**Chapter 3: Classifying Matter Graphic Organizer Assignment**

**Due:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

**Purpose:**

* Classify various forms of matter, including commonly used household substances, on the basis of their properties.
* Compare and contrast the properties of pure substances and mixtures and relate this information to practical applications.

**Assignment:**

Create a graphic organizer based off of the classification of different forms of matter like below:



In your graphic organizer you will be expected to:

1. Give a definition of: **matter**, **pure substance**, **mixture**, **element**, **compound,** **mechanical mixture** and **solution** in your own words.
2. Cut out each of the examples of matter on the next page and classify them as either **element**, **compound,** **mechanical mixture** or **solution.** These are on page 3.
3. Come up with 3 examples each of **elements**, **compounds,** **mechanical mixtures** and **solutions** that you encounter on a daily basis.
4. For each of the examples that you thought of above, explain why it is an element, compound, mechanical mixture or solution. *For example, regular nail polish is a solution because it contains a mixture of chemicals including colouring dye, organic solvent (to mix everything together) and nitrocellulose (a polymer that forms a film when dried). You cannot see these separate parts of the nail polish.*

See the next page for the rubric (what is expected of you for this assignment).

**Rubric:**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Criteria | Aspiring | Emerging | Developing | Beginning |
| Presentation /5 | * graphic organizer is neatly organized and easily readable
* text is presented in an organized manner
* product reflects exceptional attention to detail
 | * graphic organizer is organized and easily readable
* text is mostly presented in an organized manner
* product reflects attention to detail
 | * graphic organizer is readable however reader must take extra effort in trying to decipher some information
* text contains lapses in attention to detail such as spelling errors
 | * graphic organizer is difficult to decipher between the different categories of manner
* Attention to detail is lacking
 |
| Definitions / 5matter, pure substance, mixture, element, compound, mechanical mixture and solution  | * Definitions are all accurate and written in own words.
* Definitions are well written and concise (to the point).
 | * Definitions are all accurate and written in own words.
 | * Definitions contain 1-2 errors
 | * Definitions contain more than 2 errors
 |
| Classification of matter /5From cut outs | * The classification of matter from the cut-out examples are all correctly placed
 | * The classification of matter from the cut-out examples contain 1-2 errors
 | * The classification of matter from the cut-out examples contain 3-5 errors
 | * The classification of matter from the cut-out examples contain more than 5 errors
 |
| Examples and Explanation /10Come up with your own examples of elements, compounds, mechanical mixtures and solutions | * The examples are correctly categorized.
* The categorization of examples is fully supported with explanation
 | * The examples are correctly categorized.
* The categorization of examples is contains explanation that could include more detail.
 | * 2-4 examples are incorrectly categorized.
* The categorization of examples contains explanation that is not complete or does not have enough detail.
 | * More than 5 own examples are incorrectly categorized.
* No explanation is provided for the examples.
 |

2. Cut-Out Examples. Cut these examples of matter out and categorize them as either **element, compound, mechanical mixture** or **solution** on your graphic organizer. You may need to Internet research to determine what

|  |  |  |  |
| --- | --- | --- | --- |
| **oxygen** | **orange juice with pulp** | **windex cleaning solution** | **liquid foundation (makeup)** |
| **H2O(l)** | **Au(s)** | **brass** | **steel** |
| **motor oil** | **propane gas** | **CO2(g)** | **homogenized milk** |
| **silver** | **sterling silver** | **aluminum** | **road salt/ de-icing salt** |
| **wall paint** | **trail-mix (food)** | **gatorade** | **shampoo** |
| **bleach** | **perfume** | **vinegar** | **stirred yogurt** |