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DepED
DEPARTMENT OF EDUCATION

Lesson Exemplar for TLE

Quarter 1
Lesson
8

Lesson Exemplar for TLE Grade 7
Quarter 1: Lesson 8 (Week 8)
SY 2024-2025

Development Team

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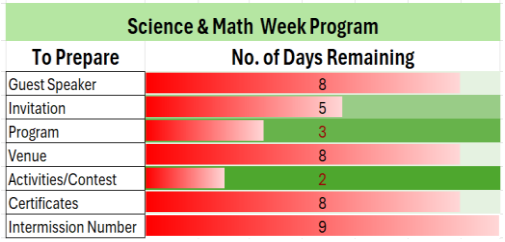
TLE/ QUARTER 1/ GRADE 7

I. CURRICULUM CONTENT, STANDARDS, AND LESSON COMPETENCIES	
A. Content Standards	The learners demonstrate an understanding of using productivity software.
B. Performance Standards	The learners perform the utilization of productivity tools in a safe and responsible manner.
C. Learning Competencies and Objectives	**Learning Competency** The learners shall be able to: • create spreadsheets with conditional formatting • and data analysis.
D. Content	Spreadsheet Software • conditional formatting functions • data analysis
E. Integration	**SDG No. 4** – Quality Education **SDG No. 9** – Industry, Innovation and infrastructure

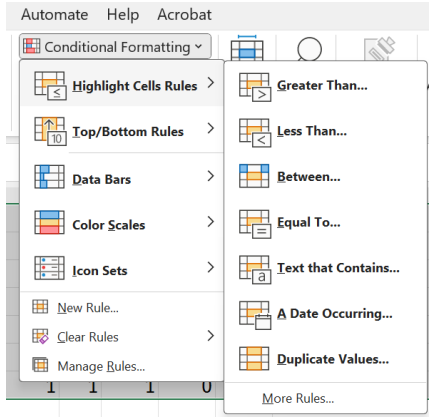
II. LEARNING RESOURCES
Akram, W. (2024, May 28). How to use the Analyze Data feature in Excel (5 easy methods). ExcelDemy. https://www.exceldemy.com/use-analyze-data-in-excel/ Analyze data in excel. (n.d.). https://support.microsoft.com/en-us/office/analyze-data-in-excel-3223aab8-f543-4fda-85ed-76bb0295ffc4 Frolov, A. (2023, January 31). Excel Data Bars Conditional Formatting with examples. ablebits.com. https://www.ablebits.com/office-addins-blog/data-bars-excel/ Highlight patterns and trends with conditional formatting - Microsoft Support. (n.d.). https://support.microsoft.com/en-us/office/highlight-patterns-and-trends-with-conditional-formatting-eea152f5-2a7d-4c1a-a2da-c5f893adb621

III. TEACHING AND LEARNING PROCEDURE		NOTES TO TEACHERS
A. Activating Prior Knowledge	**DAY 1** **1. Short Review** Analyze each scenario and identify what excel function can be used. ● Scenario 1. You have a spreadsheet of employee data with columns for name, department, salary, and years of experience. You need to quickly see the top 10 earners in the "Sales" department. ● Scenario 2: You have a list of customer addresses with columns for city, state, and zip code. You need to quickly identify all customers who live in a specific state. ● Scenario 3: You have a spreadsheet of sales data with columns for date, region, and sales amount. You want to quickly see the total sales for each region across different months. ● Scenario 4: You are creating a form where users can enter a date. You want to ensure that they enter a valid date within a specific range (e.g., between January 1st and December 31st). **2.Feedback (Optional)**	The Teacher will Share the different scenarios to the students then let them identify what function they can use to solve the problem. **Answer key:** 1. Sorting 2. Grouping 3. Filtering 4. Data Validation
B. Establishing Lesson Purpose	**1. Lesson Purpose** "Imagine you're managing a project with a deadline. You want to quickly identify tasks that are on track, behind schedule, or at risk of being late. How could you visually highlight these different statuses in your spreadsheet?" "We can use a handy tool in Excel called Conditional Formatting to do just that!" **Example:**  **2. Unlocking Content Area Vocabulary** ● **Datasets** - Collections of related information or data that can be analyzed or used for various purposes.	The teacher will prepare a Data set of Things to Prepare, No. of Days remaining. This will be shown to the students. While changing the values of entries, the bar indicators will also adjust automatically.

	• **Conditional Formatting** - A feature in software applications like Excel that automatically applies formatting, such as color or style changes, to cells based on specified conditions or criteria. • **Analyze Data** - The process of examining and interpreting data to uncover patterns, trends, or insights that can inform decision-making or solve problems. • **Insights** - Valuable or meaningful observations, interpretations, or conclusions derived from analyzing data, often leading to a better understanding of a situation or problem. • **PivotTable** - A tool in spreadsheet software like Excel used to summarize, analyze, and present large amounts of data in a compact and organized format through customizable tables. • **Threshold** - A predetermined level or point that serves as a boundary or limit, often used in data analysis to signify a specific value or condition that triggers a particular action or decision.	
C. Developing and Deepening Understanding	**SUBTOPIC 1: CONDITIONAL FORMATTING** **Conditional formatting** in Microsoft Excel is like giving your spreadsheet special powers to change the way it looks based on certain conditions or rules you set. Imagine it like magic colors that appear when certain things happen in your spreadsheet. **1. Explicitation** **What is Conditional Formatting?** Conditional formatting is a feature in Excel that lets you change the appearance of cells based on certain conditions. For example, you can make a cell turn red if the number in it is less than 50 or turn green if it's greater than 75. **How to Use Conditional Formatting:** 1. First, select the cells you want to apply conditional formatting to. 2. Then, go to the "Home" tab on the Excel ribbon. 3. Look for the "Conditional Formatting" option. It might be under the "Styles" group. 4. Click on it, and you'll see a bunch of different rules you can choose from, like "Highlight Cells Rules" or "Top/Bottom Rules".	The teacher will discuss the topic with various examples in every types of Conditional Formatting.

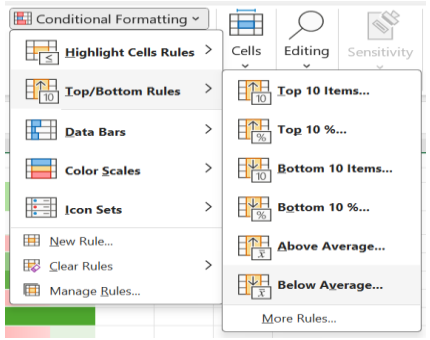
Types of Conditional Formatting:

1. **Highlight Cells Rules:** These rules let you choose how to format cells based on their values. You can make cells with certain values bold, italic, or change their background color. Examples are dates after this week, or numbers between 50 and 100, or the bottom 10% of scores. Highlight all Students with Honors having 90% and above Average.



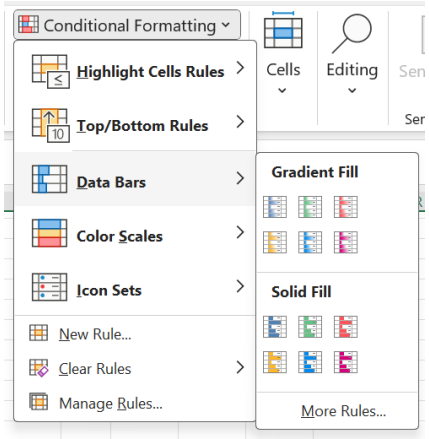
2. **Top/Bottom Rules:** These rules let you format cells that are in the top or bottom percentages or numbers in your data.

   For example, you can make the top 10% of scores green. Top 10 Highest Student Grade. Highlight students with below average scores.



3. **Data Bars, Color Scales, and Icon Sets:** These options let you visually represent your data using bars, colors, or icons.

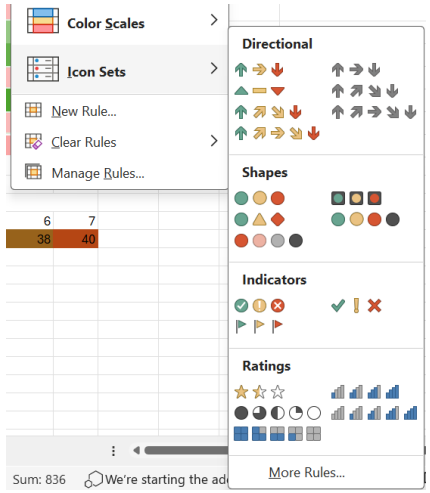
   Data Bars show the relationship of values in a cell range. Extends a band of color across the cell. Examples are comparisons of prices or populations in the largest cities. Data bars can help you spot the highest and lowers numbers in your spreadsheets at a glance.



   Color Scales show the relationship of values in a cell range. Applies a color scale where the

intensity of the cell's color reflects the value's placement toward the top or bottom of the range. An example is sales distributions across regions.

Icon Sets - A cell range that contains three to five groups of values, where each group has its own threshold. For example, you might assign a set of three icons to highlight cells that reflect sales below ₱30,000, below ₱20,000, and below ₱10,000. Or you might assign a 5-point rating system for mobile phones and apply a set of five icons.



4. Creating Your Own Rules:

If none of the preset rules suit your needs, you can create custom rules. This allows you to specify exactly what conditions should trigger the formatting you want.

2. Worked Examples

Create a table for the following Datasets:

1. Let's say you have a list of test scores with 50 items. You can use conditional formatting to make scores above 30 turn green and scores below 25 turn red.
2. You have a budget spreadsheet; you can use conditional formatting to highlight expenses that exceed a certain amount.
3. Create a summary of the number of students in every section from grade 7 to Grade 10. Another column for the number of Boys and Girls. Apply the conditional formatting using **Data Bars** to see the difference per section.
4. You are monitoring the heat index of your City or Municipality. Create a table of everyday Heat Index Result for One Month. Use **Color Scales** to monitor the results.
5. Make an inventory of snacks in the school canteen. Include the Gross Amount Sales per Day. Use the **Icon Sets** to identify the profitable items and not profitable.

Use the Learning Activity Sheet No. 1 for this activity.
The teacher may use raffle or ask representative each group to pick a topic.
Sample Scenarios:

- Book Sales analysis
- School budgeting
- Project management
- Personal finance
- Environmental Awareness

DAY 2

3. Lesson Activity

Real-World Applications: Brainstorm how Conditional Formatting can be applied in different scenarios like sales analysis, budgeting, project management, or personal finance.

Case Study: Provide a real-world dataset and ask learners to design a comprehensive Conditional Formatting system for data visualization and analysis.

SUBTOPIC 2: Analyze Data

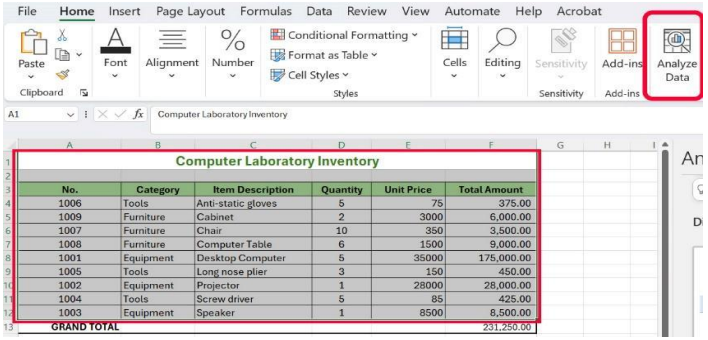
1. Explicitation

Analyze Data in Excel empowers you to understand your data through natural language queries that allow you to ask questions about your data without having to write complicated formulas. In addition, Analyze Data provides high-level visual summaries, trends, and patterns.

How to Use the Analyze Data Feature in Excel (5 Easy Methods)

Method 1 – Using Pivot Tables to Analyze Data

- Select your whole dataset from the worksheet and click the "Analyze Data" option from the Home tab.

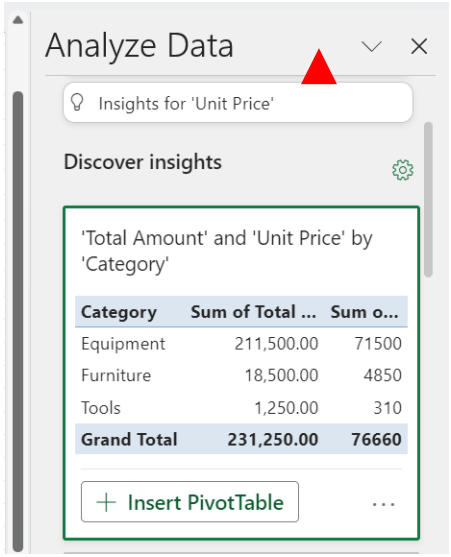


- There will be a task pane on the right of your worksheet.
- Under "Discover Insights" click "Insert Pivot Table".

IMPORTANT: The "Analyze Data" feature is currently only available with Microsoft 365.

	A	B	C
1			
2	**Category**	**Sum of Total Amount**	**Sum of Unit Price**
3	Equipment	211,500.00	71500
4	Furniture	18,500.00	4850
5	Tools	1,250.00	310
6	**Grand Total**	**231,250.00**	**76660**
7			

- A **new sheet** will be created with the **pivot table**.



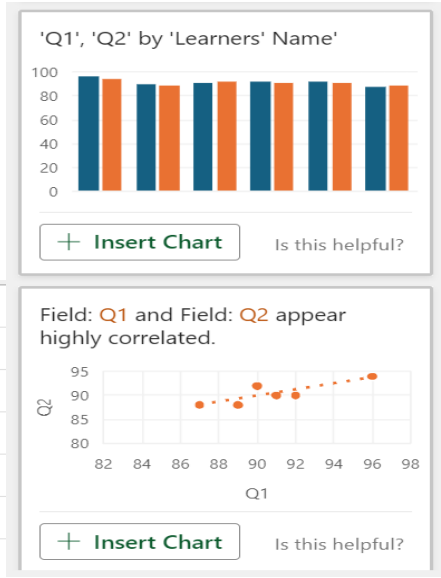
Method 2 – Using Charts to Analyze Data

- You can also get chart options of different types from this feature.

Steps:

- Prepare the Grade Sheets of Learners for Quarter 1 and Quarter 2
- Select the Table.
- Open the "**Analyze Data**" task pane.
- Choose "**Insert Chart**".
- A new **chart** will be created.

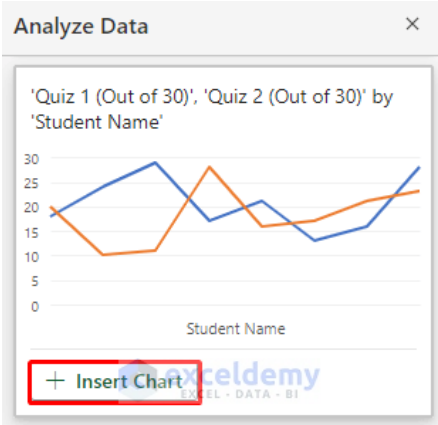
Learners' Name	Q1	Q2
Concepcion, MC	96	94
Montenegro, SB	89	88
Magdiwang, AK	90	92
Petrola, AM	91	90
Magtanggol, KB	92	90
Mamaradlo, CJ	87	88



Method 3 - – Using Graphs to Analyze Data

Steps:

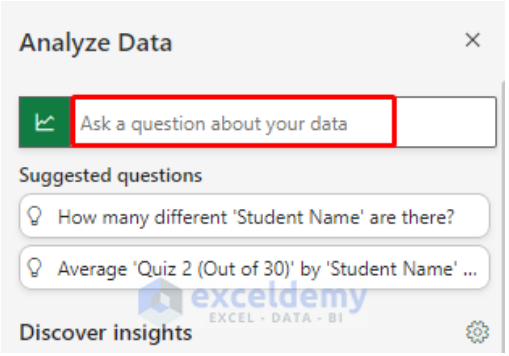
1. Open the “Analyze Data” task pane.
2. Choose “Insert Chart”.
3. A new graph will be created



Method 4 - Asking Questions for Custom Results

Steps:

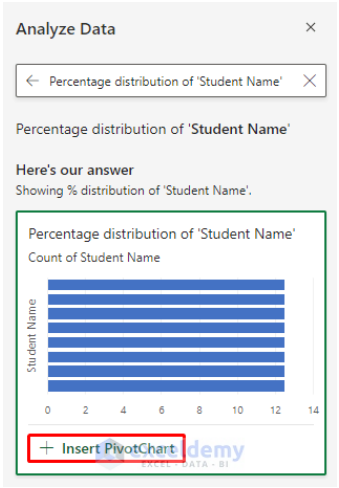
1. Open the “Analyze Data” task pane.
2. Choose “Ask a question about your data”.
3. The answer will appear below the question bar.
4. Choose “Insert PivotChart”, if needed

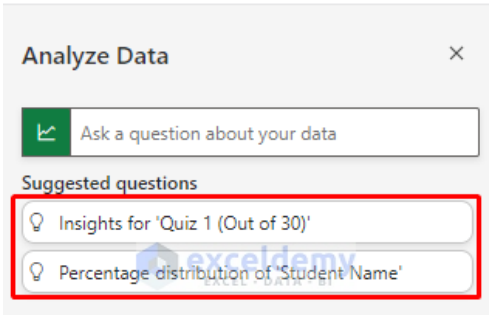


Method 5 – Using the Suggested Questions List

Steps:

1. Open the “Analyze Data” tab.
2. Just below the search question bar, you will see “Suggested questions”.
3. Choose any of the suggested questions.





DAY 3

2. Worked Example

Visit the previous activities using Conditional Formatting. Use Analyze Data if it is applicable and evaluate the output charts and graphs.

Answer the guided questions after the activity:

- Can you use Analyze Data to evaluate the tables created from previous activity?
- Does it produce a meaningful output? If not, Why?
- What else can Analyze Data feature in Excel more effective? Give insights.

3. Lesson Activity

Sports Stats:

- Have students collect data from a favorite sport (e.g., basketball, soccer, baseball).
- In Excel, they can create charts to compare players' stats (points, rebounds, assists, etc.), or track the team's performance over time.
- **Extension:** Ask students to create a "Player of the Game" spreadsheet that automatically assigns the award based on specific criteria (e.g., highest points scored, most assists, etc.).

The teacher may choose what activity can be done depending on available time. Use Learning Activity Sheet # 2 for complete instruction.

The rubric provided was generated from MagicSchool.ai. This Rubric can be modified by the teacher based on his/her preferences or point system.

	Class Survey: • Conduct a class survey on topics like favorite subjects, favorite foods, or hobbies. • Have students enter the data into Excel and create charts (pie charts, bar charts) to visualize the results. • **Extension:** Ask students to analyze the data and write a short report summarizing the class's preferences.	
D. Making Generalizations	**1. Learners' Takeaways** • What is the purpose of Conditional Formatting? Why is it useful? • How does Conditional Formatting help you quickly identify important information in a spreadsheet? • Can you describe a few different ways to apply Conditional Formatting (e.g., using a formula, highlighting cells based on values, etc.)? **2. Reflection on Learning** • What are some common scenarios where you might use Conditional Formatting (e.g., highlighting sales that are above average, flagging overdue invoices)? • What is the difference between raw data and analyzed data? Why is analysis important? • Can you think of a real-world problem or situation that could be solved using data analysis in Excel?	

IV. EVALUATING LEARNING: FORMATIVE ASSESSMENT AND TEACHER'S REFLECTION		**NOTES TO TEACHERS**
A. Evaluating Learning	**DAY 4** **1. Formative Assessment** **A. Word Bank** Fill in the blank with the correct words from the word bank **Word Bank:** Automatically highlight analyze data informed identify 1. Conditional Formatting allows you to _____ format cells based on certain conditions.	**Answer Key:** 1. Automatically 2. identify 3. highlight 4. analyze data 5. informed

2. The Analyze Data feature can help you _____ trends and patterns in your data.
3. Conditional Formatting can be used to _____ cells with values above a certain number.
4. The _____ feature in Excel can help you visualize your data.
5. Analyzing data can help you make more _____ decisions.

B. Multiple Choice Questions: Choose the correct answer from the choices for each question.

1. What is the purpose of Conditional Formatting in Excel?
   a) To format cells based on certain conditions
   b) To create charts and graphs
   c) To perform complex calculations
   d) To sort and filter data

2. Which of the following is an example of a condition you can use with Conditional Formatting?
   a) Cells with a value greater than 100
   b) Cells with a specific text color
   c) Cells that contain a certain formula
   d) All of the above

3. What is the main benefit of using the Analyze Data feature in Excel?
   a) It creates complex formulas automatically
   b) It helps you identify trends and patterns in your data
   c) It allows you to share your data with others
   d) It formats your data for you

4. Which of the following types of visualizations can the Analyze Data feature create?
   a) Bar charts
   b) Line graphs
   c) Scatter plots
   d) All of the above

Answer key (B):

1. A
2. D
3. B
4. D
5. D

<table>
<tr><td></td><td colspan="3">5. How can analyzing data in Excel help you make better decisions?
a) It provides more accurate information
b) It saves you time
c) It helps you identify problems and opportunities
d) All of the above

2. Homework (Optional)</td><td></td></tr>
<tr><td rowspan="5">B. Teacher's Remarks</td><td>Note observations on any of the following areas:</td><td>Effective Practices</td><td>Problems Encountered</td><td rowspan="5">The teacher may take note of some observations related to the effective practices and problems encountered after utilizing the different strategies, materials used, learner engagement and other related stuff.

Teachers may also suggest ways to improve the different activities explored/ lesson exemplar.</td></tr>
<tr><td>strategies explored</td><td></td><td></td></tr>
<tr><td>materials used</td><td></td><td></td></tr>
<tr><td>learner engagement/ interaction</td><td></td><td></td></tr>
<tr><td>others</td><td></td><td></td></tr>
<tr><td>C. Teacher's Reflection</td><td colspan="3">Reflection guide or prompt can be on:
▪ <u>principles behind the teaching</u>
What principles and beliefs informed my lesson?
Why did I teach the lesson the way I did?

▪ <u>students</u>
What roles did my students play in my lesson?
What did my students learn? How did they learn?

▪ <u>ways forward</u>
What could I have done differently?
What can I explore in the next lesson?</td><td>Teacher's reflection in every lesson conducted/ facilitated is essential and necessary to improve practice. You may also consider this as an input for the LAC/Collab sessions.</td></tr>
</table>