Honors Chemistry Daily Warm-Ups

Unit # 1



1. ***Answer the questions each day during the first 10 minutes of class.***
2. ***You MUST SHOW ALL WORK*** *for calculations and answers must have units!!* ***(No work; No credit)***
3. *If you are absent, you must make-up the missed questions the day you return.*

**Score**

1. *Write the correct answers for any questions you missed.*
2. *Turn in this assignment with your unit pack at the end of each unit.*

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|  | Daily Warm-Ups: |
| Unit 1 Day 1 | What is chemistry – give 2 examples of chemistry in your everyday life. ***(2 pts)***  List two common sense lab safety rules. ***(2 pts)*** |
| Unit 1 Day 2 | At a constant volume, the pressure of a gas will increase as you increase the temperature. Draw a graph that shows this relationship. Be sure to label both axes correctly. Consult your notes. ***(4 pts)***  What does the acronym DRY MIX stand for? Draw a graph showing temperature as the dependent variable. Show time as the independent variable. ***(4 pts)***  What is the difference between a heterogeneous mixture and a homogeneous mixture? Give an example of each. What is another term used to describe a homogeneous mixture? ***(5 pts)*** |
| Unit 1 Day 3 | ID the following as heterogeneous mixtures, elements, solutions or compounds: ***(6 pts)***  a. Kool-Aid \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ d. salt \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_  b. Diamond \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ e. pure gold coin \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_  c. Ice \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ f. vegetable soup \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_  Id the following as a physical or chemical change: ***(5 pts)***  a. Combustion (burning) octane \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ c. inflating a tire with air \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_  b. salt used to treat icy roads \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ d. fermenting grapes \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_  e. ice cream cone melting \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ |
| Unit 1 Day 4 | List at least 5 of the physical and chemical properties of water and of alcohol. What simple test could you do to determine which liquid is which? ***(6 pts)***  If ethanol boils at 78ºC, water boils at 100ºC, and ethyl acetate boils at 87ºC, what separation technique would be best for separating this mixture? Explain your answer. (Be specific and label the steps in order!) ***(5 pts)*** |
| Unit 1 Day 5 | Draw a heat curve (diagram) with the following specifications: *Use colored pencils to label the parts and include a key/legend.* ***(13 pts)***   * melting point 10°C * boiling point 125°C * Label the phases – solid, liquid, and gas * Label the area where both liquid and solid phases exist * Label the area where both liquid and gas phases exist * Assign a formula to each portion of the diagram (horizontal and slanted lines). * Is this substance water (H2O)?   Draw a phase change diagram (Y graph) with the following specifications: ***(13pts)***   * melting point at 0°C * boiling point at 100°C * X-axis is Temperature * Y-axis is Pressure (atmospheres) * Label all three phases of matter – solid, liquid, and gas * Label the triple point – *Explain. What is the triple point?* * Label the critical point – *Explain. What is the critical point?* * Using a line labeled with points A and B show the process   of sublimation. *(Use a red pen or colored pencil)*  ***For all calculations, you must identify (list) variables and show the correct equation. All work must be shown to receive credit!*** |
| Unit 1 Day 6 | How many joules of heat is given off when 5.0 g of water is cooled from 75°C to 25°C? ***(5 pts)***  How many joules does it take to evaporate 25 g of water at 100°C? ***(5 pts)*** |
| Unit 1 Day 7 | The specific heat capacity of graphite is 0.71 J/0C-g.   1. Calculate the energy (Joules) required to raise the temperature of 1.8 kg of graphite by 100.0 0C. ***(5 pts)*** 2. If a 3.3 g sample of graphite is originally at 25 0C and 0.23 kJ of heat is added, what will the final temperature of the graphite be? ***(5 pts)*** |