** UNIT GRAPHIC ORGANIZER**

**SUBJECT**: Mathematics **UNIT**: 2 **COURSE**: 5th Grade

**TEACHER**: Alejandra Acuña - Juanita Del Mar Ramírez - Jonathan Gonzalez **DATE**: April 13th/ 2021

**PROPORTIONS, PERCENTS, ORDER OF OPERATIONS AND MEASUREMENT SYSTEMS**

**TITLE**:

**THROUGHLINES**:

1. How can you use ratios and rates to solve real-world problems about proportions?

2. How can you use the order of operations to simplify expressions?

3. How can you apply percents in real contexts?

4. How can you write percents as fractions and decimals?

5. How can you use ratios and proportions to convert measurements?

**Why Increase my money?**

**GENERATIVE TOPIC:**

**UNDERSTANDING GOALS:**

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| The student will understand how to solve real world problems by using proportions and associating them with ratios, and rates | The student will comprehend how to find the value of any expressions by evaluating the hierarchy of operations and organizing them. | The student will understand how to find a percent of a quantity solving problems involving finding the whole, given a part and the percent with base in real life situations. | The student will comprehend how to write percent as decimals and fractions to solve math situations through models | The student will understand how use ratio reasoning to convert manipulate and transform measurement units appropriately multiplying or dividing with virtual manipulatives |

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|  | UNDERSTANDING PERFORMANCES | TIME | ASSESSMENT |  |
|  | **ACTIONS** |  | **WAYS** | **CRITERIA** |
| **Exploration**  **Stage** | * To watch a clip to introduce the concept of Percent and their relation between Fractions and decimals. * To represent percents with hundredth charts and bar graphs. * To represent ratios using two-colour counters. * To write an expression with two different results to show which operation should be performed first. * To use patterns to explain measurement conversion. | **1 Week** | * Discussing about how percents, decimals and fractions can be represented in any math situations. * Drawing percents in the hundredth chart. * Using concrete material to explain ratios and comparing units within a measurement system. * Proposing an abbreviation like PEMDAS that is a rule that tells the correct sequence of steps for evaluating a math expression. | Oral interaction. |
| **Guided**  **Stage** | * To stablish a relation between fractions, percents and decimals. * To find the percent of a number * To represent real-world problems involving ratios and rates using tables and graphs * To determine whether two ratios form a proportion. * To write and evaluate numerical expressions involving whole-number exponents. * To convert units within a measurement system | **6 Weeks** | * Writing percents as decimals and fractions by using equivalence forms. * Reasoning about tables of equivalent ratios, tape diagrams, double number line diagrams, or equations. * Writing proportions that include one unknown quantity. * Resolving percent problems by using proportions. * Solving numerical expressions using the order of operations. * Representing real-world problems involving ratios and rates using tables and graphs. * Using a model or a conversion factor to covert measurement units. | Proposing and solving problems with specific process.  Arguing the resolution of Math problems.  Drawing accurate representations by using appropriate measures and materials. |
| **Learning**  **Evidence** | **SYNTHESIS PROJECT**  The students are going to model different situations applying percentages in order to describe money movements | **1 Week** | * The students will choose a job and the teacher will give him/her a started pay * The students will apply math operations with percentages by describe how change the started pay with base in different money transactions * The students will make a digital presentation in which they can show the variation of the percentages using circle and bar graphs, by showing the conclusions of their project in a final sustentation | Synthesizing the main topics as a product. |