



UNIT GRAPHIC ORGANIZER

SUBJECT: Mathematics

UNIT: 4

COURSE: Sixth

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DATE: September 11th 2024

TITLE:

GRAPHICAL STATISTICS, MEAN, MEDIAN, MODE AND PRISMS VOLUME

THROUGHLINES:

1. How can you use solve real-world problems by analyzing and comparing data?
2. How to summarize numeric data with numerical summaries, including the mean and median?
3. How to represent numeric data graphically, including box plots?
4. How can you use statistical measures to compare populations?
5. How do you find the volume of a figure made of cubes and prisms?

GENERATIVE TOPIC



UNDERSTANDING GOALS:

<p>The student will solve problems involving random samples and populations by including stem-and-leaf plots and histograms, making predictions from box and dot plots to model populations with smaller random samples, in that way can solve real-world problems Analyzing the samples.</p>	<p>The student will analyze and compare data making inferences about a specific population and measuring the difference between the centers by expressing it as a multiple of a measure of variability to find measures of the data such as the mean and the median, so can draw informal comparative inferences about two populations and use them to solve real-world situations.</p>	<p>The student will find and interpret the mean absolute deviation comparing data sets by finding measures of center and variability to summarize a given data set through one value, in that way find some information about how spread out the data in a data set is and solve real-world problems.</p>	<p>The student will find representations of data calculating the mean, the distance each data point is from the mean and the mean of those distances to measure variability, or how spread out the data values are, so can summarize categorical data with numerical and graphical summaries.</p>	<p>The student will find the volume of three-dimensional objects composed of triangles, quadrilaterals, polygons, cubes, and right prisms applying a general formula to find volumes of some prisms, in that way can solve problems including real-life volume situations.</p>
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	UNDERSTANDING PERFORMANCES	TIME	ASSESSMENT	
	ACTIONS		WAYS	CRITERIA

<p style="text-align: center;">Exploration Stage</p>	<ul style="list-style-type: none"> • To introduce how to analyze and compare data and their application in real life. • To model measures of the data such as the mean and the median, and use them to solve problems. • To use measures of center and measures of variability for numerical data from random samples to draw informal comparative inferences about two populations. • To build 3D figure given the respective net. • To build rectangular prisms with little cubes. <p>Synthesis project progress: Start by testing the prototype.</p>	<p style="text-align: center;">1 Week</p>	<ul style="list-style-type: none"> • Analyzing possible difficulties that can appear on the activities. • Drawing a figure on a grid and then to exchange the figure making a survey using digital resources, graphically modeling the mean. • Measuring the difference between the centers by expressing it as a multiple of a measure of variability. • Summarizing categorical data with numerical and graphical summaries • Solving real-world and mathematical problems involving volume of three-dimensional objects composed of triangles, quadrilaterals, polygons, cubes, and right prisms. <p>Synthesis project progress:</p> <p>Week 1: Research on how the actual implementation is done.</p> <p>Week 2: Evaluation of logistical, economic and social aspects.</p>	<p>- Oral interaction.</p> <p>- Registering the results of each exploring activity in the notebooks.</p> <p>- Argument with mathematical reasons and arguments.</p>
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<p style="text-align: center;">Guided Stage</p>	<ol style="list-style-type: none"> 1. To compare the data given in dot or box plots. 2. To summarize numeric data, including the mean and median 3. To represent numeric data graphically, including box plots, stem-and-leaf plots, and histograms 4. To interpret numeric data summarized in dot plots <p>To summarize categorical data with numerical and graphical summaries.</p> <p>Synthesis project progress:</p> <p>To continue with the evidences.</p>	<p style="text-align: center;">6 weeks</p>	<ul style="list-style-type: none"> • Comparing two sets of data displayed in dot plots • Comparing two sets of data displayed in box plots • Summarizing numeric data with numerical summaries, including the mean and median. • Representing numeric data graphically, including box plots, stem-and-leaf plots, and histograms. • Participating in group with the teacher and individual workshop. • Solving activities from the book “progress mathematics 7” <p>Synthesis project progress:</p> <p>Week 3: Planning for implementation in a community or at home (step by step)</p> <p>Week 4: Evaluating of biological method to ensure the probability of water.</p> <p>Week 5: Project implementation (photographs and description)</p> <p>Week 6: Monitoring and necessary adjustments (photographs and their descriptions)</p>	<ul style="list-style-type: none"> - Proposing and solving problems using specific process and models. - Using different methods and models to help finding the solutions to problems situations. - Arguing the resolution of math problems. - Using the appropriate materials for activities
<p style="text-align: center;">Learning Evidence</p>	<p style="text-align: center;">AQUA INNOVATORS</p> <p style="text-align: center;">Synthesis project</p> <p>This project will be based on the creation of water filters in which students will research information about them and how to make one water filter using different materials to elaborate this filter.</p> <p>Synthesis project progress:</p> <p>The students socialize the results of the project.</p>	<p style="text-align: center;">1 week</p>	<p>- Analysing and socializing the outcome of their product to their classmates and teachers.</p> <p>Synthesis project progress:</p> <p>Week 7: Final delivery of the banner for the fair in which it will be supported.</p> <p>Week 8: Final and improved version of the prototype.</p>	<ul style="list-style-type: none"> - Synthesizing the main topics as a product. - Creative in the design and elaboration of the synthesis project.