class.

Show learners how to insert a pivot chart based on this pivot table to visually represent gender distribution.

Distribute a dataset with additional information, including subjects or other relevant data.
Guide learners in creating a pivot table from this dataset.

Demonstrate how to use the sort and filter features to organize and analyze the data effectively.

Discuss the importance of sorting and filtering in gaining insights from large datasets.

Divide the class into small groups and provide each group with a different dataset.

Instruct each group to perform specific sorting and filtering tasks using pivot tables.

Each group will present their findings, highlighting the benefits of using these features.

Assessment
1. How can creating a pivot table help you visualize the distribution of genders in your data compared to simply looking at the raw data itself?
2. Explain the difference between dragging the "Gender" field to the "Rows" area and the "Values" area of the pivot table. What information does each position provide?
3. Which chart type, bar chart or pie chart, would be more appropriate for displaying the gender distribution in your data and why?

Reflection (10mins)
Use peer discussion and effective questioning to find out from learners what they have learnt during the lesson.

Take feedback from learners and summarize the lesson.

Homework/Project Work/Community Engagement Suggestions

- If you wanted to see only the data for females in your pivot chart, how would you use the filtering feature?
- Imagine you had additional columns with age and salary information in your data. How could you further analyze the gender distribution within different age groups or salary ranges using the pivot table and chart together?
- In some cases, using conditional formatting instead of a pivot chart might be sufficient for highlighting gender distribution. When would this be the case, and what are the advantages and limitations of this approach compared to using a pivot table?

Cross-Curriculum Links/Cross-Cutting Issues

None

Potential Misconceptions/Student Learning Difficulties

None