**Name \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Due Date\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

**WHATS A MATTA U STUDY GUIDE: TEST 1**

***You must include each of the vocabulary terms in your answers to the 3 questions below. You may use a term more than once, but you are only required to use each vocabulary term one time!*** *atoms, matter, element, mass, volume, solid, liquid, gas, vibrate.*

*When writing your paragraphs, please do the following!*

*\_\_\_\_ Begin with a capital letter, end with a period!*

*\_\_\_\_ Write in complete sentences!*

*\_\_\_\_ PLEASE UNDERLINE THE REQUIRED TERMS USED IN YOUR ANSWERS!*

1. **1. Matter can be classified into different states or phases. Give two different examples of matter each in a different phase. Now explain why your examples are matter.**
2. **Compare and contrast an element and an atom.**
3. **Ice, water, and water vapor are all different states of matter yet each has exactly the same chemical makeup. Please explain the differences between a solid, liquid, and gas on the molecular level.**
4. **Know & Understand Heat Energy**: Answer the following questions.
5. What is heat? How does energy transfer as heat? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
6. What is density? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
7. What is equilibrium and what does it have to do with heat? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
8. What are the three ways that energy moves as heat? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
9. How does convection make our plates move? (include the term density) \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
10. If you put an ice cube in the refrigerator, it will melt. In which direction is heat moving?

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

1. If you touch a cold metal flagpole, in which direction will heat move? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
2. **Define the following vocabulary (WRITE OUT THE DEFINITIONS) on the bottom of this page, on index cards or on notebook paper.**

**Vocabulary Vocabulary**

Matter Nucleus Protons Chemical Properties

Atoms Weight Neutrons Physical Properties

Element Molecules Electrons Plasma

Mass Compounds

Volume

Solid

Liquid

Gas

Vibrate