**UNIT GRAPHIC ORGANIZER**

**SUBJECT: Science UNIT: II COURSE: Second Grade**

**TEACHER: Alejandra Melo, Laura Ome. DATE: April 13th, 2021.**

**MATTER, PROPERTIES AND MAGNITUDES.**

**TITLE**:

**THROUGHLINES**:

Is my mass the same in other planet? Can I freeze any liquid, if I put this into the refrigerator?

Are there more states of matter? What is the state of matter of the jello?

How can I buy one kilogram of candies?

What is inside of a cloud?

**“TESTING WITH MATTER”**

**GENERATIVE TOPIC**

**UNDERSTANDING GOALS:**

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| Students will explain the behaviour of solid, liquid and gaseous substances, when some forces are applied on them, through oral presentations to explain the properties and the uses of materials from everyday objects. | Students will measure mass and volume using the right lab instruments, through practical activities to apply the concepts in their real lives. | Students will classify magnitudes like length, weight, time and volume with their units of measure through practical activities to understand how matter can be measure. |

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|  | **UNDERSTANDING PERFORMANCES** | **TIME** | **ASSESSMENT** | |
|  | **ACTIONS** |  | **WAYS** | **CRITERIA** |
| **Exploration**  **Stage** | 1. To identify the characteristics of different materials.  2. To classify objects according to their characteristics.  3. To determine the effect of force actions like squeezing, breaking, cuttting etc, cause on material.  4. To describe and compare different materials.  5. To describes properties of matter. | **Weeks 3** | 1.1 Observing different materials of diverse objects (chairs, windows, columns etc.), found around the house, answering different questions related to the physical characteristics of the objects and materials.  2.1Observing and completing a chart about the properties of jelly, balloon, can, clay like smell, texture, color and shape.  3.1 Explaining what happens if you apply forces (squeeze, splash, stretch, fold etc.) on different materials (clay, iron, wood, plastic etc.), through an oral presentation.  3.2 Analysing the hardness of different layers such as copper, bronze, glass, steel and iron, using the next link. <https://labovirtual.blogspot.com/search/label/Dureza>  4.1 Classifying different materials taking into account their function and physical characteristics.  4.2. Doing predictions about the behaviour of materials and objects, when we use force to change them.  5.1 Measuring the mass of gas: <https://www.youtube.com/watch?v=poUsb45GkM0&t=33s>  5.2 Analysing the properties of liquids, measuring the time that they fall using equal proportions in different liquids  <https://www.youtube.com/watch?v=69iUhlqFJFk>  5.3 Testing viscosity in different liquids  <https://www.youtube.com/watch?v=2Gdxu4XcsbY>  **Synthesis Project Advance:** Students will choose an experiment in which they can explain the properties of a solid, liquid or gas, then they will ask a question about their experiments and collect information to answer it.  -Observing the next videos  <https://www.youtube.com/watch?v=Aiw4sp0dqkI>  <https://www.youtube.com/watch?v=AojXfQqErjc>  <https://www.youtube.com/watch?v=nGA78ZT941o>  <https://www.youtube.com/watch?v=ndtNy3Z0Bko> | -To observe specific phenomenons.  -To collect information and present them in an organize and coherent way. |
| **Guided**  **Stage** | 5. To classify objects into solids, liquids and gases.  6. To measure mass, volume and length.  7. To choose the correct unit of measure.  8. To analyse data. | **Weeks 3** | 5.1 Classifying objects and images into liquids, solids and gases, describing the properties like texture, flexibility and how can change when we apply force on them.  5.2 Analysing the organization of the molecules in each state of matter  <https://phet.colorado.edu/es/simulation/states-of-matter-basics>  6.1 Classifying different packages and containers according to the unit of measure. (ml,L, kg, g).  6.1 Creating a graduated cylinder using a syringe.  6.2 Measuring volume of irregular objects using graduated cylinders.  6.3 Creating a balance to measure the mass of some objects.  6.4 Measuring the mass using scales.  6.4 Developing study of a case in a context of a supermarket.  7.1 Making measures using conventional and non-conventional tools, writing the corresponding unit of measure.  -Doing a bar graphic, collecting information about mass, height and temperature of classmates.  **Synthesis Project Advance:** To design an experiment to answer the question and propose prediction (hypothesis) | -To register the results in an organize way, without alterations.  -To use math how a tool to organize, analyze and present information. |
| **Learning**  **Evidence** | -To propose a question about matter and look for answers using an experiment. | **Weeks 2** | **“EXPLORING MATTER”**  **-**Explaining through an oral presentation the properties of a solid, liquid or gas using an experiment, they will formulate the question, propose the hypothesis, and give the answer and the conclusion.  -Presenting the lab report according to experiment. | -To propose answers to their questions and compare them with the other classmates, using scientific theories.  -To take out conclusions of the experiments, even if the result isn’t expected. |