 **UNIT GRAPHIC ORGANIZER**

**SUBJECT**: Science **UNIT**: 2 **COURSE**: Fifth

**TEACHER**: Luisa Ascencio – Noelia Vega **DATE:**  \_\_April 13th -2020\_\_

**TITLE**:

**THROUGHLINES**:

1. Did you know that each atom has its own identity? How could you distinguish them?
2. In which state of matter can you classify the jelly: liquid, solid, gas or other?
3. How can I separate common mixtures in the laboratory?

**GENERATIVE TOPIC**

**CHEMISTRY IN MY KITCHEN!**

**UNDERSTANDING GOALS:**

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| The student will comprehend differences between atom, elements, molecules and compounds through models, in order to explain how atoms join and create different forms of matter. | Student will recognize different physical and chemical properties of matter through laboratory practice, in order to recognize mass, volume and density using some laboratory instruments. | The student will understand different types of mixtures (e.g. colloids and solutions) through laboratory practices, in order to show differences between them and apply different methods to separate mixtures. |

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|  | UNDERSTANDING PERFORMANCES | TIME | ASSESSMENT | |
|  | **ACTIONS** |  | **WAYS** | **CRITERIA** |
| **Exploration**  **Stage** | •To recognize different elements of the Periodic Table, and its organization.  •To identify characteristics of the elements like atomic number, mass number, symbol, electron configuration.  •To recognize properties of matter. | **Weeks: 3** | • Simulating different situations about atom structure, properties of matter, and mixtures.  • Reading and understanding the periodic table of elements, with explanations of the teacher and relating substances to the ones seen in the everyday life.  • Drawing and modeling some atoms of elements and molecules.  • Solving activities from the science guide.  **SYNTHESIS PROJECT**   1. Students will recognize the binnacle template to use along the term in Padlet. 2. Students will model some atoms’ structure of specific elements of the periodic table, taking into account its period and group. Link the elements with examples in their everyday life. 3. Students will report their models in a virtual binnacle (using PowerPoint or Paint) to publish in Padlet. | Explain how a limited number of elements make possible the diversity of known matter. |
| **Guided**  **Stage** | •To identify the relation between some properties of matter. | **Weeks: 2** | • Making virtual and real lab practices to observe different properties of matter and use different laboratory instruments.  • Making graphics about relation of variables as temperature, pressure, boiling point, viscosity and density.  • Solving activities from the science guide.  **SYNTHESIS PROJECT**   1. Students will identify and/or measure some physical and chemical properties of matter of different substances and hypothesize what could happen if they were together. 2. Case study: Ask if is possible to classify a jelly into a specific state of matter. 3. Students will report and analyze the results in a virtual binnacle (using PowerPoint or Paint) to publish in Padlet. | Verify effects of different properties of matter, and recognize different types of mixtures. |
| **Learning**  **Evidence** | •To identify types and characteristics of mixtures.  •To recognize an unsaturated, saturated and supersaturated solution.  •To apply different methods to separate mixtures. (chromatography - distillation – decantation.) | **Weeks: 3** | • Simulating different types of mixtures.  • Creating hypothesis about possible methods to separate different mixtures.  • Analyzing videos about different mixtures separation methods.  • Solving activities from the science guide.  **SYNTHESIS PROJECT**   1. Students will make unsaturated, saturated and supersaturated solutions of Kool-Aid, sugar and salt. 2. Students will make emulsions and colloids. 3. Case study: Explain which type of mixture is a jelly. 4. Students will use filtration, magnetism and evaporation methods, to separate homogeneous and heterogeneous mixtures. 5. Students will report and analyze the results in a virtual binnacle (using PowerPoint or Paint) to publish in Padlet. | Design and use experiments to separate mixtures. |