

LESSON PLAN TEMPLATE

Lesson Title	Organizing Data: The Power of Frequency Distribution Tables
Learning Area/s	Mathematics
Name of Teacher/s	DepED Tambayan PH (Visit www.depedtambayanph.net for more downloads.)
Grade Level and Section	Grade 7
No. of Sessions	4 Sessions
References	None specified
Declaration of AI use	This lesson plan was co-created using Gemini AI to assist with unpacking competencies into a 4-session learning design, structuring activities, and assessment formulation.

Intentions.

Meaningful learning experiences are anchored in how we frame them. Start by deciding what you want learners to master by the end of the lesson – keep it clear and simple.

Learning Competency and Curriculum Standards:	Learning Competency: Data and Probability • Organize statistical data in a frequency distribution table. Content Standards: The learners should have knowledge and understanding of: • conversion of units of measure • volume of square and rectangular pyramids, and cylinders • sets and subsets, and the union and intersection of sets using Venn diagrams • subset of real numbers • data collection and sampling techniques, and the presentation of data in appropriate tables and graphs • interpretation of statistical graphs • the set of integers, and comparing and ordering integers Performance Standards: By the end of the term, the learners are able to: • convert units of measure from different systems of measure. • find the volume of square and rectangular pyramids, and the volume of cylinders. • describe sets and their subsets, and the union and intersection of sets. • illustrates sets and subsets, union and intersection of sets, using Venn diagrams. • collect data, and organize data in a frequency distribution table. • represent and interpret data in different types of graphs. • compare and order integers, including through the use of the number line.
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	Session 1	Session 2	Session 3	Session 4
Learning Objectives:	- Differentiate between categorical and numerical data. - Organize categorical data from a community-based survey using a tally sheet and a basic frequency table.	- Identify the range and determine appropriate class intervals for ungrouped numerical data. - Calculate the frequency of numerical data points within a given set.	- Construct a complete Grouped Frequency Distribution Table (FDT) using a provided set of numerical data. - Ensure all components (Class Intervals, Tallies, Frequency) are accurately represented.	- Interpret information from a completed Frequency Distribution Table to solve simple problems. - Reflect on the importance of organized data in community decision-making.
Learner Context:	Learners demonstrate high engagement when topics involve local food and popular social media trends. While most can perform basic counting, some struggle with distinguishing between qualitative and quantitative attributes. A segment of the class requires visual aids to stay focused, and others exhibit difficulty in transitioning from raw lists to structured formats.	Learners have shown proficiency in basic arithmetic but often find large sets of numbers overwhelming. They respond well to color-coding and step-by-step checklists. Barriers include a lack of confidence in subtraction (for range) and tendency to skip numbers when dealing with long lists.	The class is most productive when working in small groups where they can discuss their logic. However, precision remains a barrier; students often miss one or two data points when tallying. They are particularly interested in data that feels 'real,' such as sports scores or household expenses.	Students are now comfortable with the structure of the table but need help moving from 'making the table' to 'understanding what it says.' They have a strong sense of community and respond well to scenarios involving helping their barangay or school. Some struggle with the language of 'greater than' or 'at most' in word problems.
Learning Experience. A learning experience is like a thoughtfully designed journey. Each activity and interaction builds towards meaningful understanding and growth. Identify activities and interactions to help learners gain knowledge, skills, or understanding in a				

purposeful way.

Pre-Lesson:	• 'Pinoy Pick': A quick poll where students choose their favorite local snack (e.g., Fishball, Kwek-kwek, Banana Cue) using sticky notes on the board. • Active Retrieval: Reviewing the concept of 'sets' from previous lessons.	• 'Range Race': Find the highest and lowest age in a provided list of Filipino celebrities as a quick warm-up. • Flashcard drill on basic subtraction.	• 'Sorting Challenge': A physical activity where students sort themselves into 'age groups' or 'height groups' in the classroom.	• 'The Story Behind the Table': Show a completed FDT about 'Typhoon Frequency' and ask what the numbers tell us about the rainy season in the Philippines.
Flow:	• Scaffolding : Begin with the 'Pinoy Pick' results. Group the sticky notes to show 'sorting' before 'counting.' • Social Learning: In pairs, students interview each other about their preferred mode of transportation to school (Jeepney, Tricycle, Walking). • Checks for	• Active Retrieval: Quick recap of yesterday's categorical frequency table. • Scaffolding : Introduce numerical data using 'Daily Allowance in Pesos.' Show that tallying each unique value is inefficient for large ranges. • Direct Instruction: Model the	• Modeling: The teacher demonstrates the full construction of an FDT using 'Weights of 40 Students in kg.' • Checks for Understanding: 'Think-Pair-Share' regarding why intervals should not overlap (e.g., 10-14 and 15-19 vs. 10-15 and 15-20). • Scaffolding	• Social Learning: 'Data Detectives' - In groups, students receive a finished FDT about 'Electricity Consumption' of 30 households. • Direct Instruction: Teach key phrases: 'most frequent,' 'least common,' and 'cumulative total.' • Scaffolding

	Understanding (CFU): Randomly call on students to identify if the 'Transportation' data is categorical or numerical. • Step-by-Step Modeling: Demonstrate how to convert tallies into a frequency column on the board.	formula for Range (Highest - Lowest) and the concept of 'Class Width' using the 10-peso increments common in local stores. • Social Learning: Small group activity where they find the range of a set of 30 mock test scores.	: Providing a 'Step-by-Step Guide' handout that lists the sequence: 1. Find Range, 2. Decide Intervals, 3. Tally, 4. Sum Frequencies. • Active Retrieval: Asking students to recall the importance of the 'Total Frequency' matching the 'Number of Samples.'	: Use a 'Sentence Starter' bank to help students write their interpretations (e.g., 'The table shows that most families spend between...'). • CFU: Rapid fire questions: 'How many families are in the highest interval?' 'What is the total number of respondents?'
Learning Resources:	• Slide presentation on Data Types • Sticky notes • Manila paper • Markers	• PowerPoint with 'Daily Allowance' dataset • Calculators • Color-coded frequency templates	• Interactive PPT • Step-by-Step FDT Handout • Grid Paper	• PPT with community-based FDTs • Sentence Starter Cards • Worksheet for interpretation
Opportunities for integration:	Integration with Araling Panlipunan by discussing the common modes of transport in the local barangay and their economic impact.	Integration with Personal Finance/EsP by discussing how to manage a daily school allowance and the importance of budgeting.	Integration with Science (Biology) by using data related to the heights of local plants or weights of common livestock (e.g., chickens).	Integration with English (Literacy) through the use of descriptive language and Citizenship by interpreting data on local community needs.
Assessment.				

Assessments reveal what learners have gained and what they still need help with. These are helpful in providing you with information to guide your future instruction throughout the entire session.

Formative Assessment:	- Individual Worksheet: Students are given a list of 20 'Barangay Health Center' records (Types of Vaccines) and must create a frequency table. - Checklist for accuracy in tallying and frequency summation.	'Stop-Light' Check: Students hold up green, yellow, or red cards to indicate their level of comfort in finding the Range. - Short quiz on calculating Range and identifying the 'High' and 'Low' values in a list of temperatures in Baguio City.	- Hands-on Activity: Groups are given a bag of 'Mixed Beans' or 'Coins' of different denominations and must create a grouped FDT based on weight or value. - Peer Review: Groups swap tables to check for tallying errors.	- Tangible Evidence: A written report (3-5 sentences) interpreting a provided FDT about 'Daily Water Usage in a Philippine Village.' - Exit Ticket: 'One thing I learned about my community through data.'
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Ways Forward.

Meaningful learning can also happen beyond the classroom – for both the learners and the teacher. Pause and reflect on what happened today.

Extended learning opportunities:	Assign students to count the number of different colored shirts worn by family members at home and bring the tally next session.	Peer Tutoring: Students who mastered Range calculation assist those who are still struggling during the last 5 minutes.	Provide an 'Advanced Set' of data with 50+ points for students who finished early to practice speed and accuracy.	Home Connection: Ask students to look for a statistical table in a local newspaper or online news site and bring it to class next week.
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Reflections:	Prompts for Teacher: Did the 'Pinoy Pick' activity successfully bridge the gap between concrete objects and data points? Which students struggled with the tallying process?	Prompts for Teacher: Were the intervals chosen by students logical? Did color-coding help the visual learners identify the numbers within the range?	Prompts for Teacher: Did the handout effectively reduce the cognitive load for the struggling learners? How many groups successfully matched their total frequency to the sample size?	Prompts for Teacher: Were students able to transition from calculation to interpretation? Which specific terms (e.g., 'at least') caused the most confusion?
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