CHEM 1020 SI

Jan. 27th

Agenda:

Spotify playlist (write any ideas on the board)

Worksheet

Fun Chemistry Trivia

Questions:

1. Classification of Matter: determine if each picture or word is an element, compound, or mixture.

Saline Solution

Element Mixture Mixture



Contains 2 or more substances

Contains 1 type of atom

Mixture Compound Element

 Element Compound

Elements

Compounds

Is a pure substance (hint: there are two)

1. Heterogenous or Homogenous? Look at each picture or word and determine if the mixture is homogenous or heterogenous mixture.





Homogenous Heterogenous

 Heterogenous



Homogenous

Heterogenous Homogenous

* 1. Determine if each sentence is describing a physical or chemical property.

|  |  |
| --- | --- |
|  | Physical or Chemical Property? |
| Zinc is a grayish color | Physical  |
| Water will boil at 100 ℃ | Physical  |
| Sodium will react with water forming hydrogen gas  | Chemical  |
| The substance in the lab was brittle to the touch  | Physical  |
| In lab two substances were combined. This caused an EXPLOSION | Chemical  |
| Wow, that substance didn’t freeze until 23 K  | Physical  |

|  |  |
| --- | --- |
|  | Physical or Chemical Change? |
| The ice cream that was left in the sun started to melt  | Physical  |
| In lab, two substances were added together. Without the mixture being set on a hot plate, the mixture started to heat up | Chemical  |
| You are in lab and all the sudden a gross smell starts coming from your beaker.  | Chemical  |
| You left you water bottle in your car and the water inside froze  | Physical  |
| While cooking you notice that the pot with boiling water has condensation on the top of the lid  | Physical  |
| You put a penny in a solution and it changed colors  | Chemical  |

1. Measurement Conversion.

Convert 1678 mg to g

 $1678 mg x \frac{1x 10^{-3}g}{1 mg}=1.678$

Convert 50 m to cm

$$50 m x \frac{1 cm}{1x 10^{-2}m }=5000 cm$$

The average length of a great white shark is 640 cm. How long is the average length of a great white shark in micrometers?

$$640 cm x \frac{1x 10^{-2}m}{1 cm }x \frac{1 μm}{1x10^{-6}m }=6400000 μm or 6.40 x 10^{6}μm$$

The dinosaur has a temperature of 95.5 F. What is the dinosaur’s temperature in Celsius (℃)? In Kelvin (K)?

Formulas: ℃= (F-32) x (5/9)

 0 ℃ = 273.15 K

$$°C=\left(95.5-32\right) x \frac{5}{9}=35.28 °C$$

$$K=35.28 °C+273.15=308.42 K$$