



UNIT GRAPHIC ORGANIZER

SUBJECT: MATHEMATICS

UNIT: 3

COURSE: SIXTH GRADE

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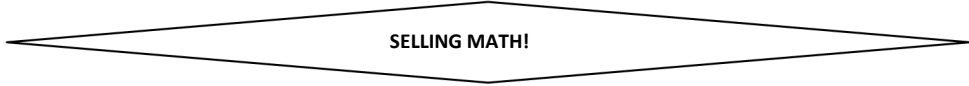
DATE: July 11th / 2022

TITLE: PERCENT, PROBABILITY AND AREA

THROUGHLINES:

- How can you use percent to solve real-world problems?
- How do you deal with sales tax, tips, and simple interest?
- What is probability?
- How can you use experimental probability to solve real-world problems?
- How do you find the area of composite figures?

GENERATIVE TOPIC



UNDERSTANDING GOALS:

<p>The student will calculate percentage increase or decrease using problems involving percent from one quantity to another to apply percentage change and work out the percentage increase or decrease, in that way can solve word problems where a percentage change is included in the context.</p>	<p>The student will calculate tips, sales tax and simple interest computing a resulting total, the simple interest and new balance earned in an investment or on a loan to estimate the tip for the total bill and discounts, so can solve practical problems involving consumer applications.</p>	<p>The student will analyze the probability of simple and compound events by discovering and evaluating some predictions of outcomes to use the results of these experiments and make predictions about the situations, in that way can conduct experiments to model real-world situations.</p>	<p>The student will predict experimental and theoretical probabilities by writing ratios, using a sample and find the expected value to understand the difference between theoretical and experimental probability, so can use experimental probabilities and make inferences about particular scenarios.</p>	<p>The student will find the area of individual and composite figures by using different formulas of 2D shapes to find the area of composite figures where two or more shapes have been composed together, in that way can solve real-world and mathematical problems involving area.</p>
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	UNDERSTANDING PERFORMANCES	TIME	ASSESSMENT	
	ACTIONS		WAYS	CRITERIA
Exploration Stage	<ul style="list-style-type: none"> - To introduce percentage change and percentage increase or decrease with their application in real life. - To model tips, sales tax and simple interest and how they are used in our daily lives. - To model the probability of simple and compound events using predictions. - To identify what experimental and theoretical probabilities are. - To introduce the area of individual and composite figures and its application in real world context. 	1 week	<ul style="list-style-type: none"> - Analyzing possible difficulties that can appear on the activities. - Offering another opportunity to compare theoretical and experimental probabilities using a number cube. - Representing and solving problems involving proportional relationships. - Giving arguments that generalize the order of the operations. - Using experimental probability to make a prediction - Drawing a figure on a grid and then trade the figure with his or her partner. 	<ul style="list-style-type: none"> - Properly argue problem solving. - Proposing problematic situations with specific topics.
Guided Stage	<ul style="list-style-type: none"> - To solve problems involving percent. - To solve mark-up and markdown problems. - To use percent to find sales tax, tips, total cost, simple interest. - To find the probability of a simple event and its complement. - To find experimental probabilities of simple and compound events. - To use experimental probability to make a prediction. - To find the area of composite figures. 	6 weeks	<ul style="list-style-type: none"> - Participating in group and individual workshop. - Working in pairs to solve increase and decrease percent problems by addressing the stages of the heuristic model of the area. - Solving activities from the book "GO MATH LEVEL 7", that reinforce the concept and also allow students to perform an individual practice. - Using the platform Khan academy in order to reinforce not only what was studied in class but also elements that teacher considers necessary to continue the topic. <p style="text-align: center;"><u>Synthesis project</u></p> <p>Stage 1: Socializing to students the project's objective to develop along the term.</p> <p>Stage 2: Selecting the kind of elements by creating the store with base in some options (ice cream, videogames, pets, food and sports).</p> <p>Stage 3: Simulating discounts, increase and decrease percentages, they must also create a consumer tax on their product.</p>	<ul style="list-style-type: none"> - Using the appropriate materials for the activities. - Proposing problematic situations with specific topics. - Proposing and solving various problem situations using a variety of methods. - Translating reality into a mathematical or geometric structure

<p>Learning Evidence</p>	<p style="text-align: center;"><u>Synthesis project</u></p> <p>Students will model a store with their favorite items by obtaining and organizing information to simulate discounts, increase and decrease percentages, they must also create a consumer tax to simulate the successful sale of their products and display them in a final presentation.</p>	<p style="text-align: center;">1 week</p>	<p>Stage 4: Analyzing and socializing the outcome of their product to their classmates and teachers.</p>	<p>Synthesizing the main topics as a product.</p> <p>Creative in the design and elaboration of the synthesis project.</p>
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